DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

SPECIFICATIONS

FOR

CODORNICES CREEK RESTORATION PROJECT
AT KAINS AVENUE

SPECIFICATION NO. 20-11368-C
MARCH 2020

PRE-BID CONFERENCE: March 25, 2020

BID OPENING DATE: April 09, 2020

1947 CENTER STREET, 4TH FLOOR, BERKELEY, CALIFORNIA 94704
(510) 981-6400
CITY OF BERKELEY
DEPARTMENT OF PUBLIC WORKS

SPECIFICATIONS
FOR
CODORNICES CREEK RESTORATION PROJECT
AT KAINS AVENUE
SPECIFICATION NO. 20-11368-C

Reviewed By:

Joe Enke, P.E.
Acting City Engineer

Engineering Division
1947 Center Street, 4th Floor
Berkeley, California 94704
Project Manager: Srinivas Muktevi
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CODORNICES CREEK RESTORATION PROJECT
AT KAINS AVENUE
SPECIFICATION NO. 20-11368-C

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NOTICE TO BIDDERS

1. Sealed bids will be received by the Finance Department – General Services Division in their office, 2180 Milvia Street, 3rd Floor, Berkeley, California up to the hour of:

   2:00 P.M., Thursday, April 09, 2020.

At which time bids will be publicly opened and read by the General Services Manager for CODORNICES CREEK RESTORATION PROJECT AT KAINS AVENUE provided for in the plans and specifications. Proposals must be submitted, on forms prepared for this purpose furnished by the City, in an envelope marked CODORNICES CREEK RESTORATION PROJECT AT KAINS AVENUE NO. 20-11368-C.

Non-Mandatory Pre-Bid Site Visit: City will conduct a Non-Mandatory Pre-Bid Conference and Site Visit on Wednesday, March 25, 2020, at 1:00 pm. Attendees shall meet at 1192 Kains Avenue, Berkeley, CA 94706 before touring the site. It is recommended that potential bidders also visit the site independently to review site conditions prior to bid.

Pre-Award Conference: The apparent low bidder will be invited to a pre-award conference tentatively scheduled for 2:00 P.M., Thursday, April 30, 2020, at 1947 Center Street, 4th Floor, Berkeley, CA.

2. Scope of Work: The work done under these specifications includes but is not limited to Removal of the existing concrete box channel; regrading earthen creek banks to create additional floodplain within the project area and installation of large native riparian. Replacement of the current debris rack to remove large debris and create a more optimal fish passage through the project area, traffic control, protection of underground utility services.

3. California Contractor License Classification required: A - General Engineering

4. Location: The work is located on a City parcel between the 1192 & 1122 Kains Avenue. See the vicinity maps included in the plan set. The exact limits of work are shown on the project plans.

5. Project plans and specifications may be obtained online at the City of Berkeley’s Public Works website under Current Construction Project Bid Opportunities:

   https://www.cityofberkeley.info/Public_Works/Bids_-_Contracts/Current_Construction_Project_Bid_Opportunities.aspx

Bidders are responsible for notifying Srinivas Muktevi, Associate Civil Engineer, by email at smuktevi@cityofberkeley.info to be included on the Planholders List.

6. It is the Contractor’s responsibility to check for any addenda on the City of Berkeley’s website

   https://www.cityofberkeley.info/Public_Works/Bids_-_Contracts/Current_Construction_Project_Bid_Opportunities.aspx
7. No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

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

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

8. Each proposal must be accompanied by an unconditionally certified or cashier's check or bid bond made payable to the City of Berkeley, and such check or bond shall be in an amount equal to at least 10% of the amount of the bid.

9. Pursuant to City Council Resolution No. 59,853-N.S., each proposal must include a signed copy of the Oppressive States Resolution Disclosure Form regarding the Contractor’s relationships with certain entities in the Oppressive States.

10. Each proposal must include a signed copy of the Nuclear Free Zone Disclosure Form.

11. Each proposal must include a signed copy of the Sanctuary City Compliance Statement.

12. Each proposal must include a signed copy of the Equal Benefits Ordinance Disclosure Form.

13. This contract will be subject to the First Source Agreement enacted by local ordinance (BMC 13.26) to enable and improve access by local residents to employment opportunities which are created by public & private construction and/or development.

14. Prior to starting work, the Contractor must furnish the following:

   a. Faithful Performance Bond in an amount not less than 100% of the amount of the contract, executed on the City of Berkeley Standard Performance Bond agreement form.

   b. Labor and Material Bond in the sum of not less than 100% of the amount of the contract.

   c. A certificate of Worker's Compensation Insurance with a waiver of subrogation in favor of the City of Berkeley.

   d. Commercial general liability insurance coverage is $2 million each occurrence Bodily Injury and $2 million each occurrence Property Damage, with defense costs payable in addition to policy limits.
e. Automobile liability insurance is $2 million each occurrence Bodily Injury and $2 million each occurrence Property Damage.

f. Insurance policies shall contain an endorsement naming the City, their employees, representatives, and agents as additional insureds, but only with respect to liability arising out of the activities of the named insured.

g. The policies shall apply separately to each insured against whom claim is made or suit is brought except with respect to the limits of the company's liability.

h. Written notice of cancellation or any limits reduction or change in said policy shall be mailed to the City and the Project Manager thirty (30) days in advance of the effective date thereof. Insurance policies shall contain a Notice of Cancellation endorsement.

i. Contractor's insurance shall be primary insurance, and no other insurance or self-insured retention carried or held by City shall be called upon to contribute to a loss covered by insurance for the named insured.

15. In accordance with California State Labor Code, the wage scale is on file with the Engineering Office or is attached herewith.

16. Award will be made by the City Council at a meeting within 75 days subsequent to the date set for bid opening. The Council reserves the right to reject any or all bids or any combination of bids.

17. General information or plan holder’s list: (510) 981-6400. Questions concerning the anticipated work or scope of the project should be directed to Srinivas Muktevi, Associate Civil Public Works Engineer, by email at smuktevi@cityofberkeley.info, no later than 10:00 A.M., March 31, 2020.

General Services Manager
BIDDER'S PROPOSAL

Bidders submitting proposals shall be very careful to follow all requirements in connection therewith. A checklist has been attached for guidance in complying with all phases of the bid process and project. Any proposal not complying with all these requirements may be rejected.

TO THE HONORABLE MAYOR AND MEMBERS OF THE CITY COUNCIL

Pursuant to the provisions of the plans, specifications and contract documents, the undersigned proposed to perform the work as described therein in a manner satisfactory to the responsible City official. All material, equipment, tools, labor and services necessary to the work will be furnished. All laws and ordinances relating to the work will be complied with, and a business license to do business in the City will be obtained. The undersigned declares that the plans, specifications, contract documents and the site of the work have been thoroughly examined and that this proposal is made without collusion with any person, firm, or corporation.

Execution of the proposal by the undersigned bidder shall become a binding contract on the parties when the award of a contract pursuant to said proposal is authorized by resolution of the City Council, where required by the Charter of the City by the City Manager, or an officer who is his/her authorized representative.

The undersigned agrees that when his proposal is executed he will furnish specified bonds and insurance, and he will begin work within the time specified, and complete work within the contract period or agree to the assessment of liquidated damages, all as stipulated in the attached pages of the Bidder's Proposal.

As a guaranty that the terms of this proposal will be complied with, the undersigned submits herewith a proposal guaranty for an amount equal to at least Ten Percent (10%) of his total bid.

All subcontractors who will perform work for the bidder on this project in the amount in excess of one-half of one percent (0.5%) of the total bid, including labor, materials and equipment, or work specifically fabricated off the job site according to detailed drawings contained in the plans, shall be listed, pursuant to Sections 4100 to 4113, inclusive of the California Government Code.
**BIDDER'S PROPOSAL**
(continued)

<table>
<thead>
<tr>
<th>Name of Subcontractor and address:</th>
<th>Subcontractor License No.</th>
<th>Type of Work</th>
<th>$ Amount</th>
</tr>
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</tbody>
</table>

Contractor’s California License Number: __________________________

License Expiration Date: ________________________________

I declare that representations made in this bid are under penalty of perjury.

________________________  __________________________
Signature                  Title
### BIDDER’S PROPOSAL (continued)

<table>
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<tr>
<th>Item No.</th>
<th>Description*</th>
<th>Estimated Quantity</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Total Cost</th>
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</thead>
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<tr>
<td>1.</td>
<td>Mobilization/Demobilization</td>
<td>1</td>
<td>LS</td>
<td>$________</td>
<td>__________</td>
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<td>2.</td>
<td>Traffic Control</td>
<td>1</td>
<td>LS</td>
<td>$_____</td>
<td>__________</td>
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<td>3.</td>
<td>Clearing and Grubbing</td>
<td>0.2</td>
<td>AC</td>
<td>$_____</td>
<td>__________</td>
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<td>4.</td>
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<td>5.</td>
<td>Channel Excavation</td>
<td>120</td>
<td>CY</td>
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<td>6.</td>
<td>Boulder Toe</td>
<td>95</td>
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<td>Armored Riffle</td>
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<td>8.</td>
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<td>Boulder Hook Riffle with Log Sill</td>
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<td>10.</td>
<td>Boulder Jam Riffle</td>
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<td>Low Water Crossing</td>
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<td>Structure Log Drop</td>
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<td>$_____</td>
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<td>13.</td>
<td>Wood &amp; Brush Toe</td>
<td>130</td>
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<td>Construction Entrance</td>
<td>660</td>
<td>SF</td>
<td>$_____</td>
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<td>Boulders - 3.0' x 3.0' x 3.0' (Rock only)</td>
<td>300</td>
<td>Tons</td>
<td>$_____</td>
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<td>16.</td>
<td>Offsite Cobble/ Boulder (Rock only)</td>
<td>70</td>
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<td>Item Description</td>
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<td>Cost 1</td>
<td>Cost 2</td>
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<td>17. Offsite Cobble/Gravel (Rock only)</td>
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<td>Tons</td>
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<td>18. Onsite Cobble/Gravel (Handling of Rock only)</td>
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<td>Tons</td>
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<td>19. Onsite Fines (Handling of Rock only)</td>
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<td>20. Structure Logs</td>
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<td>$___</td>
<td>$____</td>
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<td>21. Woven Coir Fiber 700 g Erosion Control Blanket and 12&quot; Wooden Stakes</td>
<td>560</td>
<td>SY</td>
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<td>22. Permanent Seed Mix</td>
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<td>23. Temporary Seed Mix</td>
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<td>24. Pump Around</td>
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<td>LS</td>
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<td>25. Straw Mulch</td>
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<td>Bales</td>
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<td>26. Bare Root Seedlings</td>
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<td>EA</td>
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<td>$____</td>
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<td>27. Container Trees</td>
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<td>EA</td>
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<td>28. Erosion &amp;Sediment Controls</td>
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<td>29. Soil Lifts</td>
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<td>30. Trash Rack</td>
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<td>31. Headwall / Culvert Removal</td>
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<td>32. Headwall</td>
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<td>LS</td>
<td>$____</td>
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<td>33. Project Sign during Construction</td>
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<td>34. Chain link Fence</td>
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<td>LF</td>
<td>$____</td>
<td>$____</td>
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<tr>
<td>35. Replace Wood Fence-In kind</td>
<td></td>
<td>LF</td>
<td>$____</td>
<td>$____</td>
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</table>

The following Bid Item 36 is an addition to the Project’s scope of work. This additional work may or may not be authorized to be performed by the Contractor as part of this Contract.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost 1</th>
<th>Cost 2</th>
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<tr>
<td>36. Supplemental Work</td>
<td></td>
<td>LS</td>
<td>$ 40,000</td>
<td>$ 40,000</td>
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**TOTAL COST OF BID IN WORDS AND FIGURES:**

Dollars and Cents/($ )
BIDDER'S PROPOSAL  
(continued)

The undersigned bidder agrees to accept payment in full for the work at the price set forth above in accordance with provisions of the specifications and agrees to start within Fifteen (15) WORKING days following issuance of the Notice to Proceed and to complete all work specified in the contract documents in accordance with the plans and specifications within Fifty (50) WORKING days. The Notice to Proceed will be issued when the contract is full executed. The contract construction time is inclusive of the time for delivery of materials. By execution of this contract the City and the Bidder do hereby agree that the value of damage associated with the delay of the work is difficult to ascertain. Therefore the Bidder agrees further to the assessment of liquidated damages in the amount of One Thousand Dollars ($1,000.00) for each working day that the construction work remains incomplete beyond the above construction time. The term of the contract is Seventy (70) WORKING days which includes an additional Twenty (20) WORKING days for project closeout beyond the above construction time.

Company __________________________ Address __________________________

By __________________________

Title __________________________ Phone () __________________________

Taxpayer I.D. No. __________ Date __________________________

Corporation Yes [ ] No [ ]

(The following spaces to be used by the City)

Pursuant to City of Berkeley Council Resolution No. _______ N.S. adopted on __________, the City of Berkeley agrees to pay ______________________ the prices set forth above for the Total Bid Items in the amount of ______________________ ($___________), in accordance with the terms and conditions set forth in Specification No. 20-11368-C. The contractor shall complete all work specified in the contract documents in accordance with the plans and specifications within Seventy (70) working days from the date established in the Notice to Proceed.

CITY OF BERKELEY

Dated: __________ By: __________________________

City Manager

Registered By: __________________________

Auditor

Attested By: __________________________

City Clerk
BIDDER'S PROPOSAL

(continued)

The undersigned bidder agrees to accept payment in full for the work at the price set forth above in accordance with provisions of the specifications and agrees to start within Fifteen (15) WORKING days following issuance of the Notice to Proceed and to complete all work specified in the contract documents in accordance with the plans and specifications within Fifty (50) WORKING days. The Notice to Proceed will be issued when the contract is full executed. The contract construction time is inclusive of the time for delivery of materials. By execution of this contract the City and the Bidder do hereby agree that the value of damage associated with the delay of the work is difficult to ascertain. Therefore the Bidder agrees further to the assessment of liquidated damages in the amount of One Thousand Dollars ($1,000.00) for each working day that the construction work remains incomplete beyond the above construction time. The term of the contract is Seventy (70) WORKING days which includes an additional Twenty (20) WORKING days for project closeout beyond the above construction time.

Company ____________________________ Address ____________________________

By ____________________________ Phone ____________________________

Title ____________________________ Date ____________________________

Taxpayer I.D. No. __________________ Corporation Yes [ ] No [ ]

(The following spaces to be used by the City)

Pursuant to City of Berkeley Council Resolution No. _______ N.S. adopted on ___________, the City of Berkeley agrees to pay ___________________________ the prices set forth above for the Total Bid Items in the amount of ___________________________ ($_________________), in accordance with the terms and conditions set forth in Specification No. 20-11368-C. The contractor shall complete all work specified in the contract documents in accordance with the plans and specifications within Seventy (70) working days from the date established in the Notice to Proceed.

CITY OF BERKELEY

Dated: __________ By: ____________________________

City Manager

Registered By: ____________________________

Auditor

Attested By: ____________________________

City Clerk

008
The undersigned bidder agrees to accept payment in full for the work at the price set forth above in accordance with provisions of the specifications and agrees to start within Fifteen (15) WORKING days following issuance of the Notice to Proceed and to complete all work specified in the contract documents in accordance with the plans and specifications within Fifty (50) WORKING days. The Notice to Proceed will be issued when the contract is full executed. The contract construction time is inclusive of the time for delivery of materials. By execution of this contract the City and the Bidder do hereby agree that the value of damage associated with the delay of the work is difficult to ascertain. Therefore the Bidder agrees further to the assessment of liquidated damages in the amount of One Thousand Dollars ($1,000.00) for each working day that the construction work remains incomplete beyond the above construction time. The term of the contract is Seventy (70) WORKING days which includes an additional Twenty (20) WORKING days for project closeout beyond the above construction time.

Company __________________________ Address __________________________
By __________________________
Title __________________________ Phone () __________________________
Taxpayer I.D. No. __________________________ Date __________________________
Corporation Yes [ ] No [ ]

(The following spaces to be used by the City)

Pursuant to City of Berkeley Council Resolution No. ______ N.S. adopted on __________, the City of Berkeley agrees to pay _______________________ the prices set forth above for the Total Bid Items in the amount of _______________________ ($_____________), in accordance with the terms and conditions set forth in Specification No. 20-11368-C. The contractor shall complete all work specified in the contract documents in accordance with the plans and specifications within Seventy (70) working days from the date established in the Notice to Proceed.

CITY OF BERKELEY

Dated: __________ By: __________________________
City Manager

Registered By: __________________________
Auditor

Attested By: __________________________
City Clerk
BIDDERS AND CONTRACTORS CHECKLIST

Items Required at Bid Opening: 2:00 P.M., Thursday, April 09, 2020 at Finance Department – General Services Division, 2180 Milvia Street, 3rd Floor, Berkeley, California

- Bidder's Proposals (One Full Set of Originals and 2 Additional Original Signature Pages)
- Addenda (if any)
- Experience and Financial Qualifications
- Taxpayer Identification Report
- Oppressive States Resolution Disclosure Form
- Nuclear Free Zone Disclosure Form
- Equal Benefits Ordinance Disclosure Form
- Sanctuary City Compliance Statement
- Bid Guarantee - 10% of Total Base Bid

Items Required at Pre-Award Conference: 2:00 P.M., Thursday, April 30, 2020, at 1947 Center Street, 4th Floor, Berkeley, California

- Memorandum of Understanding
- Agreement for Change in Sub-Contractors
- Work Force Composition
- Certificate of Compliance with Equal Benefits Ordinance (Form EBO-1)
- First Source / Local Hiring Policy – First Source agreement,

Items Required After Contract Award and Prior to Construction:

- City of Berkeley Business License
- Work Schedule
- Worker's Compensation Insurance - Statutory Amount
- Liability Insurance - $2,000,000
- Performance Bond - 100% (executed on enclosed Performance Bond form)
- Labor and Material Bond- 100%
- Commercial General and Automobile Liability Endorsement form
- Submittals required at preconstruction meeting
- Right to Audit Form

Items Required During Construction:

- Work Schedule Updates
- Weekly Payroll Statement (Fed Form WH-347 or equivalent)
- First Source / Local Hiring Policy –Wage Reports periodically
- Correspondence with unions and minority/female organizations

Items Required Upon Completion of Project:

- Guarantee Bond - 10%
- As-Built Drawings
EXPERIENCE AND FINANCIAL QUALIFICATIONS

The bidder has been engaged in the contracting business under State License Number ____________ for a period of ________________ years.

The bidder's three most recently completed contracts are:

<table>
<thead>
<tr>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of Project</td>
<td></td>
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<tr>
<td>Owner</td>
<td></td>
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<tr>
<td>Address</td>
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<tr>
<td>Telephone No.</td>
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<tr>
<td>Engineer in Charge</td>
<td></td>
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<tr>
<td>Date Accepted</td>
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</tbody>
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Reference is hereby made to the following Bank or Banks as to the financial responsibility of the bidder:

Name of Bank _______________ Address _______________

Reference is hereby made to the following Surety Companies as to the financial responsibility and general reliability of the bidder:

Company _______________ Address _______________

Signature of Bidder
TAXPAYER IDENTIFICATION REPORT

COMPANY NAME

________________________________________________________________________

________________________________________________________________________

MAILING ADDRESS

________________________________________________________________________

________________________________________________________________________

SOCIAL SECURITY NUMBER: ________________________________________________

OR

EMPLOYER IDENTIFICATION NUMBER: _______________________________________

My Company is a Corporation [ ]

My Company is not a Corporation [ ]

I certify that the above information is true and correct:

______________________________________  ______________________________
Name                                             Title

The Tax Equity and Fiscal Responsibility Act of 1982 (Public Law 97-248) requires the above reporting information be furnished to the City.

Persons who do not furnish their tax information numbers become subject to backup withholding by the City at a rate of 20% from each disbursement made to the recipient.
I (we) certify that:

1. I am (we are) fully cognizant of any and all contracts held, products made or otherwise handled by this business entity, and of any such that are anticipated to be entered into, produced or handled for the duration of its contract(s) with the City of Berkeley. (To this end, more than one individual may sign this disclosure form, if a description of which type of contracts each individual is cognizant is attached.)

2. I (we) understand that Section 12.90.070 of the Nuclear Free Berkeley Act (Berkeley Municipal Code Ch. 12.90; Ordinance No. 5784-N.S.) prohibits the City of Berkeley from contracting with any person or business that knowingly engages in work for nuclear weapons.

3. I (we) understand the meaning of the following terms as set forth in Berkeley Municipal Code Section 12.90.130:

"Work for nuclear weapons" is any work the purpose of which is the development, testing, production, maintenance or storage of nuclear weapons or the components of nuclear weapons; or any secret or classified research or evaluation of nuclear weapons; or any operation, management or administration of such work.

"Nuclear weapon" is any device, the intended explosion of which results from the energy released by reactions involving atomic nuclei, either fission or fusion or both. This definition of nuclear weapons includes the means of transporting, guiding, propelling or triggering the weapon if and only if such means is destroyed or rendered useless in the normal propelling, triggering, or detonation of the weapon.

"Component of a nuclear weapon" is any device, radioactive or non-radioactive, the primary intended function of which is to contribute to the operation of a nuclear weapon (or be a part of a nuclear weapon).

4. Neither this business entity nor its parent nor any of its subsidiaries engages in work for nuclear weapons or anticipates entering into such work for the duration of its contract(s) with the City of Berkeley.

Based on the foregoing, the undersigned declares under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Printed Name: ___________________________________ Title: ___________________________________

Signature: ___________________________________ Date: ___________________________________

Business Entity: ______________________________________________________________________

Contract Description/Specification No. CODORNICES CREEK RESTORATION PROJECT AT KAINS AVENUE / 20-11368-C
CITY OF BERKELEY

Oppressive States Compliance Statement for Personal Services

The undersigned, an authorized agent of __________________________________________ (hereafter "Vendor"), has had an opportunity to review the requirements of Berkeley City Council Resolution No. 59,853-N.S. (hereafter "Resolution"). Vendor understands and agrees that the City may choose with whom it will maintain business relations and may refrain from contracting with those Business Entities which maintain business relationships with morally repugnant regimes. Vendor understands the meaning of the following terms used in the Resolution:

"Business Entity" means "any individual, firm, partnership, corporation, association or any other commercial organization, including parent-entities and wholly-owned subsidiaries" (to the extent that their operations are related to the purpose of the contract with the City).

"Oppressive State" means: Tibet Autonomous Region and the Provinces of Ado, Kham, and U-Tsang. "Personal Services" means “the performance of any work or labor and shall also include acting as an independent contractor or providing any consulting advice or assistance, or otherwise acting as an agent pursuant to a contractual relationship.”

Contractor understands that it is not eligible to receive or retain a City contract if at the time the contract is executed, or at any time during the term of the contract it provides Personal Services to:

a. The governing regime in any Oppressive State.
b. Any business or corporation organized under the authority of the governing regime of any Oppressive State.
c. Any person for the express purpose of assisting in business operations or trading with any public or private entity located in any Oppressive State.

Vendor further understands and agrees that Vendor's failure to comply with the Resolution shall constitute a default of the contract and the City Manager may terminate the contract and bar Vendor from bidding on future contracts with the City for five (5) years from the effective date of the contract termination.

The undersigned is familiar with, or has made a reasonable effort to become familiar with, Vendor's business structure and the geographic extent of its operations. By executing the Statement, Vendor certifies that it complies with the requirements of the Resolution and that if any time during the term of the contract it ceases to comply, Vendor will promptly notify the City Manager in writing.
Based on the foregoing, the undersigned declares under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Printed Name: __________________________                   Title: __________________________
Signature: _______________________________                 Date: _____________
Business Entity: _____________________________________________________________________

I am unable to execute this Statement; however, Vendor is exempt under Section VII of the Resolution. I have attached a separate statement explaining the reason(s) Vendor cannot comply and the basis for any requested exemption.

Signature: _______________________________                 Date: _____________

Contract Description/Specification No. CODORNICES CREEK RESTORATION PROJECT AT KAINS AVENUE / 20-11368-C
1. In the performance of this contract the Contractor (and all Sub-contractors) agree not to discriminate pursuant to Section 13.26 of the Berkeley Municipal Code.

2. In the performance of this contract the Contractor agrees that he/she is also responsible for his/her Sub-Contractors' Compliance with Section 13.26 of the Berkeley Municipal Code.

3. For contracts that are not governed by a Community Workforce Agreement, the Contractor agrees to comply with Section 13.26 of the Municipal Code as it applies to the First Source Program (see Section 13.26.080).

The Contractor agrees to submit periodic employment and wage reports to the City's Contract Compliance Officer upon reasonable request.

________________________________  __________________________________
Contractor   City Engineer or designee

________________________________  __________________________________
Date   Date
AGREEMENT FOR CHANGE IN SUB-CONTRACTORS

I agree to use the Subcontractor(s) listed in the signed contract with the City of Berkeley. If it should become necessary to change Subcontractors, I will notify the Public Works Engineering Division by completing the following information:

<table>
<thead>
<tr>
<th>Current Subcontractor(s)</th>
<th>Alternate Subcontractors</th>
<th>Reason for Change</th>
<th>Date</th>
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Signed by: ____________________________  Verified by: ____________________________

Prime Contractor: __________________ Subcontractor: __________________ City of Berkeley City Engineer or designee

Date: ________________  Date: ________________  Date: ________________
WORKFORCE COMPOSITION FORM FOR ALL CONSTRUCTION CONTRACTS

This form is to be completed and submitted prior to the Non-Discrimination Conference. The Contractor and all Subcontractors who will do work valued at $3,000 or more are required to submit this form. Weekly payroll reports will be compared to this listing to monitor compliance with the City of Berkeley Municipal Code Section 13.26. A payroll printout or other listing of employees providing the same information will be accepted.

Name of Contractor/Subcontractor: _______________________________________________________

Project: ___________________________________________________________________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Race*</th>
<th>Sex**</th>
<th>Trade/Craft</th>
<th>Basic Hourly Rate</th>
<th>Hire Date</th>
<th>Employees to be used on this job</th>
</tr>
</thead>
</table>

* A=Asian or Pacific Islander  **M = Male  
AI=American Indian  **F = Female  
B=Afro American  
C=Caucasian  
H=Hispanic (Mexican, Puerto Rican, Spanish, Cuban, Chicano, Central or South American)

Signature of Contractor/Subcontractor   Date

Verified By: ____________________________________
City of Berkeley-City Engineer or designee

10/2010
OCCUPATIONAL CATEGORIES

**Officials and Administrators**: Occupations in which employees set broad policies, exercise overall responsibility for execution of these policies, or provide specialized consultation on a regional, district or area basis. Includes: department heads, bureau chiefs, division chiefs, directors, deputy superintendents, unit supervisors and kindred workers.

**Professionals**: Occupations which require specialized and theoretical knowledge which is usually acquired through college training or through work experience and other training which provides comparable knowledge. Includes: personnel and labor relations workers, social workers, doctors, psychologists, registered nurses, economists, dietitians, lawyers, systems analysts, accountants, engineers, employment and vocational rehabilitation counselors, teachers or instructors, and kindred workers.

**Technicians**: Occupations which require a combination of basic scientific or technical knowledge and manual skill which can be obtained through specialized post-secondary school education or through equivalent on-the-job training. Includes computer programmers and operators, technical illustrators, highway technicians, technicians (medical, dental, electronic, physical sciences) and kindred workers.

**Protective Service Workers**: Occupations in which workers are entrusted with public safety, security and protection from destructive forces. Includes: Police officers, fire fighters, guards, sheriffs, bailiffs, correctional officers, detectives, marshals, harbor patrol officers and kindred workers.

**Paraprofessionals**: Occupations in which workers perform some of the duties of a professional or technician in a supportive role, which usually requires less formal training and/or experience normally required for professional or technical status. Such positions may fall within an identified pattern of a staff development and promotion under a "New Careers" concept. Includes: library assistants, research assistants, medical aides, child support workers, police auxiliary, welfare service aides, recreation assistants, homemaker aides, home health aides, and kindred workers.

**Office and Clerical**: Occupations in which workers are responsible for internal and external communication, recording and retrieval of data and/or information and other paperwork required in an office. Includes: bookkeepers, messengers, office machine operators, clerk-typists, stenographers, court transcribers, hearings reporters, statistical clerks, dispatchers, license distributors, payroll clerks, and kindred workers.

**Skilled Craft Workers**: Occupations in which workers perform jobs which require special manual skill and a thorough and comprehensive knowledge of the processes involved in the work which is acquired through on-the-job training and experience or through apprenticeship or other formal training programs. Includes: mechanics and repairpersons, electricians, heavy equipment operators, stationary engineers, skilled machining occupations, carpenters, compositors and typesetters, and kindred workers.

**Service/Maintenance**: Occupations in which workers perform duties which result in or contribute to the comfort, convenience, hygiene or safety of the general public or which contribute to the upkeep and care of buildings, facilities or grounds of public property. Workers in this group may operate machinery. Includes: chauffeurs, laundry and dry cleaning operatives, truck drivers, bus drivers, garage laborers, custodial personnel, gardeners and groundskeepers, refuse collectors, and construction laborers.
NOTICE REGARDING THE EQUAL BENEFITS ORDINANCE

As a condition of being awarded a contract with the City of Berkeley, the selected Contractor shall be required, during the performance of the agreement, to comply with the City’s non-discrimination provisions of the Equal Benefits Ordinance (EBO) as set forth in Berkeley Municipal Code, Chapter 13.29.

The EBO requires that during the performance of a contract, the Contractor shall provide equal benefits to its employees with spouses and employees with domestic partners.

The EBO is applicable to the following employers:

- For-profit employers that have a contract with the City for the purchase of goods, services, public works or improvements, and other construction projects in the amount of $25,000 or more
- Non-profit employers that have a contract with the City for the purchase of goods, services, public works or improvements, and other construction projects in the amount of $100,000 or more
- Lessees of public property, licensees, concessionaires, and franchises that generate $350,000 or more in annual gross receipts
- Entities which receive a grant agreement of $100,000 or more

Contractors who are subject to the EBO must certify to the City that they are in compliance with the EBO and post this notice in a conspicuous place where all employees can see it. Subject contractors must also allow authorized City representatives access to records so the City can verify compliance with the Ordinance.

Compliance with the EBO

If a Contractor has not received a waiver from complying with the EBO and the timeframe within which it can delay implementation has expired but it has failed to comply with the EBO, the Contractor may be deemed to be in material breach of the City agreement. In such cases, the City may cancel, terminate or suspend the City agreement, in whole or in part. The City also may deem the Contractor an irresponsible bidder and disqualify the Contractor from contracting with the City for a period of five years. In addition, the City may assess liquidated damages against the Contractor which may be deducted from money otherwise due the Contractor, and pursue any other remedies available at law or in equity.

Violations

Any suspected violations of the EBO should be reported to:

EBO Compliance Officer
City Manager’s Office
2180 Milvia St
Berkeley, CA 94704
510-981-7000
CITY OF BERKELEY

Equal Benefits Ordinance Disclosure Form

As a condition of being awarded a contract with the City of Berkeley, the selected Contractor/Vendor ("Contractor") may be required, during the performance of the contract, to comply with the City’s non-discrimination provisions of the Equal Benefits Ordinance ("EBO") as set forth in Berkeley Municipal Code, Chapter 13.29. The EBO requires that during the performance of a contract, the Contractor shall provide equal benefits to its employees with spouses and employees with domestic partners. Benefits include, but are not limited to, health benefits, bereavement leave, family medical leaves, membership and membership discounts, moving expenses, retirement benefits, and travel benefits. A cash equivalent payment is permitted if an employer has taken all reasonable efforts to provide domestic partner’s with access to benefits but is unable to do so. A situation in which a cash equivalent payment might be used is if the employer has difficulty finding an insurance provider that is willing to provide domestic partner benefits.

The EBO is applicable to the following employers:

- For-profit employers that have a contract with the City for the purchase of goods, services, public works or improvements, and other construction projects in the amount of $25,000 or more
- Non-profit employers that have a contract with the City for the purchase of goods, services, public works or improvements, and other construction projects in the amount of $100,000 or more
- Lessees of public property, licensees, concessionaires, and franchises that generate $350,000 or more in annual gross receipts
- Entities which receive a grant agreement of $100,000 or more

Contractors who are subject to the EBO must certify to the City before execution of the contract by completing form EBO-1 that they are in compliance with the EBO or have been issued a waiver by the City. Contractors must also allow authorized City representatives access to records so the City can verify compliance with the Ordinance.

The EBO includes provisions that address difficulties associated with implementing procedures to comply with the EBO. Contractors can delay implementation of procedures to comply with the EBO in the following situations:

1. until the first effective date after the first open enrollment process following the contract execution date, not to exceed two years if the Contractor submits evidence of engaging in reasonable efforts to comply with the EBO;
2. until administrative steps can be taken to incorporate nondiscrimination in benefits in the contractor’s infrastructure, not to exceed three months, unless extended at the discretion of the City Manager; and
3. until the expiration of a Contractor’s current collective bargaining agreement(s)
Compliance with the EBO

If a Contractor has not received a waiver from complying with the EBO and the timeframe within which it can delay implementation has expired but it has failed to comply with the EBO, the Contractor may be deemed to be in material breach of the City agreement. In the event of a material breach, the City may cancel, terminate or suspend the City agreement, in whole or in part. The City also may deem the Contractor an irresponsible bidder and disqualify the Contractor from contracting with the City for a period of five years. In addition, the City may assess liquidated damages against the Contractor which may be deducted from money otherwise due the Contractor, and pursue any other remedies available at law or in equity.

By my signature below, I acknowledge that the Contractor understands that to the extent it is subject to the provisions of B.M.C. Chapter 13.29, the Contractor shall comply with this provision.

Printed Name: ___________________________________________ Title: ___________________________________________

Signature: ___________________________________________ Date: ___________________________________________

Business Entity: ___________________________________________

Contract Description/Specification No. CODORNICES CREEK RESTORATION PROJECT AT KAINS AVENUE / 20-11368-C
CITY OF BERKELEY
CERTIFICATION OF COMPLIANCE WITH EQUAL BENEFITS ORDINANCE
If you are a contractor, return this form to the originating department/project manager. If you are a vendor (supplier of goods), return this form to the Purchasing Division of the Finance Dept.

SECTION 1. CONTRACTOR/VENDOR INFORMATION

<table>
<thead>
<tr>
<th>Name:</th>
<th>Vendor No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>City:</td>
</tr>
<tr>
<td>State:</td>
<td>ZIP:</td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Telephone:</td>
</tr>
<tr>
<td>E-mail Address:</td>
<td>Fax No.:</td>
</tr>
</tbody>
</table>

SECTION 2. COMPLIANCE QUESTIONS

A. The EBO is inapplicable to this contract because the contractor/vendor has no employees.
   - [ ] Yes  [ ] No  *(If “Yes,” proceed to Section 5; if “No,” continue to the next question.)*

B. Does your company provide (or make available at the employees’ expense) any employee benefits?
   - [ ] Yes  [ ] No  
     If “Yes,” continue to Question C.
     If “No,” proceed to Section 5. *(The EBO is not applicable to you.)*

C. Does your company provide (or make available at the employees’ expense) any benefits to the spouse of an employee?
   - [ ] Yes  [ ] No

D. Does your company provide (or make available at the employees’ expense) any benefits to the domestic partner of an employee?
   - [ ] Yes  [ ] No  
     **If you answered “No” to both Questions C and D, proceed to Section 5. (The EBO is not applicable to this contract.)*  
     **If you answered “Yes” to both Questions C and D, please continue to Question E.**  
     **If you answered “Yes” to Question C and “No” to Question D, please continue to Section 3.**

E. Are the benefits that are available to the spouse of an employee identical to the benefits that are available to the domestic partner of the employee?
   - [ ] Yes  [ ] No

SECTION 3. PROVISIONAL COMPLIANCE

A. Contractor/vendor is not in compliance with the EBO now but will comply by the following date:
   - [ ] By the first effective date after the first open enrollment process following the contract start date, not to exceed two years, if the Contractor submits evidence of taking reasonable measures to comply with the EBO; or
   - [ ] At such time that administrative steps can be taken to incorporate nondiscrimination in benefits in the Contractor’s infrastructure, not to exceed three months; or
   - [ ] Upon expiration of the contractor’s current collective bargaining agreement(s).

B. If you have taken all reasonable measures to comply with the EBO but are unable to do so, do you agree to provide employees with a cash equivalent?*
   - [ ] Yes  [ ] No

* The cash equivalent is the amount of money your company pays for spousal benefits that are unavailable for domestic partners.
SECTION 4. REQUIRED DOCUMENTATION

At time of issuance of purchase order or contract award, you may be required by the City to provide documentation (copy of employee handbook, eligibility statement from your plans, insurance provider statements, etc.) to verify that you do not discriminate in the provision of benefits.

SECTION 5. CERTIFICATION

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I am authorized to bind this entity contractually. By signing this certification, I further agree to comply with all additional obligations of the Equal Benefits Ordinance that are set forth in the Berkeley Municipal Code and in the terms of the contract or purchase order with the City.

Executed this _______day of ________________, in the year __________, at __________________, _____ (City) (State)

____________________________________
Name (please print) ________________________________

____________________________________
Signature

____________________________________
Title ____________________________________________

FOR CITY OF BERKELEY USE ONLY

☐ Non-Compliant (The City may not do business with this contractor/vendor)
☐ One-Person Contractor/Vendor ☐ Full Compliance ☐ Reasonable Measures
☐ Provisional Compliance Category, Full Compliance by Date: ________________________________

Staff Name(Sign and Print): ________________________________ Date: __________________________
CITY OF BERKELEY
Sanctuary City Compliance Statement

The undersigned, an authorized agent of ________________________________ (hereafter "Contractor"), has had an opportunity to review the requirements of Berkeley Code Chapter 13.105 (hereafter "Sanctuary City Contracting Ordinance" or “SCCO”). Contractor understands and agrees that the City may choose with whom it will maintain business relations and may refrain from contracting with any person or entity that provides Data Broker or Extreme Vetting services to the U.S. Immigration and Customs Enforcement Division of the United States Department of Homeland Security (“ICE”). Contractor understands the meaning of the following terms used in the SCCO:

a. "Data Broker” means either of the following:
   i. The collection of information, including personal information about consumers, from a wide variety of sources for the purposes of reselling such information to their customers, which include both private-sector business and government agencies;
   ii. The aggregation of data that was collected for another purpose from that for which it is ultimately used.

b. “Extreme Vetting” means data mining, threat modeling, predictive risk analysis, or other similar services. " Extreme Vetting does not include:
   i. The City’s computer-network health and performance tools;
   ii. Cybersecurity capabilities, technologies and systems used by the City of Berkeley Department of Information Technology to predict, monitor for, prevent, and protect technology infrastructure and systems owned and operated by the City of Berkeley from potential cybersecurity events and cyber-forensic based investigations and prosecutions of illegal computer based activity.

Contractor understands that it is not eligible to receive or retain a City contract if at the time the Contract is executed, or at any time during the term of the Contract, it provides Data Broker or Extreme Vetting services to ICE.

Contractor further understands and agrees that Contractor’s failure to comply with the SCCO shall constitute a material default of the Contract and the City Manager may terminate the Contract and bar Contractor from bidding on future contracts with the City for five (5) years from the effective date of the contract termination.

By executing this Statement, Contractor certifies that it complies with the requirements of the SCCO and that if at any time during the term of the Contract it ceases to comply, Contractor will promptly notify the City Manager in writing. Any person or entity who knowingly or willingly supplies false information in violation of the SCCO shall be guilty of a misdemeanor and up to a $1,000 fine.

Based on the foregoing, the undersigned declares under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this______day of _____________, 20__, at __, California.

Printed Name: ________________________________ Title: ________________________________

Signed: ________________________________ Date: ________________________________

Business Entity: ________________________________
CITY OF BERKELEY
FIRST SOURCE/LOCAL HIRING POLICY

First Source (B.M.C. 13.26) promotes the hiring of local jobseekers on local and publicly funded construction projects, in addition to non-construction jobs that are created after construction is complete.

In general, the following responsibilities are assumed by the City and general Contractors/Subcontractors.

CITY RESPONSIBILITIES:

1. Coordinate with Unions and CITY-funded employment/training agencies to ensure referral of applicants and training in accordance with CITY commitments.

2. Work with the local workforce development programs to ensure that they thoroughly screen applicants' experience/qualifications for jobs.

3. Follow up with workforce development agencies and employers on outcome of applicants referred for employment and will initiate corrective actions necessary for an effective employment/training delivery system.

4. At its discretion, be responsible for monitoring and, where necessary, enforcing compliance with this Agreement. This will be accomplished through periodic reviews, investigations of grievances and dispute resolution through administrative hearings. Pending conclusion of the hearings, the CONTRACTOR can continue normal operations and hiring.

5. At its discretion, review certified payroll or other relevant reports to determine whether the CONTRACTOR has maintained good faith efforts to hire and provide opportunities for Berkeley residents.

6. Ensure that local workforce development programs and Berkeley Housing Authority (for HUD Section 3 compliance where applicable) are notified that the First Source Agreement is in place.

GENERAL CONTRACTOR/SUBCONTRACTOR RESPONSIBILITIES:

Compliance with the City of Berkeley Non-Discrimination policy and employment goal as it relates to the First Source Program:

1. Meeting employment goals contained in the City construction component.

2. Notifying City or City's designee of project labor needs.

3. Interviewing qualified Berkeley residents before others are interviewed.

4. Providing information to City of application-for-work procedures.
CITY OF BERKELEY
FIRST SOURCE AGREEMENT

I certify that:

I  I am authorized to enter into this agreement on behalf of the company whose name appears below ("Contractor").

II Contractor understands and agrees to comply with the First Source Program as described in Berkeley Municipal Code Section 13.26.080.

III Contractor understands that agreement with Berkeley Municipal Code Section 13.26.080 means that Contractor agrees as follows:

A. To interview and consider qualified Berkeley applicants before interviewing others.

B. To notify the applicable Union Hall(s) as to the local hiring requirement for this project and to request qualified Berkeley residents first.

C. That the Contractor has the sole discretion to make all final hiring decisions.

IV Contractor also agrees:

A. To ensure that workers employed through this agreement are treated in a manner that is equal to all other employees.

B. To fully document the reason(s) for not hiring persons referred by Union Halls or workforce development agencies.

C. To ensure that job specifications/requirements accurately reflect job functions.

D. To designate a qualified representative of the Contractor and each Subcontractor who will be the responsible party for implementation and compliance with the goals, objectives and responsibilities specified in this agreement. Contractor will inform the City of the designated representative(s) at the Non-Discrimination Conference.

E. To provide to the City, upon request, information on the employment status of First Source placements, and reason for separation if employee is terminated.

The above First Source Agreement provisions shall apply for the duration of covered contracts. Covered contracts are all construction projects over $100,000, and shall include all subcontracts.
I declare the foregoing to be true and correct under penalty of perjury.

Signed: ____________________________ Date: ______________

Title: __________________________________________________________________________

Company: __________________________________________________________________________

____________________________________ Date: __________

Project Manager
First Source/Local Hiring Process

- First Source is enacted by local ordinance (BMC 13.26) to enable & improve access by local residents to employment opportunities which are created by public & private construction and/or development;

- Provides businesses with qualified local applicants for job openings;

- Employer works directly with Workforce Development Program providers (on contract and/or partnering with the City), which will train, screen and refer qualified applicants.

Required Forms:

- COB First Source Agreement (one time only per contractor)
- COB Workforce Composition (also used to track new & replacement hires, submit to PM)
- New & Replacement Job Order Form (submit to City staff)

Contact person:
Delfina Geiken, Employment Programs Administrator
2180 Milvia Street, 2nd Floor
Berkeley CA 94704
(510) 981-7551
dgeiken@cityofberkeley.info
EXAMPLE OF DOCUMENTATION OF “GOOD FAITH EFFORT”

The Office of Contract Compliance offers the following list of kinds of efforts that contractors may consider:

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by the recipient to inform MBEs of contracting and subcontracting opportunities;

2. Whether the contractor advertised in general circulation, trade association, and minority-focused media concerning the subcontracting opportunities;

3. Whether the contractor provided written notice to a reasonable number of specific MBEs that their interest in the contract was being solicited, in sufficient time to allow the MBEs to participate effectively;

4. Whether the contractor followed up initial solicitations of interest by contracting MBEs to determine with certainty whether the MBEs were interested;

5. Whether the contractor selected portions of the work to be performed by MBEs in order to increase the likelihood of meeting the MBE goals (including, where appropriate, breaking down contracts into economically feasible units to facilitate MBE participation);

6. Whether the contractor provided interested MBEs with adequate information about the Plans, Specifications and requirements of the contract;

7. Whether the contractor negotiated in good faith with interested MBEs, not rejecting MBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;

8. Whether the contractor made efforts to assist interested MBEs in obtaining bonding, lines of credit, or insurance required by the recipient or contractor; and

9. Whether the contractor effectively used the services of available minority community organizations; minority contractors groups; local, state and federal minority business assistance offices; and other organizations that provide assistance in the recruitment and placement of MBEs.
PERFORMANCE BOND

CALIFORNIA PUBLIC WORKS

KNOW ALL MEN BY THESE PRESENTS,

That we, ________________ as Principal, and
______________________________, a Corporation organized and
existing under the laws of the State of ___________________________ and authorized to
transact surety business in the State of California, as Surety, are held and firmly bound unto the City
of Berkeley (hereinafter called Obligee), in the sum of ________________ Dollars
($__________________________), for the payment whereof well and truly to be made and
we each of us bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and
severally, firmly by these presents.

THE CONDITION of the above obligation is such that, Whereas, the above named bounden
principal entered into a contract dated ________________________, 20 ___ with the said Obligee to
do and perform the following work, to-wit:

which contract is hereby referred to, incorporated by reference, and made a part hereof as fully
and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, That
if the above bounden Principal shall well and truly keep, do, pay and perform, each and every, all and
singular, all the matters, provisions, undertakings, covenants, terms, conditions, agreements and
things in said contract set forth and specified to be by the said principal kept, done, paid and performed
at the time and in the manner in said contract specified, and shall pay over, make good and reimburse
to the above-named Obligee, all loss and damages which said Obligee may sustain by reason of failure
or default, or breach on the part of said Principal, then this obligation shall be void; otherwise to be and remain in full force and effect.

Whenever Principal shall be, and is declared by Obligee to be in default under the Contract, the Obligee having performed Obligee's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

1) Complete the Contract in accordance with its terms, provisions, undertakings, covenants, agreements, clauses, and conditions, or

2) Obtain a bid or bids for completing the Contract in accordance with its terms, provisions, undertakings, covenants, agreements, clauses, and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Obligee elects, upon determination by the Obligee and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Obligee, and make available as Work progresses (even though there should be a default or a succession of defaults under the contract of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price, but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the amount payable by Obligee to principal under the contract and amendments, thereto, less the amount properly paid by Obligee to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Obligee named herein or the heirs, executors, administrators or successors of Obligee.
If any action or law or in equity is brought to enforce or interpret the provisions of this bond, the prevailing party shall be entitled to reasonable attorney's fees in addition to any other relief to which it may be entitled.

SIGNED AND SEALED THIS ______________________________ day of __________________________, 20 _______.

______________________________________________________________

______________________________________________________________

Principal

______________________________________________________________

______________________________________________________________

Surety Attorney In Fact
EXHIBIT C
COMMERCIAL GENERAL AND AUTOMOBILE LIABILITY ENDORSEMENT

The attached Certificates of Insurance are hereby certified to be a part of the following policies having the following expiration dates:

<table>
<thead>
<tr>
<th>Policy No.</th>
<th>Company Providing Policy</th>
<th>Expir. Date</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

The scope of the insurance afforded by the policies designated in the attached certificates is not less than that which is afforded by the Insurance Service Organization's or other "Standard Provisions" forms in use by the insurance company in the territory in which coverage is afforded.

Such Policies provide for or are hereby amended to provide for the following:

1. The named insured is ________________________________.

2. CITY OF BERKELEY ("City") is hereby included as an additional insured with respect to liability arising out of the hazards or operations under or in connection with the following agreement:

   ____________________________________________________.

   The insurance provided applies as though separate policies are in effect for both the named insured and City, but does not increase the limits of liability set forth in said policies.

3. The limits of liability under the policies are not less than those shown on the certificate to which this endorsement is attached.

4. Cancellation or material reduction of this coverage will not be effective until thirty (30) days following written notice to __City Engineer, Engineering Division__, Department of __Public Works__, Berkeley, CA.

5. This insurance is primary and insurer is not entitled to any contribution from insurance in effect for City.

   The term "City" includes successors and assigns of City and the officers, employees, agents and volunteers.

   ________________________________
   Insurance Company

   Date: _____________    By: ________________________________
   Signature of Underwriter's Authorized Representative
CITY OF BERKELEY
RIGHT TO AUDIT FORM

The contractor agrees that pursuant to Section 61 of the Berkeley City Charter, the City Auditor’s office may conduct an audit of Contractor’s financial, performance and compliance records maintained in connection with the operations and services performed under this contract.

In the event of such audit, Contractor agrees to provide the Auditor with reasonable access to Contractor’s employees and make all such financial, performance and compliance records available to the Auditor’s office. City agrees to provide Contractor an opportunity to discuss and respond to any findings before a final audit report is filed.

Signed:______________________________________ Date:__________________

Print Name & Title:_______________________________________________________

Company:_______________________________________________________________

Questions regarding this form may be directed to the Auditor's Office, at (510) 981-6750.
PART A – GENERAL PROVISIONS

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GENERAL PROVISIONS  ii
### SECTION 1 - DEFINITION OF TERMS

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>101.1</td>
<td>Whenever in these specifications, or in any documents or instruments where these specifications govern, the following terms are used, they shall have the following meanings:</td>
</tr>
<tr>
<td>101.2 AASHTO</td>
<td>The latest revised specifications of the American Association of State Highway and Transportation officials.</td>
</tr>
<tr>
<td>101.3 As Directed</td>
<td>As directed by the Engineer or his designated representative.</td>
</tr>
<tr>
<td>101.4 ASTM</td>
<td>The latest revised specifications of the American Society for Testing Materials.</td>
</tr>
<tr>
<td>101.6 Bidder</td>
<td>Any individual, firm, partnership, or corporation submitting a proposal for the work contemplated, acting directly or through a duly authorized representative.</td>
</tr>
<tr>
<td>101.7 City, Agency</td>
<td>City of Berkeley.</td>
</tr>
<tr>
<td>101.8 Council</td>
<td>City Council of the City of Berkeley.</td>
</tr>
<tr>
<td>101.9 Engineer</td>
<td>The Assistant City Manager for Public Works of the City of Berkeley or his designated representatives.</td>
</tr>
<tr>
<td>101.10 Contract</td>
<td>The written agreement covering the performance of the work.</td>
</tr>
<tr>
<td>Clause Number</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>101.11 Contractor</td>
<td>The person or persons, partnership, association or corporation, private or municipal, who have entered into a contract with the City, as party or parties of the second part of his or their legal representatives.</td>
</tr>
<tr>
<td>101.12 Laboratory</td>
<td>The official testing laboratory of the City or other laboratories authorized by the Engineer.</td>
</tr>
<tr>
<td>101.13 Proposal</td>
<td>The written offer of the bidder for the work when made out and submitted on the prescribed proposal form, properly signed and guaranteed.</td>
</tr>
<tr>
<td>101.14 Proposal Guaranty</td>
<td>The security required by the notice to bidders to be furnished by the bidder as a guaranty that the bidder will enter into a contract for the construction of the work if it is awarded to him.</td>
</tr>
<tr>
<td>101.15 Plans</td>
<td>The official plans, profiles, cross-sections, details working drawings, and mental drawings, or reproductions thereof, approved by the Engineer, which show the location, character, dimensions, and details of the work to be done, and which are to be considered as a part of the contract supplementary to these specifications.</td>
</tr>
<tr>
<td>101.16 Purchasing Agent</td>
<td>The Purchasing Agent of the City of Berkeley.</td>
</tr>
<tr>
<td>101.17 Specifications</td>
<td>The directions, provisions, and requirements contained herein, supplemented by special provisions, pertaining to the method and manner of performing the work, and to the quantities and qualities of materials to be furnished under the contract. The term specifications shall include the General Provisions, Detailed and Technical Specifications, Special Provisions, Standard Details, the Contract Documents, and all supplementary agreements entered into between the contracting parties.</td>
</tr>
<tr>
<td>101.18 Subcontractor</td>
<td>The person or persons, partnership, association, or corporation, private or municipal, who have a direct</td>
</tr>
</tbody>
</table>
contract with the contractor. It includes one who furnishes material worked to a special design according to the plans or specifications of the work, but does not include one who merely furnishes material.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>101.19 Street</td>
<td>Any dedicated right-of-way for public use as an avenue, highway, lane alley, court, crossing, or intersection.</td>
</tr>
<tr>
<td>101.20 The Work</td>
<td>All the work described in the specifications and contract or indicated on the plans as the contemplated improvement covered by the contract.</td>
</tr>
<tr>
<td>101.21 Contract Change Order</td>
<td>A written order to the Contractor signed by the Engineer directing an addition, deletion or revision in the work, or an adjustment in the contract price or the contract time issued after the effective date of the contract. A change order may or may not also be signed by the Contractor.</td>
</tr>
<tr>
<td>101.22 Allowance</td>
<td>An inexact bid quantity listed on the Bidder's Proposal in anticipation that work of the particular nature will be required, but the quantity is not known until the work of the whole is in progress or completed. The quantity listed is for comparison of total bids. Bidder agrees to do each unit of work for the unit price bid in the proposal.</td>
</tr>
<tr>
<td>101.23 Resident Engineer</td>
<td>Designated inspection representative(s) of the Engineer.</td>
</tr>
</tbody>
</table>
SECTION 2 - PROPOSAL REQUIREMENTS AND CONDITIONS

201.1 Availability of Plans and Specifications. Plans and specifications may be examined at the office of the Engineering Division. Copies of the plans and specifications are available at the office of the Engineering Division. Copies of the Notice to Bidders and proposal forms may be obtained from the Engineering Division.

201.2 Approximate Estimate. The quantities given in the Notice to Bidders, proposal, and contract forms 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. For work bid on a lump sum price basis, any estimate of quantities is provided only for the convenience of Bidders and is not guaranteed correct by the City.

201.3 Examination of Plans, Specifications, and Site of the Work. The Bidder shall examine carefully the site of the work contemplated and the proposal, plans, specifications, and contract forms therefore. It will be assumed that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of these specifications, the plans, and the contract.

201.4 Proposal Form. All proposals must be submitted on forms for that purpose furnished by the City. Letters of transmittal cannot be considered as part of the bid.

All proposals shall give the prices proposed, and shall be signed by the Bidder, who must give his address. The Bidder shall fill out all blanks in the proposal form as therein required. In case of error, unit prices will govern over extensions and written words will govern over numerals, unless it can be established that an obviously incorrect entry has been made.

201.5 Rejection of Proposals Containing Alterations or Irregularities. Proposals may be rejected if they show any alterations of form, additions not called for, conditional bids, incomplete bids, or irregularities of any kind. When proposals are signed by an agent, other than an officer or manager of a corporation or a member of a partnership, a power of attorney or written authorization must be on file with the City prior to opening bids or shall be submitted with the proposal; otherwise, the proposal will be rejected as irregular and unauthorized.

201.6 Proposals Guaranty. All bids shall be presented in a sealed envelope and shall be accompanied by a "proposal guaranty) made payable to "City of Berkeley) and for the amount equal to at least ten percent (10%) of the bid unless otherwise specified on the "Notice to Bidders. Said guaranty shall be an unconditional certified or cashier's check, or a bank or postal money order, or bid bond executed as surety by a corporation authorized to issue surety bonds in the State of California.
201.7 **Withdrawal of Proposals.** Any bid may be withdrawn at any time prior to but not after, the hour fixed in the public notice for the opening of bids, provided that a request in writing executed by the Bidder or his duly authorized representative, for the withdrawal of such bid is filed with the Purchasing Agent. The withdrawal of a bid shall not prejudice the right of a Bidder to file a new bid.

201.8 **Disqualification of Bidders.** More than one proposal from an individual, a firm or partnership, a corporation or an association under the same or different names will not be considered. Reasonable ground for believing that any Bidder is interested in more than one proposal for the work contemplated will cause the rejection of all proposals in which such Bidder is interested. If there is a reason of believing that collusion exists among the Bidders, none of the participants in such collusion will be considered in this or future proposals. Proposals in which the prices are unbalanced may be rejected.

201.9 **Competency of Bidders.** Prior to the submission of bids, the Contractor shall be licensed in accordance with the provisions of Chapter 9 of Division III of the Business and Professional Code of the State of California and evidence of such license shall be presented to the Engineer on request.

The Engineer may require the Bidder to present satisfactory evidence that he has sufficient experience and that he is fully prepared with the necessary capital, materials, machinery, and skilled workmen to carry out the contract.

201.10 **Material Guaranty.** Before any contract is awarded, Bidders may be required to furnish a complete statement of the origin, composition, and manufacture of any or all materials to be used in the construction of the work, together with samples, which samples may be subjected to the tests provided for in these specifications to determine their quality and fitness for the work.

201.11 **Addenda.** Prior to the time set for opening of bids, the Engineer may issue addenda for clarification of the plans or specifications or for minor alterations in the work. Such addenda shall take precedence over plans, specifications, and all other Contract Documents issued prior to the opening of bids.
SECTION 3 - AWARD AND EXECUTION OF CONTRACT

301.1 Consideration of Bids. Bids will be opened publicly by the Purchasing Agent of the City on the date and at the time set forth in the "Notice to Bidders." The right is reserved by the City by action of the Council to reject any or all bids, to advertise for new proposals, to negotiate in the open market for a contract at a reasonable price, to purchase in the open market, or to have the work performed by City employees, or to abandon the work, if in the judgement of the Council, the best interests of the City will be promoted thereby.

301.2 Award of Contract. The award of the contract, if awarded, will be to the lowest responsive Bidder whose proposal complies with all the requirements prescribed. The award, if made, will be made within seventy-five (75) calendar days after the opening of the proposals.

All bids will be compared on the basis of the Engineer's estimate of the quantities of work to be done.

301.3 Return of Proposal Guarantees. All proposal guarantees will be held by the City until the contract has been authorized by Council resolution and signed by the City Manager after which guarantees for unsuccessful proposals will be returned to the unsuccessful Bidders. If bids are rejected, the proposal guarantees will be returned after the date of the rejection.

301.4 Contract Bonds. At the time of execution of the contract by the City Manager, the Contractor will be required to furnish a Surety Company contract bond for faithful performance in the sum of not less than one hundred percent (100%) of the amount of his contract, in addition to which he will be required to furnish a Surety Company labor and material bond in the sum of not less than one hundred percent (100%) of the amount of the contract in accordance with the provisions of state laws.

Alterations, extensions of time, extra and additional work, and other changes authorized by these specifications or any part of the contract may be made without securing the consent of the Surety or Sureties on the contract bonds.

301.5 Execution of Contract. The Bidder's Proposal (offer) shall become a binding contract on the parties when the award of a contract pursuant to said proposal is authorized by resolution of the City Council. The proposal will then be executed in writing by the City Manager, or his/her authorized representative, in the name of the City.

301.6 Failure to Perform Contract. If the successful Bidder fails to begin performance of the contract within thirty (30) calendar days from the date of the award of the contract, the City will either let the contract to the next lowest Bidder or will reject all other bids and call for new bids. The
successful Bidder who has failed to begin performance of the contract shall be liable to the City for the sum, not exceeding the amount of such cash, check, money order or bond as shall have been deposited as a proposal guaranty, by which the amount of the contract, covering the said proposal, executed by and between the City and some third party, may exceed the amount bid by the original successful Bidder. Such portion of said cash, check, money order, or original bond as equals said sum shall be deemed to be liquidated damages and shall be declared forfeited to the City and shall be collected and paid to the City.
SECTION 4 - SCOPE OF WORK

401.1 Work to be Done. The intent is to prescribe complete work or improvement which the Contractor undertakes to do in full compliance with the plans, specifications, and contract. The Contractor shall perform all items of work covered and stipulated in the specifications and contract, together with any extra work, all in accordance with lines, grades, cross-sections, and dimensions shown on the plans. It is further intended that all miscellaneous work required to make driveways, sidewalks, intersections, roof drains, and other privately owned improvements conform to the new work shall be performed by the Contractor. The Contractor shall furnish, unless otherwise provided in these specifications, all material, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to the prosecution and completion of the work.

All work described in the plans and specifications will be let under one contract unless otherwise set forth in the Notice to Bidders or on the Bidder's Proposal.

401.2 Alterations and Increased or Decreased Quantities. The City reserves the right in writing, to increase or decrease the quantity, to order additions to, omissions from, or corrections, alterations and modifications in the line, grade, form dimensions, plan or kind or amount of work, or materials herein contemplated, or any part thereof, either before or after the beginning of construction, as may be deemed necessary or advisable by the Engineer, provided such alterations do not change the total cost of the project, based on original estimated quantities and the unit prices bid, by more than twenty percent (20%), and provided further that such items do not change the total cost of any major item by more than fifty percent (50%). (A major item is one, the total cost of which is more than ten percent (10%) of the total contract price.) Any alterations in excess of these limits will be treated as extra work and will be covered by a contract change order, the same as though the alteration were an extra work item.

Should conditions during the progress of the work make it impossible for the Contractor to comply strictly with the terms of the contract, the Contractor shall apply in writing to the Engineer for an alteration, provided that it is not detrimental to the work or does not entail additional cost. If such alteration is acceptable to the Engineer, the Contractor shall be notified in writing, whereupon the alteration may be made. When such alteration is not acceptable to the Engineer, the Contractor shall determine some other method of doing the work which shall be acceptable.

Such alteration and increased or decreased quantities shall in no way affect or make void this contract or any part thereof, except what is necessarily affected by such alteration and is clearly the evident intention of the parties to this contract.

401.3 Extra Work. New and unforeseen items of work will be classed as extra work when they cannot be covered by any of the various items for which there is a bid price or by combinations of such items, or if the character of an item is materially changed on which the Contractor based his bid price, and
that change materially increases or decreases the cost of the item as outlined in Section 401.2 hereof.

Prices for extra work shall be itemized and covered by a contract change order submitted by the Contractor and approved by the Engineer prior to actual starting of such work.

Should the parties be unable to agree on unit prices for the extra work, or if it is impractical, the Engineer may instruct the Contractor to proceed with the work by force account and he shall be paid as provided in Section 901.2 of these specifications.

401.4 Unauthorized Work. Work done without lines and grades being given, work done beyond the lines and grades shown on the plans, work done in the absence or without the knowledge of the Engineer, including any work performed by subcontractors without proper superintendence by the Contractor, as provided for in Section 501.6, or any extra work done without written authority, will be considered as unauthorized and at the expense of the Contractor and will not be measured or paid for by the City.

401.5 Protection of Utilities. A preliminary study of the location of underground utilities within the limits of the work has been made. The location of the underground utilities indicated on the plans is not guaranteed to be accurate or complete, but is plotted for the general information of the Contractor. The Contractor shall contact Underground Service Alert (USA) at (800) 227-2600 at least four (4) working days before excavating, to allow utility companies to mark and identify their respective utilities within the limit of the work. Aboveground utilities are not shown on the plans. It shall be the responsibility of the Contractor to coordinate and determine the exact locations and/or depths of all of the aboveground utilities, underground utilities, and their service locations.

The Contractor shall be responsible for protecting and supporting the aboveground utilities and the identified underground utilities that occur in the limits of the work with a method acceptable to the respective utility owners. The cost of protecting and supporting the utilities shall be included in the bid prices for the various items of work. Any identified damage to the SBC Telephone, PG&E, EBMUD, or Cable TV lines shall be repaired by the respective utility owner at the Contractor's expense.

See also Sections 701.25.1 and 701.25.2.

401.6 Cleaning Up. The Contractor shall not allow the site of the work to become littered with trash, rubbish, and waste material but shall maintain the same in a neat and orderly condition throughout the construction period. The Engineer shall have the right to determine what is or is not trash, rubbish or waste material and the place and manner of disposal.

The Contractor shall maintain a neat appearance to the work. Contractor shall promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids and cleaning solutions from surfaces to prevent marring or other damage.
Broken concrete debris, and unsuitable excavated native soil during construction shall be disposed of concurrently with its removal. If stockpiling is necessary all debris shall be placed in trash bins daily and shall be removed or disposed of weekly. Any waste shall not be buried on the site or disposed of into storm drains, sanitary sewers, streams, or waterways.

Forms or falsework that are to be re-used shall be stacked neatly concurrently with their removal. Forms and falsework that are not to be re-used shall be disposed of concurrently with their removal.

Full compensation for conforming to the provisions in this section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

Sidewalks, street area, parking strips, and driveway approaches must be kept reasonably clean at all times during construction and be completely and carefully cleaned after the work has progressed beyond the immediate vicinity to the satisfaction of the Engineer. Reasonable cleanup is defined as no dust, rock, or mud on any portion of the public right-of-way or the private properties as a result of the Contractor's work.

401.7 Dust and Debris Control. The Contractor shall be responsible for controlling dust in the air and rocks, debris, mud or dirt which are scattered as a result of his operations on the job. The Contractor shall be responsible for cleaning all mud, rock, dust, dirt, and debris-producing materials that originate in the project area and are deposited on other public or private property by truck tires, spillages, or by other means. The Contractor shall have suitable and adequate street cleaning equipment on the project site at all times.

The Contractor shall begin cleanup operation by 3 PM and before the end of each day's work, clean all paved portions of the project and paved streets leading from the project that have dust-producing materials or debris deposited upon them. The work areas shall be swept clean at the end of each day's work and at other times when directed by the Engineer.

The Contractor shall endeavor, whenever possible, to restrict the use of water to control dust for his convenience in order to conserve water during drought situations or mandated rationing required by the Water Utility Company. Whenever flushing of streets or any other work is necessary, the Contractor shall provide filter materials at the catch basin to retain any debris and dirt flowing into the City's drainage system.

The cost of the above work, including the providing of barricades, water and other materials, labor, and equipment shall be at the sole cost and expense of the Contractor.

The Engineer may determine that an emergency exists when dust, rocks, debris, mud, or dirt are scattered in the public right of way or in the private properties as a result of Contractor's activities and/or deterioration of such conditions due to rain. The emergency conditions may also be declared when traffic
or the Contractor's equipment travelling through a job causes dust to fly or rocks, debris, mud, or dirt to be scattered. Similar emergency conditions may be determined by the Engineer if the storage of materials, tools, or any other equipment related to the project, in the public rights of way, is causing any obstruction or blocks access to the neighboring properties and/or dangerously placed without proper barricades and lights and/or backfill stockpiles or debris washing away into the street gutter and catch basins.

401.7-1 Emergency Cleanup Work. In any case in which the Contractor fails to satisfactorily complete the cleanup work described in this section, the Engineer or his representative may determine that an emergency exists. In the event an emergency is determined by the Engineer, the Contractor shall immediately make available manual labor or mechanical equipment capable of handling the cleaning process. During such an emergency, City forces may be called upon to complete the cleanup work, or the City may contract for the cleanup work. All construction work shall be shut down during this cleanup work by the City/contract forces. The Engineer may shut down further construction work until the violations are corrected to the satisfaction of the Engineer. The cost of the work performed by City/Contract forces plus an additional 70% surcharge shall be paid by the Contractor by deduction from payment due him on the contract. No compensation shall be given to the Contractor for stoppage of work. Such action by the Engineer, however, shall not relieve the Contractor of his responsibility for any damages which may occur before, during or after such action has been taken by the Engineer, and shall place no liability upon the City or the Engineer.

401.8 Noise Control. All construction machinery and vehicles employed on the project shall be equipped with approved sound muffling devices, and operated in a manner to cause the least noise consistent with efficient performance of the work. Section 701.11 specifies time limitation in which engine driven equipment shall not be operated.

401.9 Temporary Light, Power, and Water. The Contractor shall at its own expense, furnish, install, maintain, and remove all temporary light, power, and water, including piping, wiring, lamps, and other equipment, necessary for the work. The Contractor shall not draw water from any fire hydrant, except to extinguish a fire, without first obtaining permission from the water agency concerned.

401.10 Coordination With Affected Residents. This contract may include a significant amount of work within construction easements in private property. The Contractor shall be required to provide adequate notification to, and coordination with, the affected residents. At least 1 week prior to working in easements, the Contractor shall notify the affected residents in writing of the intention to perform work within their properties, the starting dates of work, and duration of the work. The Contractor shall only initiate an amount of work that can be reasonably completed on the same day. If the initiated work is unfinished, the Contractor shall provide adequate covers and appropriate barricades and warning signs to ensure public safety to the satisfaction of the Engineer. After completion of work in the easement area, the Contractor shall obtain written release from the property owners and give a copy to the Engineer. Any
damages to the properties shall be restored and handled in accordance with Section 401.11 of this specification.

In addition, service connections may be required to be temporarily stopped for rehabilitation of the sewer mains and/or laterals. At least 1 week prior to working in a particular area, the Contractor shall notify the affected residents in writing of the intended work, the starting date and duration, and any coordination requirements to facilitate work progress. The Contractor shall be required to adequately notify affected residents of schedule changes.

For service connection disruptions required to make system improvements, the Contractor shall provide a second notice to residents/businesses not less than 48 hours prior to service interruption. For interruptions in service longer than the limits specified below, the Contractor shall at his cost arrange for and provide in-kind services. Maximum interruption time without provision of in-kind services for private residences shall be as follows:

- Water Services: 4 hours
- Sewer Services: 7 hours

All interruptions shall be restored by the Contractor at the end of each day.

The Contractor shall plan for and provide the services of a septic tank pumper truck to periodically pump out any sewage which may accumulate in excavation pits at the two-way cleanout location. Alternatively, the Contractor may utilize submersible sewage pumps or trash pumps to convey the sewage from the pits to a functional portion of the existing sanitary sewer within the project area.

The Contractor shall at all times perform his lateral connection work so as to minimize the quantity of sewage which may accumulate, to minimize adverse impacts on public health and sanitation and to minimize the potential for odors. The Contractor shall at all times maintain an adequate supply of bottled chlorine bleach (sodium hypochlorite solution) to treat any accumulated sewage should this be determined necessary by the Engineer to minimize odors and to protect the public and workers' health.

All costs to the Contractor for coordination with the affected residents shall be included in bid prices for the replacement or rehabilitation of sewer mains and laterals.

401.11 Protection and Restoration of Existing Improvements. The Contractor shall be responsible for the protection of public and private property adjacent to the Work and shall exercise due caution to avoid damage to such property.

The Contractor shall repair or replace all existing improvements and street pavements which are not designated for removal (e.g., street sections, curbs, gutters, driveways, fences, walls, structures, landscaping, etc.) which are damaged or removed as a result of its operations. Repairs and replacements
shall be at least equal to existing improvements, and shall match them in finish and dimensions.

Prior to initiating work in the public right of way and in the easements, the Contractor shall make an audio/video cassette tape recording of the affected areas showing all existing improvements, and their conditions. The tapes shall be turned over to the Engineer and shall be used as a historical recording of the pre-construction conditions. The costs of the pre-construction audio-visual survey shall be the responsibility of the Contractor.

Any damages to the private properties will be restored to the satisfaction of the property owners/Engineer within seven (7) days of the damage(s).

Damages within the public right of way including street pavement will be restored to the satisfaction of the Engineer after work on that particular block is completed.

401.12 Submittals. Where required by the specifications, the Contractor shall submit descriptive information which will enable the Engineer to advise the Agency whether the Contractor's proposed materials, equipment or methods of work are in general conformance to the design concept and in compliance with the drawings and specifications. The information to be submitted shall consist of proposed construction schedule, traffic control plan, shoring, sheeting and bracing as required drawings, specifications, descriptive data, certificates, samples, test results and such other information, all as specifically required in the specifications. In some instances, specified submittal information described some, but not all, features of the material, equipment, or method of work. Features not requiring submittals shall be as specified.

401.12-1 Contractor's Responsibilities. Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the material, equipment or method of work shall be as described in the drawings. Submittal documents shall be clearly edited to indicate only those items, models, or series of equipment, which are being submitted for review. All extraneous materials shall be crossed out or otherwise obliterated. The Contractor shall insure that there is no conflict with other submittals and notify the Engineer in each case where his submittal may affect the work of another contractor or the Agency. The Contractor shall insure coordination of submittals among the related crafts and subcontractors.

401.12-2 Transmittal Procedure

401.12-2a General. Submittals regarding material and equipment shall be accompanied by a transmittal form. A separate form shall be used for each specific item, class of material, equipment, and items specified in separate, discrete sections, for which the submittal is required. Submittal documents common to more than one piece of equipment shall be identified with all the appropriate equipment numbers. Submittals for various items shall be made with a single form when the items taken together constitute a
manufacturer's package or are so functionally related that expediency indicates checking or review of the group or package as a whole.

401.12-2b Deviation from Contract. If the Contractor proposes to provide material, equipment, or method of work which deviates from the requirements of the plans and specifications, he shall indicate as "deviation" on the transmittal form accompanying the submittal copies.

401.12-2c Submittal Completeness. Submittals which do not have all the information required to be submitted, including deviations, are not acceptable and will be returned without review.

401.12-3 Review Procedure. Submittals are specified for those features and characteristics of materials, equipment, and methods of operation which can be selected based on the Contractor's judgment of their conformance to the requirements of the plans and specifications. Other features and characteristics are specified in a manner which enables the Contractor to determine acceptable options without submittals. The review procedure is based on the Contractor's guarantee that all features and characteristics not requiring submittals conform to the plans and specifications. Review shall not extend to means, methods, techniques, sequences or procedures of construction, or to verifying quantities, dimensions, weights or gages, or fabrication processes except where specifically indicated or required by the contract documents or to safety precautions or programs incident thereto. Review of a separate item, as such, will not indicate approval of the assembly in which the item functions.

When the contract documents require a submittal, the Contractor shall submit the specified information as follows:

1. One reproducible original of all the submitted information. When individual sheets in the submittal exceed 8-1/2 inches x 11 inches, a sephia shall be submitted.

2. Four copies of all the submitted information.

Unless otherwise specified, within 10 calendar days after receipt of the submittal, the Engineer shall review the submittal and return one copy of the marked-up reproducible original noted in 1 above. The reproducible original will be retained by the Engineer. The returned submittal shall indicate one of the following actions:

1. If the review indicates that the material, equipment or work method complies with the contract documents, submittal copies will be marked "NO EXCEPTIONS TAKEN." In this event, the Contractor may begin to implement the work method or incorporate the material or equipment covered by the submittal.

2. If the review indicates limited corrections are required, copies will be marked "MAKE CORRECTIONS NOTED." The Contractor may begin implementing the work method or incorporating
the material and equipment covered by the submittal in accordance with the noted corrections.

3. If the review reveals that the submittal is insufficient or contains incorrect data, copies will be marked "AMEND AND RESUBMIT." Except at his own risk, the Contractor shall not undertake work covered by this submittal until it has been revised, resubmitted and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."

4. If the review indicates that the material, equipment, or work method does not comply with the contract documents, copies of the submittal will be marked "REJECTED -SEE REMARKS." Submittals with deviations which have not been identified clearly may be rejected. Except at his own risk, the Contractor shall not undertake the work covered by such submittals until a new submittal is made and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."

401.12-4 Effect of Review of Contractor's Submittals. Review of drawings, methods of work, or information regarding materials or equipment the Contractor proposes to provide, shall not relieve the Contractor of his responsibility for errors therein and shall not be regarded as an assumption of risks or liability by the Engineer or the Agency, or by any officer or employee thereof, and the Contractor shall have no claim under the contract on account of the failure, or partial failure, of the method of work, material, or equipment so reviewed. A mark of "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED" shall mean that the Agency has no objection to the Contractor, upon his own responsibility, using the plan or method of work proposed, or providing the materials or equipment proposed.

401.13 Final Cleaning Up. Upon completion of the work, and before acceptance and final payment, the Contractor shall clean the project areas and remove all surplus and discarded materials, falsework, rubbish and temporary structures and restore in an acceptable manner all property, both public and private, which has been damaged during the prosecution of the work, and shall leave the improvement in a neat and presentable condition throughout the entire length of the improvement under contract to the satisfaction of the Engineer. If the Conditions as noted above are not corrected immediately, the Engineer may declare an emergency and take necessary action in accordance with Section 401.7-1 of this specification.

401.14 Changed Conditions. The Contractor shall notify the Engineer in writing of the following Work site conditions, hereinafter called changed conditions, promptly upon their discovery and before they are disturbed.

1. Subsurface or latent physical conditions differing materially from those represented in the Contract; and

2. Unknown physical conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character being performed.
The Engineer will promptly investigate conditions when notified or any conditions discovered by him which appear to be changed conditions. If the Engineer determines that the conditions are changed conditions and that they will materially increase or decrease the costs of any portion of the Work, a Change Order will be issued adjusting the compensation for such portion of the work in accordance with Subsection 401.3. If the Engineer determines that conditions of which has been notified by the Contractor do not justify an adjustment in compensation, the Contractor will be so advised in writing. Should the Contractor disagree with such determination, it may submit a notice of potential claim to the Engineer, as provided in Subsection 501.12.

If the Engineer determines that the conditions are changed conditions and that they will materially affect the performance time, the Contractor, upon submitting a written request, may be granted an extension of time subject to the provisions of Subsection 801.7.1.

The Contractor's failure to give notice of changed conditions promptly upon their discovery and before they are disturbed shall constitute a waiver of all claims in connection therewith.

401.15 As-Built Records. The Contractor shall maintain at the jobsite one (1) set of Plans marked to show any deviations which have been made from the Plans, including buried or concealed construction and utility features revealed during the course of construction. Record the horizontal and vertical location of all buried utilities that differ from the Plans. These Plans shall be available for review by the Engineer at all times. Upon completion of the work, deliver the marked set of prints in good condition to the Engineer for incorporation into the original drawings.
SECTION 5 - CONTROL OF THE WORK

501.1  Authority of the Engineer. The Engineer shall decide all questions which may arise as to the quality or acceptability of materials furnished and work performed, and as to the manner or performance and rate of progress of the work; all questions which may arise as to the interpretation of the Plans and Specifications; all questions as to the acceptable fulfillment of the contract on the part of the Contractor; and all questions as to compensation. His decision shall be final and he shall have authority to enforce and make effective such decisions and orders which the Contractor fails to carry out promptly.

501.2  Plans. All authorized alterations affecting the requirements and information given on the approved plans shall be in writing. No changes shall be made in any plan or drawing after the same has been approved by the Engineer, except by direction of the Engineer. Where at any time reference is made to the plans, the interpretation shall be the plans as affected by all authorized alterations then in effect.

501.3  Conformity with Plans and Allowable Deviation. Finished surfaces in all cases shall conform with the lines, grades, cross sections, and dimensions shown on the approved plans. Deviation from the approved plans, as may be required by the exigencies of construction, will, in all cases, be determined by the Engineer and authorized in writing.

501.4  Coordination with Contract Documents. These specifications, the plans, and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be cooperative, to describe and provide for a complete work. If there is a conflict between Contract Documents, the document highest in precedence shall control. The precedence shall be:

1. Federal and State requirements.
2. Permits from other agencies as may be required by law.
5. Contract Plans, including General Notes.
Materials and Part 3 - Construction Methods.


Change orders, supplemental agreements, and approved revisions to Plans and Specifications will take precedence over documents listed above. Detailed plans shall have precedence over general plans.

501.5 Interpretation of Plans and Specifications. Should it appear that the work to be done or any of the matters relative thereto are not sufficiently detailed or explained in the Plans or Specifications, the Contractor shall apply to the Engineer for such further explanations as may be necessary and shall conform to the same as part of the contract, so far as may be consistent with the original specifications; and in the event of any doubt or question arising regarding the true meaning of the Specifications, reference shall be made to the Engineer, whose decision thereon shall be final.

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

Any part of the work which is not mentioned in the Specifications, but is shown in the Plans, or any part not shown on the Plans but described in the Specifications, shall be performed by the Contractor.

501.6 Superintendence. The Contractor will be supplied with five copies of the Plans and Specifications. Additional sets of Plans and Specifications shall be provided at the Contractor's cost which shall be equal to the City's reproduction costs. The Contractor shall have available on the work, at all times, one copy of each of said Plans and Specifications; he shall give the work the constant attention necessary to facilitate the progress thereof and shall cooperate with the Engineer and with other contractors in every way. The Contractor shall, at all times, have a competent superintendent capable of reading and thoroughly understanding the Plans and Specifications, as his agent on the work, who shall receive instructions from the Engineer or his authorized representatives.

The superintendent shall have full authority to execute the order or directions of the Engineer without delay and to promptly supply such materials, tools, plant equipment, and labor as may be required. Such superintendent shall be furnished irrespective of the amount of work sublet.

501.7 Lines and Grades. Lines and grades for the work will be given by the Engineer. The Contractor shall give at least 48 hours' notice when he will require the services of the Engineer for laying out any portion of the work.

The Contractor may be required to furnish labor, at no extra cost to the City, to assist the City survey party. In general, this would mean the occasional furnishing of a laborer to drive stakes, pull manhole covers, move obstructions, etc., in order to expedite the work.

The Contractor shall protect stakes set by City surveyors by placing guard stakes or large objects to protect
them from damage. The Engineer shall charge the Contractor for all time spent resetting stakes.

501.8 Authority and Duties of Resident Engineer. Duly authorized Resident Engineers, who shall perform their duties under the direction of the Engineer, will be assigned to the project or each part thereof. The presence of the Resident Engineer shall in no way lessen the responsibility of the Contractor. In case of any dispute arising between the Contractor and the Resident Engineer as to materials furnished or the manner of performing work, the Resident Engineer shall have authority to reject materials or suspend the work until the questions at issue can be referred to and decided by the Engineer. The Resident Engineer is not authorized to revoke, alter, enlarge, relax, or release any requirement to these specifications, nor to approve or accept any portion of the work, nor to issue instructions contrary to the Plans and Specifications.

501.9 Inspection. The Contractor shall furnish the Engineer or his designated representative with access to the work for ascertaining whether the work performed and materials used are in accordance with the requirements and intent of the specifications and contract.

The Contractor shall give the Engineer or his representative notice of the time when he or his subcontractors will start the various units or operations of the work. Notice shall be given at least 24 hours in advance of starting or resumption time exclusive of Saturdays, Sundays, or holidays, for the purpose of permitting the Engineer to make the necessary assignment of his representative or inspector on the work. Any work performed by the Contractor or his subcontractors in conflict with said notice shall be removed if so ordered by the Engineer, his representative or inspector on the work.

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

501.10 Traffic Control. The Contractor shall submit three copies of proposed traffic control plan to the Engineer for approval at least five (5) working days prior to commencement of work. No work will be started unless the traffic plan and requirements in Section 801.2 is duly approved. This plan will be submitted in the form of a drawing locating the project area and all major and minor access and exits to and out of this area. The plan will also include the immediate neighboring areas where the traffic shall be directly or indirectly affected as a result of construction work in the project area.

The traffic control plan shall be developed for various traffic situations and street configurations in the work and surrounding areas in full conformance with the "State of California Business, Transportation and housing Agency Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zone" dated 1985, hereinafter referred to as Traffic Control Manual.

At main entry and exit points of each work location, the Contractor shall provide a 30" x 30" sign advising the public of the anticipated period of time that traffic delays may be anticipated. This sign will also
include name and telephone number of the Contractor along with starting and completion dates of the contract. Sign will be erected 7 days in advance of any work.

If traffic is to be detoured over a centerline or detoured in advance of the work, detour plan must be incorporated in the traffic control plan. Police, Fire, and Public Works Department shall be notified at least 48 hours in advance of any work which will interfere with the normal flow of vehicular or pedestrian traffic. Intersection closure may only occur if, in the traffic plan, the two adjacent intersections remain open, unless otherwise approved by the Engineer.

All signs and devices proposed to warn, direct, and control traffic in the vicinity of the work shall conform in size, shape, and color to the requirements set forth in the Traffic Control Manual mentioned above and approved by the Engineer in accordance with the traffic control plan.

The full width of the traveled way shall be open for use by public traffic on Saturdays, Sundays, designated legal holidays, after 3:00 P.M. on Fridays and the day preceding designated legal holidays, and when construction operations are not actively in progress.

Cost of traffic controls, including flag person, shall be included and spread among appropriate bid items as determined by the Contractor.

Public parking on streets may be restricted as necessary.

The Contractor shall furnish, erect, and maintain all signs except "No Parking" signs which shall be obtained by the Contractor from the City of Berkeley. All signs shall be placed as directed by the Engineer. The "No Parking" signs must be posted by the Contractor no later than 48 hours or as directed by the Engineer in advance of the time of need. "No Parking" signs shall bear the name of the Contractor and shall also specify the "No Parking" dates and locations.

The Contractor shall replace within a 24 hour period any sign that has been damaged, lost, or worn out.

The Traffic Engineer shall have authority to change the traffic plan and make recommendations through the Engineering Inspector after the project has started and throughout the project.

The Contractor shall comply with the traffic engineering recommendations within a 24 hour period or immediately if requested. Failure to comply with this item shall be enough reason for the Engineer to stop the project.

501.11 Defective and Unauthorized Work. All work which is defective in its construction or deficient in any of the requirements of these specifications shall be remedied, or removed and replaced by the Contractor in an acceptable manner, and no compensation will be allowed for such correction.
Upon failure of the Contractor to comply forthwith with any order of the Engineer made under the provisions of these specifications, the Engineer shall have the authority to cause defective work to be remedied, or removed and replaced, and unauthorized work to be removed, and to deduct the costs thereof from any monies due or to become due the Contractor.

501.12 Disputed Claims. In any case where the Contractor deems extra compensation is due him for work or materials not clearly covered in the contract, or not ordered by the Engineer as extra work, the Contractor shall notify the Engineer in writing of his intention to make claim for such extra compensation before he begins the work on which he bases the claim. If such notification is not given or the Engineer is not afforded proper facilities by the Contractor for keeping strict account of actual cost, then the Contractor hereby agrees to waive the claims for such extra compensation.

Such notice by the Contractor, and the fact that the Engineer has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim. The claim must be passed upon by the Engineer. In case the claim is found to be just, it shall be allowed and paid for as extra work. Unless the Contractor gives notice of his claim to the Engineer within 10 calendar days, or before he begins the work on which he bases his claim, whichever is sooner, it will not be considered.

501.13 Arbitration. Disputed claims may be settled by arbitration if both parties mutually agree. The arbitration procedures shall be in accordance with the construction industry arbitration rules of the American Arbitration Association. Arbitration awards shall be presented in writing and shall include the following elements: (1) legal "finding of fact" established by the arbiter; (2) specific breakdown of the dollar amounts allocated for each issue under arbitration; (3) the arbiter's "conclusion of law"; (4) a summary of the evidence; and (5) reasons underlying the arbiter's award.

501.14 Final Inspection. Whenever the work provided and contemplated by the contract shall have been satisfactorily completed and the final cleaning up performed, the Engineer will make the final inspection.

501.15 Progress Meetings. The Contractor shall schedule and hold regular on-site progress meetings weekly and at other times as requested by the Engineer or as required by progress of the Work. The Contractor, Engineer, and all subcontractors active on the site shall be represented at each meeting. The Contractor may, at its discretion, request attendance by representatives of its suppliers, manufacturers, and other subcontractors. The purpose of the meetings will be to review the progress of the work, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop.

501.16 Substitution. Any materials, process, or article may be requested for a substitution by the Contractor, in lieu of that specified or shown, under the following conditions:

1. Requests must be submitted in writing sixty (60) days prior to starting the work, as established by the Engineer, so as not to cause any delay in completion of the project.
2. The Contractor shall, at no cost to the City, furnish all testing, data, engineering, and design services (including the review costs incurred by the Engineer) for items offered as equivalent to those specified. Test methods and findings shall, prior to installation, be subject to approval of the Engineer.

3. On sewer rehabilitation projects, the sewer rehabilitation methods shown on the Plans are the minimum levels acceptable for the respective reaches. The three sewer rehabilitation methods, in descending order of acceptability, are as follows:
   - Replacement
   - Inversion-Lining
   - Sliplining

Substitution with a lower level rehabilitation method will not be permitted unless field conditions dictate that a lesser method will provide comparable sewer integrity. A credit change order will be prepared accordingly. The foregoing shall require the approval of the City and the Engineer. Substitution with a higher level rehabilitation method may be acceptable subject to approval of the Engineer.

1. No requests for substitution will be considered during the bidding period.

2. Any substitution of any material, process, or article shall be at no additional costs to the City. Substitution with a lesser level rehabilitation method shall be accomplished by credit change order. Substitution with a higher level method shall be accomplished by a no cost change order.

The Engineer reserves all rights and will have final approval as to the substitution of alternative rehabilitation methods.

501.17 Reinspection, Retesting, and Re-staking. All costs incurred by the City for reinspection of poor workmanship, failing air tests, failing compaction tests, failing tests of any kind, and re-staking caused by the Contractor shall be deducted from the amounts due the Contractor by contract change order. The Engineer's decision as to determination of poor workmanship shall be final.
SECTION 6 - CONTROL OF MATERIAL

601.1 Sample and Tests. At the option of the Engineer, the source of each of the materials shall be approved by the Engineer before delivery is started and before such material is used in the work. Representative preliminary samples of the character and quality prescribed shall be submitted by the Contractor or producer of all materials to be used in the work, for testing or examination as desired by the Engineer.

All tests of materials furnished by the Contractor shall be made in accordance with commonly recognized standards as set forth in the specifications and such other special methods and tests as may be prescribed.

The Contractor shall furnish such samples of materials as are requested by the Engineer, without charge. No material shall be used until it has been approved by the Engineer. Samples will be secured and tested by the laboratory whenever necessary to determine the quality of material.

601.2 Defective Materials. All materials not conforming to the requirements of these specifications shall be considered as defective, and all such defective materials, whether in place or not, shall be rejected. They shall be removed immediately from the site of the work unless otherwise permitted by the Engineer. No rejected material, the defects of which have subsequently been corrected, shall be used until approved in writing by the Engineer.

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

601.3 Storage of Materials. Materials shall be so stored as to ensure the preservation of their quality and fitness for the work. Stored materials shall be so located as to facilitate prompt inspection. Space for main storage/construction yard shall be the Contractor's responsibility.

No construction material shall be stockpiled in the street for a period of more than five (5) days at a particular location. Contractor shall coordinate with the Engineer to designate such temporary storage areas. The delivery of materials on site should be scheduled in installments in such a way that all stockpiled materials are used within the above specified period. Proper lighted barricades and other required traffic controls shall be maintained at all times around the stored materials. No material shall be stored on the sidewalk area and/or in front of driveways or within 15 feet of a fire hydrant or catch basin, passageways, or in such a way as to hinder pedestrians, vehicular flow, or drainage.
Street curbs and gutters shall be clear from stockpiled materials. To maintain flow of unobstructed surface water on the street, 4" diameter minimum drain pipes shall be provided along the gutters if any materials are stockpiled in those areas.

At least one lane shall be kept open in the street at every time during the time material is stockpiled in the public right of way. Any violation of the above requirements will result in a declaration of an emergency situation by the Engineer and proper remedial action shall be taken in accordance with Section 401.7 of this specification.

Clean up and tidiness under Section 401.6 shall be adhered to and enforced.

601.4 Trade Names or Alternatives. Whenever any article or any class of materials is specified by a trade name or by the name of any particular patentee, manufacturer or dealer, it shall be and is mutually understood to mean and specify the article or class of materials described, or any other equal thereto in quality, finish, and durability, and equally as serviceable for the purpose for which it is intended, subject to the approval and acceptance of the Engineer.
SECTION 7 - LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

701.1  **Laws to be Observed.** The Contractor shall keep himself fully informed of all state and national laws and all municipal ordinances and regulations of the City which in any manner affect those engaged or employed in the work, or which in any way affect the conduct of the work, and or all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same.

The Contractor shall at all times observe and comply with, and shall cause all agents and employees to observe and comply with all such laws, ordinances, regulations, orders and decrees, including all provisions of the Occupational Safety and Health Act of 1979 and all amendments thereto, and all applicable federal, state, municipal, and local safety regulations; and shall protect and indemnify the City, the Council, and the Engineer, and all of its and their officers and agents and servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself or his employees. If such discrepancy or inconsistency is discovered in the plans, drawings, specifications, or contract for the work in relation to any such law, ordinance, regulation, order or decree, the Contractor shall forthwith report the same, in writing, to the Engineer.

701.2  **Hours of Labor.** Eight (8) hours of labor shall constitute a legal day's work for all workers employed on this contract and the Contractor and any subcontractor under him shall comply with and be governed by the laws of the State of California having to do with working hours as set forth in Division 2, Part 7, Chapter 1, Article 3 of the Labor Code of the State of California as amended.

The Contractor shall forfeit, as penalty to the City of Berkeley, twenty-five dollars ($25.00) for each laborer, worker, or mechanic employed in the execution of the contract, by him or any subcontractor under him, upon any of the work hereinbefore mentioned, for each calendar day during which said laborer, worker, or mechanic is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of said Labor Code.

701.3  **Apprentices.** The Contractor and any subcontractor working under him must comply with and be governed by the laws of the State of California having to do with the employment of apprentices on public works as set forth in Sections 1777.5 and 1777.6 of the Labor Code of the State of California.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

701.4  **Nondiscrimination.** There shall be no discrimination against any employee who is employed in the work covered by this contract, or against any applicant for such employment, because of race, religion, color, disability, national origin, or sexual preference. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment
advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship.

In order that this provision against discrimination shall achieve the intended result, before a contract is awarded to the apparent successful bidder there shall be a pre-award conference between such apparent successful bidder and the City Manager, or the City Manager's designated representative. Such pre-award conference shall be held after the opening of bids and before award of the contract at a date and time to be designated by the City Manager, or his representative, and at such pre-award conference the apparent successful bidder shall present to the City Manager, or his authorized representative, the program of affirmative action he proposed to undertake to ensure that persons are employed and employees are treated so that they receive equal opportunities without regard to race, religion, color, disability, national origin, or sexual preference. Such program shall include not only the affirmative action proposed to be undertaken by the apparent successful bidder in his own employment practices but also the affirmative action that he proposes to undertake to assure that all subcontractors working under him provide equal employment opportunities for all without regard to race, religion, color or national origin. Failure to carry out the proposed program of affirmative action shall be deemed to be a violation of the contract within the meaning of Section 701.26 of the General Provisions.

In the event that the apparent successful bidder refuses or fails to participate in such pre-award conference or refuses or fails to present a program of proposed affirmative action, the Council may determine that he is not the lowest responsive bidder and his bid shall be rejected. In such event, the City Council shall have the right to declare such apparent successful bidder to be a nonresponsive bidder, in which case no contract shall be awarded to him by the City for a period of at least three (3) years from the date of the declaration by the Council that he is a nonresponsive bidder, and then only after satisfactory evidence that he will comply with the requirements of this Section of the General Provisions.

If the bid of the apparent successful bidder is rejected by the Council and the Council wishes to award the contract to another bidder, such contract shall not be awarded until such bidder has complied with the requirements of this Section relating to pre-award conference and the effects thereof, as hereinabove set forth, shall be applicable to said other bidder, except that such pre-award conference shall be held within five (5) days following the action of the Council in rejecting the bid. The other bidders shall be considered for award pursuant to this paragraph in the order of their bids starting with the next lowest responsive bidder and continuing until a bidder complies with the requirements of this Section, or until the council takes other action as authorized by Section 67 of the Charter.

701.5 Prevailing Wage. The Contractor and any subcontractor working under him must comply with and be governed by the laws of the State of California having to do with the prevailing wage to be paid as is set forth in Division 2, Part 7, Chapter 1, Article 2 of the Labor Code of the State of California as amended.

The Contractor shall forfeit, as penalty to the City, twenty-five dollars ($25.00) for each laborer, workman,
or mechanic employed, for each calendar day or portion thereof, such laborer, workman, or mechanic is paid less than the general prevailing wages hereinafter stipulated for any work done under the attached contract, by him or by any subcontractor under him, in violation of the provisions of said Labor Code. In addition, the Contractor shall pay to the workmen the wages resulting from the difference between the stipulated wage rate and the wages actually paid.

The Engineer has a current copy of general prevailing wage rates applicable to the work, a copy of which is made part of these specifications by reference.

701.6 Compensation Insurance. Before beginning work, the Contractor shall furnish to the Engineer a certificate of insurance as proof that he has taken out full compensation insurance for all persons whom he may employ directly or through subcontractors in carrying out the work specified herein, in accordance with laws of the State of California. Such insurance shall be maintained in full force and effect during the period covered by this contract.

701.7 Governmental Regulations. Bid price shall not be in excess of maximum prices permitted by the federal or state government.

All orders are subject to ability to obtain and use materials and deliver finished products under federal and state regulations and orders. If shipping dates are subject to delays resulting from preference rating or priority shipments order or requested by the United States Government or by any department, commission or agency thereof, the Contractor shall not be held liable for such delay.

701.8 Taxes. The City is liable for the State Sales Tax and where the County of purchase has adopted the Uniform Sales Tax law and a City and/or County tax is collected by the State, the City of Berkeley is liable for this tax also.

The City if exempt from the Federal Excise Tax and exemption certificates will be furnished. In certain instances, the bidder and subcontractor may be liable for Federal Excise Tax. Bidder must determine whether Federal Excise Tax is chargeable to him and if so, the amount of the tax should be included in the amount bid.

Any new or additional taxes levied after the adoption of these specifications that are payable by the City are not to be included in the price bid, but added thereto when invoiced.

701.9 Permit and Licenses. The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notice necessary for the lawful prosecution of the work.

701.10 Royalties and Patents. The Contractor shall pay all royalties and patent fees. He shall defend all suits and claims for infringements of any patent rights and shall save the City harmless from loss on account thereof, except that the City shall be responsible for all such loss when a particular process or the
product of a particular manufacturer is specified. If, however, the Contractor has information that the procedures or article specified is an infringement of a patent, he shall be responsible for any loss unless he promptly gives said information to the City.

The Contractor shall assume all responsibilities arising from the use of patented materials, equipment, devices or processes used on or incorporated in the work.

All fees and royalties for any patented invention or process used in connection with the work shall be included in the price bid for such work, and the Contractor shall obtain a permit from the patentee for use of the same.

701.11 Public Convenience and Safety. The Contractor shall so conduct his operations as to cause the least possible obstruction and inconvenience to the public.

Residents along the work shall be provided passage as far as practicable. Convenient access to driveways, houses, and buildings along the work shall be maintained and temporary crossings shall be provided and maintained in good conditions. Contractor shall maintain access to all driveways except when actually doing construction within the driveway boundaries, at which time parking access will be maintained unless alternate arrangement can be made with the property owners or tenants in advance. No more than one intersection street shall be closed at any one time without the approval of the Engineer.

The Contractor shall furnish all flagpersons, barricades, barriers, lanterns, flares, "DR" type detour signs, and other devices which may be necessary for adequate and safe traffic control, and in accordance with the approved traffic control plans per Section 501.10 of this specification.

Traffic control shall be performed in accordance with the following requirements:

- Safe pedestrian passage shall be provided at all times on the project site.
- All open trenches will be covered with appropriately thick steel plates in accordance with page 25 of the "Work Area Traffic Control Handbook" published by Building News, Inc. (213) 870-9871. Safe passage for all vehicles shall be maintained at all times in both directions.
- Sufficient number of reflectorized signs shall be supplied and used on the job site at all times to efficiently control traffic in accordance with this specification. Each and all barricades shall be equipped with operative automatic flashers.
- Berkeley Police and Fire Departments, Berkeley School District, City Streets and Utilities Division, and A.C. Transit shall be advised of the planned construction, blocked streets, and other changes affecting traffic conditions (48 hours in advance), every work day -- or more frequently. Additionally, the Police and Fire Departments and Resident Engineer must be given telephone
numbers where the Contractor may be reached at all hours in the event of an emergency involving the work. Appropriate Police, Fire, Berkeley School District, City Streets and Utilities Division, and A.C. Transit telephone numbers are as follows:

- Police: 981-5900
- Fire: 981-5900
- School: 644-6182
- Streets & Utilities: 981-6620
- A.C. Transit: (where applicable) 891-4777

Proper signs and devices shall be used to warn, direct, and control traffic in the vicinity of the work and shall conform in size, shape, and color to the requirements set forth in the specifications and approved by the Engineer in accordance with the Traffic Control Plan.

Where such facilities are not provided or are out of service, and an emergency exists that necessitates protective measures, the Engineer or his representative, may provide such facilities during the emergency and the cost thereof shall be paid by the Contractor or deducted from monies due or to become due him on the contract. Such action by the Engineer, however, shall not relieve the Contractor of his responsibility for any damages which may occur before, during or after such precaution has been taken by the Engineer, and shall place no liability upon the City or the Engineer.

To keep evening and night noise levels to a minimum, no engine driven equipment shall be operated between 5:00 p.m. and 7:30 a.m. unless previously authorized by the Engineer.

701.12 Responsibility for Damage. The City, the Council, or the Engineer shall not be answerable or accountable in any manner for any loss or damage that may happen to the work or any part thereof; or for any materials or equipment used in performing the work; or for injury or damage to person or persons, either workmen or the public; or for damage to adjoining property from any cause whatsoever during the progress of the work or at any time before final acceptance.

The Contractor shall be held responsible for any and all loss, accidents, injury or damage to persons or property which may be the result of this contract and for which the City might be held liable. The Contractor shall protect and indemnify the City and save it harmless in every way from all claims, suits or actions of law for damage or injury to persons or property that may arise or be occasioned in any way because of this contract. The Council may retain so much of the money due the Contractor as shall be considered necessary, until disposition has been made of such suits or claims for damages as aforesaid.

701.13 Public Liability and Property Damage Insurance. Before commencing the work, the Contractor shall furnish to the City Attorney of the City satisfactory evidence of public Liability and Property Damage insurance with limits of liability as listed in the Notice to Bidders and as approved by the City's Risk Manager. Such insurance shall name the City of Berkeley officers, employees, agents and its consultants
associated with the project (City to provide names of the consultant(s)) as additional named insured and it shall be provided that any cancellation or reduction in coverage of the insurance by either the assured or the insurance company will not be effective until thirty (30) days after written notice thereof has been given to the City.

701.14 Contractor's Responsibility for Work. Until the formal acceptance of the work by the Engineer, the Contractor shall have the charge and care thereof, except as provided in Section 701.11, Public Convenience and Safety, and shall bear the risk of injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any cause before final acceptance and shall bear the expense thereof, except such injuries or damages as occasioned by acts of war.

701.15 Entry Rights. The right is reserved to the City, and also to railway, water, gas, telephone, telegraph, cable television and electric power transmission companies to enter upon the work for the purpose of making repairs and changes that have become necessary by reason of work. Projects financed in whole or in part with State funds shall be subject to inspection at all times by the State of California agency having jurisdiction or his agent.

701.16 Cooperation between Contractor and Utility Companies. The Contractor shall be responsible for ascertaining the nature and extent of any simultaneous, collateral, and essential work by others. The City, its workers and contractors, and others shall have right to operate within or adjacent to the workers to perform such work.

The City, the Contractor, and each of such workers, contractors, and others shall coordinate their operations and cooperate to minimize interference.

The Contractor shall include in its bid all costs involved as a result of coordinating its work with others. The Contractor will not be entitled to additional compensation from the City for damages resulting from such simultaneous, collateral, and essential work. If necessary to avoid or minimize such damage, or delay, the Contractor shall redeploy its work force to other parts of the work.

Should the Contractor be delayed by the City, and such delay could not reasonably have been foreseen and prevented by the Contractor, the Engineer will determine the extent of the delay, the effect of the delay on the project as a whole, and any commensurate extension of time.

If the work of the Contractor is delayed because of any acts or omissions of any other contractor or utility company, the Contractor shall on that account have no claim against the City other than for an extension of time.

701.17 Obstruction. No material or other obstruction shall be placed within fifteen (15) feet of fire
hydrants, which must be at all times readily accessible to the Fire Department.

Where the completion of the work requires their removal, the Contractor shall remove and dispose of all structures, debris, or other obstructions encountered in making the improvement.

701.18 Sanitary Conveniences. Necessary sanitary facilities for the use of workers properly secluded from public observation and in compliance with health ordinances and laws, shall be constructed and maintained in an approved manner by the Contractor, and their use shall be strictly enforced.

701.19 Preservation of Monuments. The Contractor shall carefully preserve bench marks, reference points and stakes, and in case of willfully or careless destruction, he will be charged with the entire cost of replacing them and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance. Monuments which have to be removed shall not be disturbed until authorized by the Engineer.

The Contractor shall provide the City with a minimum of 48 hours notice of any activities which may result in the displacement damage or destruction of monuments.

701.20 Opening Sections of New Work. Whenever, in the opinion of the Engineer, any section of the work is in a condition for beneficial use by the City it may be opened for use. Such openings, when authorized in writing by the Engineer shall not represent acceptance of that portion of the work unless all specified testing has been satisfactorily completed.

The Contractor will be responsible for all necessary repairs on any section of work, so opened, due to defective material or work, damage by Contractor's operation, or to natural causes other than ordinary wear and tear until final completion and acceptance of the work. Such repairs shall be at the expense of the Contractor.

701.21 Acceptance of Work on Contract. When the final inspection is completed and it has been determined that the work is in accord with the plans and specifications, the Engineer will formally accept the contract. After such acceptance, the Contractor will be relieved of protecting the work, except for such correction or repair as shall be required to correct any defect in the work. The Contractor will not be required to perform any further work thereon except such items as may be reserved specifically in the specifications or formal written acceptance, and he shall be relieved of responsibility for injury to persons or property or damage which occurs after the formal written acceptance.

701.22 Correction of Errors, Recovery for Errors, Dishonesty or Collusion. The City reserves the right to correct any error that may have been made in any estimate that has been paid. The City also reserves the right to claim and recover by process of law any sums sufficient to correct any error or make good any deficiency in the work, regardless of when such error, dishonesty or collusion shall be discovered.
701.23 Rights in Materials and Salvage. Ownership of materials incorporated in the work is vested in the name of the City. Any material delivered and paid for in part by the City or any material furnished by the City to be incorporated in the work, is or becomes the property of the City. Any salvageable materials or installations existing at the site of the work (such as manhole rings and covers, catch basin gratings, angle iron, pipe railings, valve boxes and lamphole boxes, and other steel, cast iron or metallic materials) that are the property of the City, if they are to be removed shall be delivered F.O.B. to the storage yard designated by the City. The salvageable materials shall be cleaned of clinging concrete and debris and delivered to the storage yard in the same condition as it existed prior to removal, unless the Contractor is instructed otherwise by the Engineer.

701.24 Right-of-Way. The right-of-way for the work to be constructed will be provided by the City. The Contractor shall make his own arrangements, and pay all expenses for additional area required by him outside the limits of the right-of-way, unless otherwise provided in the Special Provisions.

701.25.1 Underground Facilities. The City has investigated underground conditions to the extent allowed by the City records and has indicated on the drawings such underground structures and conditions as are known to exist. In addition, the drawings indicate information furnished to the City by the utility agencies concerning their facilities. The City does not guarantee, either expressly or by implication, that the underground conditions indicated are either complete or exact as to locations and depths. No additional allowance will be made in cases where underground conditions vary as to number, structures, depths, locations or any other condition from the information shown on the drawings. In all cases, the cost of dealing with the identified underground facilities encountered will be considered as being included in the bid prices for the various items of work.

701.25.2 Protection of and Liability for Unidentified Underground Public Utilities. The following is pursuant to California Government Code Division 5, Chapter 3.1, Section 4215. The City is responsible for the removal, relocation or protection of existing utilities located on the construction site that is subject of these plans and specifications if such existing underground utilities are not identified in the plans and specifications and made a part of the invitation for bids. The Contractor will not be assessed liquidated damages for delay in completion of the contract, when such delay is caused by failure of the City or utility owner to provide for removal or relocation of the unidentified existing utility facilities.

701.26 Compliance with Contract. In the event any provision of the contract including the General Provisions and specifications, is violated, and the Contractor refuses to comply after 10 days written notice is given by the City, the City shall have the additional right, without further notice, to cancel the contract and/or declare such Contractor to be a nonresponsive bidder, in which case no contract shall be awarded him by the City of a period of at least three (3) years from the date of violation, and then only after satisfactory evidence that he will comply with City specification and contract provisions.
SECTION 8 - PROSECUTION AND PROGRESS

801.1 Subletting and Assignment. The Contractor shall give his personal attention to the fulfillment of the contract and shall keep the work under his control. The contract may be assigned only upon written consent of the Engineer.

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

When a portion of the work sublet by the Contractor is not being prosecuted in a manner satisfactory to the Engineer, the subcontractor shall be removed immediately on the written request of the Engineer and shall not again be employed on the work.

801.2 Progress of the Work and Time for Completion. The Contractor shall begin work within 30 calendar days after the award of the contract and shall diligently prosecute the same to completion before the expiration of the time specified in the Bidding Documents. After issuing of Notice to Proceed and prior to commencement of mobilization and construction, the Contractor shall be required to attend a pre-construction meeting.

The Engineer may extend the starting date.

801.3 Programming Work. After notification of award and at least five (5) working days prior to start of any work, the Contractor shall submit to the Engineer for approval its proposed construction schedule. No construction work will start unless the schedule is approved by the Engineer. The construction schedule shall be in the form of a tabulation, chart, or graph and shall be in sufficient detail to show the chronological relationship of all activities of the project including, but not limited to, estimated starting and completion dates of various activities, submittal of shop drawings to the Engineer for approval, procurement of materials, and scheduling of equipment. The construction schedule shall reflect completion of all work under the contract within the specified time and in accordance with these specifications. The schedule shall include completion dates of all major activities on a block to block basis.

If the Contractor desires to make a major change in the method of operations after commencing construction, or if the schedule fails to reflect the actual progress, the Contractor shall submit to the Agency a revised construction schedule in advance of beginning revised operations.

Loss of work for any cause during the period of time prior to the submission of the progress schedule will not be considered by the Engineer in his computation of time extensions. In addition, the Contractor shall submit a complete list of subcontractors who will perform the work on this project and a list of all major
material suppliers. No substitutions of any kind will be allowed, either of subcontractors or material suppliers without the written approval of the Engineer.

In case of any delays from the original schedule due to any reason, the Contractor will immediately notify the Engineer and resubmit the revised schedule within forty-eight (48) hours of that change. Any request for change in the original schedule shall be evaluated and approved or denied in accordance with requirements listed in these specifications.

All work on the project shall be performed between the hours of 7:30 AM and 5:00 PM on a regular work day. No work shall be scheduled beyond these hours on a regular work day, holiday, or weekend without prior approval from the Engineer. The Contractor shall submit this request in writing at least one week in advance. The Contractor shall pay for the inspection time of the City's resident Engineer or his designated representative on an overtime basis for required inspection of work performed beyond the mentioned regular day working hours and on holidays or weekends. This inspection charge will be deducted from the Contractor's progress payment.

All work, including finish paving on a City block and final clean up, shall be completed within five (5) weeks from the start of construction on the respective City block.

801.4  Character of Workers. If any subcontractor or person employed by the Contractor shall refuse to carry out the provisions of the plans and specifications or shall appear to the Engineer to be incompetent or to act in a disorderly or improper manner, he shall be discharged immediately on the written request of the Engineer, and such person shall not again be employed on the work.

801.5  Temporary Suspension of Work. The Engineer shall have the authority to suspend the work wholly or in part, for such period as he may deem necessary due to unsuitable weather, or to such other conditions as are considered unfavorable for the suitable prosecution of the work, or for such time as he may deem necessary due to the failure on the part of the Contractor to carry out orders given, or to perform any provisions of the work. In addition, the Contractor shall comply with the Traffic Engineering recommendation within a 24-hour period or immediately if requested. Failure to comply with this shall be sufficient reason for the Engineer to suspend the work. The Contractor shall immediately obey such orders of the Engineer and shall not resume the work until ordered in writing by the Engineer.

801.6  Liquidated Damages for Failure to Complete Work in Specified Time. Time is of the essence and an essential condition of the Contract. If all the work called for under the contract is not completed before or upon the expiration of the time set forth in the Bidding Documents, damage will be sustained by the City. Since it is and will be impracticable to determine the actual damage which the City will sustain in the event of and by reason of such delay, it is therefore agreed that the Contractor will pay to the City the sum specified in the Bidding Documents for each and every working day beyond the time prescribed to complete the work, not as a penalty, but as a predetermined liquidated damage. The Contractor agrees to pay such liquidated damages as are herein provided, and in case the same are not paid, agrees that the
City may deduct the amount thereof from any money due or that may become due the Contractor under
the contract.

801.7  Extension of Time. If the work called for under the contract is not completed within the time
specified, the Engineer may extend the time for completion if it serves the best interest of the City. If the
time limit for the completion of the contract is extended, the Engineer may charge to the Contractor or
deduct from the final payment for the work, all or any part of the actual cost of engineering, inspection,
superintendence, and other overhead expenses which are incident to the work, and which accrue during
the period of such extension. The cost of final surveys and preparation of final estimate shall not be
included in such charges.

801.7.1  Extension of Time Due to Extra Work and Inclement Weather. Extensions of time for extra work,
when granted, shall be based upon the effect of delays to the Work and will not be granted for
noncontrolling delays to minor portions of the work unless it can be shown that such delays did or will
delay the progress of the Work. Extensions of time for inclement weather, when granted, shall be based
upon impacts to the Contractors work operations causing not less than 50 percent of the effort to be shut
down.

801.8  Delays and Suspension of Work. The Contractor shall not be assessed with liquidated
damages nor the cost of engineering and inspection during any delay in the completion of the work caused
by the wrongful act or negligence of the City or its employees, agents or representatives, by acts of God,
acts of the public enemy, fire, floods, epidemics, quarantine restrictions, labor disputes, freight embargoes,
materials delays when approved by the Engineer, inclement weather or delays of subcontractors due to
such causes; provided, that the Contractor shall within five (5) working days from the end of any such
delay notify the Engineer in writing of the cause of delay. The Engineer will determine the extent of delay
and his findings of the facts thereon shall be final.

In the event the Contractor is delayed in the work by the wrongful act or negligence of the City or its
employees, agents or representatives, which said delay is not caused by or the continuance of which is not
due to any act or conduct on the part of the Contractor, reimbursement or payment to the Contractor for
such delay, if at all, shall be limited to any money actually and necessarily expended on the job during the
period of delay, solely by reason of said delay. No reimbursement, payment or allowance will be made
for anticipated profits, rental charges for equipment owned by the Contractor, or any overhead or indirect
costs.

801.9  Acceptance of Payment Does Not Constitute Waiver. If the City accepts any work or makes
any payment under this contract after a default by reason of delays, the payment or payments shall in no
respect constitute a waiver or modification of any of the provisions in regard to time of completion and
liquidated damages.

801.10 Suspension of Contract. If at any time the Contractor has failed to supply an adequate working
force or materials of proper quality, or has failed in any other respect to prosecute the work as intended by the terms of the contract, notice thereof in writing will be served upon him and his surety by the Engineer. Should the Contractor neglect or refuse to provide means for satisfactory compliance with the contract within three (3) working days, the Engineer shall have the power to suspend the operations of the Contractor. Upon receiving notice of such suspension, the Contractor shall discontinue said work or such parts of it as the Engineer may designate. Upon such suspension, the Contractor's control of the work shall terminate. The City or its duly authorized representative, may take possession of all or any part of the Contractor's materials, tools, equipment, and appliances upon the premises, and use the same for the purpose of completing said contract, and hire such force and buy or rent such additional machinery, tools, appliance and equipment, and buy such additional materials and supplies at the Contractor's expense as may be necessary for the proper conduct of the work and for the completion thereof. The City may employ other parties to carry the contract to completion, employ the necessary workmen, substitute other machinery or materials, and purchase the materials contracted for, in such manner as the Engineer may deem proper. The City may annul and cancel the contract and re-let the work or any part thereof.

801.11 Liability of Contractor in Event of Suspension or Cancellation. Any excess of cost over and above the contract price because of suspension of the contract will be charged against the Contractor and his sureties, who will be liable therefor. In the event of such suspension, all moneys due the Contractor or retained under the terms of this contract shall be forfeited to the City until all obligations of the contract have been met. Such forfeiture will not release the Contractor or his sureties from liability for failure to fulfill the contract.

The Contractor and his sureties will be credited with any surplus of money so forfeited by the suspension or cancellation of the contract after the completion of the work by the City as above provided. The Contractor or his surety may claim any surplus remaining after all just claims for such completion of the contract have been paid.

801.12 Decision of Council Binding on All Parties. The final determination of the question as to whether there has been non-compliance with the contract sufficient to warrant the suspension or annulment thereof, rests with the Council. Its decision shall be binding on all parties to the contract.

801.13 Guarantee. The Contractor shall guarantee the entire work constructed by him under the Contract to be free of defects in materials and workmanship for a period of one year after completion and acceptance by the Agency. The date of initiation of this guarantee period shall be the date of the filing of the notice of completion by the Agency. The Contractor shall agree to make, at his own expense, any repairs or replacements made necessary by defects in materials and workmanship which become evident within said guarantee period. The Contractor hereby agrees to defend, to indemnify and hold harmless the Agency; its officers, agents and employees, and its consultants associated with the project (City to provide name of consultant), against and from all claims and liability arising from damage and injury due to said defects. The Contractor shall make all repairs and replacements promptly upon receipt of written order from the Engineer. If the Contractor fails to make the repairs and replacements promptly, the Agency may do the
work and the Contractor and his surety shall be liable to the Agency for the cost of such work.

The performance of guarantee and conditions specified above shall be secured by a surety bond which shall be delivered by the Contractor to the Agency prior to the date on which final payment is made to the Contractor. Said bond shall be in an approved form and executed by a surety company or companies satisfactory to the Agency, in the amount of 10 percent of the Contract price. Said bond shall remain in force for the duration of the guarantee period.
SECTION 9 - MEASUREMENT AND PAYMENT

901.1 Measurement of Quantities. For all items of work, other than those to be paid for by lump sum, after the work is completed and before final payment is made therefore, the Engineer shall make final measurements to determine the quantities of various items of work performed as the basis for final settlement. The Contractor, in case of unit price items, will be paid for the actual amount of work performed and for the actual amount of materials in place, in accordance with these specifications as shown by the final measurements. All work completed under this contract shall be measured by the Engineer according to the standards of weight and measures recognized by the National Bureau of Standards. A ton shall consist of two thousand (2,000) pounds avoirdupois.

Measurement for items paid for on the basis of lineal or surface area shall be along centerline distances and in horizontal planes. In computing volumes, the method of average end areas will be used with the aid of planimeter. The pay weight for all items to be paid for by weight shall be determined by actual certified scale weight, certified shipping weight or computed weight if so specified.

In order that the City of Berkeley shall have control over materials paid for on a tonnage basis, certain procedures, as outlined below, shall be followed.

1. The Resident Engineer shall be notified prior to the delivery of materials which are to be paid for on a tonnage basis.

2. Material delivered must be accompanied by a weight tag at the time of delivery.

3. The Resident Engineer must validate each tag at the time of delivery.

4. Tags will be accepted and initialed only on the date shown on the tag, which shall be the date of delivery.

5. Final quantities will be based on initialed tags only.

Materials specified for measurement by tallying of vehicles having predetermined carrying capacity shall be hauled only in approved units, struck off at the top of the carrying unit or to permanent lines at the loading point and tallied at the point of delivery. Unless all vehicles have uniform carry capacity, each hauling unit shall be marked identifying the approved capacity.

901.2 Extra and Force Account Work. Extra work as defined in Section 401.3, when ordered and accepted, shall be paid for under a contract change order in accordance with the terms therein provided. Payment for extra work will be made at the unit price or lump sum previously agreed upon by the Contractor and the Engineer; or by force account.
If the work is done on force account, an amount equal to the sum of the following items shall be used as full and proper compensation therefor, and such amount shall be added to the price fixed by the terms of this contract for the part of the work affected:

1. The actual cost to the Contractor of the material required for the work as furnished and delivered by him at the site of the work.

2. The actual cost to the Contractor of the labor (including foremen devoting their exclusive attention to the work in question) required to incorporate all of said material into the work and to finish the work in accordance with directions and the cost of workers compensation insurance premiums for said labor.

3. The actual cost to the Contractor of equipment required for the extra work, except that the rate paid shall not exceed the current prevailing equipment rental rates. The charge for equipment shall be only for that time of actual operation devoted exclusively to the work in question.

4. Ten percent (10%) of Item 2, which shall be considered as covering the cost of small tools, plant and superintendence, and clerical work in connection with the changes.

5. Fifteen percent (15%) of the sum of Items 1., 2., and 3. which shall be considered as covering all other expenses and profit.

The City reserves the right to furnish such materials required as it deems expedient, and the Contractor shall have no claim for profit on the cost of such materials.

In order that a proper estimate may be made by the Engineer of the net cost of labor and materials entering into extra work, in accordance with the procedure herein stated, the Contractor shall furnish daily an itemized statement of materials and labor supplied, together with the cost of such material and the wages paid and shall furnish vouchers for quantities and prices of such labor, material or work. In case the Contractor fails to comply with the above provisions, he shall have no claim for compensation against the City for such extra work.

This method of determining the price of work shall not apply to the performance of any work or the furnishing of any materials which is susceptible of classification under the items for which prices are established in this contract as is required or reasonably implied to be performed or furnished under this contract.

901.3 Progress Payments. The Engineer shall, once in each month, cause an estimate in writing to be made of the total amount of work done and the acceptable materials furnished and delivered by the Contractor on the ground and not used to the time of such estimate, and the value thereof according to the schedule of prices contained in the accepted bid for work. The Engineer may make an estimate of such
items of work that are only partially completed on a prorating basis and pay for that portion of the item of work completed as work done. The Contractor may request the Engineer to establish a basis for prorating the unfinished items of work, but must use such a schedule for said prorating as will then be established by the Engineer. In order to receive payment, the Contractor shall make his bills in triplicate and deliver to the office of the Engineer.

901.3.1 Bid Item Breakdown. The Contractor shall submit proposed bid item breakdowns for progress payment purpose within 5 days following Award. Engineer shall establish a basis for prorating unfinished items of work utilizing Contractor's proposal, but Engineer shall not be limited to breakdown of items as proposed by the Contractor. Unbalanced or "front loaded" breakdowns shall be rejected.

901.4.1 Retained Funds. Pursuant to Article XI, Section 66 of the City Charter, the City shall retain ten percent (10%) of such estimated value of work done as part security for the fulfillment of this contract by the Contractor and shall monthly pay to the Contractor, while carrying on the work, the balance not retained, as aforesaid, after deducting therefrom all previous payment and all sums to be kept or retained under the provisions of this 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 this contract or when, in his judgment, the total value of the work done since the last estimate amounts to less than one thousand dollars ($1,000.00).

901.4.2 Payment of Retained Funds. Attention is directed to Section 901.3 of the General Provisions "Progress Payments" and in particular to the retention provisions of said section.

1. At the request and expense of Contractor, the City will make payments of funds withheld from progress payments to Contractor or to an Escrow Agent, pursuant to the terms of Government Code Section 4590 if Contractor deposits with the City or with a state or federally chartered bank as escrow agent an equal value of securities eligible for substitution pursuant to Government Code Section 4590. Contractor agrees that any escrow agreement under this contract provision must substantially conform to the form escrow agreement in Government Code 4590. Securities will be held in the name of the City, with the Contractor as beneficial owner. The City will determine market value of substituted securities. Contractor will deposit additional securities to restore the total market value of deposited securities if the market value decreases below the retention amount.

2. The Contractor shall bear the expense of the Escrow Agent who may be either the City Treasurer or the bank, in connection with the escrow deposit made.

3. The Contractor shall obtain the written consent of the surety to such agreement.

901.5 Final Payments. The Engineer shall, after the completion of the requested work in each area, make a final estimate of the amount of work done thereunder, and the value of such work, and the City
shall pay the entire sum so found to be due after deducting therefrom all previous payments and all amounts to be kept and all amounts subject to correction in the final estimate and payment.

The final payment shall not be due and payable until the expiration of thirty-five (35) calendar days from the date of acceptance of a specific phase of the work by the Engineer, and upon receipt of a bill for the amount due on the work from the Contractor.

No certificate given or payments made under the contract, except the final certificates or final payment, shall be conclusive evidence of the performance of the contract, either wholly or in part, against any claim of the Contractor, and no payment shall be construed to be an acceptance of any defective work or improper materials.

The payment of the final amounts due under the contract, and the adjustment and payment for any work done in accordance with any alterations of same, shall release the City, the Council, and the Engineer from any and all claims or liability on account of work performed under the contract or any alteration thereof.
### SPECIAL PROVISIONS

**PART B - SPECIAL PROVISIONS**

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PART B - SPECIAL PROVISIONS

1. STANDARD SPECIFICATIONS

The Creek Restoration work embraced herein shall be done in accordance with the project plans, the City’s General Provisions, these Special Provisions, and the “Greenbook” Standard Specifications for Public Works Construction and 2018 Standard Plans, herein, called the “Standard Specifications” and “Standard Plans” respectively, unless otherwise noted. In case of conflict between the Standard Specifications and Plans and the Special Provisions and/or General Provisions, the Special and/or General Provisions shall prevail. It is the intent of this contract to obtain a finished, professional job, complete in place.

2. LOCATIONS OF WORK

The work described in these specifications is located on a City parcel between 1192 & 1122 Kains Avenue within the City of Berkeley, as shown on the plans.

The exact limits of work are shown on the project plans.

3. NATURE OF WORK

The work done under these specifications includes but is not limited to: traffic control, clearing, and grubbing, installing erosion control measures, performing stream restoration work, planting, and protection of underground utility services (e.g., gas, water, sewer, electrical, telecom), as specified.

4. CONTRACTOR'S LICENSE: STATE SB #223

State Senate Bill No. 223, signed into law by the Governor on September 27, 1985, requires all public entities to specify the type of Contractor's license, which a prime Contractor must possess at the time a contract is awarded. In order to be considered for award of this contract, the prime Contractor must possess one of the following Contractor's licenses:

A - General Engineering Contractor

5. STATE SENATE BILL SB #854

Per State Senate Bill No. 854, signed into law by the Governor on June 20, 2014:

No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial
Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

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

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

6. PERFORMANCE BOND

The required 100% performance bond must be submitted on the attached performance bond form provided by the City. The form must be properly executed by the Contractor and a duly authorized representative of a surety company licensed to offer surety bonds in the State of California. All signatures must be properly authorized and notarized.

7. LABOR AND MATERIAL BOND

The required Labor and Material Bond in the sum of not less than 100% of the amount of the contract may be submitted on your Surety Company's standard certificate with original signatures.

8. OPPRESSIVE STATES COMPLIANCE STATEMENT

“Oppressive State” means: 1) Tibet Autonomous Region and the Provinces of Ado, Kham, and U-Tsang.

Resolution No. 59,853-N.S. allows the City to refrain from entering into personal services contracts with certain entities that maintain business relationships with morally repugnant regimes.

A Contractor is not eligible to receive or retain a City contract if at the time the contract is executed, or at any time during the term of the contract, it provides Personal Services to:

a. The governing regime in any Oppressive State.
b. Any business or corporation organized under the authority of the governing regime of any Oppressive State.
c. Any person for the express purpose of assisting in business operations or trading with any public or private entity located in any Oppressive State.

The Contractor must further understand and agree that Contractor’s failure to comply with the Resolution shall constitute a default of the contract and the City Manager may terminate the contract and bar Contractor from bidding on future contracts with the City for five (5) years from the effective date of the contract termination.
In compliance with this Section, the Contractor must submit the attached Oppressive States Compliance Statement along with the bid.

9. NUCLEAR FREE ZONE DISCLOSURE FORM

Contractor agrees to comply with the provisions of Nuclear Free Berkeley Ordinance No. 5784-N.S. as described in the Nuclear Free Zone Disclosure Form included herein. Contractor must submit said Disclosure Form along with the bid.

10. EQUAL BENEFITS ORDINANCE DISCLOSURE FORM

Contractor agrees to comply with the provisions of Berkeley Equal Benefits Ordinance No. 6623-N.S. Contractor must submit both the Equal Benefits Ordinance Disclosure Form and the Certification of Compliance with Equal Benefits Ordinance (Form EBO-1) included herein along with the bid prior to execution of the contract.

11. SANCTUARY CITY COMPLIANCE STATEMENT

Contractor agrees to comply with the provisions of Berkeley Sanctuary City Contracting Ordinance No. 7650-N.S., Berkeley Municipal Code Chapter 13.105. In accordance with this Chapter, Contractor agrees not to provide the U.S. Immigration and Customs Enforcement Division of the United States Department of Homeland Security with any Data Broker or Extreme Vetting Services as defined herein:

a. “Data Broker” means either of the following:

   i. The collection of information, including personal information about consumers, from a wide variety of sources for the purposes of reselling such information to their customers, which include both private-sector business and government agencies;

   ii. The aggregation of data that was collected for another purpose from that for which it is ultimately used.

b. “Extreme Vetting” means data mining, threat modeling, predictive risk analysis, or other similar services. Extreme Vetting does not include:

   i. The City’s computer-network health and performance tools;

   ii. Cybersecurity capabilities, technologies and systems used by the City of Berkeley Department of Information Technology to predict, monitor for, prevent, and protect technology infrastructure and systems owned and operated by the City of Berkeley from potential cybersecurity events and cyber-forensic based investigations and prosecutions of illegal computer based activity.

In compliance with this Section, the Contractor must submit the attached Sanctuary City
Compliance Statement along with the bid.

12. COMMUNITY WORKFORCE AGREEMENT

Contractor and any subcontractor at any tier shall comply with the First Source Agreement included herein.

Under the First Source Agreement, Contractor must sign and comply with the Agreement prior to execution of the Contract. Subcontractors at any tier must also sign and comply with a First Source Agreement prior to execution of their respective subcontracts. The signing of a First Source Agreement is a condition precedent to entering into any contract for this project.

13. INSURANCE CERTIFICATE

The required insurance certificate must be accompanied by the General and Automobile Liability Endorsement contained herein. The endorsement must be properly executed by a duly authorized representative of the insurance company. All signatures must be original in blue ink.

14. PROGRESS SCHEDULE

A detailed progress schedule will be required for this contract. The progress schedule shall be submitted prior to commencement of work and updated weekly. The Contractor shall provide a graphic description, in the form of a bar chart that outlines the items of work to be completed, and provide weekly updated written documentation that the work is proceeding on schedule and will be completed within the specified time frame. This schedule will assist the City in advanced notification of adjacent residents and businesses. Therefore, the schedule and any changes to the schedule must be approved by the City and adhered to by the Contractor.

15. HOLIDAYS

The full width of the street's traveled way shall be opened for use by public traffic on designated legal holidays.

Designated legal holidays are January 1, the third Monday in February, the last Monday in May, July 4, the first Monday in September, November 11, Thanksgiving Day, and December 25. When a designated legal holiday falls on a Sunday, the following Monday shall be observed as a designated legal holiday. When November 11 falls on a Saturday, the preceding Friday shall be observed as a designated legal holiday.

The following are recognized City Holidays. No work shall be performed on these days unless previously authorized by the Engineer.

- Third Monday in January (Martin Luther King’s Birthday)
- Lincoln’s Birthday
- Monday or Friday nearest May 19 (Malcom X Day)
- Second Monday in October (Indigenous People’s Day)
- Day After Thanksgiving Day

Due to budgetary constraints, the City of Berkeley offices will be closed approximately one day every month (2nd Fridays) for “Reduced Service Days”. When a holiday falls on that day, the previous day shall be a Reduced Service Day. Despite the City’s reduced level of service, the contractor shall plan to perform work during such days. Reduced Service Days will be included in the Engineer’s accounting of working and calendar days.

16. OBLSTRUCTIONS

Attention is directed to the possible existence of abandoned underground utilities, manholes, monuments, or any other facilities which may exist within the limits of work. The Contractor shall exercise due caution in performing his work so as not to damage said facilities.

The Contractor shall be responsible for the preservation of existing survey monuments, benchmarks, reference points, and stakes. The Contractor shall replace City Monuments and reference marks removed during the performance of the work. Whenever a City Monument is disturbed or removed during the performance of work it shall be replaced in accordance with Standard Plan 7940, 8090, 8091, or 8179, as applicable.

Attention is also directed to the presence of overhead and underground utilities in the construction area. The Contractor shall exercise due caution in performing his work so as not to damage said utilities.

The work specified shall be so conducted as to permit the utility companies to maintain their services without interruption.

Utilities and underground pipelines are to remain in place and shall be worked around and protected from damage or interruption of service. All costs caused by delays or extra work associated with maintaining utilities and pipelines shall be borne by the Contractor.

The Contractor shall determine the unknown location of main and service utilities in advance in order not to delay the schedule of construction. Advance potholing shall be included in the planning and execution of the work. No additional compensation will be paid by the City for the performance of this work. At the direction of the Engineer, it is the Contractor’s responsibility to make corrections if conflicts arise among utilities. If conflict arises, the Contractor shall inform the Engineer in advance before any correction is made.

Where various utilities are to be relocated or set to grade by the utility companies, the Contractor shall notify the various utility companies well in advance so as not to impede
this work. The contractor shall mark locations of such utilities and maintain said markings for a period of 30 days after final paving.

17. CREEK PROTECTION

The Contractor shall be responsible for and conduct all aspects of the work within the requirements of BMC Chapter 17.08 – PRESERVATION AND RESTORATION OF NATURAL WATERCOURSES (Creek Ordinance), and any other creek protection requirements by other agencies. Portions of the Work involving a creek channel may not be permitted starting October 15 through April 15, or other dates as may be stipulated in applicable permits. Any work between the creek banks shall be conducted to not create conditions, which will allow erosion, and shall be fully restored to equal or better than the erosion-resistant condition as before the work is undertaken. Complying with the requirements of creek protection shall include but not be limited to scheduling the Work around any time periods prohibiting work within creek limits, installing erosion control measures and employing appropriate BMPs for controlling erosion, monitoring, updating and modifying BMPs to meet the requirements for changing site conditions to comply with erosion control and creek protection, and replanting creek banks to reestablish erosion resistance and bank stability.

18. REGULATORY AGENCY PERMIT CONDITIONS

The contractor shall comply with the following regulatory agency permit conditions during the construction, included in Appendix-A.

a. U.S. Army Corps of Engineers
b. San Francisco Bay Regional Water Quality Control Board
c. California Department of Fish and Wildlife Bay Delta Region

19. WEIGHT CERTIFICATES

A duplicate certified ticket, giving a weight of material in the truck and the date and time of weighing, shall be given to the Engineer on the job as soon as the truck arrives at the site. All trucks used for hauling hot mix asphalt shall be weighed empty daily at such times as directed by the Engineer.

20. PUBLIC RELATIONS REQUIREMENTS

Public Relations Policy. In the course of serving its citizens, it is the policy of the City of Berkeley to be responsive, helpful and courteous to its residents at all times. Any City employee or CITY CONTRACTOR that will be in contact with residents, in person or by telephone, will adhere to this policy.

The Contractor is required to prepare a Public Relations Plan to implement the above policy. The Plan shall be submitted for approval before commencing the work under this contract. The Contractor shall certify that he understands and will adhere to the City's
Public Relations Policy and that all Contractor employees will be briefed on proper relations with the public in accordance with the above policy statement.

Contractor employees without specific public relations responsibilities shall be informed of the name of the Contractor's and the City's Public Relation Coordinators for referral purposes.

ANY CONTRACTOR EMPLOYEE WHO DOES NOT ADHERE TO THE ABOVE PUBLIC RELATIONS POLICY BY DISPLAYING RUDE, OFFENSIVE AND UNCOOPERATIVE BEHAVIOR SHALL BE DISCHARGED IMMEDIATELY ON WRITTEN REQUEST OF THE ENGINEER PER SUBSECTION 801.4.

**Public Relations Plan.** The Public Relations Plan shall include but is not limited to the following:

- a. Name of the Contractor's Public Relations Coordinator and his/her experience with interfacing with the public.
- b. Plans for conducting public impact assessments prior to commencing the total project, each stage of the project, as necessary to execute the provisions of this contract without undue impact on the public.
- c. Techniques or plans for interfacing with the public and agencies at various stages of the project.
- d. Method of notifying and informing the public and agencies prior to construction stages, providing ample time to address their concerns.
- e. Plans for coordinating public relations matters with the City during the pre-construction conference, weekly meetings and during a review of the construction schedule.
- f. Provisions for and frequency of briefing employees on the details of executing the Public Relations Plan.

POOR PERFORMANCE AND NON-ADHERENCE TO THE CITY'S PUBLIC RELATIONS POLICY ARE GROUNDS FOR BEING DECLARED A NON-RESPONSIVE CONTRACTOR THAT MAY RESULT IN THE CITY REJECTING BIDS ON FUTURE CONTRACTS.

No additional compensation will be paid by the City for implementing Public Relations Policy requirements. All such related effort is a mandatory requirement of the contract.

**21. LINES AND GRADES**

This section hereby revises section 501.7 of the General Provisions of these specifications.

Construction surveys and stakes to establish the lines and grades and to establish the replacement position for Survey Monuments will be the responsibility of the Contractor and not provided by the City.
The Contractor will be responsible for setting lines and grades for the execution and completion of the work in accordance with the Plans and Specifications. The Contractor will be held responsible for all errors in staking discovered during the performance of the work and no additional compensation shall be charged to the City for correction of such deficiency.

Stakes or marks will be set by the Contractor, utilizing a qualified land surveyor in conformance with the requirements in Chapter 12, "Construction Surveys," of the California Department of Transportation's Surveys Manual.

In all other respects, Section 501.7 and the General Provisions of these specifications remain in full force and effect.

22. PROTECTION AND PRESERVATION OF SURVEY MONUMENTS

The Contractor shall be responsible for the preservation of existing survey monuments, benchmarks, reference points, and stakes. The Contractor shall replace City Monuments and reference marks removed during the performance of the work. Whenever a City Monument is designated to be removed during the performance of the work, the Contractor shall replace the monument in accordance with Standard Plan 7940, 8090, 8091 or 8179, as applicable. Monument casings (boxes and lids) shall be provided by the contractor, and dome brass markers shall be supplied by the City.

Monument replacement must be done in a neat, workman-like manner. Pavement cuts shall be accurate, with vertical cuts to exact dimensions as shown on the Standard Plan. Each replacement monument shall be constructed such that the center of the dome brass marker is set within 0.04 foot of the referenced position. Monument boxes and lids shall be placed at the proper finished grade and as detailed by Standard Plan 7940, 8090, 8091 or 8179, as applicable. Existing monument lids shall be salvaged by the Contractor and delivered to the City Survey Staff or Project Inspector.

If the City has elected to reference known monuments within the project site, copies of the corner records for the referenced monuments shall be provided to the Contractor prior to the start of construction. Otherwise, monument referencing shall be done by a licensed land surveyor hired by the contractor, and copies of the corner records for the referenced monuments shall be provided to the City prior to the start of construction. For each monument that has been removed, the replacement monument location(s) will be established by the referencing surveyor after final pavement is completed. The new dome brass marker shall not receive final punching prior to seven (7) days after completion of the monument construction.

In the event that any non-referenced monuments or monument reference points become in danger of being disturbed due to construction, the Contractor shall cease the threatening activity and notify the Project Manager and City Survey Staff immediately. Response to endangered monuments or reference points is a priority and they shall be referenced in accordance with the City of Berkeley Monument Reference Guidelines (see
Appendix). In no case may an unreferenced monument or monument reference point be damaged during construction.

Should any monument not designated for replacement be disturbed or sustain damage during construction, the Contractor shall bear the expense for rebuilding it as well as for the survey work the City survey crew or its survey consultant must perform in the process. In any instance where the City deems a damaged monument to be irreplaceable, whether designated or not designated for replacement, the Contractor shall be fined $20,000 per monument.

23. STORMWATER POLLUTION CONTROL

**Stormwater Pollution Control.** The intent of these requirements is compliance with federal, state, city, and other local agencies’ regulations that prohibit non-stormwater discharges from construction sites. Pollutants (any substance, material, or waste other than rainfall derived stormwater) discharged to storm drains is strictly prohibited. Further, the Contractor is informed that Federally Endangered species have been identified in creeks within the City limits. Point source, pollutants, stormwater, and other relevant information are defined in Berkeley Municipal Code (BMC) Chapter 17.20 – DISCHARGE OF NON-STORMWATER INTO CITY’S STORM DRAIN SYSTEM – REDUCTION OF STORMWATER POLLUTION, and the City’s stormwater NPDES (National Pollutant Discharge Elimination System) Permit No. CAS612008. These documents are available upon request.

**Best Management Practices (BMP) and Source Control.** The Contractor shall use appropriate BMPs and source control techniques on the site(s) at all times, regardless of time of year or rainfall conditions, in order to prevent non-stormwater discharges from construction sites. BMPs shall be in conformance with the California Stormwater Quality Association’s “Stormwater Best Management Practice Handbook,” current edition.

**Water Pollution Control Plan (WPCP) and Coordinator.** The Contractor shall prepare, submit for favorable review by the City, and implement a WPCP which shall contain at a minimum the items included in this section. The WPCP shall show the locations of all storm drains, storm drain pipes, creeks, creek culverts, points of entry (catch basins, inlets, outlets), and other features through which stormwater flows. The WPCP shall identify each point of entry and show how each entry point will be protected. The WPCP shall include a protocol for allowing drainage to flow properly during rainfall events WHILE STILL PREVENTING non-stormwater discharges from entering the storm drains, creeks, and Bay. The Contractor shall designate an individual (to be approved by the City) available at all times of sufficient authority to halt work and implement BMPs and source control measures for the Contractor and all sub-contractors, suppliers, and other personnel that may be at the construction site(s), to prevent non-stormwater discharges from the construction site(s). This individual shall be the contact person for all matters of the project regarding non-stormwater discharges. The WPCP shall include descriptions and sketches of all BMPs, show locations and describe protocols for implementing and maintaining the following BMPs for but not limited to material storage, dewatering operations, bypass pumping, saw-
cutting operations, pavement operations, concrete operations, grading and excavation operations, spill prevention and control, vehicle and equipment cleaning, vehicle and equipment operation and maintenance, litter control, dust control, pavement cleaning, and construction waste management. All employees, subcontractors, suppliers, and any others involved with the construction site(s) shall be trained in implementing, the importance of, and purpose of the WPCP. Training records shall be submitted to the City along with requests for progress payment. Where BMPs affect traffic or parking, they shall be shown on the traffic control plans for the construction site(s). The WPCP shall be updated to meet the changing stages of the construction site(s). Work shall not begin without the City completing its review and finding no exceptions taken on the WPCP and finding at City’s sole discretion that the WPCP meets the intent and goals of the project.

In addition, the Contractor shall observe the following guidelines:

- **Paving during wet weather:**
  a. No paving while it is raining.
  b. No paving of the top lift of asphalt concrete (AC) on any day that experiences ¼” of rain in a twenty-four period
  c. No paving of bottom lift if previous seventy-two (72) hour period experienced more than ½” of rain unless directed by the City Engineer or his designee.
- **Store materials as required under Section 6-1.01, “Control of Materials, General,” of the Standard Specifications.**
- **Cover inlets and manholes when applying asphalt, seal coat, tack coat, slurry seal, fog seal, etc. in conformance with the provisions in Section 13-4.03E(7), “Paving, Sealing, Sawcutting, Grooving, and Grinding Activities,” of the Standard Specifications.**
- **Place drip pans or absorbent materials under paving equipment when not in use.**
- **During wet weather, store paving equipment indoors or cover with a tarp or other waterproof covering.**
- **Sweep site daily to prevent sand, gravel or excess asphalt from entering or being transported by rain into the storm drain system.**
- **Keep ample supplies of drip pans or absorbent materials on-site.**
- **If paving involves Portland cement concrete, refer to Concrete Waste Management Section of the Standard Specifications.**

Do not wash out concrete trucks into storm drains, open ditches, streets, streams, etc. The Contractor shall prevent the discharge of pollutants from concrete operations by using measures to prevent run-on and run-off pollution, properly disposing of wastes, and by implementing the following BMPs:

- **Store all materials in waterproof containers or undercover away from drain inlets or drainage areas.**
- **Avoid mixing excess amounts of Portland cement materials. Dispose of any excess materials properly.**
Whenever possible, perform washout of concrete trucks off-site where discharge is controlled and not permitted to discharge to the storm drain system. For on-site washout:

- Locate washout area at least fifty (50) feet from storm drains, open ditches or other water bodies, preferably in a dirt area. Confine run-off from this area by constructing a temporary pit or bermed area large enough for the liquid and solid waste.

- Wash out concrete wastes into the temporary pit where the concrete can set, be broken up and then disposed of properly. If the volume of water is greater than what will allow concrete to set, allow the wash water to infiltrate and/or evaporate, if possible. Remove or vacuum the remaining silt and debris from the ponding or bermed area and dispose of it properly.

- Dispose of wastewater from the washing of exposed aggregate to dirt area. The dirt area shall be adequate to contain all the wastewater and once the wastewater has infiltrated, any remaining residue must be removed.

- Collect and return sweepings from exposed aggregate concrete to a stockpile or dispose of the waste in a trash container.

**Training.** The Contractor is responsible for ensuring all personnel, laborers, subcontractors, suppliers, and any other personnel that is involved with the construction site(s) are trained in the importance of preventing non-stormwater discharges. Each worker shall be certified as being trained before being allowed to work. Before any work begins, the Contractor shall submit and certify under penalty of perjury a list of all workers who have been trained on the importance of pollution prevention, BMP and source control operation and maintenance, and recognize the authority of the City to stop the work in the event of a non-stormwater discharge. The training shall include as a minimum, review of the BMP and WPCP, and all BMPs (including BMP operation and maintenance) that are planned for the construction site(s).

**Enforcement.** The City has the authority through this contract and appropriate sections of the BMC to enforce any portions of this section. City enforcement may include but is not limited to: citations, orders to abate, bills for City cleanup costs and administration, civil suits, and criminal charges and enforcement. Enforcement action by the City does not void or suspend any enforcement actions by other agencies and actions by the City and other agencies shall be cumulative.

**Submittals and Contract Time.** The contractor is cautioned and advised to have appropriately trained staff with any applicable certifications to prepare all submittals for Storm Water Pollution Controls including the WPCP, and have appropriately trained staff available to meet with City staff to review the submittals. It is considered reasonable that the Contractor shall make a complete and acceptable submittal at least by the second submission. City reserves the right to deduct monies from payments due Contractor to cover additional costs of project manager’s and Architect/Engineer’s review beyond the second submission. Illegible submittals will be rejected and returned to the Contractor.
24. MOBILIZATION AND DEMOBILIZATION

Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the project site; for the establishment of all offices, buildings and other facilities necessary for work on the project; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site.

The Contractor shall insure that adequate existing sanitation facilities are available or the Contractor shall provide and maintain adequate sanitation facilities. All wastes and refuse from sanitary facilities provided by the Contractor’s operations shall be disposed of away from the site in accordance with all laws and regulations pertaining thereto.

Demobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the removal of personnel, equipment, supplies and incidentals from the project site and for all other work and operations which must be performed or costs incurred after completion of the various contract items on the project site.

25. OVERAGE PERMITS

Contractor is hereby notified that permits must be obtained for transporting over height, over width, and/or overweight loads within the limits of the City of Berkeley. The Berkeley Police Department enforces these permits which may be obtained from the Engineering Counter of the City's Permit Service Center. The City’s Traffic Engineer shall approve truck routes before the start of work. Truck traffic is not allowed on Marin Avenue within the City of Albany.

26. TREE AND ROOT PROTECTION AND ROOT PRUNING

Care shall be taken when working near trees, public or private. For all phases of the work, the Contractor is responsible for protecting trees and the Contractor will replace any trees judged damaged by the City.

If root pruning would compromise the structural stability of the tree, the tree will be removed. Trees may also be removed based on their condition or location. Tree Removal will be decided by the Urban Forestry Representative. Tree removal will be coordinated by the Urban Forestry Representative and scheduled in conjunction with the Contractor.

Underground Service Alert (USA) of Northern/Central California and Nevada

a) The Contractor will contact USA North 811 Call Before You Dig in accordance with all applicable requirements.

b) The Contractor will notify USA North that there will be root grinding and root removal in addition to the sidewalk removal.
c) The Contractor will ensure that the utility location marks are offset so that they are placed on a permanent surface that will not be removed. Offset marks locate the utility by showing the orientation of the utility and the distance from the marks to the utility.

**Limb and Trunk Protection**

This applies when trees are not surrounded by protective fencing. Trees situated in a tree well or sidewalk planting strip shall have the trunk protected by wrapping it with straw tubes (wattle) or vertical wood slats (*ex. 2x4*), up to a minimum of 8 feet from grade. Wooden slats shall be angled to protect the root flare at the base of the tree and bound securely on the outside. Closed-cell foam or an equivalent material shall be used to protect the trunk of the tree where it contacts the slats. Lateral branches below 8 feet shall also be protected. Contractor shall keep deleterious materials associated with project construction from contacting any part of the trees or being placed or stored in the tree well or planting strip.

**Root Protection and Preparation for Root Pruning**

a) Existing sidewalk shall be removed in a manner that prevents any machinery, such as a backhoe, Bobcat®, or mini-excavator, from traveling over the exposed root zone.

b) Contractor shall make every attempt to not scrape, skin, or pull on roots. Hand excavation around roots may be required.

c) Where roots must be pruned, the area shall be excavated down to the depth required for the improvements prior to the Urban Forestry Representative inspecting the site; and all rock, concrete or other loose material shall be removed.

d) No roots shall be torn or pulled using any other tools or machinery unless already severed on each end by one of the approved pruning tools.

e) Exposed roots shall be covered with soil, mulch, or wet burlap if they will be exposed for more than 48 hours without measurable precipitation.

**Root Pruning Requirements**

a) All pruning of roots shall be performed using a stump/root cutting machine, saw, axe, or any other sharp blade tool; resulting in a flat surface with the adjacent bark firmly attached.

b) Roots 2 inches in diameter or greater shall be pruned by the Contractor in accordance with these provisions.

c) Roots smaller than 2 inches in diameter shall be pruned by the Contractor in accordance with these provisions, with the exception of contacting the Urban Forestry Representative.

d) Large roots may be shaved to a depth of no more than one-third of their thickness, or as approved by the City’s Urban Forestry Representative.

e) At no time will any root pruning cut into the root flare as defined by the City Arborist.
The size of the tree well or planting strip will be assessed by the City Engineer or his/her
designee to determine if it can be increased in size and still meet the minimum
requirements. **All debris resulting from root pruning shall be removed by the Contractor.**

Should tree, root, and/or bush pruning be required to construct the improvements shown
on the plans, specified in these Special Provisions, and as directed by the Engineer, the
Contractor will inform the City’s Urban Forestry Representative of the schedule for when
the roots are expected to be exposed. The Contractor shall notify the Engineer and contact
the Urban Forestry Representative at least 2 business days in advance of a tree or root
pruning. The Urban Forestry Representative will inspect each site to approve the
necessary root pruning, or work with the Engineer to modify the work to accommodate
the tree roots. The Urban Forestry Representative will use white, chalk-based paint to
indicate which roots may be pruned and where root pruning is prohibited. Root pruning
must adhere to the directions of the Urban Forestry Representative.

**Damages**

Contractor shall make every effort to avoid damaging any City-owned property, including
(roots, trunk and canopy of) City maintained trees. If damages to trees are found to be as
part of Contractor negligence, Contractor shall be responsible for as follows:

a. Contractor will provide full reparation to include: removal of irreparable tree
   and replacement with similar approved species. Contractor will perform this
   work themselves (at Contractor’s expense) under supervision of City’s Urban
   Forestry Representative, and/or,
   
b. Contractor will reimburse City for City expenses incurred in the related
   reparation work, consisting of but not limited to, site inspections, corrective
   pruning, tree removal, and tree replacement.
   
c. Damages shall be graded 1 (minor) through 5 (replacement), as determined by
   City forestry department, with monetary values below.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Value of Damages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minor Damage</td>
<td>$200</td>
</tr>
<tr>
<td>2</td>
<td>Avoidable Damage to a Major Limb or Root</td>
<td>$400</td>
</tr>
<tr>
<td>3</td>
<td>Moderate Damage</td>
<td>$600</td>
</tr>
<tr>
<td>4</td>
<td>Severe Damage, but Recovery Expected</td>
<td>$800</td>
</tr>
<tr>
<td>5</td>
<td>Replacement</td>
<td>$1,000</td>
</tr>
</tbody>
</table>

**27. CONFORMANCE TO PLANS AND SPECIFICATIONS**

The Contractor’s work shall conform to these specifications and project plans.
Upon notification of the Engineer, the Contractor shall correct any deficiencies within 72 hours. The City may request the City crews or contract with another Contractor to perform the necessary work and repairs if the deficiencies have not been corrected after the 72-hour notification. The Contractor shall pay the cost of the work performed by the City crews or other contractor plus an additional seventy percent (70%) surcharge by deduction from the payment due on the contract.

28. BOND RIDERS FOR ADDITIONAL WORK DURING CONSTRUCTION

During construction, the City may request or authorize additional work as part of the contract. Prior to the commencement of any Contract Change Order (CCO) or Contract Amendment (CA), the Contractor shall submit Surety Company Bond Riders for the new contract amount. The new contract amount is the Contractor’s bid amount or authorized contract amount plus the CCO or CA. The Riders for any additional work shall be provided at no cost to the City. Typically, the maximum authorized contract amount requiring a Rider is the Contractor’s bid amount plus 20%.

29. RETAINED FUNDS

Pursuant to California Senate Bill 293 (SB 293), Assembly Bill 1705 (AB 1705), and Assembly Bill 92 (AB 92) until January 1, 2023, the City shall retain five percent (5%) of such estimated value of work done as part security for the fulfillment of the contract by the Contractor. Section 901.4.1 Retained Funds of the General Provisions of these specifications is hereby revised, decreasing the amount of retained funds from ten percent (10%) to five percent (5%). In all other respects, Section 901.4.1 and the General Provisions of these specifications remain in full force and effect.

30. DUST CONTROL


The Contractor shall exercise diligence in preventing dust nuisance. When necessary or when directed by the Engineer, the Contractor shall apply water for laying dust. Water shall be applied by means of pressure-type distributors equipped with a spray system that will ensure a uniform application.

31. EXISTING UTILITIES

It is not the intent of the plans to show the exact location of existing or relocated utilities, and the Engineer assumes no responsibility therefor. Whenever any such utilities are indicated thereon, the Contractor shall be responsible for verifying their actual location and depth in the field. The Contractor shall notify Underground Service Alert at (800) 227-2600 prior to excavation.
It shall be the Contractor’s responsibility to coordinate with the utility agencies for relocation or adjustment of utilities. Utilities to notify include:

<table>
<thead>
<tr>
<th>Utility</th>
<th>Contact Number</th>
<th>Notification Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG&amp;E</td>
<td>(800) 743-5000</td>
<td>Notify 5 working days in advance</td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>(510) 864-8255</td>
<td>Notify 2 weeks in advance</td>
</tr>
<tr>
<td>COMCAST</td>
<td>(925)424-0966</td>
<td>Notify 2 weeks in advance</td>
</tr>
<tr>
<td>East Bay Municipal Utility District (EBMUD)</td>
<td>(510) 986-7733</td>
<td>Notify 2 weeks in advance and 48 hours.</td>
</tr>
</tbody>
</table>

Contact EBMUD before working in the vicinity of all EBMUD facilities.

The Contractor shall be cognizant of the existing utility lines in the proximity of the work area and take precautions, as necessary, to not disturb these facilities.

Where excavations are performed in the vicinity of underground utility mains and/or services the Contractor shall, as necessary, perform initial exploratory excavations to determine their exact depth and location. Extreme care shall be exercised to avoid damage, and it will be the Contractor’s responsibility to have repairs made to existing facilities at his/her expense in the event of damage.

Styrofoam shall be placed between a new storm drain and existing utilities where vertical clearance between utility crossings is less than six (6) inches.

Attention is directed to the possible existence of underground facilities not indicated on the plans or in the Special Provisions and to the possibility that underground main or trunk lines may be in a location different from that which is indicated on the plans or in the Special Provisions. The Contractor shall ascertain the exact location of underground main or trunk lines whose presence is indicated on the plans or in the Special Provisions, the location of their service laterals or other appurtenances, and of existing service lateral or appurtenances of any other underground facilities which can be inferred from the presence of visible facilities such as buildings, meters, and junction boxes prior to doing work that may damage any of the facilities or interfere with their service.

If the Contractor cannot locate an underground facility whose presence is indicated on the plans or in the Special Provisions, the Contractor shall so notify the Engineer in writing. If the facility for which the notice is given is in a substantially different location from that indicated on the plans or in the Special Provisions, the additional cost of locating the facility will be paid for as extra work as provided in Section 2-9, “Changed Conditions,” of the Standard Specifications.

If the Contractor discovers underground main or trunk lines not indicated on the plans or in the Special Provisions, the Contractor shall immediately give the Engineer and the Utility Company written notification of the existence of those facilities. The main or
trunk lines shall be located and protected from damage as directed by the Engineer, and
the cost of that work will be paid for as extra work as provided in Section 7-4 of the
Standard Specifications. The Contractor shall, if directed by the Engineer, repair any
damage that may occur to the main or trunk lines. The cost of that repair work, not due
to the failure of the Contractor to exercise reasonable care, will be paid for as extra work
as provided in Section 7-4 of the Standard Specifications. Damage due to the Contractor's
failure to exercise reasonable care shall be repaired at the Contractor's cost and expense.

Where it is determined by the Engineer that the rearrangement of an underground facility
is essential in order to accommodate the highway improvement and the plans and
specifications do not provide that the facility is to be rearranged, the Engineer shall
provide for the rearrangement of the facility by other forces or the rearrangement shall be
performed by the Contractor and will be paid for as extra work as provided in Section 7-
4 of the Standard Specifications.

When ordered by the Engineer in writing, the Contractor shall rearrange any utility or
other non-highway facility necessary to be rearranged as a part of the street improvement,
and that work will be paid for as extra work as provided in Section 7-4 of the Standard
Specifications.

Should the Contractor desire to have any rearrangement made in any utility facility, or
other improvement, for the Contractor's convenience in order to facilitate the Contractor's
construction operations, which rearrangement is in addition to, or different from, the
rearrangements indicated on the plans or in the Special Provisions, the Contractor shall
make whatever arrangements are necessary with the owners of the utility or other
non-highway facility for the rearrangement and bear all expenses in connection therewith.

The Contractor shall immediately notify the Engineer of any delays to the Contractor's
operations as a direct result of underground main or trunk line facilities which were not
indicated on the plans or in the Special Provisions or were located in a position
substantially different from that indicated on the plans or in the Special Provisions or as
a direct result of utility or other non-highway facilities not being rearranged as herein
provided (other than delays in connection with rearrangements made to facilitate the
Contractor's construction operations or delays due to a strike or labor dispute). These
delays shall be considered within the meaning of Section 6-4, “Delays and Extensions of
Time,” of the Standard Specifications, and compensation for the delay will be determined
in conformance with the provisions in Section 6-4.3 of the Standard Specifications. The
Contractor shall be entitled to no other compensation for that delay.

Any delays to the Contractor's operations as a direct result of utility or other nonhighway
facilities not being rearranged, due to a strike or labor dispute, shall entitle the Contractor
to an extension of time as provided in Section 6-4, “Delays and Extensions of Time,” of
the Standard Specifications. The Contractor shall be entitled to no other compensation
for that delay.

32. GENERAL CONDITIONS COMPENSATION
Full compensation for complying with the General Conditions shall be considered as included in the contract prices paid for the various items of work and no separate payment will be made therefor.

33. TERMINATION OF CONTRACT FOR CONVENIENCE

A. Owner may terminate the performance of the Work under the Contract Documents in accordance with this clause in whole, or from time to time in part, whenever Owner shall determine that termination is in Owner’s best interest. Termination shall be effected by the Owner delivering to the Contractor notice of termination specifying the extent to which performance of the Work under the Contract Documents is terminated, and the effective date of the termination.

B. Contractor shall comply strictly with the Owner’s direction regarding the effective date of the termination, the extent of the termination, and shall stop work on the date and to the extent specified.

C. Contractor shall be entitled to a total payment on account of the Contract work so terminated measured by:
   a. the actual cost to Contractor of Work actually performed, up to the date of the termination, with profit and overhead limited to twelve percent (12%) of actual cost of work performed, up to but not exceeding the actual contract value of the work completed as measured by the Schedule of Values and Progress Schedule,
   b. offset by payments made and other contract credits. In connection with any such calculation, however, the Owner shall retain all rights under the Contract Documents, including but not limited to claims, indemnities, or setoffs.

D. Under no circumstances may Contractor recover legal costs of any nature, nor may Contractor recover costs incurred after the date of the termination.

34. CREEK WORK COMPLETION

The creek work shall be completed by October 15, 2020, per the regulatory agency permit conditions included in Appendix-A.
CODORNICES CREEK RESTORATION PROJECT
AT KAINS AVENUE
SPECIFICATION NO. 20-11368-C

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TECHNICAL PROVISIONS

The Technical Provisions were prepared under the direction of:

Craig Steward, P.E., CFM
Stantec Consulting Services Inc.

PART 1   GENERAL

1.1. SECTION INCLUDES

A. This specification covers all items related to furnishing, installing, and maintaining Construction Entrance as shown on the plans. Upon completion of the project, the Contractor shall leave the construction entrance in place. Additionally, repair of any erosion areas that have resulted from construction activities will be the responsibility of the Contractor.

1.2. REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. California Stormwater BMP Handbook

1. Stabilized Construction Entrance/Exit TC-1.

B. Special Provisions

1. Section 17 – Creek Protection

PART 2 PRODUCTS

2.1. TEMPORARY CONSTRUCTION ENTRANCE

A. Crushed Stone shall comply with requirements as shown on Erosion Control Plan.

B. Temporary Pipe Culvert shall comply with requirements as shown on Erosion Control Plan.

C. Filter Fabric shall comply with requirements as shown on Erosion Control Plan.

PART 3 EXECUTION

3.1. PREPARATION

A. Prepare Surfaces as detailed on the Erosion Control Plan

3.2. INSTALLATION

A. Install erosion control measures as shown on the Erosion Control.
PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

4.1. CONSTRUCTION ENTRANCE

A. The Construction Entrance will be paid for at the contract unit price per square feet (SF). The payment will be full compensation for all necessary materials, labor, equipment and incidentals to install.

Construction Entrance SQUARE FEET (SF)

END OF SECTION 01 55 13
TECHNICAL SPECIFICATIONS
DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 55 26 – TRAFFIC CONTROL

PART 1  GENERAL

1.1.  SECTION INCLUDES

A. This specification consists of furnishing all materials, equipment, incidentals, and labor which may be necessary for adequate and safe traffic control and in accordance with the approved traffic control plans per Section 501.10 of the General Provisions.

1.2.  REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. General Provisions

1. Section 401.12 – Submittals
2. Section 501.10 – Traffic Control.
4. Section 701.11 – Public Convenience and Safety.


1. Part 6 – Temporary Traffic Control.

1.3.  SUBMITTAL

A. Contractor shall submit three copies of proposed traffic control plan per Section 401.12 of the General Provisions to the Engineer for approval at least five (5) working days prior to commencement of work.

PART 2  PRODUCTS (NOT USED)

PART 3  EXECUTION

3.1.  TRAFFIC CONTROL PLAN

A. The Contractor shall conduct his operations as to cause the least possible obstruction and inconvenience to the public. The Contractor shall furnish all flag persons, barricades, barriers, lanterns, flares, "DR" type detour signs, and other devices which may be necessary for adequate and safe traffic control, and in accordance with the specifications and the approved traffic control plans.
PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

4.1. TRAFFIC CONTROL

A. Traffic Control will be paid for at the contract price Lump Sum (LS). The payment will be full compensation for all necessary materials, labor, equipment and incidentals to install, maintain, remove, and remove from traffic control area.

Traffic Control LUMP SUM(LS)

END OF SECTION 01 55 26 – TRAFFIC CONTROL
PART 1 GENERAL

1.1. SECTION INCLUDES

A. The work covered by this section consists of furnishing, installing, and maintaining all materials required for Temporary Erosion and Sediment Control. All work shall be in accordance with the details and as shown in the Drawings, and as approved by the Engineer. The work covered by this section consists of collection or furnishing, storage, preparation, and installation of all materials along with all labor and equipment required for proper installation of Temporary Erosion and Sediment Control.

1.2. REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. California Stormwater BMP Handbook
   2. Fiber Rolls SE-5.

   1. Section 300-9 – Geotextiles for Erosion Control.

C. Special Provisions
   1. Section 17 – Creek Protection

D. Technical Specifications
   1. Section 01 55 13 – Construction Entrance.

E. Codornices Creek Erosion Control Plan

1.3. SUBMITTAL

A. Contractor shall prepare submittal of material to be used for review to the engineer prior to construction.
PART 2 PRODUCTS

2.1. MATERIALS


PART 3 EXECUTION

3.1. PREPARATION

A. Prepare Surfaces as detailed on the Erosion Control Plan

3.2. INSTALLATION

A. Install erosion control measures as shown on the Erosion Control.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

4.1. TEMPORARY EROSION AND SEDIMENT CONTROL

A. The Temporary Erosion and Sediment Control will be paid for at the contract price Lump Sum (LS). The payment will be full compensation for all necessary materials, labor, equipment and incidentals to install, maintain, remove, and restore to a condition that meets or exceeds preconstruction condition.

Temporary Erosion and Sediment Control LUMP SUM(LS)

END OF SECTION 01 57 13 – EROSION AND SEDIMENT CONTROL
TECHNICAL SPECIFICATIONS
DIVISION 01 – GENERAL REQUIREMENTS
SECTION 01 58 13 – PROJECT SIGNAGE

PART 1  GENERAL

1.1.   SECTION INCLUDES

A. This Specification covers all items related to furnishing and installing Proposition 84 Sign. The work covered by this section consists of collection or furnishing, storage, preparation, and installation of all materials along with all labor and equipment required for proper installation of Sign posted during construction.

1.2.   REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

   1. Section 201-1 – Portland Cement Concrete.

B. California Department of Transportation Standard Plans and Specifications, 2018 Edition
   1. Roadside Signs.

C. California Department of Parks and Recreation Proposition 84 Sign Guidelines

1.3.   SUBMITTAL

A. Sign Posted During Construction
   1. Contractor shall prepare and submit shop drawings of Sign to be posted during construction for review and approval to the engineer prior to Construction.

   2. Recommended minimum size of sign is 4.5 feet by 7.5 feet,

B. Shop Drawings will show details, dimensions, size of material, sign posts and footings, and sign location at the project. All materials shall be durable and resistant to the elements and graffiti.

C. Language for Sign:
   1. All signs will contain the minimum language below: (Description of Project) Another Project to Improve California Parks (or term appropriate for the project, such as Museums, Zoos, Aquariums, Children’s Museums, etc.) funded by the 2006 Clean Water Bond Act

   2. Lisa Ann L. Mangat, Director, California Department of Parks and Recreation

   3. Wade Crowfoot, Secretary for California Natural Resources Agency
4. Gavin Newsom, Governor

5. The name of the director of the local agency or other governing body also may be added. The sign may also include the names and/or logos of other partners, organizations, individuals and elected representatives as deemed appropriate by those involved in the Project.

6. Universal Logo: All signs will contain a universal logo that will be equated with the 2006 Parks and Water Bond Act statewide. The logo will be on a template, available at www.parks.ca.gov/grants. The Universal logo must be mounted in an area to maximize visibility and durability. The logo must be a minimum of 1’x1’. Exceptions are permitted where these dimensions may not be appropriate.

PART 2  PRODUCTS (NOT USED)

PART 3  EXECUTION

3.1. INSTALLATION

A. Install sign per approved shop drawings.

PART 4  T. MEASUREMENTS AND PAYMENT PROCEDURES

4.1. PROPOSITION 84 SIGN

A. The Sign will be paid at the contract unit price per each (EA). The payments will be full compensation for all necessary materials, labor, equipment, and incidentals to install Sign prior to Construction.

Sign posted during construction EACH (EA)

END OF SECTION 01 58 13
TECHNICAL SPECIFICATIONS
DIVISION 01 – GENERAL REQUIREMENTS

SECTION 01 71 13 MOBILIZATION/DEMOBILIZATION

PART 1 GENERAL

1.1. SECTION INCLUDES

A. The Contractor shall comply with the requirements of the regulatory permits included in the Appendices of these documents. Regulatory permits include: US Army Corps of Engineers – Nationwide Permit, State of California Regional Water Quality Control Board Water Quality Certification, and California Department of Fish and Wildlife Streambed Alteration Agreement.

B. Mobilization includes both mobilization and demobilization required by the contract.

C. Mobilization shall include all activities and associated costs for transportation of Contractor's personnel, equipment, and operating supplies to the site; establishment of offices, buildings, staging areas, stockpiling areas and other necessary general facilities for the Contractor's operations at the site; premiums paid for any applicable performance and payment bonds, including coinsurance and reinsurance agreements as applicable; and other items specified.

D. Mobilization shall include sanitary facilities. The Contractor shall furnish, install, and maintain temporary sanitary facilities for use throughout construction period. This includes containers to dispense drinking water, enclosed toilet facilities and general washing facilities for construction personnel, which complies with OSHA safety and health regulations for these facilities. All sanitary facilities are to be within project site.

E. Mobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not required or included in the contract from the site; including the disassembly, removal and site clean-up of offices, buildings and other facilities assembled on the site specifically for this contract.

F. A site inspection box will be provided as incidental part to the cost of mobilization. The site inspection box shall be of adequate size to hold plans, specifications, permits and other documents on site. The site inspection box must be unlocked during working hours. A rain gauge shall be installed near inspection box yet must be free to collect rainfall unimpeded by vegetation and other overhanging objects. Rain gauge readings shall be recorded at the beginning of every workday. After readings are taken, the gauge shall be reset by pouring out the old rainwater.

1.2. REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. General Provisions

1. Section 801.2

B. Special Provisions

1. Section 26 – Mobilization and Demobilization
PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1. MOBILIZATION

A. The Contractor shall begin work within 30 calendar days after the award of the contract and shall diligently prosecute the same to completion before the expiration of the time specified in the Bidding Documents. After issuing of Notice to Proceed and prior to commencement of mobilization and construction, the Contractor shall be required to attend a pre-construction meeting.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. The contract lump sum price paid for "Mobilization" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in mobilization and demobilization, including, but not limited to, furnishing all specified contract bonds and insurance certificates, compliance with regulatory permits and payment of required dual permit fees, public notification, submittals, transporting equipment, sanitary restroom facilities, and all other work as specified in the Standard Specifications, these technical provisions, and as directed by the Engineer.

Mobilization and Demobilization  LUMP SUM(LS)

END OF SECTION 01 71 13
PART 1  GENERAL

1.1.  SECTION INCLUDES

A.  This specification consists of furnishing all materials, equipment, incidentals, and labor necessary for construction staking and layout. Surveying shall be performed by qualified personnel, employed by or on the behalf of the Contractor. The Contractor shall ensure that all construction staking is performed under the direct supervision of a Professional Land Surveyor, licensed in the State of California. Survey point closures shall be Fourth Order horizontal (1:2500) and Fourth Order vertical (0.10 feet).

1.2.  REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A.  General Provisions

1.  Section 501.7 – Lines and Grades.

2.  Section 701.19 – Preservation of Monuments.

B.  Special Provisions

1.  Section 8 - Obstructions

2.  Section 11 – Lines and Grades.


C.  California Department of Transportation’s Surveys Manual

1.  Chapter 12 – Construction Surveys.

PART 2  PRODUCTS (NOT USED)

PART 3  EXECUTION

3.1.  CONSTRUCTION STAKING LAYOUT

A.  The Contractor shall establish control points and necessary benchmarks for the proper layout of the work. The Contractor shall make all calculations involved and shall furnish and place all layout stakes or markers. The Contractor shall exercise care in the preservation of stakes, control points and markers, and benchmarks and shall have them reset at the Contractor’s own cost when they are damaged, lost, displaced, or removed.
B. The Contractor shall be responsible for the proper layout of the Project. The Contractor shall be responsible for reporting any discrepancies to the Engineer for clarification. Minor adjustments to suit field conditions are anticipated, and it shall be the responsibility of the Engineer to make decisions regarding adjustments. Any inspection or checking of the Contractor’s layout by the Engineer and the acceptance of such shall not relieve the Contractor of its responsibility to secure the proper dimensions, grades, and elevation of the required work.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

4.1. CONSTRUCTION STAKING

A. Construction Staking will be paid for at the contract price Lump Sum (LS). The payment will be full compensation for all necessary materials, labor, equipment and incidentals to perform the work as required. No additional payment will be made to reset stakes, control points and markers, and benchmarks that have been damaged, lost, displaced, or removed.

Construction Staking LUMP SUM (LS)

END OF SECTION 01 71 23.13
PART 1 GENERAL

1.1. SECTION INCLUDES

A. This specification covers all items related to the removal of Surface Debris; the removal of Concrete Walls, Footings, and Aprons; the removal of Trees, and Other Vegetation; the removal of Fencing; the removal of Debris Rack; and the removal of 4" HDPE Pipe as shown on the plans. Site preparation shall be accomplished in a manner that will not result in damage to existing culverts, storm drainpipes, fencing, structures, buildings, or landscaping not designated for removal. If any such damage does occur due to Contractor’s operations, the Contractor shall repair the damage at his/her expense. Clearing and Grubbing shall be performed in accordance with Section 23 of the Special Provisions, Greenbook, 2018 Edition, Cal/OSHA regulations, and as shown on the approved plans.

1.2. REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

A. Comply with laws and regulations for environmental requirements, disposal of debris, and use of herbicides.

B. Cal/OSHA – Title 8 Regulations

C. Special Provisions
   1. Section 23 – Clearing and Grubbing.

   1. Section 5-7.1 – Work Site Safety.
   2. Section 300-6.2 – Clearing and Grubbing.

E. Technical Specifications
   1. Section 31 35 01 – Wood and Brush Toe
   2. Section 31 38 41 – Boulder Hook Riffle with Log Sill
PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1. PREPARATION
   A. Verify that existing trees, shrubs, and other vegetation designated to remain are tagged or identified.

3.2. PROTECTION
   A. Locate, identify, and protect from damage culverts and HDPE storm pipes.
   B. Protect vegetation designated to remain as final landscaping.
   C. Protect from damage or displacement existing structures and fencing.

3.3. CLEARING AND GRUBBING
   A. Clear and Grub areas required for access to Site and Execution of Work. Retain woody debris for use in Select Bed Mix and Wood and Brush Toe.
   B. Remove trees and shrubs including root systems to a depth of 12 inches. Retain woody debris for use in Select Bed Mix and Wood and Brush Toe.
   C. Remove surface debris.

3.4. REMOVAL
   A. Remove fencing indicated on the Drawings
   B. Remove concrete Walls, Footings, and Aprons as indicated on the Drawings.
   C. Remove Debris Rack indicated on the Drawings.

3.5. DISPOSAL
   A. Dispose of debris, extracted plant life, and removed materials off Site in accordance with laws and regulations.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

4.1. CLEARING AND GRUBBING
   A. Clearing and Grubbing will be paid for at the contract unit price per acre (AC). The payment will be full compensation for all necessary materials, labor, equipment and incidentals for clearing and grubbing of the job site. All cost associated with storage for future use, as well as removal and disposal of debris will be included in Clearing and Grubbing.
CODORNICES CREEK RESTORATION PROJECT
AT KAINS AVENUE
SPECIFICATION NO. 20-11368-C

END OF SECTION 31 11 00
PART 1 GENERAL

1.1. SECTION INCLUDES

A. The work covered by this section consists of the construction and materials required for completing all work associated with the excavation of the proposed channel and floodplain.

PART 2 PRODUCTS

2.1. EXCAVATION

A. Excavation shall include all labor and excavation necessary to form the channel bedform features, banks and floodplain.

PART 3 EXECUTION

3.1. EXCAVATION METHODS

A. The Contractor is required to construct the appropriate bed features such as riffles, runs, pools, and glides, as shown on the Drawings or as determined in the field by the Engineer. Typical sections, profiles, and cross-sections are provided in the Drawings. The excavated materials will be stockpiled in areas approved by the Engineer. The materials excavated from the new channel will be used to fill in abandoned channel sections as shown on the plans or as indicated by the Engineer. Topsoil and herbaceous material salvaged and stockpiled during excavation shall be used to cover the constructed channel banks.

Final channel grades shall meet the stream profile and spot elevations, and stream dimensions shall meet the typical sections and cross-sections within the tolerances specified in Table C-1.

<table>
<thead>
<tr>
<th>Table C-1: Elevation and Dimension Tolerances</th>
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<tbody>
<tr>
<td>riffle elevations</td>
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<tr>
<td>pool elevations</td>
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<tr>
<td>width</td>
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<tr>
<td>depth</td>
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PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. Excavation shall be measured by actual quantity, in cubic yards (CY) as approved by the Engineer. Handling of onsite fines shall be measured in actual quantity, in Tons as approved by the engineer. Payment shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals necessary for all work covered by this section.
CODORNICES CREEK RESTORATION PROJECT
AT KAINS AVENUE
SPECIFICATION NO. 20-11368-C

DIVISION 31 – EARTHWORK
SECTION 31 23 16
EXCAVATION

Channel Excavation
Onsite Fines (Handling of Rock Only)

CUBIC YARD (CY)
TONS

END OF SECTION 31 23 16
TECHNICAL SPECIFICATIONS
DIVISION 31 – EARTHWORK
SECTION 31 23 19 – PUMP AROUND

PART 1 GENERAL

1.1. SECTION INCLUDES

A. The work covered by this section consists of furnishing, installing, and maintaining and removing (as directed) any and all material required for the Pump-Around Operation(s). The work shall be approved by the Engineer.

All construction activities in the stream channel shall be conducted in the dry, segregated from active stream flow, by pumping all water around the section of the stream being constructed. The Contractor shall furnish, install, operate, maintain, and remove all hose, materials, and apparatus required to maintain daily pumping activities as required for the duration of the project. Work shall also include furnishing, installing, maintaining, and removing Temporary Impervious Dikes for the purpose of diverting normal, active stream flow around the section of stream being constructed or other sections of unstabilized stream channel.

The quantity of Pump-Around Operation(s) to be completed will be affected by the actual conditions that occur during the construction of the project. The quantity of Pump-Around Operation(s) may be increased, decreased, or eliminated entirely at the discretion of the Engineer. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the work.

1.2. FISH RELOCATION

A. Only a qualified biologist, approved by CDFW for this Project, may relocate all fish/amphibians within the work site prior to dewatering. Captured fish/amphibians shall be moved to the nearest appropriate site on the stream. This condition does not allow for the take or disturbance of any state or federally listed species without appropriate take permits. A record shall be maintained of all fish/amphibians captured and moved, and the written record shall be provided to the CDFW (c/o1600 program, 2825 Cordelia Road, Suite 100, Fairfield, California 94534) with appropriate Streambed Alteration Notification number.

1.3. STRANDED AQUATIC LIFE

A. The qualified biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include fish landing nets, dip nets, buckets and by hand. Captured aquatic life shall be released immediately in the closest body of water adjacent to the work site. This measure does not allow for the take or disturbance of any state or federally listed species without appropriate take permits.

1.4. NON-NATIVE SPECIES

A. All non-native invasive aquatic species found during construction activities shall not be released in the stream or quarry ponds. If non-native species are found on site, Permittee shall consult with CDFW to determine appropriate methods for disposing of them.
1.5. **COFFER DAMS**

A. When work in a flowing stream is unavoidable, the entire stream flow shall be diverted around or through the work area during the excavation and/or construction operations. Stream flow shall be diverted using gravity flow through temporary culverts/pipes or pumped around the work site with the use of hoses. Any temporary dam or other artificial obstruction constructed shall only be built from materials such as sheet pile, sandbags or clean gravel which will cause little or no siltation. No other diversion method shall be use without authorization of the CDFW. If another diversion method is preferred, the Permittee must submit a plan detailing the desired diversion method. Authorization of any other diversion method shall be at the discretion of the CDFW. Normal flows will be restored to the affected stream immediately upon completion of work at that location.

1.6. **SCREENED PUMPS**

A. All water diversion intake hoses and pump inlets shall be screened to prevent entrapment or intake of aquatic species and the screen face shall be oriented parallel to the flow of water. The screens shall be made of non-corrosive material and diameter/diagonal openings shall meet the criteria of CDFW and the National Marine Fisheries Service before water is pumped from within the coffer dams (see screening criteria at: http://www.westcoast.fisheries.noaa.gov/publications/hydropower/water_drafting_specification_guidelines.pdf).

The screen shall be kept in good repair and cleaned/checked as frequently as possible. All screens shall be supported above the channel bottom.

1.7. **BYPASS FLOWS**

A. Flow diversions shall be done in a manner that shall prevent pollution and/or siltation and which shall provide flows to downstream reaches. Flows to downstream reaches shall be provided during all times that the natural flow would have supported aquatic life. Said flows shall be sufficient quality and quantity, and of appropriate temperature to support fish and other aquatic life both above and below the diversion. Normal flow shall be restored to the affected stream immediately upon completion of work at that location.

**PART 2 PRODUCTS**

2.1. **PUMP AROUND PRODUCTS**

A. Pump, hose, and associated apparatus shall have enough capacity to adequately pump normal base flow (i.e. non-storm flow) around the section of stream channel being constructed without flow overtopping the impervious dike. Hose length shall be adequate to reach from pump setup location to the location of the Special Stilling Basin.
PART 3 EXECUTION

3.1. PUMP AROUND OPERATIONS

A. Contractor shall prepare and submit a creek diversion plan for review and approval by the Engineer prior to any work commencing on site.

B. Pump Around Operation(s) shall be installed and operated as directed by the Engineer and in the following sequence. Install the upstream Temporary Impervious Dike, diversion pumping apparatus, and Special Stilling Basin, and begin pumping operations for stream diversion. Place the downstream impervious dike along with the dewatering pumping apparatus and begin dewatering the entrapped area. When the water within the entrapped area has been evacuated, perform the stream restoration work for that area in accordance with the plans. On completion of all stream restoration work within the entrapped area, excavate any accumulated silt and dewater before removing all Temporary Impervious Dike(s) and Special Stilling Basin equipment. During normal, “sunny day” operation, pump should maintain flow that does not overtop the installed impervious dikes.

Pump-Around Operation(s) shall not be allowed to continue beyond the end of the workday, throughout the nighttime hours. The Contractor shall be responsible for stabilizing all graded areas before the Pump-Around Operation is shut down and active flow is introduced to the graded areas. Care should be taken to ensure that flow can pass over the Temporary Impervious Dikes without causing damage or erosion. Likewise, pump operation should be shut down and measures taken to stabilize graded areas and impervious dikes prior to forecast storm events.

Pump and hoses shall be maintained so as to prevent leaks. Temporary Impervious Dikes shall be inspected after each storm event or when seepage occurs and repaired to prevent seepage and erosion.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Pump-Around Operation(s) shall be measured for payment as a lump sum. The payment will include all materials, labor, equipment, all incidentals, and related expenses and shall include multiple installations of the system, dewatering, multiple installations of Temporary Impervious Dikes, and maintenance and removal of the system. In addition, the payment will include all materials, labor, equipment, all incidentals, and related expenses of the qualified biologist.

The quantity of Pump-Around Operation(s) as provided above will be paid for at the contract lump sum (LS) price for Pump-Around Operation. The LS payment shall be full compensation for all materials, labor, equipment, and incidentals necessary to perform the work described above.

Pump Around LUMP SUM (LS)

END OF SECTION 31 23 19
TECHNICAL SPECIFICATIONS
DIVISION 31 – EARTHWORK
SECTION 31 25 14.16 – EROSION CONTROL BLANKETS

PART 1 GENERAL

1.1. SECTION INCLUDES

A. The work covered by this section consists of furnishing, installing, and maintaining all materials required for Erosion Control Blankets (Coir). All work shall be in accordance with the details and as shown in the Drawings, and as approved by the Engineer. The work covered by this section consists of collection or furnishing, storage, preparation, and installation of all materials along with all labor and equipment required for proper installation of erosion control matting.

PART 2 PRODUCTS

2.1. NON-WOVEN COCONUT MATTING

A. Non-Woven Coconut Matting shall be North American Green Biodegradable C-125BN or equivalent, as specified in the details. The top and bottom netting shall consist of Jute Fiber, NOT Black Polypropylene.

2.2. WOVEN COIR FIBER

A. Woven Coir Fiber shall be 780 g/m2 Nedia Enterprises KoirMat 700 or equivalent, as specified in the details.

2.3. WOOD STAKES

A. Anchors shall be made of hardwood not less than 12 inches in length with a notch for securing the matting. Stakes used for securing the matting along the edges shall be made of hardwood not less than 18" long with a 2" x 2" nominal square cross section. One end of the stake must be sharpened or beveled to facilitate driving through the coir fiber mat and down into underlying soil.

PART 3 EXECUTION

3.1. EROSION CONTROL BLANKET INSTALLATION

A. A single layer of Erosion Control Matting (Woven Coir Fiber) shall be placed in locations that may be susceptible to surface erosion due to concentrated flows. Locations for installation are indicated on the Erosion and Sediment Control Plans or will be determined by the Engineer. Application of seed and mulch will be followed by installation of the coir fiber matting. Prior to applying coir fiber matting, provide a smooth soil surface free from stones, clods, or debris that will prevent the contact of the matting with the soil. Care shall be taken to preserve the required line, grade, and cross section of the area covered. Place the matting by unrolling the matting and apply without stretching such that it will lie smoothly but loosely on the soil surface. Attach matting to finished grade as shown in the detail. The Engineer may require adjustments in the staking requirements to fit individual site conditions.
B. A layer of Woven and Non-Woven Erosion Control Blanket will be used in the construction of soil lifts. Refer to Specification 31 38 01.2 – Soil Lifts and the Design Details.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Woven Coir Fiber to be measured for payment will be the actual number of square yards (SY) of erosion control matting along the surface of the ground which is installed, is unassociated with any other structure, and is accepted by the Engineer. The payment will include all furnishing, storage, installation, and maintenance of materials including Coir Fiber Matting, stakes, and any other materials required for installation, with the exception of seed and mulch. Separate payment will be made for Temporary Seeding, Permanent Seeding and Mulching. The quantity of Woven Coir Fiber will be paid for at the contract unit price for the total quantity used as measured provided above. The payment will be full compensation for all necessary materials, labor, equipment, and incidentals. All Erosion Control Blanket quantities associated with soil lifts will be paid for under that bid item.

Woven Coir Fiber SQUARE YARD (SY)

END OF SECTION 31 25 14.16
PART 1 GENERAL

1.1. SECTION INCLUDES

A. The work covered by this section consists of the construction and maintenance of structures placed in and along the stream to provide bank protection at locations designated on the Drawings or as indicated by the Engineer.

The work covered by this section consists of collection or furnishing, storage, preparation and installation of all materials required for proper installation of Wood and Brush Toe(s). The quantity of Wood and Brush Toe(s) to be installed will be affected by the actual conditions that occur during the construction of the project.

The quantity of Wood and Brush Toe(s) may be increased, decreased, or eliminated entirely at the discretion of the Engineer. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the work.

PART 2 PRODUCTS

2.1. WOODY MATERIAL

A. The coarse wood material may consist of root wads, logs, and tree trunks and shall be no smaller than six inches in diameter with different lengths interlocking together. Logs shall have dimensions no smaller than those specified in the plans. The smaller or fine wood material shall be branches of various diameters and lengths that interlock together. Wood material shall be gathered from onsite trees and woody plants taken during the clearing and grubbing process. If there is insufficient woody material on-site, the Contractor is responsible for obtaining suitable material off-site.

2.2. SOIL LIFT

A. Refer to Section 31 38 01.2 for Soil Lift Specifications

PART 3 EXECUTION

3.1. WOOD AND BRUSH TOE CONSTRUCTION

A. Brush Toe(s) shall be constructed as shown in the Brush Toe details at the locations shown on the Drawings, and at other locations as directed by the Engineer. Soil lifts shall then be placed to the plan elevation according to the soil lift specifications and details.
PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Wood and Brush Toe structures to be measured for payment will be the actual linear footage of Wood and Brush Toe constructed, as measured along the toe, installed and accepted by the Engineer, and shall include all materials, labor, equipment, and incidentals. The quantity of Wood and Brush Toe(s) will be paid for at the contract unit price per linear foot (LF) for the total quantity installed. The payments will be full compensation for all necessary materials, labor, equipment, and incidentals.

Wood and Brush Toe

LINEAR FOOT (LF)

END OF SECTION 31 35 01
TECHNICAL SPECIFICATIONS
DIVISION 31 – EARTHWORK
SECTION 31 38 01.2 – SOIL Lifts

PART 1 GENERAL

1.1. SECTION INCLUDES

A. The work covered in this section consists of furnishing, storage, preparation, installing, and maintaining all materials required for Soil Lifts. Soil Lifts are a structure, consisting of natural materials, to build and reinforce the bank of the channel. The layering of live brush material, and topsoil with erosion control blanket create a stable interlocking matrix.

PART 2 PRODUCTS

2.1. LIVE BRUSH

A. Live Brush material will consist of live branches that are of the length, size, and species as prescribed on the plans and as listed in the planting plan. Live Branch species shall be the same as the live stake species.

2.2. EROSION CONTROL BLANKET

A. Erosion Control Blanket (ECB) associated with Soil Lifts shall be installed at the locations and of the type specified in the Soil Lift detail. Refer to Section 31 25 14.16 for Erosion Control Blanket specifications.

2.3. HARDWOOD STAKES

A. Hardwood stakes associated with soil lifts shall be sized and placed according to the details, unless adjusted by the engineer. Refer to Section 31 25 14.16 for Hardwood Stake specifications.

PART 3 EXECUTION

3.1. SOIL LIFT CONSTRUCTION

A. Soil Lifts shall be constructed as shown in the Soil Lift details at the locations shown in the drawing, and at other locations as directed by the Engineer.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. Measurement of Soil Lifts shall be per linear foot of installed structure, and shall include installation labor and equipment, live brush, erosion control blankets, and wooden stakes. The contract linear foot (LF) price shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals and for doing all the work involved of the installed structure.

Soil Lifts LINEAR FOOT (LF)
END OF SECTION 31 35 01.2
PART 1  GENERAL

1.1.  SECTION INCLUDES

A. The work covered by this section consists of the construction and maintenance of Rock Toe structures placed in and along the stream to provide bank protection at locations designated on the Drawings or as indicated by the Engineer. Rock Toe structures consist of natural boulder materials to reinforce the channel bank. The quantity of Rock Toe to be installed will be affected by the actual conditions that occur during the construction of the project.

PART 2  PRODUCTS

2.1.  BOULDERS

A. Refer to Section 31 37 00 for Boulder Specifications.

PART 3  EXECUTION

3.1.  ROCK TOE CONSTRUCTION

A. Rock Toe shall be constructed as shown in the Rock Toe details at the locations shown on the Drawings, and at other locations as directed by the Engineer. Soil lifts shall then be placed to the plan elevation according to the soil lift specifications and details.

PART 4  MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Rock Toe structures to be measured for payment will be the actual linear footage of Rock Toe constructed, as measured along the toe, installed and accepted by the Engineer. The quantity of Rock Toe will be paid for at the contract unit price per linear foot (LF) for the total quantity installed. The payments will be full compensation for all necessary materials, labor, equipment, and incidentals. All boulder quantities required for the Rock Toe will be paid for according to Section 31 37 00.

Boulder Toe  LINEAR FOOT (LF)

END OF SECTION 31 35 02
PART 1 GENERAL

1.1. SECTION INCLUDES

A. The work covered by this section consists of furnishing and stockpiling approved stone for use in in-stream structures as indicated in the plans or as directed by the Engineer. The quantity of stone may be increased, decreased, or eliminated entirely at the direction of the Engineer. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the work. Equivalent stone may be substituted for local stone if approved by the Engineer.

PART 2 PRODUCTS

2.1. BOULDERS

A. Boulders shall have minimum dimensions as specified in the details. Boulders shall be relatively flat on either side in the same dimension, preferably the long dimension. Engineer shall approve boulders and select material. “Boulder” stone shall consist of natural stone approved by the Engineer. The stone shall be sound, tough, dense, resistant to the action of air and water, and suitable in all other respects for the purpose intended.

2.2. OFFSITE COBBLE/BOULDER

A. Offsite Cobble/Boulder shall follow the gradation requirements specified in the details and shall consist of natural stone approved by the Engineer. The stone shall be sound, tough, dense, resistant to the action of air and water, and suitable in all other respects for the purpose intended.

2.3. OFFSITE COBBLE/GRAVEL

A. Offsite Cobble/Gravel shall follow the gradation requirements specified in the details and shall consist of natural stone approved by the Engineer. The stone shall be sound, tough, dense, resistant to the action of air and water, and suitable in all other respects for the purpose intended.

2.4. ONSITE COBBLE/GRAVEL

A. Onsite Cobble/Gravel is to be harvested from the existing channel prior to any fill operations. The existing bed shall be harvested down to a depth below the armoring level (~1-2 feet), and then should be stockpiled and mixed with offsite cobble/gravel and onsite fines.
PART 3 EXECUTION

3.1. USE OF ROCK

A. The Select bed mix material will be required to be well sorted and mixed prior to placement. The Contractor may use suitable, locally harvested native gravel and cobble for the gravel/cobble composition requirements specified in the plan, if approved by the engineer. The Contractor shall place stone, in locations shown on the construction plans to the thickness, widths, and lengths as shown on the construction plans or directed by the Engineer. All stone shall be placed neatly and uniformly with an even surface to form an in-stream structure or a sediment and erosion control device or in accordance with the construction plans and specifications and shall meet the approval of the Engineer.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of stone required to construct the structures or sediment and erosion control measures detailed in these specifications will be paid for under the unit price per ton once those structures have been completed and approved by the Engineer. When field conditions dictate the need for additional quantity greater than 10% of the bid item, the quantity of stone measured as provided above, will be paid for at the contract unit price per ton based on the material upon agreement between the contractor, client, and Engineer. Such price and payment will be full compensation for all work covered by this section, including but not limited to furnishing, weighing, stockpiling, and maintaining the stone and disposal of any materials not incorporated into the project if directed by the Engineer. Delivery tickets must clearly state material source and weight and be presented to Engineer or Owner for approval and accompany pay requests.

<table>
<thead>
<tr>
<th>Boulders</th>
<th>TON</th>
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<tbody>
<tr>
<td>Offsite Cobble/Boulder</td>
<td>TON</td>
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<tr>
<td>Offsite Cobble/Gravel</td>
<td>TON</td>
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<tr>
<td>Onsite Cobble/Gravel</td>
<td>TON</td>
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END OF SECTION 31 37 00
TECHNICAL SPECIFICATIONS
DIVISION 31 – EARTHWORK
SECTION 31 38 01 – ARMORED RIFFLE

PART 1   GENERAL

1.1.   SECTION INCLUDES

A. This work consists of preparing areas at which Armored Riffles are to be placed; excavation of channel material; placement of rock and select bed mix; and finishing banks, structure slopes, and stream channel at the locations specified on the plans to provide grade control for the newly constructed channel. The Armored Riffle is comprised of select bed mix. The select bed mix is to be placed and compacted in the channel bed to bankfull width, where the riffle is located.

PART 2   PRODUCTS

2.1.   SELECT BED MIX

A. Select bed mix for this item shall be a mix of the Offsite Cobble/Boulder, Offsite Cobble/Gravel, and Onsite Cobble/Gravel specified in Section 31 37 00 along with 4” – 6” diameter woody debris taken during the clearing and grubbing process. If there is insufficient woody material on-site, the Contractor is responsible for obtaining suitable material off-site. Wood material shall be branches of various diameters and lengths that interlock together. Rock and woody debris shall be mixed according to the methodology and gradation noted in the details.

PART 3   EXECUTION

3.1.   ARMORED RIFFLE CONSTRUCTION

A. Armored Riffle shall be constructed as shown in the armored riffle details and in the riffle containing the Log Drop at the locations shown in the Drawings, and at other locations as directed by the Engineer. Other structures may be placed concurrently and specified by the Drawings. Final grades should be within 0.1 feet of those indicated on the Plans. Some excavation of channel material may be necessary to achieve the correct grades. This shall be considered incidental to construction of Armored Riffle.

PART 4   MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Armored Riffle structures to be measured for payment will the number of distinct armored riffles constructed, as accepted by the Engineer. The quantity of Armored Riffle will be paid for at the contract unit price for the total quantity installed. The payments will be full compensation for all necessary labor, equipment, and incidentals. Rock material will be compensated under Section 31 37 00 on a per ton basis. Woody debris shall be considered incidental to this pay item.

Armored Riffle EACH (EA)

END OF SECTION 31 38 01
TECHNICAL SPECIFICATIONS
DIVISION 31 – EARTHWORK

SECTION 31 38 21.1 – BOULDER J-HOOK

PART 1 GENERAL

1.1. SECTION INCLUDES

The work covered by this section consists of the construction and maintenance of Boulder J-Hook structures at locations designated on the drawings or as indicated by the Engineer. The quantity of rock in a vane may be increased, decreased, or eliminated entirely at the direction of the Engineer. Such variations in quantity will not be considered as alterations in the details of construction or a change in the character of the work.

PART 2 PRODUCTS

2.1. SELECT BED MIX

A. Select bed mix for this item shall be a mix of the Offsite Cobble/Boulder, Offsite Cobble/Gravel, and Onsite Cobble/Gravel specified in Section 31 37 00 along with 4” – 6” diameter woody debris taken during the clearing and grubbing process. If there is insufficient woody material on-site, the Contractor is responsible for obtaining suitable material off-site. Wood material shall be branches of various diameters and lengths that interlock together. Rock and woody debris shall be mixed according to the methodology and gradation noted in the details.

2.2. BOULDERS

A. Refer to Section 31 37 00 for Boulder Specifications.

PART 3 EXECUTION

3.1. BOULDER J-HOOK CONSTRUCTION

A. Boulder J-Hooks shall be constructed as shown in the Boulder J-Hook details at the locations shown in the Drawings, and at other locations as directed by the Engineer. Some excavation of channel material may be necessary to achieve the correct grades. This shall be considered incidental to construction of Boulder J-Hooks.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Boulder J-Hook structures to be measured for payment will the number of successfully installed Boulder J-Hooks, as accepted by the Engineer. The quantity of Boulder J-Hooks will be paid for at the contract unit price for the total quantity installed. The payments will be full compensation for all necessary labor, equipment, and incidentals. Boulders and Select Bed Mix will be compensated under Section 31 37 00 on a per ton basis. Woody debris shall be considered incidental to this pay item.

Boulder J-Hook EACH (EA)

END OF SECTION 31 38 21.1
TECHNICAL SPECIFICATIONS
DIVISION 31 – EARTHWORK
SECTION 31 38 31.2 – STRUCTURE LOG DROP

PART 1 GENERAL

1.1. SECTION INCLUDES

A. This work consists of preparing areas at which Log Drops are to be placed; excavation of channel material; furnishing and placing footing logs and surface logs; placing anchor boulders and select backfill; and finishing banks, structure slopes, and stream channel at the locations specified on the plans.

PART 2 PRODUCTS

2.1. Logs

A. Logs for this item shall be from trees free of rot and/or disease with minimum dimensions as specified on the plans. Logs shall be straight with limbs trimmed and flush.

2.2. Select Bed Mix

A. Select bed mix for this item shall be a mix of the Offsite Cobble/Boulder, Offsite Cobble/Gravel, and Onsite Cobble/Gravel specified in Section 31 37 00 along with 4" – 6" diameter woody debris taken during the clearing and grubbing process. If there is insufficient woody material on-site, the Contractor is responsible for obtaining suitable material off-site. Wood material shall be branches of various diameters and lengths that interlock together. Rock and woody debris shall be mixed according to the methodology and gradation noted in the details.

2.3. Boulders

A. Refer to Section 31 37 00 for Boulder Specifications.

PART 3 EXECUTION

3.1. Log Drop Construction

A. Log Drops shall be constructed as shown in the Log Drop details at the locations shown on the Drawings, and at other locations as directed by the Engineer.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Log Drop structures to be measured for payment will the number of successfully installed Log Drops, as accepted by the Engineer. The quantity of Log Drops will be paid for at the contract unit price for the total quantity installed. The payments will be full compensation for all necessary labor, equipment, and incidentals. Boulders and Select Bed Mix materials will be compensated under Section 31 37 00 on a per ton basis. Installation of the Select Bed Mix will
be compensated under Section 31 38 01 – Armored Riffle. Structure Logs will be compensated on a per unit basis. Woody debris shall be considered incidental to this pay item.

Structure Log Drop  EACH (EA)
Structure Logs  EACH (EA)

END OF SECTION 31 38 31.2
TECHNICAL SPECIFICATIONS
DIVISION 31 – EARTHWORK
SECTION 31 38 40 – BOULDER JAM RIFFLE

PART 1  GENERAL

1.1.  SECTION INCLUDES

A. This work consists of preparing areas at which Boulder Jam Riffles are to be placed; excavation of channel material; placing boulders, and select bed mix; and finishing banks, structure slopes, and stream channel at the locations specified on the plans.

PART 2  PRODUCTS

2.1.  SELECT BED MIX

A. Select bed mix for this item shall be a mix of the Offsite Cobble/Boulder, Offsite Cobble/Gravel, and Onsite Cobble/Gravel specified in Section 31 37 00 along with 4” – 6” diameter woody debris taken during the clearing and grubbing process. If there is insufficient woody material on-site, the Contractor is responsible for obtaining suitable material off-site. Wood material shall be branches of various diameters and lengths that interlock together. Rock and woody debris shall be mixed according to the methodology and gradation noted in the details.

2.2.  BOULDERS

A. Refer to Section 31 37 00 for Boulder Specifications.

PART 3  EXECUTION

3.1.  ROCK RIFFLE CONSTRUCTION

A. Boulder Jam Riffles shall be constructed as shown in the Boulder Jam Riffle details at the locations shown on the Drawings, and at other locations as directed by the Engineer. The surface of Boulder Jam Riffles shall be finished to a smooth and compact surface in accordance with the lines, grades and cross sections or elevations shown on the drawings.

PART 4  MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Boulder Jam Riffle structures to be measured for payment will the number of successfully installed Boulder Jam Riffles, as accepted by the Engineer. The quantity of Boulder Jam Riffles will be paid for at the contract unit price for the total quantity installed. The payments will be full compensation for all necessary labor, equipment, and incidentals. Boulders and Select Bed Mix materials will be compensated under Section 31 37 00 on a per ton basis. Woody debris shall be considered incidental to this pay item.

Boulder Jam Riffles  EACH (EA)

END OF SECTION 31 38 40
PART 1 GENERAL

1.1. SECTION INCLUDES

A. This work consists of preparing areas at which Boulder Hook Riffle with Log Sill structures are to be placed, excavation of channel material, placing select bed mix, footing boulders, and surface boulders; furnishing and placing logs; and finishing banks, structure slopes, and stream channel at the locations specified on the plans.

PART 2 PRODUCTS

2.1. SELECT BED MIX

A. Select bed mix for this item shall be a mix of the Offsite Cobble/Boulder, Offsite Cobble/Gravel, and Onsite Cobble/Gravel specified in Section 31 37 00 along with 4” – 6” diameter woody debris taken during the clearing and grubbing process. If there is insufficient woody material on-site, the Contractor is responsible for obtaining suitable material off-site. Wood material shall be branches of various diameters and lengths that interlock together. Rock and woody debris shall be mixed according to the methodology and gradation noted in the details.

2.2. BOULDERS

A. Refer to Section 31 37 00 for Boulder Specifications.

2.3. LOGS

A. Logs for this item shall be from trees free of rot and/or disease with minimum dimensions as stated in the Drawings with root ball attached. Logs shall be straight with limbs trimmed off, flush.

2.4. BRUSH

A. The brush material shall consist of smaller or fine wood material of various diameters and lengths that interlock together. Wood material shall be gathered from onsite trees and woody plants taken during the clearing and grubbing process.

PART 3 EXECUTION

3.1. BOULDER HOOK RIFFLE WITH LOG SILL CONSTRUCTION

A. Boulder Hook Riffles with Log Sills shall be constructed as shown in the Boulder Hook Riffles with Log Sill details at the locations shown on the Drawings, and at other locations as directed by the Engineer.
PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Boulder Hook Riffle with Log Sill structures to be measured for payment will be the number of successfully installed Boulder Hook Riffles with Log Sills, as accepted by the Engineer. The quantity of Boulder Hook Riffles with Log Sills will be paid for at the contract unit price for the total quantity installed. The payments will be full compensation for all necessary labor, equipment, and incidentals. Boulders and Select Bed Mix materials will be compensated under Section 31 37 00 on a per ton basis. Structure Logs will be compensated under section 31 38 31.2. Woody debris shall be considered incidental to this pay item.

Boulder Hook Riffle with Log Sill EACH (EA)

END OF SECTION 31 38 41
**TECHNICAL SPECIFICATIONS**

**DIVISION 31 – EARTHWORK**

**SECTION 31 38 50 – LOW WATER CROSSING**

**PART 1  GENERAL**

1.1. **SECTION INCLUDES**

A. The work covered by this section consists of furnishing, installing, maintaining, and removing (as directed) any and all material required for the construction of Low Water Crossing(s). The work shall be approved by the Engineer.

**PART 2  PRODUCTS**

2.1. **LOW WATER CROSSING MATERIALS**

A. The size of timber mats to be used in Temporary Stream Crossing(s) shall be determined by the Contractor and shall be sufficient to allow construction equipment safe passage over the stream without causing failure of the channel banks.

**PART 3  EXECUTION**

3.1. **LOW WATER CROSSING CONSTRUCTION**

A. The Contractor shall install and maintain a Low Water Crossing in accordance with the Drawings or as directed by the Engineer. All Low Water Crossings shall be maintained in good working condition and shall not contribute to degradation, erosion or siltation of the stream. Regular inspection and maintenance of crossings shall be performed by the Contractor. All material used in construction and maintenance of Low Water Crossings shall be removed before the conclusion of construction.

**PART 4  MEASUREMENTS AND PAYMENT PROCEDURES**

A. Low Water Crossing(s) are to be measured for payment by the actual number of Low Water Crossings installed and accepted by the Engineer. The quantity of Low Water Crossings will be paid for at the contract unit price per each (EA) for the total quantity installed. The payments will be full compensation for all necessary materials, labor, equipment and incidentals.

Low Water Crossing EACH (EA)

**END OF SECTION 31 38 50**
TECHNICAL SPECIFICATIONS
DIVISION 32 – SITE IMPROVEMENTS
SECTION 32 31 13 – CHAIN LINK FENCE

PART 5 GENERAL

5.1. SECTION INCLUDES

A. This Specification covers all items related to furnishing and installing Schedule 40, Class 1, six foot high Chain Link Fence as shown on the plans in locations where existing fencing was removed.

5.2. REFERENCE SPECIFICATIONS, CODES, AND STANDARDS


1. Section 201-1 – Portland Cement Concrete.

2. Section 206-6 – Chain Link Fence.

3. Section 210-3 – Galvanizing.

B. ASTM F1083 – Class 1 Fence Materials.

5.3. SUBMITTAL

A. Contractor shall prepare and submit fence plan for review to the engineer prior to Construction.

PART 6 PRODUCTS

6.1. MATERIALS

A. Concrete shall be Class 500-C-2500, maximum slump 5” as shown in Table 201-1.1.2, Greenbook 2018.

B. Fence Materials shall conform to Table 206-6.2, Greenbook 2018.

PART 7 EXECUTION

7.1. INSTALLATION

A. Install Fence posts in concrete footings. Post shall be extend 36” into footing. Footings shall be 12” diameter by 39” deep. Post sides and bottom shall have a minimum of 3” clear of soil.

B. Installation of Fence Material shall conform to Section 206-6

C. Repair to damaged coatings shall conform to Section 206-6.8
PART 8  T. MEASUREMENTS AND PAYMENT PROCEDURES

8.1.  CHAIN LINK FENCE

   A. The quantity of Chain Link Fence to be measured for payment will be the actual linear footage of Chain Link Fence constructed, installed and accepted by the Engineer. The quantity of Chain Link Fence will be paid for at the contract unit price per linear foot (LF) for the total quantity installed. The payments will be full compensation for all necessary materials, labor, equipment, and incidentals to construct Chain Link Fence.

   Chain Link Fence
   LINEAR FOOT (LF)

END OF SECTION 33 31 13
TECHNICAL SPECIFICATIONS
DIVISION 32 – PLANTS
SECTION 32 93 13 – SEEDING AND MULCHING

PART 1   GENERAL

1.1. SECTION INCLUDES

A. This specification covers all items related to native seeding within the Riparian Zones specified on the Plans and includes the preparation of soil for seeding, mulching, and fertilizing associated with the stream restoration.

PART 2  PRODUCTS

2.1. SEED

2.1.1. Permanent Seed Species and Mixtures

A. Seed for this item shall be a mixture specified by the Plans and the ENGINEER. Pure live seed shall be a minimum 99 percent by weight of the total mixture.

2.1.2. Temporary Seed Species and Mixtures

A. Temporary seed species for surface erosion control or over seeding shall be a minimum of 95 percent pure live seed in accordance with the temporary crop cover specification found in the planting schedule in the plans. Pure live seed shall be a minimum 99 percent by weight of the total mixture.

2.1.3. Seed Supplier Requirements

A. The Seed Supplier for all seed shall be approved by the ENGINEER in writing. The Seed Supplier shall certify that all seed was produced from USDA Hardiness Zone 10a and written certification shall be provided to the ENGINEER upon request. Seed collected from “the wild” is prohibited.

2.1.4. Seed Identification

A. State-approved seed of the latest season’s crop shall be provided in original sealed packages bearing the producer’s guaranteed analysis for percentages of mixture, purity, germination, hard seed, weed seed content, and inert material. Other materials shall be inspected for compliance with specified requirements. Labels shall be in conformance with AMS Seed Act and applicable state seed laws.

2.1.5. Substitutions

A. All proposed species substitutions or changes in percent composition of species or USDA Hardiness Zone must be approved by the ENGINEER in writing prior to purchase and planting. Only specified seed species will be accepted. Cultivated varieties (cultivars) will be rejected.
2.2. STRAW MULCH

A. Straw mulch for this item shall be small-grain straw free of weeds, disease, and rot. Straw mulch obtained from regular farming operations is not free of weeds and will be rejected.

2.3. EROSION CONTROL BLANKET

A. Refer to Section 31 25 14.16 for Erosion Control Blanket Specifications.

PART 3 EXECUTION

3.1. SEEDING AREA

A. All non-paved disturbed areas within the Riparian Zone specified on the plans shall be restored, seeded, fertilized, and mulched unless otherwise directed by the ENGINEER.

3.2. SEEDING SCHEDULE AND CONDITIONS

The CONTRACTOR shall seed the newly constructed streambanks as soon as possible with temporary and permanent seed species. The CONTRACTOR shall seed the remaining areas within the Riparian Zone as soon as disturbance to the seeding areas from construction activities is halted. The species survival rate shall be evaluated and the ENGINEER will determine if there are areas that need to be re-seeded. Re-seeding operations shall be performed from September 1 to November 1 for fall establishment. No seeding shall be performed on frozen ground or when the temperature is 32°F or lower.

Seeding operations shall be performed only during periods when beneficial results can be obtained. When drought, excessive moisture, or other unsatisfactory conditions prevail, the work shall be stopped when directed. When special conditions warrant a variance to the seeding operations, proposed alternate times shall be submitted for the ENGINEER’S approval.

3.3. INSPECTION

A. Seed shall be inspected upon arrival at the job site for conformity to species and quality. Seed that is wet, moldy, or bears a test date five months or older, shall be rejected. Other materials shall be inspected for compliance with specified requirements.

3.4. STORAGE

A. Seed storage methods and location shall be approved by the ENGINEER. Seed shall be stored in cool, dry locations away from contaminants and direct sunlight.

3.5. SITE PREPARATION

A. All areas to be seeded shall conform to the finished grades as specified on the plans and be free of all trash, debris, and other foreign materials. All gullies, washes, or disturbed areas that develop subsequent to final dressing shall be repaired prior to seeding.

After final grading, soil samples and tests shall be taken again at the locations identified prior to construction as well as any areas for staging, stockpiling, or high traffic during construction to measure soil nutrient levels and compaction throughout the site. At least 4 compaction tests should be performed in each staging or stockpiling area and along areas with higher traffic on
site during construction. Soil compaction shall be tested and documented using a handheld penetrometer or approved equivalent as directed by the ENGINEER. Areas that test for moderate compaction shall be subsoiled to a minimum depth of 12 to 18 inches prior to seeding or planting. The subsoiling shall be by an approved technique until the condition of the soil is acceptable. The work shall be performed only during periods when, in the ENGINEER’S opinion, beneficial results are likely to be obtained and should occur during drier conditions when soils are more friable. When excessive moisture or other unsatisfactory conditions prevail, the work shall be stopped.

Areas with the prepared surface shall be protected from compaction or damage by vehicular or pedestrian traffic and surface erosion. Compaction levels that require the ground to be subsoiled before seeding or planting are listed in the table below.

<table>
<thead>
<tr>
<th>Percentage of measuring points having cone index &gt; 300 psi in top 15 inches</th>
<th>Compaction rating</th>
<th>Subsoiling recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;30</td>
<td>Little-none</td>
<td>No</td>
</tr>
<tr>
<td>30-50</td>
<td>Slight</td>
<td>No</td>
</tr>
<tr>
<td>50-75</td>
<td>Moderate</td>
<td>Yes</td>
</tr>
<tr>
<td>&gt;75</td>
<td>Severe</td>
<td>Yes</td>
</tr>
</tbody>
</table>


The CONTRACTOR shall verify that finished grades are as indicated on drawings, and the placing of topsoil, smooth grading, and compaction requirements have been completed prior to commencement of the seeding operation. Topsoil shall be a minimum of six (6) inches thick on all finished surfaces outside of the low flow channel. The location of underground utilities and facilities in the area of the planting operation shall be verified. Damage to underground utilities and facilities shall be repaired at the CONTRACTOR’S expense.

The prepared surface shall be a maximum one inch below the adjoining grade of any surfaced area. New surfaces shall be blended to existing areas. The prepared surface shall be completed with a light raking to remove debris.

3.6. **SEEDING**

A. Seeding shall be accomplished by hand or using a broadcast spreader. Native seeds should be broadcast at rates specified in the plans. Any alternative seeding methods must be approved by the ENGINEER. Seed shall be applied in two different directions. In areas where the soil is very loose and unconsolidated, the CONTRACTOR shall maximize the seed/soil contact by firming soil after seeding with a cultipacker or by dragging the surface with a finish harrow chain link fence. A cultipacker shall not be used on clay soils. Immediately after seeding, the site
shall be watered lightly but thoroughly so that the top four inches of soil is saturated. Seeding can only occur when conditions and timing are conducive to vegetation establishment, as specified in Part 3.2 of this Section. Alternative seeding methods, equipment, or timing shall be approved by the ENGINEER in writing. The ENGINEER may stop work if planting or seeding is being performed under undesirable conditions, and the seeding material may be properly stored for up to 4 months until proper conditions for planting are met. Proper storage methods specified by the seed supplier shall be followed if storage is necessary. Seed shall be stored in a cool, dry location that is away from contaminants and direct sunlight.

3.7. EROSION CONTROL BLANKET INSTALLATION

A. Where indicated on the Plans or as directed, surface erosion control blankets shall be installed. Seed and mulch shall be spread prior to placement of the blanket. Placement of the material shall be accomplished without damage to installed material or without deviation to finished grade. The blankets shall be rolled out in the direction of the flow on stream banks. The top of the blanket shall be buried in a 6-inch deep trench and secured with 18-inch wooden stakes, installed at a rate consistent with manufacturer recommendations. If, after staking the blanket, it is possible to lift the blanket away from the soil more than 1 inch by hand pulling, additional stakes shall be applied until the fabric is secured. Erosion control blankets shall be used on all slopes that are 3-horizontal to 1-vertical, or steeper and where indicated on the drawings.

3.8. MULCHING

A. The CONTRACTOR shall mulch and tack all seeded areas within 12 hours after seeding with a weed-free straw at the rate of 68 bales/acre.

3.9. PLANT ESTABLISHMENT AND WARRANTY PERIOD

3.9.1. Commencement

A. Upon completion of the last day of the planting operation, the plant establishment and warranty period for maintaining installed plant material in a healthy growing condition shall commence and shall be in effect for a minimum of one (1) year. A written calendar time period shall be furnished for the plant establishment and warranty period. When there is more than one plant establishment period, the boundaries of the planted area covered for each period shall be described. The plant establishment period shall be modified for inclement weather shut down periods, or for areas with different completion dates.

3.9.2. MAINTENANCE DURING PLANT ESTABLISHMENT AND WARRANTY PERIOD

A. Maintenance of plant material including supplementing mulch; watering; eradicating weeds, insects, and disease; and post-fertilization are the responsibility of the contractor.

B. The plant material shall be watered as necessary to prevent desiccation and to maintain an adequate supply of moisture within the root zone. An adequate supply of moisture is estimated to be the equivalent of one inch of absorbed water per week, delivered in the form of rain or augmented by irrigation. Run-off, puddling, and wilting shall be prevented. Unless otherwise directed, watering trucks shall not be driven over planted areas. Watering of other adjacent areas or existing plant material shall be prevented.
PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Permanent Seeding and Temporary Seeding to be measured for payment will be the actual number of pounds (LB) of permanent seed or temporary seed applied and accepted by the Engineer. The cost of soil amendments will be incidental to Permanent Seeding and Temporary Seeding. The quantity of Permanent Seeding and Temporary Seeding as provided above will be paid for at the contract unit price. The payments shall be full compensation for all materials, labor, equipment, and incidentals necessary to perform the work described above through the Plant Establishment and Warranty Period.

B. The quantity of Straw Mulch to be measured for payment will be the actual number of bales applied and accepted by the Engineer. The quantity of straw mulch as provided above will be paid for at the contract unit price. The payments shall be full compensation for all materials, labor, equipment, and incidentals necessary to perform the work described above.

C. The quantity of Erosion Control Blanket will be compensated under Section 31 25 14.16 – Erosion Control Blanket and Section 31 35 01.2 – Soil Lifts.

Permanent Seed Mix PER POUND (LB)
Temporary Seed Mix PER POUND (LB)
Straw Mulch BALES

END OF SECTION 32 93 13
TECHNICAL SPECIFICATIONS
DIVISION 32 – PLANTS
SECTION 32 93 50.1 – TREES AND SHRUBS

PART 1  GENERAL

1.1.  SECTION INCLUDES

A. This specification covers furnishing all materials, equipment, and labor for planting trees and shrubs as required by the plans or as directed by the ENGINEER

PART 2  PRODUCTS

2.1.  PLANT STOCK

2.1.1. General

A. Plant stock for this item shall be trees and shrubs specified by the Planting Schedule, plans, and the ENGINEER. All Plant Stock must be healthy, vigorous, and free of damage and disease. Plant stock shall be healthy representatives typical of their species or variety and exhibit a normal habit of growth.

2.1.2. Supplier Requirements

A. The Plant Supplier for all plant stock shall be approved by the ENGINEER in writing. The Plant Supplier shall certify that all Plant Stock were produced from USDA Hardiness Zone 10a and written certification shall be provided to the ENGINEER upon request. Plant stock collected from “the wild” is prohibited.

2.1.3. Identification

A. Not Applicable.

2.1.4. Substitutions

A. All proposed species substitutions or changes in percent composition of species or USDA Hardiness Zone must be approved by the ENGINEER in writing prior to purchase and planting. Only specified plant species will be accepted. Cultivated varieties (cultivars) will be rejected.

2.2.  MULCH

2.2.1. Straw

A. Straw mulch for this item shall be small-grain straw free of weeds, disease, and rot. Straw mulch obtained from regular farming operations is not free of weeds and will be rejected.

2.2.2. Supplier Requirements
A. The Mulch Supplier shall certify that the mulch is free of weeds and written certification shall be provided to the ENGINEER upon request.

2.2.3. Substitutions

A. Proposed mulch substitutions must be approved by the ENGINEER in writing prior to purchase and installation.

PART 3 EXECUTION

3.1. SCHEDULE AND CONDITIONS

A. Planting operations shall be performed only from February 1 to April 30 for spring establishment, and from October 1 to December 15 for fall establishment, when beneficial results can be obtained. It is generally preferred that plantings occur during the spring establishment period of February 1 through April 30 and planting during the fall shall be discussed and approved by the ENGINEER prior to ordering plant stock. When drought, excessive moisture, frozen ground or other unsatisfactory conditions prevail, the work shall be stopped when directed by the ENGINEER. When special conditions warrant a variance to the planting operations, proposed planting times shall be submitted for approval by the ENGINEER. Particularly in regard to bare root stock, care should be taken to ensure that plants are delivered and installed when ambient temperatures remain below 45 degrees Fahrenheit.

3.2. PROTECTION DURING DELIVERY

A. Plant stock shall be protected during delivery to prevent desiccation and damage to the branches, trunk, root system, or earth ball. Branches shall be protected by tying-in. Exposed branches shall be covered during transport.

3.3. INSPECTION

A. Plant stock shall be inspected upon delivery to the project site for conformity to species and quality. Plants shall be well shaped, vigorous and healthy with a well branched root system, free from disease, harmful insects and insect eggs, sun-scald injury, disfigurement, abrasion, mishandling or poor pruning. Plant stock shall be inspected for unauthorized substitution and to certify nursery grown status. Plant stock shall be inspected to certify production in USDA Hardiness Zone 10a.

Plant stock should also be inspected to verify that they are the intended species. Any non-natives or cultivated varieties should be rejected and replaced by the correct specified stock.

Plants showing desiccation, abrasion, sun-scald injury, disfigurement, or unauthorized substitution shall be rejected. Container-grown plant stock shall have new fibrous roots and the root mass shall contain its shape when removed from the container.

Plants with broken or cracked balls shall be rejected. Plants with broken containers shall be rejected. Bare-root plant stock that is not dormant or is showing roots where pulled from the ground shall be rejected. Plants that have evidence of stress, disease, dieback or mishandling will be rejected. Plants damaged in handling or transportation may be rejected by the ENGINEER.

3.4. STORAGE
A. Plants not installed on the day of arrival at the site shall be stored and protected in areas approved by the ENGINEER. Plants shall not be stored longer than 20 days. Plants shall be protected from direct exposure to wind and sun. Containerized trees and shrubs shall be kept in a moist condition by watering the base of each plant. Bare-root trees and shrubs shall be stored in buckets of cool water so that the water level covers the roots and placed in a cool dark storage area. However, to prevent drowning, bare-root stock shall not be stored in water for more than 3 days.

3.5. SITE PREPARATION

A. Planting locations and bed outlines shall be staked on the project site before any digging or planting is performed. Planting locations may be adjusted to meet field conditions following approval by the ENGINEER.

3.6. INSTALLATION

A. Installation of trees or shrubs can only occur when conditions and timing are conducive to their establishment, as specified in Part 3.1 of this Section. Alternative methods of planting, storage, or timing of installation shall be approved by the ENGINEER in writing. The ENGINEER may stop work if planting is being performed under undesirable conditions, and the planting material can be stored as approved by the ENGINEER until proper conditions for planting are met.

3.6.1. Containerized Trees and Shrubs

3.6.1.1. Planting Pits

a. Excavate the planting pit to at least 1½ times the width of the root mass of the plant to be installed. Excavate the planting pit to a depth that allows the surface of the containerized plant to be flush with the existing grade after the soil in the bottom of the pit is tamped. To the extent practicable, containerized plantings should be installed when soil conditions are friable and not overly wet. This prevents the sides of the planting pit from becoming “glazed” which can cause root binding.

3.6.1.2. Planting

a. For burlap containers, remove burlap from top 1/3 of rootball. For other containers, remove the plant by inverting the container and pushing on the container bottom. Place the plants in the center of the planting pit by carrying the plant by the root mass.

3.6.1.3. Backfill

a. Backfill the planting pit with native soil to a depth equal to 2/3 times the depth of the root ball. Cover the native soil with a soil mix composed of 5 parts topsoil to 1 part organic matter and a 2” layer of wood cellulose fiber mulch to a depth equal to 1/3 times the depth of the rootball.

3.6.1.4. Staking Materials

a. Bracing stakes and guy ing material shall be installed according to the Plans. Bracing stakes shall be set without damaging rootball. Rubber chafing guards shall be used to protect tree trunks and branches when metal guy ing material is applied.
3.6.1.5. Watering

a. The CONTRACTOR shall water plant thoroughly immediately after planting. Water shall be of a sufficient quantity to saturate the backfill, and shall be applied slowly enough to infiltrate the soil without runoff. The need for additional watering shall be at the discretion of the ENGINEER.

3.6.2. Bare-Root Trees and Shrubs

3.6.2.1. Planting Holes

a. Planting holes shall be excavated by hand using a dibble bar, mattock, pick, or iron bar. Planting holes shall be excavated to a depth that allows the first lateral root of the root mass to be flush with the existing grade. Roots protruding above the soil surface will be rejected. Additionally, the planting hole shall be deep enough to accommodate the entirety of the tap root vertically without “J-rooting” the plant. “J-rooted” plants will be rejected.

3.6.2.2. Planting

a. Plant bare-root trees and shrubs by spreading the roots in the hole and gradually backfilling hole with soil. Ensure that plant remains straight while placing backfill and firm the soil, being careful to avoid breaking the roots.

3.6.2.3. Watering

a. The CONTRACTOR shall water plant thoroughly immediately after planting. Water shall be of a sufficient quantity to saturate the backfill, and shall be applied slowly enough to infiltrate the soil without runoff. The need for additional watering shall be at the discretion of the ENGINEER.

3.7. FINISHING

3.7.1. Pruning

A. Pruning shall be accomplished by trained and experienced personnel. The pruning of trees and shrubs shall be in accordance with ANSI A300. Only dead or broken material shall be pruned from installed plants. The typical growth habit of individual plant material shall be retained. Clean cuts shall be made flush with the parent trunk. Improper cuts, stubs, dead and broken branches shall be removed. “Headback” cuts at right angles to the line of growth will not be permitted. Trees shall not be poled or the leader removed, nor shall the leader be pruned or “topped off”.

3.8. TREE ESTABLISHMENT AND WARRANTY PERIOD

3.8.1. Commencement

A. Upon completion of the last day of the planting operation, the plant establishment and warranty period for maintaining installed plant material in a healthy growing condition shall commence and shall be in effect for a minimum of one (1) year. A written calendar time period shall be furnished for the plant establishment and warranty period. When there is more than one plant establishment period, the boundaries of the planted area covered for each period shall be
described. The plant establishment and warranty period shall be modified for areas with separate completion dates.

3.8.2. Maintenance During Plant Establishment and Warranty Period

A. Maintenance of plant material shall include straightening plant material, pruning dead or broken branch tips; watering; eradicating weeds, insects and disease; post-fertilization; and removing and replacing unhealthy plants. At the end of the one (1) year establishment and warranty period, the CONTRACTOR shall remove any stakes or guying material.

The plant material shall be watered as necessary to prevent desiccation and to maintain an adequate supply of moisture within the root zone. An adequate supply of moisture is estimated to be the equivalent of one inch of absorbed water per week, delivered in the form of rain or augmented by watering. Run-off, puddling and wilting shall be prevented. Unless otherwise directed, watering trucks shall not be driven over turf areas. Watering of other adjacent areas or existing plant material shall be prevented.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

A. The quantity of Bare Root Seedlings and Container Trees to be measured for payment will be the actual number of Seedlings and Container trees successfully planted and accepted by the Engineer. The quantity of Bare Root Seedlings and Container Trees as provided above will be paid for at their respective contract unit price. The payments shall be full compensation for all materials, labor, equipment, and incidentals necessary to perform the work described above through the Plant Establishment and Warranty Period.

| Bare Root Seedlings EACH (EA) |
| Container Trees EACH (EA) |

END OF SECTION 32 93 50.1
PART 1 GENERAL

1.1. SECTION INCLUDES

A. This specification covers all items related to the removal of the existing headwall at Kains Avenue, the removal of 10 feet of culvert, and the construction of the headwall as shown on the plans.

1.2. REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

   1. Section 201-1 – Portland Cement Concrete.
   2. Section 300-3 – Structure Excavation and Backfill.

B. California Department of Transportation Standard Plans and Specifications, 2018 Edition
   1. Section 13-4.03D(3) – Concrete Wastes.
   2. Section 13.4.03E(6) – Structure Removal Over or Adjacent to Water.
   3. Section 19-3.05(e) – Structure Excavation and Backfill
   4. Section 51 – Concrete Structures.
   5. Section 52 – Reinforcement

C. Bar Reinforcement
   1. Deformed bars complying with ASTM A615/A615M, Grade 60.

D. Technical Specification
   1. Section 01 71 23.13 – Construction Layout
   2. Section 31 23 16 – Excavation

1.3. SHOP DRAWING SUBMITTAL

A. Contractor shall submit a list of all reinforcement before starting reinforcement placement.
PART 2 PRODUCTS

2.1. MATERIALS

A. Concrete shall be Class 560-C-3250, maximum slump 4”, as shown in Table 201-1.1.2, Greenbook, 2018.

B. Reinforcement shall comply with ASTM A615/A615M, Grade 60.

PART 3 EXECUTION

3.1. INSTALLATION

A. The existing head wall and portion of culvert shall be removed as shown in the drawings. All wastes resulting from the demolition of headwall and culvert shall be d from the site.

B. The culvert headwall shall be constructed as detailed in the Drawings. Typical sections and profiles are provided in the drawings.

C. All work shall be in accordance with the “Greenbook” Standard Specifications for Public Works Construction, California Department of Transportation Standard Plans and Specifications, Technical Specifications, and the approved Drawings.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

4.1. HEADWALL

A. Headwall will be paid for at the contract price Lump Sum (LS). The payment will be full compensation for all necessary materials, labor, equipment and incidentals to remove the existing headwall, to remove 10 feet of existing culvert, and to construct headwall as detailed on the Drawings.

Headwall/Culvert Removal LUMP SUM (LS)
Headwall LUMP SUM (LS)

END OF SECTION 33 42 23
TECHNICAL SPECIFICATIONS
DIVISION 35 – WATERWAYS
SECTION 35 21 33 – TRASH RACKS

PART 1  GENERAL

1.1. SECTION INCLUDES

A. This specification covers all items related to furnishing and installing the Debris Rack as shown on the plans. For removal of existing trash rack see Clearing and Grubbing.

1.2. REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

   1. Section 201-1 – Portland Cement Concrete.
   2. Section 304 – Metal Fabrication and Construction.
   3. Section 210-3 - Galvanizing

B. Structural Welding Code AWS D1.1

C. Technical Specification
   1. Section 31 11 00 – Clearing Grubbing.

1.3. SHOP DRAWING SUBMITTAL

A. Contractor shall prepare and submit shop drawings per Greenbook Section 304-1.1.1 for review to the engineer prior to Construction.

PART 2  PRODUCTS

2.1. MATERIALS

A. Concrete shall be Class 560-C-3250, maximum slump 5” as shown in Table 201-1.1.2, Greenbook, 2018.

B. Steel shall be 40 KSI or better per Trash Rack detail on plans.

C. Welds shall be performed in such a manner that the Brinnell Hardness is within the limits of Section 304-1.9.
PART 3 EXECUTION

3.1. INSTALLATION

A. Install Debris Rack per approved shop drawings.

B. All welding shall conform to Greenbook Section 304-1.9 and AWS D1.1.

C. Steel parts shall be galvanized per Greenbook Section 210-3.

PART 4 MEASUREMENTS AND PAYMENT PROCEDURES

4.1. TRASH RACK

A. The Trash Rack will be paid for at the contract unit price per each (EA). The payment will be full compensation for all necessary materials, labor, equipment and incidentals to install the trash rack.

Trash Rack EACH (EA)

END OF SECTION 35 21 33

These are the special conditions in addition to the NWP authorization include:

1. After construction completion, any installed by-pass pipe, cofferdam, or other related construction materials installed below ordinary high water shall be removed in its entirety. Excavated substrate consisting of coarse sand, gravel, and cobble may be used as backfill material for construction purposes; all other material excavated below ordinary high water, including debris, mud, silt, and organic matter, shall be hauled off-site and disposed of at an upland location not subject to Corps’ regulatory authority.

2. Preconstruction cultural awareness training shall be provided by a qualified archaeologist who is knowledgeable of the area and its sensitivity for potential Native American cultural resources.

3. The applicant is responsible for having an archaeological monitor stationed at each backhoe and/or excavator during all ground-disturbing excavations for the duration of the project. Ground-disturbing excavations are defined here as mechanized excavations into native soils and sediments. Previously disturbed native soils and sediments shall be monitored. If extensive portions of the APE contain only imported fill, archaeological monitoring is not required at those location. The applicant will coordinate with the Corps’ Project Manager before digging in these areas, to confirm the presence and extent of fill.

4. If after inspecting a sufficient sampling of excavated soils and sediments, the archaeological monitor determines there is no potential to encounter archaeological materials of any kind within the excavation areas, the monitor will cease their work and inform the applicant of their determination. The monitor shall not monitor any areas that have no potential for archaeological materials.

5. Qualifications for archaeological monitor(s) must include the following:
   - Bachelor’s degree in archaeology or closely related field;
   - Minimum of two years of experience conducting field archaeology;
   - Familiarity of both historic-era and prehistoric archaeological materials in immediate region of the project location;
   - Understanding of basic soil and sediment identification in order to detect buried former surfaces (A horizons);
   - Monitors shall be directly supervised by an archaeologist who is qualified in accordance with the Secretary of the Interior’s standards and guidelines (https://www.nps.gov/history/local-law/arch_stnds_9.htm)

6. The monitor(s) will contact the Corps’ cultural resource contact, Dina Ryan (415-503-6806), within 24 hours of any confirmed cultural resource discoveries. Ms. Ryan will assist with management of the new resource in accordance with Section 106 of the National Historic Preservation Act (NHPA).

7. The monitor(s) shall document, map, and photograph new archaeological discoveries on Department of Parks and Recreation cultural resource forms and prepare DPR update forms for known resources. Copies of all DPR forms shall be submitted to CHRIS after they are reviewed for completion by the Corps’ cultural resource manager.

8. A post construction report shall be submitted 45 days after the conclusion of construction activities. The report shall document construction activities and contain as-built drawings (if different from drawings submitted with application) and include before and after photographs.
CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND ORDER
FOR THE
Codornices Creek Restoration Project at Kains Avenue, Berkeley, Alameda County

Sent via electronic mail: No hard copy to follow

Effective Date: March 10, 2020
Place ID: 859680
WDID #: 2 CW 432952
Corps File No: 2018-00419S

Permittee: City of Berkeley, Public Works
1947 Center Street, 4th Floor
Berkeley, CA 94704
Attn: Srinivas Muktevi (smuktevil@cityofberkeley.info)

Water Board Staff: Brian Wines
1515 Clay Street, Suite 1400
Oakland, CA 94612
Phone: (510) 622-5680
Email: Brian.Wines@waterboards.ca.gov
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Certification and Order Coverage

This Clean Water Act (CWA) section 401 Water Quality Certification (Certification) and Order (Order) is issued to the City of Berkeley, Public Works (Permittee or City).

Pursuant to CWA section 404, the Permittee requested authorization to fill and discharge to waters of the U.S. from the U.S. Army Corps of Engineers (Corps), Regulatory Branch, under a Nationwide Permit (NWP). The Corps authorized the Project under NWP 27 (Aquatic Habitat Restoration, Enhancement, and Establishment Activities) (Corps File No. 2018-00419S), on [TBD], 2020. [NEED TO RESOLVE IF NWP 7 IS NEEDED FOR AN OUTFALL]

The Permittee applied to the San Francisco Bay Regional Water Quality Control Board (Water Board) requesting Certification verifying that the Codornices Creek Restoration Project at Kains Avenue, Berkeley (Project) does not violate State water quality standards. An application was submitted for the Project and received by the Water Board on July 9, 2019 (Application). Water Board staff provided the Permittee with an incomplete application letter on July 31, 2019. The Permittee submitted additional information to complete the Application through December 5, 2019.

The following sections are derived from the Application materials and correspondence received through December 2019.

1. Project

The Project purpose is to improve riparian habitat along a concrete-lined reach of Codornices Creek near Kains Avenue in the City of Berkeley by removing a failing, concrete open box culvert from a 170-foot long reach of Codornices Creek and replacing the lining with geotechnical and biotechnical channel stabilization measures.

The Project is a joint restoration project being implemented by the City of Berkeley and the California Urban Streams Partnership. Project funding includes $247,500 of grant funding provided by the Department of Water Resources and $100,000 provided by the City of Berkeley as compensatory mitigation for placing permanent fill in 25 linear feet of Codornices Creek at 1231 Glen Avenue in the City of Berkeley (CIWQS Place No. 854418 (bkw), CIWQS Reg. Meas. No. 427777). The City of Berkeley is the responsible party for compliance with the conditions of Certification.

1.1 Site Description

The Project site is a 0.29-acre, city-owned parcel that includes a reach of Codornices Creek, west of Kains Avenue and east of San Pablo Avenue, in the City of Berkeley, California (Lat. 37.882848; Long. -122.295678). Within the Project site, Codornices Creek is contained in a 170-foot long reach of concrete, open box culvert, about five-feet high by eight-feet wide. The creek enters and exits the site through 6-foot diameter concrete culverts. A debris rack spans the channel about 40 feet downstream of Kains Avenue. Riparian vegetation consists of occasional patches of volunteer willow growth within voids of the aging concrete walls and a large
cottonwood tree that is growing about halfway down the stream corridor within the Project site. The upland areas within the Project site are overgrown with fennel and other weeds (See Sheet 2 of 12, Overview and Demo, in Att. A). The open channel is almost entirely unshaded, and the channel width keeps summer flows shallow. These conditions contribute to high water temperatures and low dissolved oxygen levels.

1.2 Construction Details

The Project design is described in the Codornices Creek at Kains Avenue – Basis of Design Memo (Rev1) (Stantec, December 11, 2019) and illustrated in the City of Berkeley, Alameda County, California, Codornices Creek at Kains Avenue (Project No. 18SD19) Draft Final Plans (City of Berkeley, Public Works Department, October 8, 2019) in Att. A. Project construction will take about four months and work within the stream channel will occur between June 15 and October 15.

Project implementation will include (Sheet references are to sheets in Att. A):

- Dewatering the Project reach of the creek with the use of a coffer dam, pump system, and temporary piping to divert water around the construction reach of the creek.
- Removing the existing concrete box channel, various pieces of concrete rubble, and other debris from the creek (See Sheet 2 of 12, Overview and Demo).
- Slightly realigning the creek to increase its sinuosity (see sheet 3 of 12)
- Regrading the creek banks to stable slopes varying between 2:1 to 3:1 (Horizontal:Vertical).
- Stabilizing the restored creek channel with biotechnical and geotechnical stabilization measures, consisting of: rock toe armoring (see sheet 4 of 12 and sheet 6 of 12); boulder step pools (see sheet 5 of 12); boulder jams (see sheet 4 of 12); brush and cobble backfill (see sheet 7 of 12); boulder hook riffle with log sill (see sheet 7 of 12); log drops (see sheet 8 of 12); wood and brush toes (see sheet 4 of 12); staked soil lifts (see sheet 4 of 12 and sheet 9 of 12); and boulder J-hooks (see sheet 10 of 12).
- Planting native riparian plants (willow, dogwood, CA buckeye, big leaf maple, etc.) at the top of bank along the Project reach (See the Planting Plan on Sheet 8 of 8 in Att. A).
- Replacement of the existing debris rack at a location closer to Kains Avenue (see sheet 11 of 12).

Following Project construction, the site will be cleared of any debris and garbage and the creek dewatering system will be removed and natural stream flows will be returned to the Project reach.
2. Impacts to Waters of the State
The Water Board independently reviewed the Project record to analyze impacts to water quality and the environment and designated beneficial uses within the Project’s watershed.

2.1 Fill and Discharge
The Project will remove the concrete lining from the creek channel and remove historic fill to increase the cross-sectional area of the channel. Even with the incorporation of rock toe armoring, brush and cobble backfill, boulder step pools, boulder J-hooks, and log drops into the restored channel, the Project will result in a net removal of fill from the 170-foot long Project reach.

2.2 Beneficial Uses
The San Francisco Bay Basin Water Quality Control Plan (Basin Plan) defines the beneficial uses of waters of the State. The Project will affect Codornices Creek. The following beneficial uses are listed in the Basin Plan for Codornices Creek: cold freshwater habitat, fish migration, preservation of rare and endangered species, fish spawning, warm freshwater habitat, wildlife habitat, water contact recreation, and noncontact water recreation. The Project is anticipated to have neutral to beneficial impacts to these beneficial impacts.

3. Mitigation
The Project will improve riparian habitat in the project reach and increase the capacity of the channel in the Project reach. Therefore, mitigation is limited to the successful implementation of the Monitoring and Maintenance Plan for the Codornices Creek Project (City of Berkeley December 3, 2019) (See Att. B).

4. California EcoAtlas
Regional, state, and national studies have determined that tracking of mitigation and restoration projects must be improved to better assess the performance of these projects, following monitoring periods that last several years. To effectively carry out the State’s Wetlands Conservation Policy of no net loss to wetlands, the State needs to closely track both losses and successes of mitigation and restoration projects affecting wetlands and other waters of the State. The Water Board must also track project performance in Bay Area creeks subject to routine repair and maintenance activities, such as recurring instabilities. Therefore, we adopted the digital interactive mapping tool called EcoAtlas. EcoAtlas is a web-based tool that integrates maps, project plans, site conditions, restoration efforts, and other elements on a project-by-project basis based on data inputs. Accordingly, we require the Permittee to upload their Project information

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5. California Environmental Quality Act (CEQA) Compliance

The City of Berkeley, acting as the CEQA lead agency, reviewed the Project’s potential environmental impacts pursuant to the requirements of CEQA. The City filed a Categorical Exemption pursuant to Section 15333, Small Habitat Restoration Projects – Class 33, of the CEQA Guidelines. A Notice of Exemption was filed with the Alameda county clerk on April 18, 2018. The Water Board, as a responsible agency under CEQA, concurs that this exemption is appropriate.

6. Conditions

I, Michael Montgomery, Executive Officer, do hereby issue this Order certifying that any discharge from the proposed Project will comply with the applicable provisions of sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 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 Order, including the following:

6.1 Regulatory Compliance and Work Windows

1. **Design Conformance.** The Project shall be constructed in conformance with the Project description provided in the Application and the design sheets included in Att. A. The Permittee shall fully comply with the engineering plans, specifications, and technical reports submitted in the Application or required as part of this Order. Any changes to information provided in the Application must be submitted to the Water Board and receive Executive Officer approval before the changes are implemented;

2. **Corps Compliance.** The Permittee shall adhere to the conditions of the CWA Section 404 NWP 27 issued by the Corps (Corps File No. 2018-00419S); [CONFIRM IF NWP 7 IS NEEDED]

3. **Work Window.** Construction in waters of the State is restricted to the dry season work window of June 15 through October 15;

4. **Channel Dewatering.** No later than 30 days prior to dewatering the Project reach, the Permittee shall submit a dewatering plan to the Water Board. The dewatering plan must include all of the requirements in Att. C. The channel shall not be dewatered until the Permittee has received written approval of the dewatering plan from the Water Board’s Executive Officer;
5. **Precipitation and Construction Planning.** Precipitation forecasts shall be considered when planning construction activities. The Permittee shall monitor the 72-hour forecast from the National Weather Service at [https://www.weather.gov](https://www.weather.gov). When there is a forecast of more than 40% chance of rain, or at the onset of unanticipated precipitation, the Permittee shall remove all equipment from the riparian area and shall implement erosion and sediment control measures (e.g., jute, straw, coconut fiber erosion control fabric, coir logs, straw), and all Project activities shall cease. The use of erosion control measures that include plastic monofilament netting is prohibited;

6.2 General Construction

6. **Discharge Prohibition.** No unauthorized construction-related materials or wastes shall be allowed to enter into or be placed where they may be washed by rainfall or runoff into waters of the State. When construction is completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be discharged to waters of the State;

7. **Equipment Maintenance Prohibition.** No fueling, cleaning, or maintenance of vehicles or equipment shall take place within waters of the State, or within any areas where an accidental discharge to waters of the State may occur; and construction materials and heavy equipment must be stored outside of the active flow of the creek or other waters of the State. When work within waters of the State is necessary, the entire stream flow shall be diverted around the work area;

8. **Impacts to Beneficial Uses.** All work performed within waters of the State shall be completed in a manner that minimizes impacts to beneficial uses and habitat; measures shall be employed to minimize disturbances along waters of the State that will adversely impact the water quality of waters of the State. Disturbance or removal of vegetation shall not exceed the minimum necessary to complete Project implementation;

6.3 Pre-Construction Reporting and Other Requirements

9. **EcoAtlas.** The Permittee shall input Project information to EcoAtlas within 14 days from the date of this Order. The Project information shall be added to the Project Tracker tool in EcoAtlas online at [https://ptrack.ecoatlas.org](https://ptrack.ecoatlas.org). Instructions for adding information to EcoAtlas are available at [https://ptrack.ecoatlas.org/instructions](https://ptrack.ecoatlas.org/instructions), or by contacting the San Francisco Estuary Institute by email at ptrackadmin@sfei.org, or the Water Board case manager listed on the cover page of this Order. The Executive Officer may grant an extension to the 14-day deadline if the Permittee submits a request in writing to the Water Board case manager listed on the cover page of this Order. The extension request may be submitted via electronic mail. If any changes to the project occur pursuant to Condition 19, the Permittee shall
revise EcoAtlas information for the Project, accordingly. In cases when EcoAtlas must be revised, the Permittee shall meet the same schedule and notification requirements required for the initial EcoAtlas information;

10. **Commencement of Construction.** The Permittee shall submit a Commencement of Construction Report at least seven days prior to start of initial ground disturbance activities and notify the Water Board at least 48 hours prior to initiating in-water work and stream diversions. Notification may be via telephone, email, delivered written notice, or other verifiable means;

11. **Photo-Documentation Points.** Prior to the start of construction, the Permittee shall establish a minimum of six photo-documentation points at the Project site. These points shall include views of the upstream and downstream transitions to the restored channel, views of each of the biotechnical and geotechnical bank stabilization measures constructed in the restored channel, views of the locations of riparian plantings, and views of the upland areas along the channel that will be stabilized with native grass seeds following construction. The photo-documentation points shall be used to track the post-construction condition of the Project reach, the successful stabilization of the Project reach with biotechnical and geotechnical bank stabilization measures, the successful vegetation of disturbed areas adjacent to the creek channel, and the condition of riparian shrub and tree plantings. The Permittee shall prepare a site map with the photo-documentation points clearly marked. Pre-construction and post-construction photographs from each of the six photo-documentation points and the map shall be submitted, along with the as-built and monitoring reports (See Conditions 12 and 19), to the Water Board within 60 days of completing construction activities for each work season;

### 6.4 Active Construction and Post-Construction Reporting Requirements

12. **As-Built.** Not later than 60 days after completing the Project construction activities, including revegetation of disturbed soil surfaces and planting of riparian trees and shrubs (see Sheet 8 of 8 in Att. A), the Permittee shall submit an as-built report to the Water Board. The report shall include a description of the areas of actual disturbance during Project construction and the photographs and map specified in Condition 11. The as-built report shall include the 100 percent construction plans, marked with the contractor’s field notes, that clearly depict any deviations from the design set that were made during construction. The as-built report shall provide a written explanation of the need for any deviations from the approved Project plans. The map included with the as-built report shall include an as-planted map of the riparian tree and shrub plantings, and the re-vegetation of disturbed upland soils;

13. **Project Construction Completion Report.** Not later than 60 days after completing Project construction activities, the Permittee shall submit, acceptable to the Executive Officer, a Notice of Project Construction
Completion that references CIWQS Place ID 859680. The Notice shall include the as-built report (see Condition 12), the date of the first Project related disturbance of waters of the State occurred, and the date construction was completed. The Notice shall be sent via email to RB2-401Reports@waterboards.ca.gov, or by mail to the attention of 401 Certifications Reports (see address on the letterhead);

14. **Annual Project Status.** The Permittee shall submit an Annual Project Status Report each year by January 31 commencing the calendar year after issuance of this Certification. The Report shall reference CIWQS Place ID 859680 and state whether Project construction activities have been initiated or delayed. The Annual Project Status Report shall continue until a Notice of Project Construction Completion is received (see Condition 13);

**6.5 Mitigation and Monitoring Requirements**

15. **Monitoring and Maintenance.** The Permittee shall implement the Monitoring and Maintenance Plan for the Codornices Creek Project (MMP) City of Berkeley December 3, 2019) (See Att. B) for a minimum period of 10 years;

16. **Channel Monitoring.** The Permittee shall monitor the stability of the rock toe armoring; boulder step pools; boulder jams; brush and cobble backfill; boulder hook riffle with log sill; log drops; wood and brush toes; staked soil lifts; and boulder J-hooks at the Project site for a minimum of 10 years to assess the stability of the restored channel. If any of the biotechnical or geotechnical stabilization measures show evidence of instability, a stabilization contingency plan shall be developed to stabilize any failing stabilization measure(s). The contingency plan, including a monitoring plan, shall be submitted to the Executive Officer within 12 months of detecting signs of channel instability and shall be implemented in the first dry season after receiving written approval from the Executive Officer. After the contingency plan is implemented, the stabilized biotechnical or geotechnical measures shall be monitored for a minimum of five years. If there are any signs of instability in the new debris rack, the Permittee shall submit an analysis of the failure and a proposed remediation plan, including a monitoring program for the implemented remediation, to the Executive Officer within 12 months of detecting signs of structural instability at the rack. The remediation plan shall be implemented in the first dry season after receiving written approval from the Executive Officer. The new debris rack shall be monitored and maintained as specified on page 10 of the MMP;

17. **Vegetation Monitoring.** Revegetated soil surfaces adjacent to the creek channel shall be monitored until they have percent vegetation cover that is at least 80 percent of adjacent, unimpacted vegetated surfaces at the Project site. Riparian shrubs and willows shall be monitored and maintained for a minimum of five years, until the performance standards on page 7 of the MMP
are attained. Riparian trees shall be monitored and maintained for a minimum of 10 years, until the performance standards on page 7 of the MMP are attained. Seeded areas, shrubs, and willows shall be monitored in years 1 through 5. Riparian trees shall be monitored in years 1 through 5, 7, and 10. If vegetation performance standards are not attained a vegetation contingency plan shall be developed to replace any failing vegetation. The contingency plan, including a monitoring plan, shall be submitted to the Executive Officer within 12 months of detecting signs that vegetation is not on track to meet performance standards and shall be implemented within 12 months after receiving written approval from the Executive Officer. After the contingency plan is implemented, replaced vegetation shall be monitored for a minimum of five years;

18. **Final Performance Standards.** The Project will be considered successful at the end of the initial monitoring period if biotechnical and geotechnical stabilization measures are intact, willows and/or alders provide 80 percent cover of the streamside corridor, and overhanging brush over the channel margin provides cover over 50 percent of the Project length;

19. **Monitoring Reports.** The Permittee shall submit monitoring reports, acceptable to the Executive Officer, by January 31 following each monitoring year until final performance standards are met (See Condition 18). The first monitoring year commences in the calendar year after the Project is completed. At the time of this Certification and Order, the Project is anticipated to be completed by October of 2020. Therefore, the first monitoring report shall be due on January 31, 2022, unless the Project is completed at a different time. Monitoring reports shall include photographs from the photo-documentation points specified in Condition 11. Monitoring reports shall discuss the stability of the biotechnical and geotechnical stabilization measures, the percent cover by vegetation in revegetated surfaces at the Project site, and the condition of riparian shrubs and trees. Reports shall include the percent cover of the streamside corridor by willows/and or alders and the percent cover by overhanging brush along the Project length. Each monitoring report shall summarize the previous monitoring results in addition to the current year’s monitoring results, including the need for, and implementation of, any remedial actions and or contingency plans. The annual reports shall compare data to previous monitoring years and describe the effects of the Project and environmental drivers (e.g. storms, weather/climate events) on site conditions. The final monitoring report shall document the overall effect of the Project. If monitoring indicates that beneficial uses have been adversely affected or have the potential to be adversely affected, the Permittee shall, in consultation with Water Board staff, identify remedial measures to be undertaken, including repairs to biotechnical or geotechnical stabilization measures and replanting, as well as possible extension of the monitoring and reporting period until the final performance standards are met. The Permittee shall implement all remedial/contingency measures identified upon receiving written acceptance.
by the Executive Officer. Success of the Project shall be determined by, and acceptable to, the Executive Officer. Annual monitoring reports shall reference CIWQS Place ID 859680 and shall be submitted via email to RB2-401Reports@waterboards.ca.gov, and by mail to the attention of 401 Certifications Reports (see the address on the letterhead);

6.6 Administrative and General Compliance

20. **Site Access.** The Permittee shall grant Water Board staff or an authorized representative, upon presentation of credentials and other documents as may be required by law, permission to: (1) enter upon the Project site or compensatory mitigation site(s) where a regulated facility or activity is located or conducted, or where records are kept; (2) have access to and copy any records that are kept and are relevant to the Project or the requirements of this Order; (3) inspect any facilities, equipment, practices, or operations regulated or required under this Order; and (4) sample or monitor for the purposes of assuring Order compliance;

21. **Certification and Order at Site.** A copy of this Order shall be provided to any consultants, contractors, and subcontractors working on the Project. Copies of this Order shall remain at the Project site for the duration of this Order. The Permittee shall be responsible for work conducted by its consultants, contractors, and any subcontractors;

22. **Ownership Change Notification.** The Permittee shall provide a signed and dated notification to the Water Board of any change in ownership or interest in ownership of the Project area at least 10 days prior to the transfer of ownership. The purchaser shall also submit a written request to the Water Board to be named as the permittee in an amended order. Until this Order has been modified to name the purchaser as the permittee, the Permittee shall continue to be responsible for all requirements set forth in this Order;

23. **Water Quality Violations Notification.** The Permittee shall notify the Water Board of any event causing a violation of compliance with water quality standards as soon as practicable (ideally within 24 hours). Notification may be via telephone, email, delivered written notice, or other verifiable means.

24. **Discharge Change Notification.** In accordance with California Water Code (CWC) section 13260, the Permittee shall file with the Water Board a report of any material change or proposed change in the ownership, character, location, or quantity of this waste discharge. Any proposed material change in operation shall be reported to the Executive Officer at least 30 days in advance of the proposed implementation of any change. This shall include, but not be limited to, all significant new soil disturbances, all proposed expansions of development, or any change in drainage characteristics at the Project site. For the purpose of this Order, this includes any proposed change in the boundaries of the area of wetland/waters of the State to be impacted;
25. **Individual Waste Discharge Requirements.** Should new information come to our attention that indicates a water quality problem with this Project, the Water Board may issue Waste Discharge Requirements pursuant to 23 CCR section 3857;

26. **Expiration.** This Order shall continue to have full force and effect regardless of the expiration or revocation of any federal license or permit issued for the Project;

6.7 **Standard Conditions**

27. **Certification and Order Modification.** This Order is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to CWC section 13330 and 23 CCR section 3867;

28. **Hydroelectric Facilities.** This Order does not 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 23 CCR subsection 3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought;

29. **Application Fee.** This Certification and Order is conditioned upon full payment of the required fee, including annual fees, as set forth in 23 CCR section 3833. The Water Board received a $437 check on July 19, 2019. The Project’s $437 required fee was calculated from the Project’s status as a Category D – Ecological Restoration and Enhancement Project in the 2018/2019 Water Quality Certification Dredge and Fill Application Fee Calculator; and

6.8 **Annual Fees**

30. **Annual Fee Invoice.** In accordance with 23 CCR section 2200, the Permittee shall pay an annual fee to the Water Board each fiscal year (July 1 – June 30) until Project construction activities are completed and an acceptable Notice of Project Construction Completion is received by the Water Board (See Condition 13). If monitoring is required, the Permittee shall pay an annual fee to the Water Board until monitoring activities are completed (See Condition 19) and an acceptable final mitigation report is received by the Water Board (Note: The Annual Post Discharge Monitoring Fee may be changed by the State Water Board; at the time of Certification it was $260 per year).

This Order applies to the Project as proposed in the application materials and designs referenced above in the conditions of Certification. Be advised that failure to implement the Project in conformance with this Order is a violation of this Certification. Any violation of Certification conditions is a violation of State law and subject to administrative civil liability pursuant to CWC section 13350. Failure to meet any
condition of this Certification may subject the Permittee to civil liability imposed by the Water Board to a maximum of $10,000 per day of violation or $10 for each gallon of waste discharged in violation of this action. Any requirement for a report made as a condition to this Certification (e.g., conditions 9, 10, 12, 13, 14, 19, 22, and 24) is a formal requirement pursuant to CWC section 13267, and failure or refusal to provide, or falsification of such required report, is subject to civil liability as described in CWC section 13268. The burden, including costs, of these reports bears a reasonable relationship to the need for the report and the benefits to be obtained. Should new information come to our attention that indicates a water quality problem with this Project, the Water Board may issue Waste Discharge Requirements.

If you have any questions concerning this Order, please contact Brian Wines of my staff at (510) 622-5680 or Brian.Wines@waterboards.ca.gov. All future correspondence regarding this Project should reference the CIWQS Place ID No. indicated at the top of this letter.

Sincerely,

__________________________
for Michael Montgomery
Executive Officer

Attachment A: City of Berkeley, Alameda County, California, Codornices Creek at Kains Avenue (Project No. 18SD19) Draft Final Plans
Attachment B: Monitoring and Maintenance Plan for the Codornices Creek Project
Attachment C: Requirements for Creek Dewatering Plans

cc: SWRCB, DWQ, stateboard401@waterboards.ca.gov Water Board, Victor Aelion, victor.aelion@waterboards.ca.gov
CDFW, Marcia Grefsrud, marcia.grefsrus@wildlife.ca.gov
U.S. EPA, Region IX, Sam Ziegler, ziegler.sam@epa.gov
Corps, SF Regulatory Branch:
    Katerina Galacatos, katerina.galacatos@usace.army.mil
    Frances Malamud-Roam, frances.p.malamud-roam@usace.army.mil
City of Berkeley
    Joe Enke, jenke@cityofberkeley.info
    Srinivas Muktevi, smuktevi@cityofberkeley.info
Stantec, Michael Adams, Michael.AdamsJr@stantec.com
Greg Matuzak, gmatuzak@gmail.com
General Permit Conditions:

1. Work Period. Work within the stream/riparian corridor shall be confined to the period April 15 to October 31. Revegetation work is not confined to this time period.

2. Work Period Restrictions. The work period for completing the work within the stream zone shall be restricted to periods of low or no stream flow and dry weather. Excavation for and placement of the fill shall not begin unless a no precipitation forecast is obtained covering the entire construction phase (within the area covered in this Agreement) and the time necessary to implement erosion control measures.

3. Construction Work Hours. No project activity will be initiated until thirty (30) minutes after sunrise and all project activity will cease thirty (30) minutes prior to sunset.

4. Flag Perimeter. The perimeter of the work site shall be adequately flagged to prevent damage to adjacent riparian and sensitive habitat.

5. Qualified Biologist. Only a qualified biologist, with all necessary State and Federal permits, may relocate wildlife within the work site prior to dewatering. Captured fish and wildlife shall be moved to the nearest appropriate site on the stream. This measure does not allow for the take or disturbance of any State or federally listed species.

6. Nesting Birds. If work will occur during nesting bird season (February 1 through August 31) no more than thirty (30) days prior to work commencing, including staging, clearing and grubbing, the CDFW-approved qualified biologist shall survey a sufficient area around the work site to identify any nests that are present and determine their status. Once construction work begins, the survey effort shall continue to ensure any nest starts established after the work commences are identified. ‘Sufficient’ in the context of this condition means any nest within an area that could potentially be affected by the Project. In addition to direct impacts, such as nest destruction, nesting birds might be affected by noise, vibration, odors and movement of workers or equipment. Identified active nests should be continuously surveyed for the first 24 hours prior to any construction-related activities to establish a behavioral baseline of the adults and any nestlings.

7. Silt Control Measures. Silt control measures shall be utilized throughout all phases of the project where silt and/or earthen fill threaten to enter Waters of the State. Silt control structures shall be monitored for effectiveness and shall be repaired or replaced as needed. Build-up of soil behind the fence shall be removed promptly and any breaches or undermined areas repaired at once.
8. Erosion Control. All exposed/disturbed areas within the project site shall be stabilized to the greatest extent possible. Erosion control measures, such as silt fences, shall be used where ever silt laden water has the potential to leave the work site and enter State waters. Erosion control measures shall be monitored during and after each storm event. Modifications, repairs and improvements to erosion control measures shall be made whenever it is needed. Materials used for erosion control or to repair erosion control shall not pose a risk to fish or wildlife. Monofilament shall not be used.

9. Prohibition against Use of Plastic Netting in Erosion Control Measures. Permittee shall not use temporary or permanent erosion control devices containing plastic netting, including photo- or bio-degradable plastic netting. Erosion control and landscaping specification shall only allow natural fiber for use in erosion control mats, blankets, and straw or fiber wattles.

10. Clean Equipment Use. Prior to operations, all heavy equipment and vehicles shall be cleaned of all external materials, which may be deleterious to aquatic life, wildlife, and riparian habitat (such as oil, grease, or hydraulic fluid). Cleaning shall not occur within a watercourse, stream channel or stream bank.

11. Storage and Stationary Equipment. Stationary equipment such as motors, pumps, generators, compressors and welders, located within adjacent to the stream, shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak.

12. No Equipment Operated on Wet Bed of Creek. Equipment shall not be operated in wetted areas including but not limited to ponded, flowing, or wetland areas, except as may be necessary to construct coffer dams to divert stream flow and isolate the work site.
City of Berkeley
Monument Reference Guidelines

A guide to Monument Referencing in the City of Berkeley as required by the Professional Land Surveyors’ Act (Business and Professions Code) Section 8771 et. seq.
City of Berkeley Monument Reference Guidelines

May 13, 2019

GENERAL

City Monuments consist of many different kinds of physical objects but regardless of the specific description of the object deemed to be a City Monument, the actual physical location must be accurately preserved.

STANDARD PRACTICE

Standard Practices detailed below are to be followed when referencing a City of Berkeley Monument.

FIELD PRACTICES

Whenever a monument appears to be threatened with removal or disturbance, the monument must be referenced, both horizontally and vertically, by or under the direction of a licensed land surveyor or civil engineer legally authorized to practice land surveying in the State of California. For each monument referenced, a minimum of four (4) reference points must be set and tagged with the appropriate license number of the land surveyor or civil engineer. All reference points shall be durable and have a known location relative to the monument so that the monument can be accurately replaced from the references. When available, sound concrete is the best site for setting reference points. Brass or bronze disks, Mag Nails (or similar concrete nail) with washers, surveyor’s nails & tags, etc., should be used in those cases where the reference can be set on sound concrete curb, gutter, sidewalk, wall, etc. In no case shall lead be used as any part of the reference point. The important criteria are that any concrete structure meets the following basic tests:

1. Good condition (not cracked, lowered or raised as compared to the adjacent concrete, or otherwise damaged);

2. Accessible for setup, not blocking traffic and preferably on public right of way. If a reference point must be set outside the public right of way, permission to do so must be acquired by the surveyor performing the referencing. The City of Berkeley, by promulgation of these standards, is not giving permission to perform any task on private property;

3. Positioned to survive the conditions that put the original monument at risk, such as a street rehabilitation
project, a sanitary sewer rehabilitation project, etc.;

4. Positioned to survive any foreseeable (as evidenced by a visual inspection of the site) construction such as curb ramp construction/replacement, curb replacement, sidewalk replacement, utility relocation, etc. The City of Berkeley has a strong commitment to insuring accessibility throughout the City. Existing curb ramps are frequently replaced with code compliant curb ramps with truncated domes. Damaged sidewalks and curbs are replaced as well. Additionally the City commonly installs curb ramps at crosswalks where none currently exist, therefore those locations shall be avoided when placing reference points;

5. The primary consideration in choosing the placement of a reference point shall be to assure its safety and stability in perpetuity. For example, no reference point should be set near any trees with roots likely to raise or damage the surface upon which the reference point has been set.

If no suitable concrete is available, a metal bar or pipe, with a tagged cap or plug, may be used provided that it is set flush in sound soil or pavement. Setting metal bars or pipes has the possibility of damaging subsurface infrastructure. It shall be the duty of the surveyor performing the referencing to assure that the site is properly evaluated for subsurface infrastructure. Sole responsibility for any resulting damage thereto shall be borne by the surveyor responsible for the damage. No reference point shall be set on private property without the surveyor performing the referencing first obtaining permission from the property owner.

DOCUMENTATION

Within two (2) weeks of the completion of any monument referencing, a Corner Record for each monument referenced shall be filed with Alameda County, and copies of the signed sealed submittals of the Corner Record(s) shall be provided to the City of Berkeley, Public Works Department, Engineering Division, Survey Section.

CORNER RECORD MONUMENT AND REFERENCE POINT CONDITIONS AND DESCRIPTIONS

Corner Records shall include a detailed description of the monument referenced and reference points set:

1. Description of monument character and setting (2” brass disc stamped CITY OF BERKELEY UNLAWFUL TO DEFACE in monument well, 3/4” brass pin in monument well, 1” square iron bar in monument well, 1-1/2” iron pipe in soil, etc.);

2. Description of monument reference point character and setting (1” brass disc stamped LS #### in concrete, mag nail & washer stamped LS #### in top of curb, nail & tag LS #### in concrete walk, rebar & cap LS #### in asphalt pavement, etc.);

3. Labeled with the official City of Berkeley monument designation (B####);

4. North arrow and graphic scale;

5. Note pertaining to the method used for establishing the reference point elevations.
UNACCEPTABLE REFERENCE POINTS

In no case will lead, or any other material that may cause harm, be used in any portion of the referencing process. Sole responsibility for the removal of such products and any harm they cause will be borne by the surveyor responsible for using the product in the referencing process.

Cut crosses, scribed lines, permanent marker, paint, wood hubs, etc., due to their limited lifecycle, may not be used as a reference point.

No reference point may be set on any fire hydrant or similarly temporary fixture.

VERTICAL REFERENCE POINTS

When performing the vertical referencing of a monument, differential leveling practices shall be used. The Corner Record shall include a minimum of four (4) vertical reference points. It is preferable that the horizontal reference points also be used for the vertical referencing.

All vertical references shall be based on a value and datum provided by the City of Berkeley, Public Works Department, Engineering Division, Survey Section, at the time of the request for referencing. Note that the value associated with any control point in the City’s vertical and horizontal network is subject to change as the City periodically recalculates its position.
PEDESTRIAN ACCESS DURING CONSTRUCTION PROJECTS

- The purpose of these standards for construction in the public right-of-way is to ensure pedestrian safety and access
- Standards apply to City of Berkeley crews, Contractors with the City, and all others working in the right-of-way
- Each project is unique and requires thorough review to ensure complete, safe, usable and accessible paths of travel

### Maintenance of a Clear and Accessible Pedestrian Corridor

The Contractor or permittee shall maintain an accessible corridor that provides at least one safe path of travel for all pedestrians at all times for the duration of the project.

- Pedestrian corridor shall be a nominal width of 6’ whenever feasible, and shall conform to ADAAG guidelines. It shall not be less than 48” wide at single point of contact or obstruction.
- Accessible pedestrian corridor shall connect with facilities throughout the project area.
- Equipment, debris, construction materials or vehicles shall not obstruct the corridor.
- No parked vehicles can obstruct blue curb parking spaces unless permitted by the City.
- Temporary closure of designated pedestrian routes and crossings shall be allowed only when flaggers are present and safely directing pedestrians around hazards.

### Temporary Ramps Conforming to Accessibility Standards

The Contractor or permittee shall install and maintain temporary concrete, asphalt or wood ramps to provide a safe path of travel for mobility-impaired pedestrians at all locations where ramps have been temporarily removed OR needed to route pedestrians.

- Temporary ramps shall be constructed so installation and removal will not damage existing pavement, curb and/or gutter.
- Ramps shall have a minimum 4’ wide walking surface and a slope not to exceed 8%.
- Ramps shall snugly meet existing surfaces without gaps. When required for drainage schedule 40 PVC pipe minimum 2” diameter shall be installed through ramp.
- Transitions between ramps and the street surface shall be smooth such that no lip exists at the base of the ramp.
- Sides of a ramp shall be protected where there is any drop-off.

### Construction of Signposts, Barricades and Fencing

Barricades that are impenetrable shall be used to separate pedestrians from hazards on all sides of excavations that may be exposed to pedestrians. Use materials and methods suitable to site conditions. Signs and fencing material shall not protrude into the clear pathway.

- A-frames used for defining path of travel (not barricading trenches) shall be placed end-to-end without spacing, shall be connected and maintained to ensure stability to help a person who is blind negotiate a safe path while using a cane.
- Caution Tape shall NOT be used by itself to delineate the path of travel or create a barricade.
- Fencing material requires a minimum 3” height, solid, uninterrupted toe-board.
- Signposts, scaffolding and fencing supports shall be placed entirely outside the pedestrian path of travel, minimum 4’ wide and 80” high without obstruction.
- Construction barriers shall be maintained in a sound, neat and clean condition.

### Identification of Safe Path of Travel

If a portion of the pedestrian way is rerouted due to construction, the path of travel shall be clearly defined. Traffic Engineer shall review any pedestrian access limitations and notification requirements for pedestrians with mobility or vision impairments.

- Paths of travel that DO NOT continue to the next corner or to a safe crosswalk shall be closed to pedestrian traffic. Signs a minimum of 36” x 36” must be posted stating the sidewalk is closed and detour pedestrians to accessible sidewalk.
- Pedestrian access corridors shall be clearly delineated with cones or barricades, as approved by the Engineer.
- If a crosswalk is closed, curb ramps leading into that crosswalk must be barricaded in such a manner that walkways that are not closed remain accessible to use.
- Caution Tape shall NOT be used by itself to delineate the path of travel or create a barricade.

### Surfacing of Pedestrian Corridors

During construction, tripping hazards and barriers for people with mobility impairments must be removed to maintain an accessible pedestrian corridor.

- Any change of level, which exceeds 1/4” height, must be beveled at 45°.
- Closed trenches, temporary paving surfaces, walking surfaces, steel plates; etc. shall have a smoothly finished, firm walking surface made even w/surrounding walkways.
- Aisle or loading area adjacent to a parking space is part of the pedestrian corridor.

### Identification of Safe Path of Travel

If a portion of the pedestrian way is rerouted due to construction, the path of travel shall be clearly defined. Traffic Engineer shall review any pedestrian access limitations and notification requirements for pedestrians with mobility or vision impairments.

- Paths of travel that DO NOT continue to the next corner or to a safe crosswalk shall be closed to pedestrian traffic. Signs a minimum of 36” x 36” must be posted stating the sidewalk is closed and detour pedestrians to accessible sidewalk.
- Pedestrian access corridors shall be clearly delineated with cones or barricades, as approved by the Engineer.
- If a crosswalk is closed, curb ramps leading into that crosswalk must be barricaded in such a manner that walkways that are not closed remain accessible to use.
- Caution Tape shall NOT be used by itself to delineate the path of travel or create a barricade.

### Restoration of Pedestrian Routes

After construction, the site shall be returned to its former condition, or new condition as required.

- Temporary ramps shall be removed as soon as construction and approval of permanent ramp is completed.
- After work is completed, surface of the pedestrian path shall be restored free from all ridges, gaps, bumps and rough edges.
- Construction that affects existing curb ramp shall include replacement or repair of the curb ramp to meet current City standards.

PLEASE NOTE: City of Berkeley Engineers may stop work when any hazardous conditions are present.