Agreement: Award contract for construction of the Lower American River Salmonid Habitat Enhancement Program: River Bend (G14140407) [Two-Thirds Vote] [Publish for 10-Day Review 06/14/2024]

Recommendation: Pass a Motion by two-thirds vote authorizing the City Manager, or the City Manager’s designee to 1) suspend competitive bidding in the best interests of the City; and 2) execute an agreement with Dixon Marine Services, Inc. in the amount of $1,749,566.00, for construction of the Lower American River Salmonid Habitat Enhancement Program: River Bend (G14140407), being administered by the City-County Office of Metropolitan Water Planning (CCOMWP, also known as “Water Forum”).

Contact: Jessica Law, Executive Director, (916) 808-1998, jlaw@waterforum.org; Erica Bishop, Program Manager, (916) 808-1997, ebishop@waterforum.org; Water Forum; Penny Buchman, Supervising Financial Analyst, (916) 808-1841, pbuchman@cityofsacramento.org, Department of Utilities

Policy Considerations: This Project will aid fish habitat restoration efforts for the Lower American River, consistent with goals of the Water Forum Agreement. Pursuant to the Interagency Agreement that created the Water Forum, the City’s procedures are followed for the Water Forum contracting.
activities.

The Sacramento City Code Section 4.04.020 and Council Rules of Procedure (Chapter 7, Section E.2.d) mandate that unless waived by a 2/3 vote of the City Council, all labor agreements, and all agreements greater than $1,000,000 shall be made available to the public at least ten (10) days prior to council action. This item was published for 10-day review on June 14, 2024, in compliance with the City Code.

Economic Impacts: None.

Environmental Considerations:

California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA):
The Project is subject to review pursuant to both CEQA and NEPA. The City of Sacramento was responsible for CEQA review. The City Council adopted a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Plan on August 20, 2019. Reclamation was responsible for NEPA review. Reclamation issued a Finding of No Significant Impact (FONSI) for the Project on August 28, 2019. The NEPA review process did not require action by the City.

This Project is one of many to help meet the requirements of the 1992 Central Valley Project Improvement Act, Section 3406 (b)(13), to restore and replenish spawning gravel and rearing habitat to improve fish production. There will be no significant effects on endangered, rare or threatened species or habitat, and no other significant environmental effects from the project.

Sustainability: Implementation of Projects in the Lower American River that are more protective of fisheries and aquatic resources is a fundamental element of the Water Forum Agreement, which is supported by the City’s General Plan Goals, specifically Natural and Open Space Protection (E.R. 2.1).

Commission/Committee Action: Not applicable.

Rationale for Recommendation: City Code allows the City Council to suspend competitive bidding when the City Council determines that it is in the best interest of the City to do so. On March 26, 2024, the Water Forum issued a Request for Proposals, number P24804101002, for construction of the Lower American River Salmonid Habitat Enhancement Program: River Bend (G14140400). Five proposals were received. One proposal was marked as non-responsive to the RFP. The remaining four qualified proposals are analyzed in the RFP Evaluation Table attached.

Financial Considerations: The total amount of the agreement is $1,749,566.00. There is sufficient funding in the River Bend Habitat Salmonid Project grant funds (G14140407) to support this project.
This project has no impact on the City’s General Fund or the Department of Utilities Water Fund.

**Local Business Enterprise (LBE):** The minimum LBE participation requirement was waived by the Executive Director of the Water Forum due to the use of federal funds on the project.
RFP-P24804101002
Salmonid Habitat Construction: River Bend
City of Sacramento/Water Forum

RFP EVALUATION RESULTS
April 30, 2024

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vendor Ranking</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
THIS CONTRACT is made at Sacramento, California, by and between the CITY OF SACRAMENTO, a charter city and municipal corporation ("CITY"), and

Dixon Marine Services, Inc.
P.O. Box 424
Inverness, CA 94937
(415) 669-7369 / masutton@dixonmarineservices.com
("Contractor"), as of the Effective Date, as defined below.

The City and Contractor agree as follows:

1. **Effective Date.** This Contract shall be effective beginning May 21, 2024.

2. **Contract Documents.** All exhibits and documents attached or referred to in this Contract are incorporated as if set forth herein, Including Exhibit A (titled “Scope of Services”) and Exhibit B (titled “Payment”).

   If there is a conflict between the terms and conditions of any document prepared or provided by the Contractor and made a part of this Contract and the other terms or conditions of the Contract, the other terms and conditions of the Contract control.

3. **Services.** Subject to the terms and conditions set forth in this Contract, Contractor shall provide to CITY the services described in Exhibit A ("Services").

   Contractor will not be compensated for services outside the scope of Exhibit A ("Additional Services") unless, before providing Additional Services: (a) Contractor notifies CITY and CITY agrees that the Additional Services are outside the scope of Exhibit A; (b) Contractor estimates the additional compensation required for these Additional Services; and (c) CITY, after notice, approves in writing a Supplemental Contract specifying the Additional Services and the amount of additional compensation to be paid Contractor.

   CITY will have no obligations whatsoever under this Contract or any Supplemental Contract, unless and until this Contract or any Supplemental Contract is approved by the City as required.
by the Sacramento City Code. As used in this Contract, the term “Services” includes both Services and Additional Services as applicable.

4. **Payment.** CITY shall pay Contractor at the times and in the manner set forth in Exhibit B. Contractor shall submit all invoices to CITY in the manner specified in Exhibit B.

5. **Facilities and Equipment.** Except as set forth below, Contractor shall, at its sole cost and expense, furnish all facilities and equipment required for Contractor to perform this Contract. CITY shall furnish to Contractor only the facilities and equipment listed below, if any.

6. **Insurance.** Contractor shall, at its sole cost and expense, maintain the insurance coverage described in the attached Exhibit C.

7. **General Conditions.** Contractor shall comply with the terms and conditions set forth in the attached Exhibit D and the attached Additional Federal Requirements.

8. **Additional Requirements for Surveying, Material Testing, and Inspection Services.** If this Contract includes any land surveying, material testing, or inspection services provided for a City construction project, during the design, pre-construction, construction, or post-construction phases of the project, the Contractor and any subcontractor or subconsultant performing any such services shall comply with the provisions specified in the attached Exhibit E.

9. **Non-Discrimination in Employee Benefits.** This Contract may be subject to Sacramento City Code chapter 3.54, Non-Discrimination in Employee Benefits by City Contractors. A summary of the requirements, entitled “Requirements of the Non-Discrimination in Employee Benefits Code (Equal Benefits Ordinance),” can be viewed at: https://www.cityofsacramento.org/Finance/Procurement/Contract-Ordinances.

Contractor acknowledges and represents that Contractor has read and understands the requirements and shall fully comply with all applicable requirements of Sacramento City Code chapter 3.54. If requested by City, Contractor shall promptly provide any documents and information required by City to verify Contractor’s compliance.

Contractor's violation of Sacramento City Code chapter 3.54 constitutes a material breach of this Contract, for which the City may terminate the Contract and pursue all available legal and equitable remedies.

The Ban-The-Box Requirements are applicable to certain contracts with the City in an amount of $250,000 or more (either initial value or total value after amendment) or if the total value of all Contractor's contracts with the City is $250,000 or more over a 12-month period.

Contractor acknowledges and represents that Contractor has read and understands these requirements and shall fully comply with all applicable requirements of Sacramento City Code chapter 3.62. If requested by City, Contractor shall promptly provide any documents and information required by City to verify Contractor's compliance. Contractor shall require applicable subcontractors to fully comply with all applicable requirements of Sacramento City Code chapter 3.62 and include these requirements in all subcontracts covered by Sacramento City Code chapter 3.62.

Contractor's violation of Sacramento City Code chapter 3.62 constitutes a material breach of this Contract, for which the City may terminate the Contract and pursue all available legal and equitable remedies.

11. **Local Business Enterprise Program.** The Local Business Enterprise Program Participation Requirements ("LBE Participation Requirements") may be applicable to this Contract. A summary of the requirements, entitled "LBE Participation Requirements," can be viewed at:


Contractor acknowledges and represents that Contractor has read and understands these requirements and shall fully comply with all applicable requirements of Sacramento City Code chapter 3.60. If requested by City, Contractor shall promptly provide any documents and information required by City to verify Contractor's compliance. Contractor shall require applicable subcontractors to fully comply with all applicable requirements of Sacramento City Code chapter 3.60 and include these requirements in all subcontracts covered by Sacramento City Code chapter 3.60.

Contractor's violation of Sacramento City Code chapter 3.60 constitutes a material breach of this Contract, for which the City may terminate the Contract and pursue all available legal and equitable remedies.

12. **Authority.** The person signing this Contract for Contractor represents and warrants that he or she has read, understands, and agrees to all the Contract terms and is fully authorized to sign this Contract on behalf of the Contractor and to bind the Contractor to the performance of the Contract’s obligations.

[Signatures Page Following Exhibits]
EXHIBIT A

SCOPE OF SERVICES

1. Representatives.

The CITY Representative for this Agreement is:

Jessica Law, Executive Director  
1330 21st Street, Ste. 103, Sacramento, CA  95811  
(916) 799-9125 / jlaw@waterforum.org

The CONTRACTOR Representative for this Agreement is:

Mark Sutton, Vice President  
P.O. Box 424  
Inverness, CA  94937  
(415) 669-7369 / masutton@dixonmarineservices.com

Unless otherwise provided in this Contract, all Contractor questions and correspondence pertaining to this Contract must be addressed to the City Representative. All City questions and correspondence must be addressed to the Contractor Representative.

2. Scope of Services. Contractor shall provide Services to City as set forth in Attachment 1 to this Exhibit A.

3. Time of Performance. The Services described in this Contract shall be provided for a term ending June 30, 2025. Contractor shall provide the Services in accordance with any schedule in Attachment 1 to this Exhibit A. Contractor shall immediately notify the City if Contractor is unable to make delivery of Goods or perform Services in compliance with this Contract.

4. Conflict of Interest Requirements. The individual(s) who will provide Services pursuant to this Contract are “Consultants” within the meaning of the Political Reform Act and the City’s Conflict of Interest Code. [check one]

(A) Identify the individuals who will provide Services or perform Work under this Contract as "Consultants"; and

(B) Cause these individuals to file with the City Representative the "assuming office" statements of economic interests required by the City’s Conflict of Interest Code.

Contractor shall cause the following to occur within 30 days after execution of this Contract:

(A) Identify the individuals who will provide Services or perform Work under this Contract as "Consultants"; and

(B) Cause these individuals to file with the City Representative the "assuming office" statements of economic interests required by the City’s Conflict of Interest Code.

Thereafter, throughout the term of the Contract, Contractor shall cause these individuals to file with the City Representative annual statements of economic interests and "leaving office" statements of economic interests, as required by the City's Conflict of Interest Code. The City may withhold all or a portion of any payment due under this Contract or impose fines on the individuals until all required statements are filed.
EXHIBIT B

PAYMENT

1. **CONTRACTOR’s Compensation.** The total of all fees paid to the Contractor for the provision of Services as set forth in Exhibit A, including any authorized reimbursable expenses, shall not exceed the total sum of $1,749,566.00. The payments specified in this Exhibit B shall be the only payments made to Contractor unless the City approves a Supplemental Contract.

2. **Billable Rates.** Contractor shall be paid for the performance of Services on an hourly rate, daily rate, flat fee, lump sum, or other basis, as set forth in Exhibit A or Attachment 1 to this Exhibit B and any applicable special provisions included in the request for bids or proposals. If there is a conflict between Exhibit A or Exhibit B and the Special Provisions, Exhibit A or Exhibit B controls.

3. **CONTRACTOR’s Reimbursable Expenses.** “Reimbursable Expenses” are limited to actual expenditures of Contractor for expenses that are necessary for the proper satisfaction of the Contract and are only payable if specifically authorized in advance in writing by the City. No charges or markup will be allowed unless specified in the Contract, including charges for travel and transportation.

4. **Payments to CONTRACTOR.** Contractor is responsible for supplying all documentation necessary to verify invoices to the City’s satisfaction.

   A. Payments to Contractor shall be made within a reasonable time after receipt of Contractor’s invoice, in proportion to services performed or as otherwise specified in Attachment 1 to Exhibit B. Contractor may request payment on a monthly basis. Contractor shall be responsible for the cost of supplying all documentation necessary to verify the monthly billings to the satisfaction of CITY.

   B. Invoices must be submitted to either of the addresses specified below.

      (1) Email. Submit email invoices and any attachments to: apinvoices@cityofsacramento.org

      (2) Postal Mail. If emailing is not an option, mail to:

          A/P Processing Center
          City of Sacramento
          915 I Street, Floor 4
          Sacramento, CA 95814-2608

   C. All invoices submitted by Contractor must contain the following information:

      (1) Job/Project Name
      (2) CITY’s current Purchase Order Number
      (3) Contractor’s Invoice Number
      (4) Date of Invoice Issuance
      (5) Work Order Number (if applicable)
      (6) CITY representative identified on the Purchase Order
(7) Contractor’s remit address
(8) Description of services billed under Invoice
(9) Amount of Invoice (itemize all authorized Reimbursable Expenses)
(10) Total Billed to Date under Contract (if applicable)

D. Items must be separated into Services and Reimbursable Expenses. Invoices that do not conform to the format outlined above will be returned to Contractor for correction. CITY is not responsible for delays in payment to Contractor resulting from Contractor’s failure to comply with the invoice format described above.

5. **Additional Services.** Additional Services shall be provided only when a Supplemental Contract authorizing the Additional Services is approved in writing by the City in accordance with the City’s contract amendment procedures. The City reserves the right to perform any Additional Services with its own staff or to retain other contractors to perform the Additional Services.

6. **Accounting Records of CONTRACTOR.** During performance of this Contract and for a period of three years after completion of performance, Contractor shall maintain all accounting and financial records related to this Contract, in accordance with generally accepted accounting practices, including records of Contractor’s costs for performance under this Contract and records of Contractor’s Reimbursable Expenses. Contractor shall keep and make records available for inspection and audit by representatives of the CITY upon reasonable written notice.

7. **Tax Payments.** Contractor shall pay, when and as due, any and all taxes incurred as a result of Contractor’s compensation hereunder, including estimated taxes, and shall provide CITY with proof of the payment upon request. Contractor hereby agrees to indemnify CITY for any claims, losses, costs, fees, liabilities, damages or injuries suffered by CITY arising out of Contractor’s breach of this section.
1. **Insurance Requirements.** During the entire term of this Contract, Contractor shall maintain the insurance coverage described in the Insurance Terms below. Full compensation for all premiums that Contractor is required to pay for the insurance coverage described herein shall be included in the compensation specified under this Contract. No additional compensation will be provided for Contractor's insurance premiums. Any available insurance proceeds in excess of the specified minimum limits and coverages shall be available to the City.

Contractor's liability to the City is not in any way limited to or affected by the amount of insurance coverage required or carried by the Contractor in connection with this Contract.

2. **General Liability Minimum Scope and Limits of Insurance Coverage.** Commercial General Liability Insurance is required providing coverage at least as broad as ISO CGL Form 00 01 on an occurrence basis for bodily injury, including death, of one or more persons, property damage, and personal injury, arising out of activities performed by or on behalf of the Contractor and subcontractors, products and completed operations of Contractor and subcontractors, and premises owned, leased, or used by Contractor and subcontractors, with limits of not less than one million dollars ($1,000,000) per occurrence. The policy shall provide contractual liability and products and completed operations coverage for the term of the policy.

The City, its officials, employees and volunteers shall be covered by policy terms or endorsement as additional insureds as respects general liability arising out of: activities performed by or on behalf of Contractor and subcontractors; products and completed operations of Contractor and subcontractors; and premises owned, leased, or used by Contractor and subcontractors.

3. **Automobile Liability Minimum Scope and Limits of Insurance Coverage.** *(Check the applicable provision.)*

   ___ No automobile liability insurance is required, and by signing this Contract, Contractor certifies as follows:

   “Contractor certifies that a motor vehicle will not be used in the performance of any work or services under this agreement. If, however, Contractor does transport items under this Contract, or this Contract is amended to require any employees of Contractor to use a
vehicle to perform services under the Contract, Contractor understands that it must maintain and provide evidence of Automobile Liability Insurance providing coverage at least as broad as ISO Form CA 00 01 for bodily injury, including death, of one or more persons, property damage and personal injury, with limits of not less than one million dollars ($1,000,000) per occurrence. The policy shall provide coverage for owned, non-owned and/or hired autos as appropriate to the operations of the Contractor.”

4. **Excess Insurance.** The minimum limits of insurance required above may be satisfied by a combination of primary and umbrella or excess insurance coverage, provided that any umbrella or excess insurance contains, or is endorsed to contain, a provision that it will apply on a primary basis for the benefit of the City, and any insurance or self-insurance maintained by City, its officials, employees, or volunteers will be in excess of Contractor's umbrella or excess coverage and will not contribute to it.

5. **Workers’ Compensation Minimum Scope and Limits of Insurance Coverage.** *(Check the applicable provision.)*

   - **X** Workers’ Compensation Insurance is required with statutory limits and Employers' Liability Insurance with limits of not less than one million dollars ($1,000,000). The Workers' Compensation policy shall include a waiver of subrogation in favor of the City.
   - ____ No work or services will be performed on or at CITY facilities or CITY Property, therefore a Workers’ Compensation waiver of subrogation in favor of the CITY is not required.
   - ____ No Workers’ Compensation insurance is required, and by signing this Contract, Contractor certifies as follows:
     
     “Contractor certifies that its business has no employees, and that it does not employ anyone, and is therefore exempt from the legal requirements to provide Workers’ Compensation insurance. If, however, Contractor hires any employee during the term of this Contract, Contractor understands that Workers’ Compensation with statutory limits and Employer’s Liability Insurance with a limit of not less than one million dollars ($1,000,000) is required. The Workers’ Compensation policy will include a waiver of subrogation in favor of the City.”

6. **Professional Liability Minimum Scope and Limits of Insurance Coverage.** Professional Liability Insurance providing coverage on a claims-made basis for errors and omissions, or malpractice with limits of not less than one million dollars ($1,000,000):

   - Is **X** Is not ____ [check one] required for this Agreement.

   If required, such coverage must be continued for at least _1_ year(s) following the completion of all Services under this Contract. The retroactive date must be prior to the date this Contract is approved or any Services are performed.
7. **Other Insurance Provisions.** The policies must contain, or be endorsed to contain, the following provisions:
   A. Contractor's insurance coverage, including excess insurance, shall be primary insurance as respects the City, its officials, employees and volunteers. Any insurance or self-insurance maintained by the City, its officials, employees or volunteers will be in excess of Contractor's insurance and will not contribute with it.

   B. Any failure to comply with reporting provisions of the policies will not affect coverage provided to the City, its officials, employees or volunteers.

   C. Coverage shall state that Contractor's insurance applies separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

   D. Contractor shall provide the City with 30 days written notice of cancellation or material change in the policy language or terms.

8. **Acceptability of Insurance.** Insurance must be placed with insurers with a Bests' rating of not less than A:VI. Self-insured retentions, policy terms or other variations that do not comply with the requirements of this Exhibit C must be declared to and approved by the City in writing before execution of this Contract.

9. **Verification of Coverage.**
   A. Contractor shall furnish City with certificates and required endorsements evidencing the insurance required. Certificates of insurance must be signed by an authorized representative of the insurance carrier. Copies of policies shall be delivered to the City Representative on demand.

   B. Contractor shall send all insurance certificates and endorsements, including policy renewals, during the term of this Contract directly to:

       City of Sacramento  
       c/o Exigis LLC  
       PO Box 947  
       Murrieta, CA 92564

   C. Certificate Holder must be listed as:

       City of Sacramento  
       c/o Exigis LLC  
       PO Box 947  
       Murrieta, CA 92564

   D. The City may withdraw its offer of Contract or cancel this Contract if the certificates of insurance and endorsements required have not been provided before execution of this Contract. The City may withhold payments to Contractor and/or cancel the Contract if the insurance is canceled or Contractor otherwise ceases to be insured as required herein.
10. **Subcontractor Insurance Coverage.** Contractor shall require and verify that all subcontractors maintain insurance coverage that meets the minimum scope and limits of insurance coverage specified in this Exhibit C.
EXHIBIT D

GENERAL CONDITIONS

1. **Independent Contractor.**

   A. It is understood and agreed that Contractor (including Contractor’s employees) is an independent contractor and that no relationship of employer-employee exists between the parties hereto for any purpose whatsoever. Neither Contractor nor Contractor’s assigned personnel will be entitled to any benefits payable to CITY employees. CITY is not required to make any deductions or withholdings from the compensation payable to Contractor under the provisions of this Contract, and Contractor will be issued a Form 1099 for its services hereunder. As an independent contractor, Contractor hereby agrees to indemnify and hold CITY harmless from any and all claims that may be made against CITY based upon any contention by any of Contractor’s employees or by any third party, including any state or federal agency, that an employer-employee relationship or a substitute therefor exists for any purpose whatsoever by reason of this Contract or by reason of the nature and/or performance under this Contract.

   B. It is further understood and agreed by the parties that Contractor, in the performance of its obligations, is subject to the City’s control and direction as to the designation of tasks to be performed and the results to be accomplished under this Contract, but not as to the means, methods, or sequence used by Contractor for accomplishing the results. To the extent that Contractor obtains permission to, and does, use CITY facilities, space, equipment or support services in the performance of this Contract, this use will be at the Contractor’s sole discretion based on the Contractor’s determination that the use will promote Contractor’s efficiency and effectiveness. Except as may be specifically provided elsewhere in this Contract, the CITY does not require that Contractor use CITY facilities, equipment or support services or work in CITY locations in the performance of this Contract. As used in this Contract, "sole discretion" or "sole judgment" means that the party authorized to exercise its discretion or judgment may do so based on an unfettered assessment of its own interests, without considering how its decision affects the other party, and unconstrained by the implied covenant of good faith and fair dealing.

   C. If, in the performance of this Contract, any third persons are employed by Contractor, such persons will be entirely and exclusively under the direction, supervision, and control of Contractor. Except as otherwise provided in this Contract, all terms of employment, including hours, wages, working conditions, discipline, hiring, and discharging, or any other terms of employment or requirements of law, shall be determined by Contractor. It is further understood and agreed that Contractor will issue W-2 or 1099 Forms for income and employment tax purposes for all Contractor’s assigned personnel and subcontractors.

   D. The provisions of this section will survive any expiration or termination of this Contract. Nothing in this Contract creates an exclusive relationship between CITY and Contractor. Contractor may represent, perform services for, or be employed by any additional persons or companies so long as Contractor does not violate the provisions of Section 5, below.
2. **Licenses; Permits, Etc.** Contractor represents and warrants that Contractor has, and shall maintain at all times during the term of this Contract at its sole cost and expense, all licenses, permits, qualifications, and approvals of any nature that are legally required for Contractor to practice its profession or fulfill the terms of this Contract, including a City Business Operations Tax Certificate and any required certification issued by the California Secretary of State.

3. **Time.** Time is off the essence in the performance of this Contract. Contractor shall devote the necessary time and effort to its performance under this Contract. Neither party will be considered in default of this Contract, to the extent that party’s performance is prevented or delayed by any cause, present or future, that is beyond the reasonable control of that party.

4. **CONTRACTOR Not Agent.** Except as CITY may specify in writing, Contractor and Contractor’s personnel have no authority, express or implied, to act on behalf of CITY in any capacity whatsoever as an agent. Contractor and Contractor’s personnel shall have no authority, express or implied, to bind CITY to any obligations whatsoever.

5. **Conflicts of Interest.** Contractor covenants that neither it, nor any officer or principal of its firm, has or will acquire any interest, directly or indirectly, that would conflict in any manner with the CITY’s interests or that would in any way hinder Contractor’s performance under this Contract. Contractor further covenants that in the performance of this Contract, no person having any such interest will be employed by it as an officer, employee, agent or subcontractor, without the City’s written consent.

Contractor agrees to avoid conflicts of interest or the appearance of any conflicts of interest with the City’s interests during the performance of this Contract. If Contractor is or employs a former officer or employee of the CITY, Contractor and any former City officer or employee shall comply with the provisions of Sacramento City Code Section 2.16.090 pertaining to appearances before the City Council or any CITY department, board, commission, or committee.

6. **Hazardous Substances.** "Hazardous Substances" means any substance, material, waste, or other pollutant or contaminant that is or becomes designated, classified, or regulated as hazardous or toxic under any law, regulation, rule, order, decree, or other governmental requirement now in effect or later enacted. If Contractor is shipping Hazardous Substances, Contractor must supply a Safety Data Sheet ("SDS") with the first shipment of Hazardous Substances to each City location receiving the Hazardous Substances. If the content of an SDS is revised, Contractor must provide a revised SDS to each City location receiving Hazardous Substances.

7. **Confidentiality of CITY Information.** During performance of this Contract, Contractor may gain access to and use CITY information regarding inventions, machinery, products, prices, apparatus, costs, discounts, future plans, business affairs, governmental affairs, processes, trade secrets, technical matters, systems, facilities, customer lists, product design, copyright, data, and other vital information (hereafter collectively referred to as “City Information”) that are valuable, special and unique assets of the CITY.

Contractor agrees to protect all City Information and treat it as strictly confidential, and further agrees that Contractor shall not at any time, either directly or indirectly, divulge, disclose or
communicate in any manner any City Information to any third party without the City’s prior written consent.

In addition, Contractor must comply with all CITY policies governing the use of the CITY network and technology systems, as set forth in applicable provisions of the City of Sacramento Administrative Policy Instructions # 30. A violation by Contractor of this section is a material violation of this Contract and shall justify legal and equitable relief.

8. **CONTRACTOR Information.**

A. CITY shall have full ownership and control, including ownership of any copyrights, of all information prepared, produced, or provided by Contractor under this Contract. In this Contract, the term “information” means and includes: any and all work product, submittals, reports, plans, specifications, and other deliverables consisting of documents, writings, handwritings, typewriting, printing, photostatting, photographing, computer models, and any other computerized data and every other means of recording any form of information, communications, or representation, including letters, works, pictures, drawings, sounds, or symbols, or any combination thereof. CONTRACTOR shall not be responsible for any unauthorized modification or use of such information for other than its intended purpose by CITY.

B. Contractor shall fully defend, indemnify and hold harmless CITY, its officers and employees, and each of them, from and against any and all claims, actions, lawsuits or other proceedings alleging that all or any part of the information prepared, produced, or provided by Contractor under this Contract infringes upon any third party’s trademark, trade name, copyright, patent or other intellectual property rights. CITY shall make reasonable efforts to notify Contractor not later than ten days after CITY is served with any such claim, action, lawsuit or other proceeding. However, City’s failure to provide notice within the ten-day period does not relieve Contractor of its obligations hereunder, which survive any termination or expiration of this Contract.

C. All proprietary and other information received from Contractor by CITY, whether received in connection with Contractor’s proposal to CITY or in connection with Contractor’s performance, will be disclosed upon receipt of a request for disclosure, in accordance with the California Public Records Act; provided, however, that, if any information is set apart and clearly marked “trade secret” when it is provided to CITY, CITY shall give notice to Contractor of any request for the disclosure of such information. The Contractor will then have five days from the date it receives notice to petition the court for a protective order to prevent the disclosure of the information. The Contractor shall have sole responsibility for defense of the actual “trade secret” designation of such information.

D. The parties understand and agree that any failure by Contractor to respond to the notice provided by CITY and seek a protective order, in accordance with the provisions of subsection C, above, constitutes a complete waiver by Contractor of any rights regarding the information designated “trade secret” by Contractor, and the information will be disclosed by CITY in accordance with the Public Records Act.
9. **Notification of Material Changes in Business.** Contractor agrees that if it experiences any material changes in its business, including a reorganization, refinancing, restructuring, leveraged buyout, bankruptcy, name change, or loss of key personnel, it will immediately notify the City of the changes. Contractor also agrees to immediately notify the City of any condition that may jeopardize the scheduled delivery or fulfillment of Contractor's obligations to the City under this Contract.

10. **Standard of Performance.** Contractor shall perform in the manner and according to the standards currently observed by a competent practitioner of Contractor's profession in California and in compliance with all requirements of this Contract. All products that Contractor delivers to CITY under this Contract must be prepared in a professional manner and conform to the standards of quality normally observed by a person currently practicing in Contractor's profession.

Contractor shall assign only competent personnel to perform on its behalf under this Contract. Contractor must notify the CITY in writing of any changes in Contractor's staff assigned to perform under this Contract, before any performance by the new staff member. If the CITY, in its sole discretion, determines that any person assigned by the Contractor to perform under this Contract is not performing in accordance with the standards required herein, City shall provide notice to Contractor. Contractor shall immediately remove the assigned person upon receipt of the notice.

11. **Performance or Different Terms and Conditions.** The City's subsequent performance will not be construed as either acceptance of additional or different terms and conditions or a counteroffer by the Contractor, nor will the City's subsequent performance be viewed as acceptance of any provision of the Uniform Commercial Code, as adopted by any State, that is contrary to the terms and conditions contained herein. Contractor's performance shall conform to the applicable requirements of the Sacramento City Charter, Sacramento City Code, and all applicable State and Federal laws, and all the requirements of this Contract. The California Commercial Code will apply except as otherwise provided in the Contract.

12. **Emergency/Declared Disaster Requirements.** If an emergency is declared by the City Manager, or if any portion of the City is declared a disaster area by the county, state or federal government, this Contract may be subjected to increased usage. The Contractor shall serve the City during a declared emergency or disaster, subject to the same terms and conditions that apply during non-emergency / non-disaster conditions. The pricing set forth in this Contract will apply, without mark-up, regardless of the circumstances. If the Contractor is unable to fulfill the terms of the Contract because of a disruption in its chain of supply or service, then the Contractor shall provide proof of the disruption. Acceptable forms of proof will include a letter or notice from the Contractor's source stating the reason for the disruption.

13. **Term; Suspension; Termination.**

   A. This Contract is effective on the Effective Date and continues in effect until both parties have fully performed their respective obligations under this Contract, unless sooner terminated as provided herein.

   B. CITY shall have the right at any time to suspend Contractor’s performance hereunder, in whole or in part, by giving a written notice of suspension to Contractor. Upon receipt of
such notice, Contractor shall immediately suspend its activities under this Contract, as specified in the notice.

C. The CITY shall have the right to terminate this Contract at any time by giving a written notice of termination to Contractor. Upon receipt of such notice, Contractor shall immediately cease performance under this Contract as specified in the notice. If the CITY terminates this Contract:

(1) Contractor shall, not later than five days after receipt of the notice, deliver all information prepared under this Contract to the City.

(2) The CITY shall pay Contractor the reasonable value of Goods or Services provided by Contractor before termination; provided, however, CITY shall not in any manner be liable for lost profits that might have been made by Contractor had the Contract not been terminated or had Contractor completed performance required by this Contract. Contractor shall furnish to the CITY any financial information requested by the City to determine the reasonable value of the Goods or Services provided by Contractor. The foregoing is cumulative and does not affect any right or remedy that CITY may have in law or equity.

14. Default by Contractor. In case of default by the Contractor, the City reserves the right to procure the Goods or Services from other sources and deduct from any monies due, or that may thereafter become due to the Contractor, the difference between the price named in this Contract and the actual cost to the City to procure from an alternate source. Prices paid by the City will be considered the prevailing market price at the time such purchase is made.

15. Indemnity.

A. Indemnity: Contractor shall defend, hold harmless, and indemnify City, its officers, and employees, and each and every one of them, from and against all actions, damages, costs, liabilities, claims, demands, losses, judgments, penalties, and expenses of every type and description, whether arising on or off the site of the work or services performed under this Contract, including any fees and costs reasonably incurred by City’s staff attorneys or outside attorneys and any fees and expenses incurred in enforcing this provision (hereafter collectively referred to as “Liabilities”), including Liabilities for personal injury or death, damage to personal, real, or intellectual property, damage to the environment, contractual or other economic damages, or regulatory penalties, arising out of or in any way connected with performance of or failure to perform this Contract by Contractor, any subcontractor (including lower-tier subcontractors) or agent of Contractor, their respective officers and employees, and anyone else for whose acts of omissions any of them may be liable, whether or not the Liabilities (i) are caused in part by a party indemnified hereunder, or (ii) are litigated, settled, or reduced to judgment; provided that the foregoing indemnity does not apply to liability for damages for death or bodily injury to persons, injury to property, or other loss, damage, or expense, to the extent arising from the active negligence or willful misconduct of, or defects in design furnished by, City, its agents, servants, or independent contractors who are directly responsible to City, except when such agents,
servants, or independent contractors are under the supervision and control of Contractor or any subcontractor (including lower-tier subcontractors) or agent of Contractor.

B. **Insurance Policies; Intellectual Property Claims:** The existence or acceptance by City of any of the insurance policies or coverages described in this Contract will not affect or limit any of City’s rights under this Section, nor will the limits of any insurance limit the liability of Contractor hereunder. This Section will not apply to any intellectual property claims, actions, lawsuits or other proceedings subject to the provisions of the Contractor Information Section, above.

C. **Survival.** The provisions of this section will survive any expiration or termination of this Contract.

16. **Funding Availability.**

A. This Contract is subject to the budget and fiscal provisions of the Charter and the Sacramento City Code.

B. The City’s payment obligation under this Contract will not exceed the amount of funds appropriated and approved for this Contract by the Sacramento City Council.

C. This Section shall govern over any other contrary provision of the Contract.

17. **Equal Employment Opportunity.** During the performance of this Contract, Contractor, for itself, its assignees and successors in interest, agrees as follows:

A. **Compliance With Regulations:** Contractor shall comply with all state, local, and federal anti-discrimination laws and regulations, including the Executive Order 11246 entitled “Equal Opportunity in Federal Employment”, as amended by Executive Order 11375, 12086, and 13672, and as supplemented in Department of Labor regulations (41 CFR Chapter 60), referred to collectively as the “Regulations.”

B. **Nondiscrimination:** Contractor, with regards to the work performed by it after award and before completion of the work under this Contract, shall not discriminate on the ground of race, color, religion, sex, national origin, age, marital status, physical handicap or sexual orientation in selection and retention of subcontractors, including procurement of materials and leases of equipment. Contractor shall not participate either directly or indirectly in discrimination prohibited by the Regulations.

C. **Solicitations for Subcontractors, Including Procurement of Materials and Equipment:** In all solicitations either by competitive bidding or negotiations made by Contractor for work to be performed under any subcontract, including all procurement of materials or equipment, each potential subcontractor or supplier shall be notified by Contractor of Contractor’s obligation under this Contract and the Regulations relative to nondiscrimination on the ground of race, color, religion, sex, national origin, age, marital status, physical handicap or sexual orientation.
D. **Information and Reports:** Contractor shall provide all information and reports required by the Regulations, or by any orders or instructions issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the CITY to be pertinent to ascertain compliance with the Regulations, orders and instructions. Where any information required of Contractor is in the exclusive possession of another who fails or refuses to furnish this information, CONTRACTOR shall so certify to the CITY, and shall set forth what efforts it has made to obtain the information.

E. **Sanctions for Noncompliance:** In the event of noncompliance by Contractor with the nondiscrimination provisions of this Contract, the CITY shall impose any sanctions it determines are appropriate including:

(1) Withholding of payments to Contractor under this Contract until Contractor complies;
(2) Cancellation, termination, or suspension of this Contract, in whole or in part.

F. **Incorporation of Provisions:** Contractor shall include the provisions of subsections A through E, above, in every subcontract, including procurement of materials and leases of equipment, unless exempted by the Regulations, or by any order or instructions issued pursuant thereto. The City may direct Contractor to take specific actions to enforce these provisions, including sanctions for noncompliance; provided, however, that if Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, Contractor may request that the CITY join such litigation to protect the City’s interests.

18. **Entire Agreement.** This Contract, including all Exhibits and documents referenced herein, contains the entire agreement between the parties and supersedes whatever oral or written understanding they may have had before the execution of this Contract. No alteration to the terms of this Contract shall be valid unless approved in writing by Contractor, and by CITY, in accordance with applicable provisions of the Sacramento City Code.

19. **Modification of Contract.** The Contractor shall take no direction from any City employee that changes the executed terms and conditions of the Contract, including Exhibit A, or any change that impacts the cost, price, or schedule, before receiving a written, signed modification to the Contract.

20. **Severability.** If a court with jurisdiction rules that any portion of this Contract or its application to any person or circumstance is invalid or unenforceable, the remainder of this Contract will not be affected thereby and will remain valid and enforceable as written, to the greatest extent permitted by law.

21. **Waiver.** Neither the CITY’s acceptance of, or payment for, any Goods or Services, nor any waiver by either party of any default, breach or condition precedent, will be construed as a waiver of any provision of this Contract, nor as a waiver of any other default, breach or condition precedent or any other right hereunder. No waiver will be effective unless it is in writing and signed by the waiving party.
22. **Governing Law.** This Contract shall be governed, construed and enforced in accordance with the laws of the State of California, except that the rule of interpretation in California Civil Code section 1654 will not apply. Venue of any litigation arising out of this Contract will lie exclusively in the state trial court or Federal District Court located in Sacramento County in the State of California, and the parties consent to jurisdiction over their persons and over the subject matter of any such litigation in such courts, and consent to service of process issued by such courts.

23. **Assignment Prohibited.** The expertise and experience of Contractor are material considerations for this Contract. CITY has a strong interest in the qualifications and capability of the persons and entities that will fulfill the obligations imposed on Contractor under this Agreement. In recognition of this interest, Contractor shall not assign any right or obligation pursuant to this Contract without the written consent of the CITY. Any attempted or purported assignment without CITY’s written consent shall be void and of no effect.

24. **Binding Effect.** This Contract is binding on the heirs, executors, administrators, successors and assigns of the parties, subject to the provisions of Section 23, above.

25. **Compliance with Laws.** The Contractor shall be responsible for strict compliance with all applicable laws, regulations, court orders and other legal requirements applicable to the work to be accomplished under the Contract, including the California Occupational Safety and Health Act and all applicable safety orders issued by the Division of Occupational Safety and Health, Department of Industrial Relations, State of California, and all applicable requirements of Underwriters Laboratories and the Federal Communication Commission.

26. **Debarment Certification**

A. Pursuant to 2 CFR, Part 200, and applicable Executive Orders, the City is restricted in its ability to contract with certain parties that are debarred, suspended, or otherwise excluded or ineligible for participating in Federal assistance programs or activities. By signing this Agreement, CONTRACTOR warrants and certifies under penalty of perjury under the laws of the State of California that Contractor, including any owner, partner, director, officer, or principal of the CONTRACTOR, or any person in a position with management responsibility or responsibility for the administration of federal funds:

   (1) Is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency;

   (2) Has not within a three-year period preceding this certification been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract (federal, state, or local); violation of federal or state antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, receiving stolen property, or other criminal felony;

   (3) Is not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (b) above; or

   (4) Has not, within a three-year period preceding this certification, had one or more public contracts (federal, state, or local) or transactions terminated for cause or default.
(5) Has not been notified, within a three-year period preceding this certification, been notified of any delinquent Federal taxes in an amount that exceeds $3,500 for which the liability remains unsatisfied. Federal taxes are considered delinquent if the tax liability has been finally determined and the taxpayer is delinquent in making payment, as defined in Section 52.209-5 of the Federal Acquisition Regulations.

B. CONTRACTOR further warrants and certifies that it shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency. Any exceptions to the warranties and certifications in this Section must be disclosed to the City.

C. Exceptions will not necessarily result in denial of recommendation for award, but will be considered in determining Contractor’s responsibility. Disclosures must indicate to whom exceptions apply, the initiating agency, and dates of action.

D. City will review the Federal Government’s System for Award Management Exclusions maintained by the General Services Administration for eligibility, prior to the execution of this Agreement. The CONTRACTOR shall provide immediate written notice to the City if, at any time prior to execution, the CONTRACTOR learns this certification is erroneous or has become erroneous by reason of changed circumstances. If it is later determined that the Contractor’s warranties and certification in this Section were erroneous, the City may terminate this Agreement for default.
EXHIBIT E

ADDITIONAL REQUIREMENTS FOR SURVEYING, MATERIAL TESTING, AND INSPECTION SERVICES

The Services provided under this Contract include land surveying, material testing, or inspection services provided for a City construction project during the design, pre-construction, construction, or post-construction phases of the project. Therefore, the services include “Public Work” under the California Labor Code and is subject to the following requirements:

A. Payment of Prevailing Wages: Contractor and any subcontractor(s) performing any Public Work shall comply with the provisions of Sacramento City Code Section 3.60.180 and applicable provisions of the California Labor Code, which require, among other things, that CONTRACTOR and all subcontractors pay not less than the prevailing rate of wages, as determined by the Director of the California Department of Industrial Relations (“DIR”) in accordance with California Labor Code Section 1773. CONTRACTOR and every subcontractor shall maintain payroll records and submit certified payrolls and other labor compliance documentation electronically when and as required by CITY. In addition, Labor Code Section 1771.4 requires the CONTRACTOR and any subcontractor performing any Public Work to furnish electronic payroll records directly to the Labor Commissioner. Contractor shall include these requirements in every subcontract.

This Agreement is subject to compliance monitoring and enforcement by the DIR, as specified in California Labor Code Section 1771.4. The Contractor and any subcontractor will be subject to withholding and penalties for violation of prevailing wage requirements in accordance with applicable law, including Labor Code Sections 1726, 1741, 1771.5, and 1775, and City Code Section 3.60.180. Questions regarding the City’s Labor Compliance Program should be directed to the City Representative.

B. DIR Registration: California Labor Code Section 1725.5 requires the CONTRACTOR and all subcontractors performing Public Works services to be currently registered with the DIR, as specified in California Labor Code Section 1725.5. California Labor Code Section 1771.1 provides that a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal (subject to the requirements of Section 4104 of the California Public Contract Code), or engage in the performance of any contract for Public Work, unless currently registered and qualified to perform Public Work in accordance with California Labor Code Section 1725.5.

Further information can be found on DIR’s website at http://www.dir.ca.gov/Public-Works/Contractors.html. The above summary is provided solely for informational purposes and does not in any way affect the CONTRACTOR’s and subcontractors’ obligation to comply in all respects with all other applicable laws and regulations. The CONTRACTOR shall disseminate these provisions to all subcontractors.

Before the performance of work by Contractor or any subcontractor(s) under this Contract, Contractor shall furnish Contractor’s and any subcontractors’ current DIR
registration number(s). The Contractor’s current DIR registration number and the current DIR registration number of all subcontractors will be listed on the Subcontractor and LBE Participation Verification Form, incorporated herein.

To be completed by the City Representative if this Agreement is for the performance of any Public Work:

Contractor DIR registration #: 1000009778

C. Workers’ Compensation Certification. In accordance with California Labor Code Section 1861, by signing this Contract, Contractor acknowledges and represents that Contractor is aware of the provisions of Section 3700 of the California Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and that Contractor will comply with the provisions of the Labor Code before commencing performance under this Contract.

D. Apprentices. If this Contract is for the performance of any Public Work, and the amount of the Contract is $30,000 or more, the Contractor and any subcontractors performing any Public Work under this Contract must comply with and be subject to enforcement under, the provisions of Sacramento City Code Section 3.60.190, Section 1777.5 et seq. of the California Labor Code, and implementing regulations set forth in Title 8 of the California Code of Regulations, governing the employment of apprentices. The Contractor and any subcontractors performing Public Work will be subject to penalties for apprenticeship violations in accordance with Labor Code Section 1777.7.

E. Working Hours. If this Contract is for the performance of any Public Work, Contractor and any subcontractors performing any Public Work under this Contract must comply with and be subject to enforcement under, the provisions of Sacramento City Code Section 3.60.180 and California Labor Code Section 1810 et seq., governing the working hours of employees performing Public Work.

F. Failure to Comply with Labor Compliance. If all applicable labor compliance requirements are not met, the City will have the right to withhold or reject a payment request and/or invoice, in whole or in part, without in any way relieving Contractor or its subcontractors of any obligations under this Contract.

G. Subcontractors. The Contractor shall include these provisions A through F in every subcontract or sub-agreement for any subcontractors performing work under this Contract.
ADDITIONAL FEDERAL CONDITIONS

1. **DAVIS-BACON ACT.** If this Contract is for construction, alteration, or repair (including painting and decorating) of public buildings or public works, Contractor must comply with the provisions of the Davis-Bacon Act (40 U.S.C. §§3141-3148) and all rules, regulations and orders promulgated under said act, unless a determination of exemption from requirements of the Davis-Bacon Act is made and unless the exemption is expressly stated elsewhere in this Contract. Among other provisions, said act establishes minimum wages and fringe benefits; prohibits deductions or rebates from payments; provides for the withholding of funds to assure compliance with wage provisions; and provides for the termination of the Contract and debarment of the Contractor for failure so to comply. Additionally, California State Prevailing wages may apply (California Labor Code §1720 et seq.), in which case prevailing wages shall be the higher of either the Davis Bacon wages or the State prevailing wage, as determined by trade. Prior to starting Project construction, the City will obtain the Department of Labor General Wage Decision for Sacramento County. The Bid opening shall serve as the City’s federally-required ten (10) day call, and serves to lock-in applicable prevailing wages throughout the construction phase.

2. **DEBARMENT CERTIFICATION.**

   A. Pursuant to 2 CFR, Part 200, applicable Executive Orders and the Department of the Interior regulations at 2 CFR 1400 Governmentwide Debarment and Suspension (Nonprocurement), which adopt the common rule for the governmentwide system of debarment and suspension for nonprocurement activities, the City is restricted in its ability to contract with certain parties that are debarred, suspended, or otherwise excluded or ineligible for participating in Federal assistance programs or activities. By signing this Agreement, Contractor warrants and certifies under penalty of perjury under the laws of the State of California that Contractor, including any owner, partner, director, officer, or principal of the Contractor, or any person in a position with management responsibility or responsibility for the administration of federal funds:

   (1) Is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency;

   (2) Has not within a three-year period preceding this certification been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract (federal, state, or local); violation of federal or state antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, receiving stolen property, or other criminal felony;

   (3) Is not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (b) above; or
(4) Has not, within a three-year period preceding this certification, had one or more public contracts (federal, state, or local) or transactions terminated for cause or default.

(5) Has not been notified, within a three-year period preceding this certification, been notified of any delinquent Federal taxes in an amount that exceeds $3,500 for which the liability remains unsatisfied. Federal taxes are considered delinquent if the tax liability has been finally determined and the taxpayer is delinquent in making payment, as defined in 48 CFR Section 52.209-5 of the Federal Acquisition Regulations.

B. Contractor further warrants and certifies that it shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency. Any exceptions to the warranties and certifications in this Section must be disclosed to the City.

C. Exceptions will not necessarily result in denial of recommendation for award, but will be considered in determining Contractor's responsibility. Disclosures must indicate to whom exceptions apply, the initiating agency, and dates of action.

D. City will review the Federal Government's System for Award Management Exclusions maintained by the General Services Administration for eligibility, prior to the execution of this Agreement. The Contractor shall provide immediate written notice to the City if, at any time prior to execution, the Contractor learns this certification is erroneous or has become erroneous by reason of changed circumstances. If it is later determined that the Contractor's warranties and certification in this Section were erroneous, the City may terminate this Agreement for default.

3. **EQUAL EMPLOYMENT OPPORTUNITY.** During the performance of this contract, the Contractor agrees:

A. To comply with all Federal nondiscrimination laws and equal opportunity laws and regulations, as may be amended from time to time;

B. Not to participate directly or indirectly in the discrimination prohibited by any Federal law or regulation, including but not limited to:

   (1) Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. §§ 2000d et seq., Treasury's implementing regulations at 31 C.F.R. Part 22, and any applicable implementing federal directives that may be issued;

   (2) The Fair Housing Act, Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.);

The Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. § 12101, et seq.), as well as all applicable regulations and guidelines issued pursuant to the ADA, including but not limited to those found within the Code of Federal Regulations, title 49, parts 27, 37, and 38.

C. To permit access to its books, records, accounts, other sources of information, and its facilities as required by the City or the applicable federal agency;

D. That, in the event Contractor fails to comply with any nondiscrimination provisions in this contract, the City and the applicable federal agency will have the right to impose such contract sanctions as they determine are appropriate, including but not limited to withholding payments to the contractor until the contractor complies, and/or cancelling, terminating, or suspending this contract, in whole or in part; and

E. To insert this clause, including paragraphs (a) through (e), in every subcontract and in every solicitation for a subcontract.

F. Compliance with all Non-Discrimination and Equal Employment Opportunity Laws:

(1) It is the City’s policy to comply with state and federal laws and regulations including Title VI of the Civil Rights Act of 1964, Americans with Disabilities Act of 1990 (ADA) and other federal and state anti-discrimination laws and regulations. The City does not discriminate on the basis of race, color, sex, creed, religious creed, national origin, age, marital status, ancestry, medical condition, disability (including HIV and AIDS), sexual orientation or gender identity in conducting its business. The City prohibits discrimination by its employees, contractors and consultants.

(2) Contractor assures the City that it complies with, and that Contractor will require that its subcontractors comply with, all non-discrimination and equal opportunity laws.

(3) Any failure by Contractor to comply with these provisions shall constitute a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the City may deem appropriate.

4. PROHIBITION OF EXPENDING STATE OR FEDERAL FUNDS FOR LOBBYING (BYRD ANTI-LOBBYING AMENDMENT)

A. Contractors who apply or bid for an award of $100,000 or more, and any subcontractors, must provide the certification below. Each tier must certify to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such
disclosures must be forwarded from tier to tier up to the City, who in turn will forward the certification(s) to the awarding agency.

B. By signing this Agreement, Contractor certifies, to the best of his or her knowledge or belief, that:

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

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

(3) None of the funds paid under this contract will be used for any activity specifically designed to urge or influence a State or local legislator to favor or oppose the adoption of any specific legislative proposal pending before any State or local legislative body. Such activities include both direct and indirect (e.g., “grassroots”) lobbying activities, with one exception. This does not preclude a State official whose salary is supported with NHTSA funds from engaging in direct communications with State or local legislative officials, in accordance with customary State practice, even if such communications urge legislative officials to favor or oppose the adoption of a specific pending legislative proposal.

C. This certification is a material representation of fact upon which reliance was placed when this Agreement was executed. Submission of this certification is a prerequisite for making or entering into this Agreement imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

D. Contractor also agrees by signing this Agreement that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000, and that all such subcontractors shall certify and disclose accordingly.

E. Contractor certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.
5.  **REBATES, KICKBACKS, OR OTHER UNLAWFUL CONSIDERATION.** Contractor warrants that this Agreement was not obtained or secured through rebates, kickbacks or other unlawful consideration, either promised or paid to any City employee. For breach or violation of this warranty, City shall have the right, in its discretion: to terminate this Agreement without liability; to pay only for the value of the work actually performed; or to deduct from the Agreement price, or otherwise recover the full amount of such rebate, kickback or other unlawful consideration.

6.  **BUY AMERICA ACT AND DOMESTIC PREFERENCES.** The City and Contractor will comply with the Buy America requirement (23 U.S.C. 313). Buy America requires the City and Contractor to purchase only steel, iron, and manufactured products produced in the United States, unless the applicable federal agency determines that such domestically produced items would be inconsistent with the public interest, that such materials are not reasonably available and of a satisfactory quality, or that inclusion of domestic materials will increase the cost of the overall contract by more than 25 percent. In order to use foreign produced items, the Contractor must first submit a waiver request to the City that provides an adequate basis and justification for approval by the applicable federal agency. Contractor shall provide a preference for the purchase, acquisition, or use of all goods, products, or materials produced in the United States.

7.  **DRUG-FREE CERTIFICATION.** The Department of the Interior regulations at 2 CFR 1401 Governmentwide Requirements for Drug-Free Workplace (Financial Assistance), which adopt the portion of the Drug-Free Workplace Act of 1988 (41 U.S.C. 701 et seq, as amended) applicable to grants and cooperative agreements, are hereby incorporated by reference and made a part of this agreement. By entering into this professional services agreement, with City, Contractor agrees to comply with 2 CFR Part 182.

8.  **ENVIRONMENTAL COMPLIANCE.** Contractor agrees to comply with the Clean Air Act (42 U.S.C. §7401 et seq.), the Federal Water Pollution Control Act (33 U.S.C. §1251 et seq.), Executive Order 11738, all Environmental Protection Agency (“EPA”) Regulations (40 CFR) and all applicable standards, orders or regulations issued pursuant thereto. Contractor agrees to report any violation of these statutes and regulations to the City and understands and agrees that the City will, in turn, report each violation, as required, to assure notification to the appropriate federal agency and EPA Regional Office.

9.  **REMEDIES.** Should Contractor violate any of the terms of this Contract, City may terminate the Contract and pursue all available legal and equitable remedies.

10.  **RECOVERED MATERIALS**

    A.  In the performance of this Contract, Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired.
B. Information about this requirement, along with the list of EPA-designated items, is available at EPA’s Comprehensive Procurement Guidelines web site, https://www.epa.gov/sgg/comprehensive-procurement-guideline-cpg-program.

C. Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act: (1) Competitively within a timeframe providing for compliance with the contract performance schedule; (2) Meeting contract performance requirements; or (3) At a reasonable price.

11. COMPLIANCE WITH FEDERAL LAW. Contractor acknowledges that federal financial assistance may be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, and all policies, procedures, and directives issued by the applicable federal funding agency (e.g., Bureau of Reclamation).

12. COMPLIANCE WITH THE CONTRACT WORK HOURS AND SAFETY STANDARDS ACT. In the event that Contractor or any subcontractor is contracting for work requiring or involving the employment of laborers or mechanics, the following terms shall apply:

A. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

B. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

C. Withholding for unpaid wages and liquidated damages. The City shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such
contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

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

13. PUBLICATIONS. Any publications produced with funds from this award must display the following language: “This project [is being] [was] supported, in whole or in part, by federal award number [enter project FAIN] awarded to City County Office of Metropolitan Water Planning by the U.S. Bureau of Reclamation.”

14. REDUCING TEXT MESSAGING WHILE DRIVING. Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Contractor is encouraged to adopt and enforce policies that ban text messaging while driving and should establish workplace safety policies to decrease accidents caused by distracted drivers.

15. PROTECTIONS FOR WHISTLEBLOWERS. Pursuant to 41 U.S.C. § 4712, Contractor may not discharge, demote, or otherwise discriminate against any employee in reprisal for disclosing an information the employee reasonably believes is evidence of gross mismanagement of this contract, a gross waste of federal funds, an abuse of authority related to this contract, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to this contract.

16. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT. Contractor is prohibited from obligating or expending loan or grant funds to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be
an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

17. TRAFFICKING VICTIMS PROTECTION ACT OF 2000.

A. Contractor and Contractor’s employees may not

(1) Engage in severe forms of trafficking in persons during the period of time that the award is in effect;

(2) Procure a commercial sex act during the period of time that the award is in effect; or

(3) Use forced labor in the performance of the award or subawards under the award.

B. For purposes of this contract:

(1) "Employee" means either:

   (i) An individual employed by Contractor or a subcontractor who is engaged in the performance of the project or program under this award; or

   (ii) Another person engaged in the performance of the project or program under this award and not compensated Contractor including, but not limited to, a volunteer or individual whose services are contributed by a third party as an in-kind contribution toward cost sharing or matching requirements.

(2) "Forced labor" means labor obtained by any of the following methods: the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.

(3) "Severe forms of trafficking in persons," "commercial sex act," and "coercion" have the meanings given at section 103 of the TVPA, as amended (22 U.S.C. 7102).
REQUEST FOR WAIVER OF LBE PARTICIPATION REQUIREMENT

REQUEST DATE: February 20, 2024
BID OR PROJECT: RFP-P24804101001_River Bend Park Salmon Habitat Construction
REQUESTING DEPARTMENT: Water Forum (CCOMWP)
DEPARTMENT CONTACTS: Erica Bishop, Program Manager (916) 808-1997

In accordance with the Local Business Enterprise (LBE) program requirements:

City departments shall require a five percent (5%) LBE participation level in City procurement opportunities for services or public projects of $250,000 or greater unless a waiver or reduction of the participation level is approved.

Requests for waivers or reductions to the minimum LBE participation level, for a specific bid or project, must be approved by a department director in advance of advertising the solicitation. Approved waivers must be described in the LBE section of City Council staff reports and be forwarded to the Procurement Services Division as an attachment to requisitions.

Reasons for requesting this modification are as follows:

Lack of qualified vendor availability (A waiver may be considered if fewer than three qualified local vendors are available to provide the services.)

Other conditions where a waiver or reduction is in the City’s best interest (A “best interest” consideration may include factors such as sole-brand, timeliness, cost, trade-in, maintenance, or warranty issues.)

WAIVER OR REDUCTION IS HEREBY GRANTED FOR THE 5% LBE PARTICIPATION REQUIREMENT. ADVERTISEMENT OF THIS PROCUREMENT OPPORTUNITY MAY COMMENCE AFTER APPROVAL BY THE DEPARTMENT DIRECTOR.

__________________________________ ____________________________
Project Manager Approving Department Director

__________________________________ ____________________________
Date Date

Erica Bishop
Project Manager
Feb 21, 2024

Approving Department Director
Feb 22, 2024

Date
**Certificate of Marine/Energy Insurance**

**PRODUCER**
Marsh & McLennan Agency LLC
Marsh & McLennan Ins. Agency LLC
1 Polaris Way #300
Aliso Viejo CA 92656

**INSURED**
Dixon Marine Services, Inc.
P.O. Box 424
Inverness CA 94937

**CONTACT**
Fabiola Cruz

**Revision Number:**

**Certificate Number:** 862431273

**Coverages**

<table>
<thead>
<tr>
<th>Insr</th>
<th>Ltr</th>
<th>Type of Insurance</th>
<th>ADDL SUB</th>
<th>Policy Number</th>
<th>Policy Eff (MM/DD/YYYY)</th>
<th>Policy Exp (MM/DD/YYYY)</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Hull and Machinery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Collison Liability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Towers Liability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td></td>
<td>Protection and Indemnity</td>
<td>X Crew Liability</td>
<td>SF23MPK15630501</td>
<td>12/1/2023</td>
<td>12/1/2024</td>
<td>PER CLUB RULES</td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td>X Collison Liability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td>X Towers Liability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td>X Removal of Wreck</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>X In Rem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>Pollution Liability</td>
<td>X OPA 90</td>
<td>V1503123</td>
<td>12/1/2023</td>
<td>12/1/2024</td>
<td>EA OCCURRENCE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>X Cercla</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maritme Employers Liability</td>
<td>N/A</td>
<td>MX00077399</td>
<td>12/1/2023</td>
<td>12/1/2024</td>
<td>ANY ONE PERSON</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Certificate Holder**

City of Sacramento
C/o Exigis LLC
P.O. Box 947
Murrieta, CA 92564

**Cancellation**

**Authorized Representative**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Certified by the Authorized Representative)

(Stamp)

Date: 5/8/2024

**Notes:**

- This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not affirmatively or negatively amend, extend or alter the coverage afforded by the policies below. This certificate of insurance does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder.

- Important: If the certificate holder is an additional insured, the policy(ies) must have additional insured provisions or be endorsed. If subrogation is waived, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

- The certificate holder is an additional insured, the producer is Marsh & McLennan Agency LLC, and the certificate holder is Dixon Marine Services, Inc.

- The certificate is for a waterside occurrence (EA occurrence) and a collision (EA occurrence).

- The certificate includes a Jones Act endorsement and a death on the high seas endorsement.

- The certificate is for a pollution liability policy with OPA 90 and non-OPA/Non-CERCLA.

- The certificate holder is City of Sacramento.

- The certificate is for contractors equipment with a scheduled equipment limit of $2,862,732.

- The certificate holder must be notified of any cancellations before the expiration date.

- The ACORD name and logo are registered marks of the ACORD Corporation.

ACORD 31 (2016/03)

© 2012-2015 ACORD CORPORATION. All rights reserved.
The City of Sacramento, its officials, employees and volunteers are included as Additional Insured with respects to General Liability and Auto Liability, where required by written contract, per the attached endorsements. Insurance is Primary & Non-Contributory, where required by written contract, per the attached endorsements. Waiver of Subrogation applies with respects to Workers Compensation, where required by written contract, per the attached endorsement.
## ADDITIONAL REMARKS SCHEDULE

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>POLICY NUMBER</th>
<th>CARRIER</th>
<th>NAIC CODE</th>
<th>EFFECTIVE DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marsh Risk and Insurance Services</td>
<td></td>
<td>Colony Insurance Company</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ADDITIONAL REMARKS

**THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,**

**FORM NUMBER:** 31  **FORM TITLE:** Certificate of Marine / Energy Insurance (03/16)

**HOLDER:**

**ADDRESS:**

- **Coverage: Pollution Liability**
  - Policy #: CPLUS4278281
  - Policy term: 12/01/23 - 12/01/24
  - Carrier: Colony Insurance Company
  - AM Best Rated A XII Excellent
  - Retro Date: 11/04/2015
  - Coverage: Contracting Services Pollution Coverages - $5,000,000/Each Pollution Condition Limit;
  - Deductible: $10,000

- **Coverage: Professional Liability**
  - Policy #: CPLUS4278281
  - Policy term: 12/01/23 - 12/01/24
  - Carrier: Colony Insurance Company
  - AM Best Rated A XII Excellent
  - Retro Date: 11/04/2015
  - Coverage: Professional Liability – Claims Made and Reported - $5,000,000/ Each Wrongful Act Limit;
  - Deductible: $10,000/ Each Wrongful Act
## Schedule of Underlying Insurances

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Carrier/ Policy</th>
<th>Effective Dates</th>
<th>Limit of Liability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bumbershoot Liabilities</strong></td>
<td>1. Liberty Mutual – Lead 1/3 quota share Policy # NYABJNMO007</td>
<td>12/1/2023-12/1/2024</td>
<td>$14,000,000 / Occurrence</td>
</tr>
<tr>
<td></td>
<td>2. Navigators Insurance Company – Follow 1/3 quota share Policy # SF23LUA15630502</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Stratford Ins. Co. – Follow 1/3 quota share Policy # VMX8002948</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marine General Liability</td>
<td>Navigators Insurance Company/ 100%, Policy # SF23MPK15630501</td>
<td>12/1/2023-12/1/2024</td>
<td>USD $1,000,000 Occurrence USD $2,000,000 Aggregate USD $1,000,000 Personal and Adv. Liab. USD $1,000,000 Products Completed Operations Aggregate</td>
</tr>
<tr>
<td>Pollution Liability (Sudden &amp; Accidental)</td>
<td>Navigators Insurance Company/ 100%, Policy # SF23MPK15630501</td>
<td>12/1/2023-12/1/2024</td>
<td>USD $1,000,000 Any One Accident or Occurrence</td>
</tr>
<tr>
<td>Protection &amp; Indemnity Collision and Tower’s Liability</td>
<td>Navigators Insurance Company/ 100%, Policy # SF23MPK15630501</td>
<td>12/1/2023-12/1/2024</td>
<td>USD $1,000,000 Any One Accident or Occurrence</td>
</tr>
<tr>
<td>Automobile Liability</td>
<td>Navigators Insurance Company/ 100% Policy # CH21BAP02169103</td>
<td>12/1/2023-12/1/2024</td>
<td>USD $1,000,000</td>
</tr>
<tr>
<td>Employer’s Liability</td>
<td>Everest National Insurance Co. Policy # 9700000349231</td>
<td>12/1/2023-12/1/2024</td>
<td>USD $1,000,000</td>
</tr>
<tr>
<td>Vessel Pollution Liability</td>
<td>Starr Indemnity &amp; Liability Company Policy # V1503123</td>
<td>12/1/2023-12/1/2024</td>
<td>USD $5,000,000 Each Occurrence</td>
</tr>
</tbody>
</table>
CONTRACTUAL LIABILITY ENDORSEMENT

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

When the Named Insured on this Policy is required by a written contract to name other entities as Additional Insured(s) on this Policy and/or to indemnify and/or defend and/or hold harmless such entities, the Insured may provide evidence to the Additional Insured per the following wording:

It is understood and agreed that

and the commissioners, officers, directors and employees thereof while operating in their capacity as such are hereby named as ADDITIONAL INSURED(S) under this policy as respects the legal liability of the Named Insured for Bodily Injury or Property Damage to third parties and defense of such claims and lawsuits arising out of the ownership, operation or use of premises and/or negligent work or operations and/or ownership or operation of vessels of the Named Insured and its officers, employees and/or sub-contractors during the term of this policy.

This policy shall be the principal coverage as respects the liabilities of the NAMED INSURED and any other insurance carried by the ADDITIONAL INSURED shall not be contributory as respects the liabilities of the Named Insured. Nor shall the Additional Insured be responsible for any premium or deductibles hereunder.

This Endorsement shall include "Severability of Interest" as respects the liabilities of each Insured named hereon, but the naming of Additional Insured(s) hereto shall not increase the limit of liability of this policy arising out of any one accident or occurrence.

In the event of cancellation of the policy or this endorsement or material change in coverage of this policy, 30 days written notice shall be given to:

Any other terms or modifications required by contract must be agreed by the Company and a specific Endorsement will be issued.

Any modification of any provision of the above Endorsement form shall void the Endorsement. The Insured agrees to send to the Company a copy of each endorsement when issued.

All other terms and conditions remain unchanged.
INSURED: Dixon Marine Services, Inc.

POLICY #: CH21BAP02169103

POLICY PERIOD: 12/01/2023 TO 12/01/2024

COMMERCIAL AUTO
CA 20 48 10 13

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED FOR COVERED AUTOS LIABILITY COVERAGE

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "Insureds" for Covered Autos Liability Coverage under the Who Is An Insured provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Named Insured:

Endorsement Effective Date:

SCHEDULE

Name Of Person(s) Or Organization(s):

ANY PERSON OR ORGANIZATION TO WHOM OR WHICH YOU ARE REQUIRED TO PROVIDE ADDITIONAL INSURED STATUS OR ADDITION INSURED STATUS ON A PRIMARY, NON-CONTRIBUTORY BASIS, IN A WRITTEN CONTRACT OR WRITTEN AGREEMENT EXECUTED PRIOR TO LOSS, EXCEPT WHERE SUCH CONTRACT OR AGREEMENT IS PROHIBITED BY LAW.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

Each person or organization shown in the Schedule is an "Insured" for Covered Autos Liability Coverage, but only to the extent that person or organization qualifies as an "Insured" under the Who Is An Insured provision contained in Paragraph A.1. of Section II – Covered Autos Liability Coverage in the Business Auto and Motor Carrier Coverage Forms and Paragraph D.2. of Section I – Covered Autos Coverages of the Auto Dealers Coverage Form.
THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY

PRIMARY AND NON-CONTRIBUTING INSURANCE FOR ADDITIONAL ASSUREDS

This endorsement modifies coverage provided under the following:

MARINE GENERAL LIABILITY COVERAGE POLICY - NAVG-MGL01 (Ed. 08/13)

The following is added to Subparagraph a. Primary Insurance of Paragraph 5. Other Insurance of SECTION IV - CONDITIONS:

Notwithstanding the foregoing, the insurance afforded to any additional assured under this policy is primary and non-contributing insurance, but only:

I. As respects “bodily injury” or “property damage” arising out of “your work” performed for the additional assured while this policy is in effect;

II. If a written “assured contract” between you and such additional assured requires you to maintain primary and non-contributory insurance on its behalf; and

III. The written “assured contract” is in effect at the time of the “occurrence” and not entered into subsequent to the “occurrence”.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED.

NAVG-MGL21 (Ed. 08/13)
THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY

BLANKET ADDITIONAL ASSURED / BLANKET WAIVER OF SUBROGATION

This endorsement modifies coverage provided under the following:

MARINE GENERAL LIABILITY COVERAGE POLICY - NAVG-MGL01 (Ed. 08/13)

Premium: Included

I. Section II - Who Is An Assured is amended to include as an additional assured any person or organization to whom the Named Assured is obligated by virtue of a written contract or agreement to provide insurance such as is afforded by this policy or who is added by endorsement, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

A. In the performance of your ongoing operations; or
B. In connection with your premises owned by or rented to you.

II. The following is added to Paragraph 9. Transfer Of Rights Of Recovery Against Others To Us of Section IV - Conditions:

We waive any right of recovery we may have against the person or organization because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization for whom the Named Assured is required to waive subrogation.

This waiver of subrogation will apply only when the waiver is issued prior to an "Occurrence".

III. Coverage under this endorsement only applies if:

A. An "occurrence" and the "bodily injury" or "property damage" it causes occur; or
B. An "offense" occurs, on or after the effective date of the endorsement, but before the end of the policy period.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED.

NAVG-MGL26 (Ed. 08/13)
WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT - CALIFORNIA

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

You must maintain payroll records accurately segregating the remuneration of your employees while engaged in the work described in the Schedule.

The additional premium for this endorsement shall be % of the California workers’ compensation premium otherwise due on such remuneration.

SCHEDULE

PERSON OR ORGANIZATION

ANY PERSON OR ORGANIZATION FOR
WHOM THE NAMED INSURED HAS AGREED
BY WRITTEN CONTRACT TO FURNISH
THIS WAIVER.

JOB DESCRIPTION
Attachment 1 to Exhibit A

RFP-P24804101002

Lower American River Salmonid Habitat Enhancement Program: River Bend Site
Scope of Work Summary

Provide all material, labor, and equipment necessary to implement all aspects of the City of Sacramento/Water Forum's Lower American River Anadromous Fish Habitat Restoration Program - River Bend project in Rancho Cordova, California.

The overall scope of services should include, but is not limited to, the following activities to support construction of spawning and rearing habitat enhancements at River Bend (see Drawing and Specifications for all work item details):

Construction of In-River and Side-Channel/Floodplain Spawning and Rearing Habitat
1) excavation of native material onsite to create side channel and seasonally inundated floodplain benches for salmonid rearing juvenile habitat,
2) sorting and washing of spawning gravel and cobble material from the Mississippi Bar stockpile area,
3) import of gravel and cobble material to site for construction of habitat features,
4) in-river spawning gravel/cobble placement and grading of spawning gravel/cobble material,
5) placement of bar enhancement cobble, native fill and plantings,
6) in-river excavation of side channel(s) and grading of habitat benches,
7) procurement and hauling of large woody material (LWM) for use as habitat features,
8) LWM placement in side channel and floodplain bench areas,
9) planting of willow stakes and sedge plugs, and
10) excess excavated material offhauled to designated offsite location.

Site Management
1) SWPPP preparation and implementation,
2) site preparation and temporary fence installation,
3) traffic control, and
5) native plant seeding.

Water Quality Protection
1) adherence to applicable permit requirements, a
2) turbidity testing and logging, and
3) erosion control and site restoration.
RFP-P24804101002

Revised Design Drawings and Technical Specifications
LOWER AMERICAN RIVER
SALMONID HABITAT ENHANCEMENT PROGRAM
RIVER BEND (RM 13.1) - REVISED MARCH 25, 2024
WATER FORUM, UNITED STATES BUREAU OF RECLAMATION IN COOPERATION WITH
SACRAMENTO AREA FLOOD CONTROL AGENCY, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
AND UNITED STATES FISH AND WILDLIFE SERVICE

LOCATION MAP

CONTOURS AND ELEVATIONS SHOWN ON PLANS PROVIDED BY SITE SURVEY TIED INTO NATIONAL GEODETIC SURVEY CONTROL POINT DH6482 LOCATED AT LAT:38°35'23.61", LONG:121°17'18.8" WITH A PUBLISHED ELEVATION OF 99.9 FT (NAVD88, GEOID 12A). OUTLINING TOPOGRAPHY IS REFERENCED TO THE DECEMBER 2023 WATER FORUM LIDAR DATASET.
NOTES:
1. BEFORE VALING MATERIAL TO STOCKPILE LOCATIONS, COORDINATE WITH OWNER TO VERIFY WITH STOCKPILE LOCATION, THE BROOKS COMPANY WILL LOCATE ON LANDWAY PROPERTY.
2. WAUL TRUCKS ARE NOT PERMITTED TO PARK OR STAY WITHIN ANY PUBLIC AREAS OF RIVER BEND PARK, AMERICAN RIVER BAY TRAIL, OR ALONG ROC BEAUFORT DR.
3. THE CONTRACTORS USE OF ACCESS ROUTES SHALL BE LIMITED TO THOSE SHOWN ON THE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE MOVEMENT OF VEHICULAR TRAFFIC TO AND FROM THE WORKSITES DURING OPERATIONS, INCLUDING TRAFFIC CONTROL MEASURES. REQUIRED TO ENSURE SAFETY OF VEHICLES AND EQUIPMENT.
5. MISSISSIPPI BAR STOCKPILE AREA DIRECTIONS (11.6 MILES)
   a) GET ON US-50 EAST FROM ROC BEAUFORT DR., FOLSOM BLVD., AND MATHER FIELD RD.
   b) FOLLOW US-50 EAST TO HAZEL AVE. TAKE EXIT 25 FROM US-50 EAST.
   c) CONTINUE ON HAZEL AVE. TAKE A RIGHT INTO SUNSET AVE.
   d) CONTINUE ON SUNSET AVE. INTO THE MISSISSIPPI BAR STOCKPILE AREA.
6. TECHERT AGREGATES - PERMAFACILITY DICTIONS (5 MILES)
   a) TAKE HAZEL BEAUFRONT DR. TO SUNSET AVE., THEN TAKE A RIGHT INTO FOLSOM BLVD.
   b) CONTINUE ON FOLSOM BLVD. FOR 4 MILES. THEN TURN LEFT ONTO S. HARRIS AVE.
   c) CONTINUE FOR 2 MILES. THEN TURN RIGHT INTO TECHERT AGREGATES - PERMAFACILITY.
   d) CONTINUE FOR 3 MILES. THEN TURN LEFT INTO THE TECHERT AGREGATES - PERMAFACILITY.
7. MISSISSIPPI BAR STOCKPILE AREAS
   a) THE 4" COBBLE AND 8/16" SHANMAN SAND ARE TO BE VIOLATED AND WASHED FROM MISSISSIPPI BAR AND TRANSPORTED TO THE PROJECT LOCATION BY THE CONTRACTOR.
   b) COORDINATE WITH OWNER FOR GATE ACCESS AT BEGINNING OF PROJECT.
   c) THE CONTRACTOR SHALL PLACE THEIR OWN LOCK ON THE GATE FOR ACCESS DURING CONSTRUCTION, IN CONSULTATION WITH STATE PARKS Ranger Staff.
   d) GATE MUST BE LOCKED OVERNIGHT, DURING WORST HOURS. THE GATE CAN REMAIN UNLOCKED ONLY IF AN EMPLOYEE IS POSTED AT THE GATE TO PREVENT PRIVATE VEHICLES FROM ENTERING AT THE REQUEST OF STATE PARKS Ranger Staff.
   e) CONTRACTOR SHALL ARRANGE ACCESS FOR USE OF A FUND CONSTRUCTION WATR RER IN THE WASHING AND ILLUSIONS.
   f) VOLUMES PRESENTED IN THE DRIVE ARE BASED ON USE OF TOPOGRAPHIC LAYOUT. PROJECT SHALL BE BUILT TO GRADES, ELEVENTH, AND TOLERANCES PRESENTED ON THE DRAWINGS AND SPECIFICATIONS.

LEGEND
- TECHERT AGREGATES - PERMAFACILITY EXCESS MATERIAL STOCKPILE AREA
- MISSISSIPPI BAR IMPORT STOCKPILE NAIL ROUTE
- APPROXIMATE LOCATION OF PROJECTED 8/16" SHANMAN SAND STOCKPILE, CONSTRUCTION SHALL WASH MATERIAL, PRIOR TO WASHING TO COMPLY WITH ASSOCIATED PERMITS.
BAR ENHANCEMENT FEATURE NOTE:
1. CONTRACTOR SHALL GRADE A LEVEL PAD WITHIN THE COBBLE PLACEMENT FOOTPRINT OF THE BAR ENHANCEMENT FEATURE BEFORE PLACEMENT ACTIVITIES BEGIN.
2. FILM MATERIAL SHALL CONSIST OF BOTH SORTED AND WASHED COBBLE AND NATURAL FILL. NATURAL FILL MATERIAL SHALL BE FREE OF ORGANIC SOIL, VEGETATION, AND DEBRIS AND CONSIST OF WELL-GRADED ALLUVOgenic DEPOSITS. ADDITIONALLY, THE FILM MATERIAL SHALL BE EXCAVATED FROM THE SIDE CHANNEL, HABITAT BANKS, AND/OR LOADS, AND OF THE BAR ENHANCEMENT FEATURE.
3. INSTALL FILM IN A MANNER THAT WILL COMPACT IN PL ACROSS.
4. PROVIDE POSITIVE DRAINAGE TO THE EXISTING SIDE CHANNEL TO MINIMIZE POTENTIAL FOR FISH STRANDING.
5. WILLow PLANTS WERE INSTALLED ON THE BAR ENHANCEMENT FEATURE SHALL BE DRAINED 5 FEET BELOW THE FINISHED GRADE.
NOTE:

1) PRECISE LAYOUT OF WILLOW AND PLUG PLANTINGS SHALL BE VERIFIED IN THE FIELD BY OWNER'S REPRESENTATIVE.
2) FOR WILLOW POLE PLANTING AND VALLEY SEDGE PLUG PLANTING, SEE SPECIFICATIONS AND DETAILS 4 AND 5 ON SHEET C-14.
3) THE ABOVE LINES ARE PLANTING LINES ONLY, WHICH COVERS THE IMPROVEMENT AREA SEED MIX, VALLEY SEDGE PLUG, AND WILLOW POLE PLANTING.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>GRADING AREA PLANTING</th>
<th>UNDISTURBED PLANTING</th>
<th>ACCESS IMPROVEMENT AREA SEEDING</th>
<th>STAGING AREA SEEDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALLEY SEDGE (COARSE BARREN) PLUG PLANTING (2&quot;)</td>
<td>393</td>
<td>707</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>WILLOW (VALLEY) POLE PLANTING (CUTLINGS) (1&quot;)</td>
<td>1,786</td>
<td>2,091</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>WILLOW (VALLEY) POLE PLANTING (FECES) (1&quot;)</td>
<td>604</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SEEDING AREA (AC)</td>
<td>1.0</td>
<td>1.1</td>
<td>0.2</td>
<td>1.8</td>
</tr>
<tr>
<td>STAGING PLANTING AREA (AC)</td>
<td>1.2</td>
<td>1.3</td>
<td>0.2</td>
<td>1.8</td>
</tr>
</tbody>
</table>

LEGEND
- ACCESS IMPROVEMENT AREA SEED MIX
- GRADING AREA PLANTING (IMPRAVIAN SEED MIX, VALLEY SEDGE PLUG, AND WILLOW POLE PLANTING AREA)
- UNDISTURBED AREA PLANTING (IMPRAVIAN SEED MIX, VALLEY SEDGE PLUG, AND WILLOW POLE PLANTING AREA)
- STAGING AREA SEED MIX
### SUMMARY OF QUANTITIES

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUANTITY</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOBILIZATION</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>CONSTRUCTION SURVEYING</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>SITE SECURITY</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>PREPARE &amp; IMPLEMENT SWPPP</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>ESTABLISH CONSTRUCTION ACCESS INCLUDING HAUL ROADS</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>TURBIDITY TESTING AND REPORTING</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>TURBIDITY MANAGEMENT PLAN &amp; IMPLEMENTATION</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>TEMPORARY CONSTRUCTION FENCING</td>
<td>2,950</td>
<td>LF</td>
</tr>
<tr>
<td>CLEARING &amp; GRABBING GRADING EXTENTS, SORTING AREA, STAGING AREA, AND ACCESS</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>TRAFFIC CONTROL</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>SITE RESTORATION</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>GRADING - SIDE CHANNEL &amp; HABITAT BENCH EXCAVATION</td>
<td>7,237</td>
<td>CY</td>
</tr>
<tr>
<td>SORTING GRAVEL &amp; COBBLE</td>
<td>9,834</td>
<td>CY</td>
</tr>
<tr>
<td>IMPORTING GRAVEL &amp; COBBLE</td>
<td>6,814</td>
<td>CY</td>
</tr>
<tr>
<td>GRADING - BAR ENHANCEMENT FEATURE EXCAVATION (LEVEL PAD)</td>
<td>143</td>
<td>CY</td>
</tr>
<tr>
<td>GRADING - BAR ENHANCEMENT FEATURE PLACEMENT WITH NATIVE EXCAVATED MATERIAL</td>
<td>874</td>
<td>CY</td>
</tr>
<tr>
<td>GRADING - BAR ENHANCEMENT FEATURE PLACEMENT WITH 4&quot; + COBBLE</td>
<td>457</td>
<td>CY</td>
</tr>
<tr>
<td>GRADING - RIFFLE PLACEMENT WITH 3/8&quot; TO 4&quot; SPANNING GRAVEL</td>
<td>3,864</td>
<td>CY</td>
</tr>
<tr>
<td>GRADING - RIFFLE PLACEMENT WITH 4&quot; + COBBLE</td>
<td>2,493</td>
<td>CY</td>
</tr>
<tr>
<td>IMPORT AND INSTALL LWM STRUCTURES</td>
<td>35</td>
<td>EA</td>
</tr>
<tr>
<td>VALLEY SEDGE PLUG PLANTING</td>
<td>793</td>
<td>EA</td>
</tr>
<tr>
<td>ACCESS IMPROVEMENT AREA SEEDING</td>
<td>0.2</td>
<td>AC</td>
</tr>
<tr>
<td>STAGING AREA SEEDING</td>
<td>1.9</td>
<td>AC</td>
</tr>
<tr>
<td>RIPARIAN SEEDING</td>
<td>1.2</td>
<td>AC</td>
</tr>
<tr>
<td>WILLOW POLE PLANTING</td>
<td>1.2</td>
<td>AC</td>
</tr>
<tr>
<td>STRAW PLACEMENT</td>
<td>3.3</td>
<td>AC</td>
</tr>
<tr>
<td>EXPORT MATERIAL TO TIECHERT AGGREGATES - PERKINS FACILITY STOCKPILE AREA</td>
<td>6,505</td>
<td>CY</td>
</tr>
</tbody>
</table>

### OPTIONAL BID ITEMS - SUMMARY OF QUANTITIES

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUANTITY</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALLEY SEDGE PLUG PLANTING</td>
<td>707</td>
<td>EA</td>
</tr>
<tr>
<td>RIPARIAN SEEDING</td>
<td>1.1</td>
<td>AC</td>
</tr>
<tr>
<td>WILLOW POLE PLANTING</td>
<td>1.1</td>
<td>AC</td>
</tr>
<tr>
<td>STRAW PLACEMENT</td>
<td>1.1</td>
<td>AC</td>
</tr>
</tbody>
</table>
LOWER AMERICAN RIVER SALMONID HABITAT ENHANCEMENT PROGRAM
2024 RIVER BEND PROJECT

REVISED TECHNICAL SPECIFICATIONS

Prepared for: City of Sacramento (Water Forum)
Prepared by: Benjamin Taber, P.E., cbec, Inc.

March 25, 2024
SECTION 01 00 00

GENERAL CONDITIONS

PART 1- GENERAL

1.1 SUMMARY

A. Provide all material, labor, and equipment necessary to implement the Sacramento Water Forum's Salmonid Habitat Enhancement Program – River Bend Project in Rancho Cordova, California. Work includes but is not limited to temporary fence installation; SWPPP preparation and implementation; excavation; gravel/cobble material washing; sorting and hauling; in-river gravel placement, cobble placement, and fill placement; haul of excess material offsite; procurement, import and installation of large woody material (LWM); adherence to permit requirements; and planting and seeding.

B. Provide all materials and components necessary to result in 100 percent complete construction of work and restoration of grounds shown on Drawings and detailed in Specifications.

1.2 LOCATION OF THE WORK

A. Physical location of the work is within River Bend Park on the Lower American River in the immediate vicinity of the Harold Richey Memorial Bridge, Rancho Cordova, CA. Access the Project area via the Rod Beaudry Drive and construction access shown on the Drawings (38° 35' 30.0042" N, 121° 19' 42.6966"W).

B. Physical location of the Mississippi Bar Stockpile Area (38° 38' 57.1704N, 121° 12' 25.0812"W) is upstream of Nimbus Dam and north of Lake Natoma. Access to Mississippi Bar Stockpile Area can be accessed via Sunset Avenue at the Main Avenue Trailhead. The haul route at Mississippi Bar is the existing trail heading southwest at the intersection of Sunset Avenue and Main Avenue to the gravel/cobble stockpiles.

C. Physical location of the excess material stockpile area at the Teichert Aggregates - Perkins Facility (38° 32' 43.2600"N, 121° 22' 44.8356"W) as shown on the Drawings and approximately 5.8 miles away from the project site.

1.3 TIMING OF THE WORK

A. In river work window associated with endangered species protections is restricted to July 1, 2024 to October 31, 2024. In river work window restrictions do not apply to Mississippi Bar Stockpile Area.

B. All work at the River Bend Project Area must be performed in 8 weeks and between July 1, 2024 and October 11, 2024, with the exception of site restoration; planting and seeding may extend past this period. An extension of the work window (past October 11, 2024) may be given in the event of delayed permits allowing in-river work.

1. Hauling of excess material to Teichert Aggregates – Perkins Facility shall be restricted to 15 workdays in the period between July 1, 2024 and October 11, 2024.

   i. Hauling shall be limited to no more than 59 truck trips per day.

   ii. No hauling may occur on weekends or holidays.
1.4 WORK HOURS

A. River Bend Project Area at River Bend Park – Monday through Saturday 6AM-6PM. No noise allowed until after 7 AM. No work within the active river channel allowed on weekends or holidays. Work within side channel and other portions of the site is allowed on weekends or holidays.

B. Mississippi Bar Stockpile Area - Monday through Friday. 7 AM – 6PM. No weekend access.

C. Teichert Aggregates – Perkins Facility Excess Material Stockpile Area– Monday through Saturday 6:30AM-2:45PM.

1.5 INQUIRIES

A. Direct questions to:

   City of Sacramento (Water Forum)
   1330 21st Street
   Sacramento, CA 95811
   Erica Bishop (916) 808-1997

   cbec, inc,
   2544 Industrial Blvd.
   West Sacramento, CA 95691
   Benjamin Taber (916) 668-5247
   Chris Hammersmark; (916) 668-5236

1.6 DEFINITIONS

D. Owner – Sacramento Water Forum

E. Property Owners/Managers
   1. Sacramento County Regional Parks
   2. California State Parks (administers Mississippi Bar area as an administrative unit of Folsom Lake State Recreation Area, through management agreement with United States Bureau of Reclamation (landowner)

F. Owner’s Representative – Staff from Sacramento Water Forum, staff from cbec, inc., staff from GEI Consultants, staff from Cramer Fish Sciences, other Water Forum contracted consultant

G. Engineer – cbec, inc.

H. Contractor – company owner, supervisor, staff and subcontractors employed to do the work outlined in these specifications, construction drawings and applicable permits.
I. Drawings – construction drawings for the project
J. Specifications – these construction specifications for the project
K. Work – includes but is not limited to temporary fence installation; SWPPP preparation and implementation; excavation; gravel/cobble material washing; sorting and hauling; in-river gravel placement, cobble placement, and fill placement; haul of excess material offsite; procurement, import and installation of large woody material (LWM); adherence to permit requirements; and planting and seeding.
L. Work area – areas noted on Drawings
M. Project – Work shown on Drawings and in these Specifications
N. River – The lower American River

1.7 SPECIAL NOTICES

A. Necessary environmental permits will be provided by Owner.
B. Contractor shall obtain all other permits necessary to complete the work.
C. Sacramento Water Forum and Property Owner shall be named as additionally insured.
D. Owner will provide to the Contractor a seasonal river operations forecast as soon as it is available from U.S. Bureau of Reclamation. Updated forecasts or short-term operational changes that may affect river flow will be communicated to the Contractor on an ongoing basis throughout the project duration.
E. Contractor shall comply with all local, state, and federal regulations and comply with requirements in the permits, Mitigation Monitoring and Reporting Program (MMRP) and Storm Water Pollution Prevention Plan (SWPPP).
F. Within MMRP, Owner and Owner’s Representative will be responsible for BIO-1, BIO-2, BIO-3, BIO-4, GEO-2, REC-1, REC-2. Contractor is responsible for GEO-1, NOI-1.
G. This project will be constructed during fire season. Contractor shall educate all staff and subcontractors and shall operate in a manner consistent with standard industry safety requirements to prevent fires caused by Contractor’s operations.
H. Construction work shall comply with all applicable federal, state, and local environmental and biological laws, regulations and permits. This condition applies to, but is not limited to, laws and regulations governing noise levels, air and water quality standards, and cultural and biological resources.
I. Contractor shall coordinate site access with Owner’s Representative per SECTION 01 55 00 ACCESS AND STAGING at least 2 weeks prior to start of work at River Bend Project Area. Owner will issue gate keys, open gates, or facilitate access so that Contractor can install its own lock. Owner will send access notice to Landowner and associated management based on construction schedule.
J. Contractor shall identify on-site Person In Charge (PIC) for coordination with Owner and/or Owner’s Representative. If PIC changes during construction notify Owner at least 72 hours in advance.
K. Contractor will provide a project schedule to Owner's Representative at least two months prior to starting work. Owner's Representative will identify key points during construction which require inspection and approval, field fitting and coordination. Project schedule shall include but not be limited to access plan review, sequencing and travel plan review, traffic control plan review, turbidity
control measures review, alignment staking, installation of berms, final grading and erosion and sediment control.

L. Work may not begin until a written Notice to Proceed has been issued by Owner.

M. The Contractor or the Contractor’s Designated Representative (who will oversee the construction work) shall attend a pre-work conference, 2 weeks prior to start of work at River Bend Project Area with the Owner's Representative at the project site.

N. All workers must attend a pre-construction meeting, to be scheduled by the Owner prior to start of any Work at River Bend Project Area, regarding required construction measures to protect sensitive species, protected areas, existing infrastructure, sensitive wetland habitats, and water quality.

O. Water distribution pipes, utility poles and lines, and other utilities may be present on site. Contractor shall arrange an Underground Services Alert, shall locate (pothole) identified utilities, and shall place appropriate warning signage to alert workers to utility presence and shall not damage utilities. Contractor shall coordinate with the utility to understand maintenance and operations schedules and shall make efforts to accommodate utility maintenance and operations, including but not limited to maintaining access to water pipes and utilities. Damage to utilities and other existing infrastructure shall be repaired at contractor’s expense with no additional cost to Owner.

P. Contractor shall establish construction survey control at least 2 weeks prior to start of work at River Bend Project Area based on the control coordinates shown in the Cover Sheet of the Drawings. Owner’s Representative will inspect control consistency and provide approval within 3 days after notification.

Q. Contractor shall lay out all project work areas including access roads, staging areas, grading areas, by use of flagging, grade stakes or other approved methods, prior to mobilization. Owner’s Representative will provide approval within 2 days of completion.

R. The Project is highly visible on the American River Parkway and is of regional and statewide importance to the Water Forum, State and Federal grant funding agencies, and government officials. Thus, the Contractor shall accommodate onsite construction tours, visits from elected officials, and media personnel during the project duration. Any visitors to the project site would be approved by and escorted around the Project site by the Owner. All visitors shall follow standard site safety protocols and shall wear approved Personal Protective Equipment (PPE) appropriate for a construction site. All visitors shall complete a liability waiver provided by the City of Sacramento, City Attorney’s Office prior to entering the Project site. A schedule for planned construction tours shall be provided to the Contractor prior to the start of construction. Notification of media presence or other non-prior scheduled site visit shall be provided at least 72 hours in advance.

S. Mississippi Bar Stockpile Area

a. There is no water source at the Mississippi Bar Stockpile Area. Contractor may access the Fair Oaks Water District (FOWD) hydrant located approximately 1,500 west of the of the entrance gate to Folsom State Recreation Area, along Sunset Avenue. Contractor shall arrange access for use of a FOWD construction water meter during washing and hauling operations.

b. Gate must be locked overnight. During work hours, the gate can remain unlocked only if an employee is posted at the entrance to prevent private vehicles from entering, at the request of State Parks Ranger staff.
1.8 EQUIPMENT DECONTAMINATION

A. To prevent the introduction of plant pathogens, including phytophthora, and invasive plants, Contractor shall decontaminate their equipment prior to mobilization on-site:

1. Vehicles, heavy machinery, and large tools (such as excavators, trenchers, graders, including tires, tracks, undercarriage of on-site vehicles, and their tools and implements, and transport vehicles) shall be cleaned free of debris and soil with high pressure washer and disinfected with Propeller™ (or similar) from any prior work site prior to mobilizing to the Project site. Vehicles, heavy machinery, and equipment that will work in or around the water shall be inspected and free of aquatic invasive species.

2. Footwear and small tools (such as hand tools, shovels, trowels, hoes, and personnel boots) shall be thoroughly cleaned of debris and soil then wiped with seventy (70) percent ethanol or isopropanol prior to use within the Project site.

B. Equipment and tools moved off-site and returned later for use will again require decontamination by Contractor before re-entering the site.

C. Decontamination of equipment, tools, etc. by the Contractor shall be included in the lump sum price bid for mobilization, and no separate payment will be made therefor.

1.9 CONTAINMENT

A. Description: Containment measures are intended to be deployed in the event of a spill of hazardous chemicals, fuels, oils, cement, and other liquids or powders to prevent pollution of water, air, or soil resources. Containment measures may include absorbent materials to soak up spills, tools such as shovels or hoes to dig small emergency containments, tarps to cover dry spills, etc.

B. Applications: Containment measures shall be available at all construction sites and at any time that chemicals are to be used near a watercourse.

C. BMP Removal: Handle chemicals and absorbents in accordance with instructions from fire protection staff, Environmental Health officials and/or manufacturer.

D. Spill Prevention and Response: Fluid spills shall not be hosed down. The Contractor shall use dry cleanup methods (absorbent materials, cat litter, and/or rags) whenever possible. If water must be used, the Contractor will be required to collect the water and spilled fluids and dispose of it as hazardous waste. Spilled fluids shall not be allowed to soak into the ground or enter any watercourse. Spilled dry materials shall be swept up immediately. Dry spills shall not be washed down or buried. Spills on dirt areas shall be removed by digging up and properly disposing of contaminated soil. Significant spills shall be reported to Sacramento County Environmental Department Incident Response Program by calling 311 or 916-875-8550.

1.10 SPILL PREVENTION AND CONTROL

A. Contractor shall keep spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.

B. Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.

C. Clean up spills or leaks immediately and dispose of cleanup materials properly.

D. Contractor shall not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
E. Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.

F. Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.

G. Contractor shall report all spills immediately. Contractor is required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or local emergency response number, 2) Call the Governor’s Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

H. If these Specifications and the SWPPP are in conflict, the more stringent requirement shall govern.

1.11 EQUIPMENT MAINTENANCE, FUELING & INSPECTION

A. Description: Equipment maintenance and fueling is frequently required at construction sites. Proper equipment maintenance and fueling procedures will ensure that no fluids are discharged into watercourses, and that any spills are promptly cleaned up, reported and properly disposed of.

B. General Requirements: A separate area shall be designated for equipment maintenance and fueling, away from any slopes, watercourses, or drainage facilities. Where equipment is expected to be stored for more than a few days, cleanup materials and tools shall be kept nearby and available for immediate use (refer to City of Sacramento Sediment Control Manual E-6 "Spill Prevention and Containment"). Equipment shall not be stored in areas that will potentially drain to watercourses or drainage facilities. If equipment must be stored in areas with the potential to generate runoff, drip pans, berms, sandbags, or absorbent booms shall be employed to contain any leaks or spills. Contractor shall inspect equipment daily for leaks or damage and promptly repair equipment as needed.

C. Terrestrial Equipment Operating in Aquatic Environments: Terrestrial equipment (e.g., excavators, trucks, loaders, dozers, etc.) to be used in the River, its tributaries, or stranded water within the floodway shall be retrofitted with biodegradable hydraulic fluids, greases, and lubricants (vegetable oil-based, such as BioFlo AW-series, Environ-AW, or similar). Equipment operating outside the excavation limits are exempt from this requirement. All construction equipment shall be maintained free of petroleum leaks. The contractor shall inspect all vehicles operated within 250 ft of any water daily for leaks and, if necessary, perform repairs before equipment is allowed to leave the staging area. Document inspections in a record that is available for review on request.

D. Spill Prevention and Response: Follow instructions above in CONTAINMENT section.

1.12 AIR QUALITY MEASURES

A. Idling Times: Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

B. Material Hauling NOx Emissions Control and Cap Measures: Contractor shall implement any combination of the measures described below to reduce nitrogen oxides (NOx) emissions, in any given construction year, to ensure Project NOx emissions are capped below an average of 54 pounds per day. As a performance standard, the mitigation measures shall demonstrate that off-road equipment (greater than 50 horsepower [hp]) and material hauling vehicles used during construction (i.e., owned, leased, and subcontracted vehicles) will achieve emission reductions to the extent feasible. Equipment and material hauling vehicles shall achieve at least
a project-wide fleet average of 20 percent NOX reduction compared to the most recent California Air Resources Board (CARB) fleet average up to a Tier IV-equivalent engine. Contractor shall implement any of the following examples of appropriate mitigation to achieve this reduction including, but not limited to: limit the number of daily one-way material hauling trips, use alternative-fueled equipment, alter the phasing of construction activities, use of chemical additives or aftermarket devices to reduce emissions on existing equipment, use higher tier (Tier 3 or greater) and/or newer models for equipment and/or material hauling trucks, use of electrically powered equipment, reduction in total equipment hours, use of alternative fuels, or engine retrofit technology.

1.13 WATER QUALITY MEASURES

A. Contractor shall comply with permit requirements for water quality protection, monitoring, and reporting, see Appendix A Central Valley Regional Water Quality Control Board, Section 401 permit (401 permit) and Mitigation Monitoring and Reporting (MMRP).

B. The 401 permit provides guidance for turbidity control, timing and frequency of testing, turbidity thresholds for exceedance, and reporting requirements.

1.14 COORDINATION OF DOCUMENTS

A. The Specifications and associated Drawings are intended to be mutually supplementary to describe and provide for a complete work product. If the Drawings and Specifications are in conflict, Contractor shall contact the Owner's Representative for clarification.

1.15 CONTRACT ADMINISTRATION

A. Authority of the Owner's Representative is limited to the following functions:
   1. Observe and accept or reject work and materials including approval or disapproval of materials submittals.
   2. Clarify Specifications and Drawings
   3. Provide input on elements of the design which require field-fitting.

B. The Owner's Representative is not authorized to take the following actions, all of which remain the sole responsibility of the Owner:
   1. Make changes to the contract provisions, period of performance, or change any contract terms and conditions.
   2. Make decisions concerning any claims and disputes.

C. Close liaison will be maintained by the Owner, Owner's Representative, and the Contractor. The Owner's Representative shall notify the Owner immediately of any problems encountered, including but not restricted to maintaining completion schedules. The Owner, Owner’s Representative, and the Contractor will attend a weekly meeting every Monday beginning once the work commences until the completion of the work. The weekly meetings will cover the following items:
   a. Progress update and any changes to previous schedule
   b. Notice of needed inspections and approvals
   c. Updated schedule for the upcoming 2-3 weeks
   d. Contractor staff managing upcoming tasks will attend and provide detailed schedule for each task.

D. Construction Observation:

03/25/2024
1. The Owner's Representative shall always have free access to the jobsite while work is in progress, and the Contractor shall furnish information and assistance as necessary.
2. The Owner's Representative shall monitor and inspect construction for conformance with Drawings and Specifications.
3. The Owner's Representative must approve all materials prior to installation and may reject unsuitable materials or work that does not conform to the Drawings and Specifications.
4. Owner’s Representative shall have input on field fitting activities. Field fitting shall be performed to the satisfaction of the Owner's Representative.

E. Performance of Work by the Contractor:
1. The Contractor shall furnish the Owner's Representative all reasonable facilities for obtaining information regarding the character of the materials and progress of the work.

1.16 GENERAL TECHNICAL REQUIREMENTS
A. Perform the work in accordance with the Specifications and other provisions of this contract.
B. In any instances where the Drawings and Specifications are unclear, the Contractor shall contact the Owner's Representative.
C. Field-verify all dimensions and conditions. Notify the Owner's Representative of any conflicts.

1.17 CONSTRUCTION SUPPORT
A. The Contractor shall furnish any temporary facilities and utilities needed including light, power, water, telephone, sanitary facilities, job offices, storage enclosures, safety devices, construction aids, off-hour security and support equipment.

1.18 PROTECTION
A. Protect adjacent trees, vegetation, wetlands, property, structures, access road, ground surfaces, existing utilities, and improvements from damage.
   a. Owner’s Representative may direct Contractor to field fit grading to avoid vegetation.
   b. Contractor shall be responsible for restoring to original condition roads, staging areas and fields damaged by construction activities.
   c. Contractor shall be responsible for replacing damaged or removed trees outside of the work areas at the Contractor's expense.

1.19 CLEAN UP
A. Dispose of debris legally at licensed disposal facilities.
B. Upon completion of the work and immediately prior to the final inspection, clean the construction area and remove any temporary facilities and utilities that were brought on to the project site.
C. Restore or replace fences, gates, vegetation, wetlands, trees, ground surfaces, and disturbed areas to original condition or as directed by the Owner's Representative or Owner.
D. Restore the off-pavement access road from Rod Beaudry Drive and staging areas to pre-project conditions. See Drawings and Specification SECTION 01 55 00, ACESS AND STAGING.
E. Any restoration or repair must be approved by Owner's Representative. See Final Inspection.
1.20 FINAL INSPECTION

A. The Contractor shall schedule a "punch list" walk with the Owner's Representative to review site conditions no more than 2 weeks prior to the end of construction. The Owner's Representative and the Contractor will develop a "punch list" of items remaining to be completed prior to completion of construction. The Contractor representative responsible for the work shall be present at the "punch list" walk and shall submit a list of any unfinished work for approval by the Owner's Representative.

B. Notify the Owner's Representative at least 2 weeks prior to the anticipated date of completion of all work. The Owner's Representative will coordinate the final inspection as promptly as practicable.

END OF SECTION
SECTION 01 55 00
ACCESS AND STAGING

PART 1 - GENERAL

1.1 SUMMARY
A. Provide all material, labor, and equipment necessary to perform the work as shown on Drawings and as specified herein.

B. This SECTION includes:
   1. Approved access roads to and from the project site and stockpile areas.
   2. Approved equipment staging and parking areas.
   3. Approved construction sequencing and travel plan.
   4. Traffic control plan.
   5. Temporary fencing plan

1.2 MEASUREMENT AND PAYMENT

A. The Work includes providing access to the project and stockpile areas, and staging areas at various locations within the Project and stockpile areas. Within access and staging activities, there are discrete Work items that will be paid for in lump sum. The contract lump sum price paid for these Work items shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, required to install and restore access routes and staging areas as specified in these technical Specifications, Drawings and as directed by Owner’s Representative. Those Work items include:
   a. Traffic Control
   b. Temporary Fencing
   c. River Bend Project Access Route
   d. River Bend Project Staging Area

B. Full compensation for access and staging as specified herein shall be included in the contract lump sum price paid for each of the Work items identified above and no additional compensation will be allowed therefor.

1.3 REFERENCES

A. General
   1. The publication listed below forms a part of this specification to the extent referenced.
   2. The latest edition available on the date of the Notice Inviting Bids shall be used.

B. California Department of Transportation (Caltrans)
   1. Manual of Traffic Controls for Construction and Maintenance Work Zones
1.4 SUBMITTALS

A. Hauling plan and permit, if required.
   a. To be submitted to Owner at least 2 months prior to start of work at River Bend Project Area.
   b. After submission, the Owner and Owner’s Representative will have 2 business days to review and approve or deny the submittal.

B. Construction access road plan.
   a. To be submitted to Owner at least 1 month prior to start of work at River Bend Project Area.
   b. After submission, the Owner and Owner’s Representative will have 2 business days to review and approve or deny the submittal.

C. Traffic control plan.
   a. To be submitted to Owner at least 1 month prior to start of work at River Bend Project Area.
   b. After submission, the Owner and Owner’s Representative will have 2 business days to review and approve or deny the submittal.

D. Temporary fencing plan.
   a. To be submitted to Owner at least 1 month prior to start of work at River Bend Project Area.
   b. After submission, the Owner and Owner’s Representative will have 2 business days to review and approve or deny the submittal.

E. Construction sequencing and travel plan.
   a. To be submitted to Owner at least 1 month before start of work at River Bend Project Area.
   b. After submission, the Owner and Owner’s Representative will have 2 business days to review and approve or deny the submittal.

F. Contractor shall provide a construction and site access schedule to Owner.
   a. To be submitted to Owner at least 1 month before start of work at River Bend Project Area.
   b. After submission, the Owner and Owner’s Representative will have 2 business days to review and approve or deny the submittal.

G. Temporary access plan for in-river grading shall be submitted to Owner for approval at least seven days prior to mobilization. See Turbidity Management Plan requirements in Section 31 25 00 Erosion and Sediment Control.
   a. To be submitted to Owner at least 1 month before start of work at River Bend Project Area.
   b. After submission, the Owner and Owner’s Representative will have 2 business days to review and approve or deny the submittal.

H. Contractor shall provide documentation of pre-construction conditions of all access roads.
   a. To be submitted to Owner at least 1 week before start of work at River Bend Project Area.
1.5 ACCESS TO THE WORK SITE

A. The Water Forum will obtain landowner agreements from Sacramento County Parks for construction operations at River Bend Project Area, California State Parks at Mississippi Bar Stockpile Area, and Teichert Aggregates – Perkins Facility Excess Material Stockpile Area.

B. The Water Forum will obtain an approved Sacramento County Parks encroachment permit to enter on behalf of the Contractor for the construction activities at the River Bend Project Area.

C. Contractor shall coordinate with Owner regarding site access. Contractor shall provide contact information for Contractor’s site superintendent during construction.

D. The Contractor’s use of existing access roads shall be limited to those shown in Drawings.

E. In case of need to enter the site before or after normal working hours, Contractor shall arrange access at least 72 hours in advance of planned access with the Owner. Working hours are generally 6 AM to 6PM, Monday through Saturday (no noise permitted before 7 AM).

F. In case of need to enter the stockpile area before or after normal working hours, Contractor shall arrange access at least 72 hours in advance of planned access with the Owner.

G. Construction Traffic is limited to Rod Beaudry Drive and the temporary site access shown in the Drawings, no construction access, parking or staging is permitted in other areas of the American River Parkway.

1.6 TRAFFIC CONTROL

A. The Contractor shall be responsible for the safe movement of vehicular traffic to, from, and through the worksite during operations, including traffic control measures required to ensure safe passage of vehicles, bicyclists, pedestrians, and equipment.

B. The control shall be in accordance with CCR Title 8.

1. Flagger(s) shall be positioned at the intersection of the American River Bike Trail, Rod Beaudry Drive, and access road to River Bend Project Area, as shown on the Access and Staging Plan in the Drawings, throughout the entire duration of mobilization, demobilization, and hauling operations to prevent conflict with public vehicles, bicyclists, pedestrians, and construction operations.

C. The Traffic control and signage shall be in accordance with Manual of Traffic Controls for Construction and Maintenance Work Zones.

D. Stop signs shall be placed at the intersection of the American River Bike Trail and access road to River Bend Project Area, as shown on the Access and Staging Plan in the Drawings, to prevent conflict with public vehicles, bicyclists, pedestrians, and construction operations.

1.7 TEMPORARY FENCING

A. Contractor shall install a lockable chain link temporary construction fence across the access road to River Bend Project Area, at the end of the site access road and entrance of the staging area as shown on the Access and Staging Plan in the Drawings, prior to start of work at River Bend Project Area.

1. Temporary exclusion fencing (orange plastic safety fencing or approved equivalent) shall be installed:

   a. In areas shown on the Drawings.

   b. Around any protected vegetation identified by Owner.
c. To exclude access to any cultural or archeological resource identified by the Owner.

1.8 ACCESS ROADS

A. Throughout the entire Contract period, the Contractor shall share access roads, both those constructed by the Contractor or otherwise provided for Contractor's use, with the Owner's Representative, and Owner.
   1. Coordination with others shall be the responsibility of the Contractor. In case of conflicts or disputes, the Owner's or Owner's Representative's decision will be final.
   2. The Contractor shall not construct new access roads without the approval of Owner or Owner's Representative.

B. The Contractor shall fortify temporary access roads to protect existing surfaces.

C. Contractor shall document pre-construction condition of all access routes on Rod Beaudry Drive from Folsom Boulevard to the River Bend Project Area. Contractor shall restore off-pavement access area disturbance and areas shown on the Drawings to pre-project condition. See Specification SECTIONS 32 92 19, SEEDING. Contractor shall repair any damage to asphalt where access route transitions from asphalt to soil, to the satisfaction of the Owner, at the Contractor’s expense.

D. The Contractor shall provide dust control as needed on access roads used in Contractor operations and on those roads subject to dust because of conditions created by the work.
   1. Contractor shall spray roads by water truck as needed during haul operations.
   2. Contractor shall limit driving speed on access roads to keep dust down.

E. If on-site access roads become damaged during the work, the Contractor shall promptly repair them after Project construction with equivalent surfacing to pre-project conditions.

1.9 PARKING

A. On-site parking areas for Contractor personnel shall be limited to the staging areas shown on Drawings.
   1. The Contractor's personnel, suppliers, and delivery vehicles shall not block access roads.
   2. Haul trucks are not permitted to park or stage within any public areas of River Bend Park, American River Bike Trail, or along Rod Beaudry Drive.

END OF SECTION
SECTION 31 00 00

EARTHWORK

PART 1 - GENERAL

1.1 DEFINITION

A. Excavation includes earthwork performed by terrestrial equipment.
   1. Excavation is expected to occur in the lower American River channel as shown on Drawings.

1.2 SUMMARY

A. Provide all material, labor, and equipment necessary to perform earth moving activities including cut and fill excavation, material sorting, and LWM installation as shown on Drawings and as specified herein.

B. This SECTION includes:
   1. Excavation and compaction
   2. Sorting excavated material
   3. Fill placement and material criteria
   4. Protection, sheeting, shoring, bracing and excavation slopes

C. Related Technical SECTIONS
   1. SECTION 31 25 00 EROSION AND SEDIMENT CONTROL
   2. SECTION 35 42 13.23 LARGE WOODY MATERIAL INSTALLATION

1.3 MEASUREMENT AND PAYMENT

A. The Work consists mainly of earth moving activities. Within the earth moving activities, there are several discrete Work items that will be paid for on a per unit (cubic yard) basis. The contract unit price paid for the installation of these Work items shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, as specified in these technical Specifications, Drawings and as directed by Owner’s Representative. Those Work items include:
   1. Grading – side channel and habitat bench excavation
   2. Sorting gravel and cobble
   3. Importing gravel and cobble
   4. Grading – bar enhancement feature excavation (level pad)
   5. Grading – bar enhancement feature placement with native excavated material
   6. Grading – bar enhancement feature placement with 4"+ cobble
   7. Grading – riffle placement with 3/8" to 4" spawning gravel
   8. Grading riffle placement with 4"+ cobble
   9. Haul excess material offsite to Teichert Aggregates – Perkins Facility
B. Full compensation for earthwork as specified herein shall be considered as included in the contract unit price paid for each of the Work items identified above and no additional compensation will be allowed therefor.

1.4 REFERENCES

A. General
1. The publications listed below form a part of this specification to the extent referenced.
2. Where a date is given for reference standards, the edition of that date shall be used. Where no date is given for reference standards, the latest edition available on the date of Notice Inviting Bids shall be used.

B. American Society for Testing and Materials (ASTM)
1. ASTM D422, Standard Test Method for Particle-Size Analysis of Soils
2. ASTM D1556, Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
3. ASTM D1557, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/cu.ft. (2,700 kN-m/cu.m.))
5. ASTM D2434, Standard Test Method for Permeability of Granular Soils (Constant Head)
6. ASTM D2487, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
7. ASTM D4253, Standard Test Method for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
8. ASTM D4829, Standard Test Method for Expansion Index of Soils
9. ASTM D4914, Standard Test Method for Density of Soil and Rock in Place by the Sand Replacement Method in a Test Pit
10. ASTM D5030, Standard Test Method for Density of Soil and Rock in Place by the Water Replacement Method in a Test Pit

C. United States Bureau of Reclamation (USBR), Earth Manual
1. USBR 7205, Procedure for Determining Unit Weight and Moisture Content of Soils In-Place—Nuclear Moisture-Density Gauge


E. California Code of Regulations (CCR) Title 8, Chapter 4, Article 6 of the Construction Safety Orders, and shall be performed in accordance with appropriate and applicable design codes, including the:

F. American Institute of Steel Construction (AISC) – applicable design standards.


H. Naval Facilities and Engineering Command (NAVFAC)
1. NAVFAC Design Manual 7.01-Soil Mechanics
2. NAVFAC Design Manual 7.02-Foundations and Earth Structures
1.5 SUBMITTALS

A. Plans, Calculations, and Procedures: The following plans, calculations, and procedures shall be submitted.
   1. Proposed excavation plans, schedule and sequence of earthwork operations, including phasing, access and staging, and stockpiling plans.
   2. Detailed plans for the protection and the safety of workers when trenches and excavations are equal to or greater than 5 feet in depth. The plans shall include supporting design calculations and shall cite all references used to substantiate the calculations. If a support of excavation system is included in the plans, detailed procedures for the installation and removal of the support of excavation system shall be provided.

B. Material Submittals: Product data shall be submitted on a product data sheet. The Contractor shall certify product compliance with these specifications.

C. Survey and Grade Control Submittals:
   1. Contractor shall submit methods and equipment to be used to establish position, check grade, and elevation for the Project at least 2 weeks prior to start of work at River Bend Project Area. Owner’s Representative will provide final approval after verifying equipment calibration and measurements in field prior to any grading or staking work.
   2. If Contractor is using GPS enabled equipment (Machine Control), Contractor to provide calibration results for:
      i. static measurements (i.e., survey at bottom of blade, flat excavator bucket, etc.). Results must show agreement between calibrated survey rover and machine control computer on construction equipment, and
      ii. perform test survey of graded spawning gravel and cobble. Must contact Owner’s Representative 2 days prior to test survey. Owner’s Representative shall be on site during test survey to provide verification and approval of grade tolerance. No grading shall be permitted until approval is granted by Owner’s Representative.
   3. Volumes and grade reports shall be submitted to Owner and Owner’s Representative promptly after Contractor achieves finished grade for each work item. Contractor shall collect survey points on a grid with point spacing no greater than 10 feet apart. Contractor shall provide points in a spreadsheet in x,y,z format to Owner’s Representative. After reviewing the spreadsheet, Owner’s Representative will verify grade and provide approval within 2 days.

D. Rock Sorting Submittals:
   1. Contractor shall submit a sorting, washing, and processing plan, including methods, screening specifications, and all other support equipment proposed to produce the spawning gravel and cobble at least 1 month before the start of on-site work. After review, Owner’s Representative will either provide approval or suggested changes within 3 days.
   2. Contractor shall coordinate with the Owner’s Representative at the initiation of rock sorting activities to conduct a spawning gravel and cobble sorting test run, where 50 CY each of spawning gravel and cobble are produced. The Owner’s Representative will perform a photo-based grain size analysis, the Owner’s Representative will either provide approval or suggested changes within 2 days.

E. Permits: Copies of permits required to perform the work shall be submitted.
1.6 SEQUENCING AND SCHEDULING

A. Contractor shall be responsible for coordination and timing of earth moving activities.
   1. Contractor shall provide a detailed schedule and construction sequencing plan to the Owner’s Representative at least 1 month prior to start of work at River Bend Project Area.
   2. Contractor shall coordinate access to off-site stockpile locations with Owner.

1.7 QUALITY ASSURANCE

A. Imported materials shall match the material samples.
B. Certificates of Compliance
   1. A certificate of compliance will not relieve the Contractor of responsibility for incorporating material into the work which is in accordance with Drawings and these Specifications.
C. Submittals and supporting calculations for excavation plans, including, but not limited to, temporary sloped excavations, slope stabilization, and/or slope reinforcement, shall be prepared, signed, and stamped by a civil or geotechnical engineer currently registered in the State of California.
D. Submittals and supporting calculations for support of excavation systems, including, but not limited to, shoring, bracing, and/or sheeting, shall be prepared, signed, and stamped by a civil or structural engineer currently registered in the State of California.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Contractor shall be responsible for the proper storage, handling, and protection of materials once both at the materials stockpile location and after they are delivered to Project site.
B. Contractor shall be responsible for sorting and washing the appropriate material at the stockpile location to generate the needed fill materials as classified by the Drawings and Specifications.
C. Cobble and gravel transported from the sorting plant to the Project area shall be loaded, transported and unloaded with care to not break rock. Owner’s Representative has right to refuse material if greater than 5% of sediments are broken.

1.9 REPLACEMENTS

A. Failed Materials:
   1. Repair and/or replace at no cost to the Owner all materials exhibiting conditions which are determined as unacceptable due to not conforming to this Specification or workmanship by the Contractor.
   2. Apply requirements of this Specification to replacements.

PART 2 - PRODUCTS

2.1 GENERAL

A. Materials not conforming to these Specifications and requirements shall remain the property of Contractor and shall be removed from the job site at no additional cost to Owner.

2.2 FILL MATERIALS

A. Fill Materials: Sorted and washed fill material as described on Drawings and the Specifications.
1. Cobble Fill - Sorted cobble 4-inch diameter and larger. No substrate less than 4-inch shall be used for cobble fill areas shown on the Drawings.
2. Spawning Gravel Fill – Sorted gravel between 3/8-inch to 4-inch in size shall be used for spawning gravel fill areas shown in the Drawings.
3. Native Fill - Fill material generated from excavation of the side channel and/or bench excavation areas. Native fill shall only be placed in the Bar Enhancement Feature, the remaining native fill shall be hauled offsite. Native fill used for the Bar Enhancement Feature shall be free of organic soil, vegetation, and debris and consist of well graded alluvial deposits.

B. General: Fill material shall be classified and measured according to cubic yardage (CY) of material installed.

C. Substitutions: Substituted Fill materials shall conform to this Specification and shall be approved by Owner’s Representative. Use of substitutions shall not increase Contract price.

PART 3 - EXECUTION

3.1 PREPARATION

A. Underground Utilities and Substructures

1. Utilities and substructures within the work areas shall be located prior to sitework and identified with aboveground markers over their locations.
2. Underground Service Alert of Northern California and Nevada (USA North; telephone: 1-800-227-2600 or 811; website: www.usanorth.org) shall be given 2 working days, minimum, advanced notification of excavation.
3. Utility and substructure installations and their general locations shown on Drawings may not be a complete listing, verify in field.
4. Where unidentified existing utilities are encountered and determined to be abandoned, only the interfering portions shall be removed, unless indicated otherwise in Drawings. Work shall not be performed on an active utility without obtaining prior approval of the Owner's Representative and the utility owner. The Contractor shall not proceed without instructions, except to correct an immediate hazard or emergency condition. Work performed by the Contractor in the absence of written instructions will be entirely at Contractor's own risk.
5. Subsurface physical conditions or unknown physical conditions that are unusual in nature shall be reported to the Owner's Representative immediately and confirmed in writing.

B. Clearing and Grubbing

1. Refer to City of Sacramento Standard Specifications, Section 12, CLEARING AND GRUBBING AND TREE REMOVAL.

C. Fish Exclusion

1. If flows are high enough to inundate the side channel work area at time of construction, contractor shall install temporary fish berms to prevent aquatic organism ingress. Contractor shall coordinate with the Owner’s Representative a minimum of 2 weeks prior to installing berms to perform aquatic organism evacuation and monitoring.

3.2 MATERIAL SORTING AND FILL PLACEMENT

1. Material sorting and sediment washing shall occur at the Mississippi Bar Stockpile Area as shown in the Drawings. Native material shall be sorted to generate the required volume of
cobble to achieve grade for the Project. The remainder of gravel can be sorted from the existing spawning gravel stockpile shown on the Drawings.

2. Stockpiling of sediments at the Project Site shall occur within the Project footprint shown on the Drawings.

3. Additional vegetation clearing beyond what is required for project grading is prohibited.

4. Prevent sorting plant runoff from entering any waterway or drainage. Wash water shall be contained away from surface water and allowed to percolate into the ground.

5. Exercise care in handling rock materials to avoid fracturing.

3.3 PROTECTION, SHEETING, SHORING, BRACING AND EXCAVATION SLOPES

A. Protection Plan: When necessary to prevent caving and to protect adjacent structures or property, trenches and excavations shall be protected, shored, sheeted, braced, or sloped in accordance with California Code of Regulations (CCR) Title 8 and the regulations of local authorities having jurisdiction. Where trenches and excavations are equal to or greater than 5 feet in depth, the Contractor shall submit to the Owner a detailed plan for the protection and the safety of workers. If the protection plan varies from the support of excavation system standards of CCR Title 8, the plan and supporting calculations shall be prepared, stamped, and signed by a civil or structural engineer currently registered in the State of California. All protection plans shall be submitted to the Owner for review and acceptance prior to their construction and use in the work. If the trench protection system includes the use of a shield, the design, construction, and manner of using the shield shall be clearly indicated in the protection plan.

B. The protection plans shall be prepared in accordance with the following, and shall include supporting design calculations and shall cite all references used to substantiate the plans and calculations:

1. Design calculations shall follow the guidelines set forth in CCR Title 8, Chapter 4, Article 6 of the Construction Safety Orders, and shall be performed in accordance with appropriate and applicable design codes, including the American Institute of Steel Construction (AISC).

2. Industry standard accepted methods of analyses shall be used and shall conform to the Caltrans Trenching and Shoring Manual, the NAVFAC Design Manual 7.01-Soil Mechanics, or the NAVFAC Design Manual 7.02-Foundations and Earth Structures.

3. Excavation plans shall include analyses and calculations demonstrating the stability of sloped excavations. The minimum factor of safety for temporary sloped excavations shall be not less than 1.25.

4. Calculations shall clearly identify all assumptions, references, data sources, vertical and lateral loads, surcharge loads, design loads and parameters utilized, and intended setbacks, weights, and configurations of equipment and stockpiles.

5. If support of excavation systems, including, but not limited to, shoring, bracing, and/or sheeting, are included in the plans, the design calculations, structural members and connection details utilized, construction methodology, manner of using the support of excavation systems, and detailed procedures for the installation and removal of the support of excavation systems shall be provided.

6. Shoring members and shields used in the support of excavation systems shall be certified with signature and stamp by a civil or structural engineer currently registered in the State of California indicating that the shoring members and the shields meet the calculated loads.

7. Locations where the plans and the supporting design calculations apply shall be indicated on the plans and in the design calculations.
C. The Contractor shall furnish, place, and maintain supports and shoring that may be required for trenches and excavations and shall be responsible for damages related to their inadequacy or failure.

D. Excavation widths shall be modified to accommodate the protective devices within the excavation extents shown on Drawings, which shall be maintained in place during execution of the work. Temporary measures installed to protect workers, shoring, and bracing shall be removed on completion of the work.

E. Existing utilities and structures to remain within the limits of the work shall be supported and protected to the satisfaction of the Owner's Representative and the owner of the utilities and structures. Plans, calculations, and supporting documentation requirements for the support and protection of utilities and structures shall be the same as specified herein for protection plans.

F. All temporary support of excavation systems shall be designed and installed to allow for their removal without causing damage to adjacent structures, facilities, pipelines, or improvements. Methods utilized to install and remove support of excavation systems shall induce minimal or no ground vibrations to existing and newly constructed features, and adjacent ground.

G. The minimum horizontal separation between the outside edge of any existing and newly constructed structure, or any other feature, and any support of excavation element or excavation required to install any support of excavation element shall be 2 feet, unless otherwise noted.

H. Temporary excavations shall not extend or fall below a 1½H:1V (horizontal to vertical) plane that projects downward from the outer lowest edge of any existing and newly constructed adjacent facilities and features, including, but not limited to, roads, bedding of buried pipes, and structural footings. The minimum horizontal setback from the top of a temporary sloped excavation at the existing ground surface and the outside edge of any existing and newly constructed structure, or any other feature shall be 5 feet, unless otherwise noted.

3.4 EQUIPMENT

A. Excavation Equipment
   1. Equipment operating within flowing or standing water within the Lower American River floodway shall be equipped as noted in SECTION 01 00 00 GENERAL CONDITIONS.

B. Moisture-Control Equipment
   1. The type and quality of equipment for applying water shall be adequate for the work. It shall not leak, and mobile equipment shall be equipped with distributor bars or other approved devices to ensure uniform application.
   2. Water-supply trucks shall be equipped with meters, gauges, or other devices to measure the quantity of water dispensed.

C. Sediment Washing/Sorting Equipment
   1. The type and quality of equipment for sorting cobble and gravel material from the fines shall be appropriate for the work. Machine shall be adequate to wash sediment to satisfy the turbidity thresholds outlined in the 401 permit.

3.5 EXCAVATION

A. The Contractor shall confine its activities and operations to within the Work area shown on Drawings except as otherwise permitted by the Owner's Representative.
B. Contractor shall report damage to utilities from excavation activities immediately to the Owner's Representative and shall repair utilities at no cost to Owner.

C. Whenever excavated materials are to be used directly in fill or are stockpiled for later use in fill, the excavation and stockpiling shall be performed using equipment and procedures selected to minimize the effects of natural stratification and variations in material and to optimize conditioning of materials for compaction.

D. Excavations and over excavations called out on Drawings shall be accurately made to the lines, grades, elevations, and cross sections shown on Drawings. Minimize disturbance to trees and vegetation. If trees are within grading limits, contact Owner’s Representative before removal or excavation within the tree dripline. Some level of field fit may be required to limit damage to or removal of trees.

1. Over excavation of trenches or of structure foundations will not be permitted, except as specified or shown on Drawings, or directed by the Owner's Representative. Any unauthorized over excavation carried below the grade or elevation specified or indicated shall be backfilled and compacted to the required grade with the indicated or other material as directed by the Owner's Representative at no additional cost. The Contractor shall avoid unnecessary disturbance to adjacent ground.

2. Obstructions within the limits of required excavations, such as boulders, tree stumps, abandoned pipes and structures, and debris of all types shall be removed as part of excavation work. Metal, plastic and concrete materials shall be disposed of legally offsite.

E. Cut Slopes

1. Cut slopes that remain as visible features of the completed work shall be trimmed to the lines and grades shown on Drawings as the excavation advances unless directed by Owner’s Representative for field fit to minimize removal of trees or to maximize habitat benefit.

2. Debris and trash shall be removed.

3. When completed, the average plane of cut slopes shall conform to the slopes shown on Drawings, and no point shall vary more than ±3 inches, measured normal to the slope. Except for field fit areas, as directed by Owner’s Representative.

4. Variation and irregularities in the bank slopes and bank toe locations are encouraged to create a naturalized channel. Provide smooth transition to existing ground and positive drainage back to low flow channel to reduce the potential for fish stranding on receding flows. Owner’s Representative will provide guidance to Contractor.

3.6 SORTING AND WASHING EXCAVATED MATERIAL

A. Excavated material shown on the Drawings shall be washed and sorted into the following gradations:

1. Fines
2. Spawning Gravel
3. Cobble

3.7 EXCESS FINES GENERATED FROM SORTING

A. Fines generated from sorting operations shall be graded in the sorting area at the Mississippi Bar Stockpile Area, Fill should be placed no greater than 1 ft deep and provide a smooth transition to the existing topography.
3.8 PLACEMENT OF FILL – COBBLE

A. Fill material shown in Drawings shall consist of sorted and washed cobbles.
B. Place cobbles before spawning gravel to minimize loss of spawning gravel during placement.
C. Install cobbles in a manner that will compact them in place, so it doesn’t wash downstream during placement. Minimum 4 passes with heavy equipment to achieve sufficient compaction, to be approved by Owner’s Representative.
D. Cobbles shall be locked in place and well graded, Minimize windrowing.
E. Finished grades shall be no less than finished grade shown on Drawings and no more than 3 inches above finish grade. The surface shall be smoothed and all gullies and potholes greater than 6 inches deep backfilled.

3.9 PLACEMENT OF FILL – SPAWNING GRAVEL

A. Fill material shown in Drawings shall consist of sorted and washed gravel.
B. Install gravel fill in a manner that will compact it in place, so it doesn’t wash downstream during placement.
C. In gravel fill areas, install fill loosely.
D. Finished grades shall be no less than finished grade shown on Drawings and no more than 3 inches above finished grade. The surface shall be smoothed and all gullies and potholes greater than 6 inches deep backfilled.
E. Minimize windrowing in the longitudinal direction. Once the grade has been achieved, make the final grade pass over entire gravel area of the riffle with equipment in the transverse direction (perpendicular to flow).

3.10 PLACEMENT OF FILL – BAR ENHANCEMENT FEATURE

F. Fill material shown in Drawings shall consist of both sorted and washed cobbles and native fill. Native fill material shall be free of organics and excavated from the side channel, habitat benches, and/or level pad of the Bar Enhancement Feature.
G. Install fill in a manner that will compact it in place.
H. Finished grades shall be no less than finished grade shown on Drawings and no more than 3 inches above finished grade. Except in areas field fit by Owners Representative including for minor channel alignment changes to avoid vegetation or field fit associated with Section 35 42 13.23 LWM Installation.
I. Provide positive drainage to the existing side channel to minimize potential for fish stranding.

3.11 PLACEMENT AND COMPACTION OF FILL – LARGE WOODY MATERIAL

A. The habitat roughness features shall be collocated with the LWM structure trenches to ensure sufficient anchor log embedment with a minimum thickness of sediment placed and compacted above the anchor logs. This will be directed by Owner’s Representative.
B. Backfill of trenches in which logs will be installed shall consist of native bed alluvium and material that has been removed from channel bank and habitat benches to each of the LWM installations. The material shall be free of debris and excess organic material.
C. Compact material around the anchor log haunches to eliminate voids surrounding logs.
3.12 HAULING EXCESS MATERIAL
A. All excess material produced from excavation activities not being used as fill for the Bar Enhancement Feature will be hauled offsite to the excess material stockpile area.

3.13 BLASTING
A. Blasting will not be permitted.

3.14 FIELD QUALITY CONTROL
A. Grading tolerances shall be as specified in sub-Sections Excavation, Placement of Fill – Cobble and Placement of Fill – Spawning Gravel.
B. Materials shall not be used until approved by the Owner's Representative.
C. Contractor is responsible for construction survey to ensure adherence to grading tolerances with the exception to field fit directed by the Owners Representative.
C. Coordinate with Owner’s Representative to schedule inspections and approvals at the following stages in the earth moving process:
   1. After excavation of the side channels and habitat benches.
   2. After placement of cobble and spawning gravel in the main channel riffle.
   3. After achieving finished grades on all Work items.
   4. Upon delivery of the LWM orchard trees.
   5. While placing, fastening, and backfilling LWM installation.
D. Progress Inspections: Periodic progress inspections and grade confirmation surveys may be made by Owner’s Representative.
E. Contractor shall correct any deficiencies to Owner’s Representative’s satisfaction.

3.15 SITE CLEAN-UP
A. Contractor shall clean up the Project site following earth moving and grading activities as follows and as directed by Owner’s Representative:
   1. Clean Project site and work area of all containers, packaging, and other debris resulting from earth moving and grading operations.
   2. Dispose of all trash and debris legally at licensed disposal facilities.
   3. Remove all residues resulting from mixing, applying, or equipment flushing.
   4. Remove temporary items.

3.16 ACCEPTANCE
A. Acceptance of earthwork will be made after Work in SECTION 31 00 00 EARTHWORK is deemed complete by Owner’s Representative.

END OF SECTION
SECTION 31 25 00

EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1 SUMMARY

A. Provide all material, labor, and equipment necessary to perform the work as shown on Drawings and as specified herein.

B. Contractor shall be responsible for turbidity monitoring. See requirements in 401 permit Appx. A. Develop and implement a Turbidity Management Plan.

C. Erosion control best management practices shall comply with Drawings and the SWPPP.

D. Contractor shall prepare and implement the SWPPP in accordance with the NPDES General Construction Permit for stormwater and non-stormwater discharges associated with construction activities, entitled: National Pollutant Discharge Elimination System (NPDES) Permit – Water Quality Order 2022-0057-DWQ. Approval of the SWPPP shall not relieve the Contractor of any liability for violations of State or Federal law relating to water pollution.

E. Contractor shall coordinate with Owner’s Representative on erosion control measures to be installed at termination of construction prior to purchasing materials. Contractor’s erosion control measures to stabilize the site shall be compatible with Owner’s planting and seeding plans shown on the Drawings.

F. This SECTION includes:
   1. Erosion and sediment control best management practices (BMPs)

G. Related Technical SECTIONS
   1. SECTION 31 00 00 EARTHWORK
   2. SECTION 32 92 19 SEEDING

1.2 MEASUREMENT AND PAYMENT

A. The contract lump sum price paid for erosion and sediment control shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in erosion and sediment control installations and maintenance as specified in these technical Specifications, Drawings and as directed by the Owner’s Representative.

B. Full compensation for installation as specified herein shall be considered as included in the contract lump sum price paid for erosion and sediment control and no additional compensation will be allowed therefor.

1.3 REFERENCES

A. General

   1. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

   2. Where a date is given for reference standards, the edition of that date shall be used. Where no date is given for reference standards, the latest edition available on the date of Notice Inviting Bids shall be used.
B. American Society for Testing and Materials (ASTM)
   4. ASTM D4873, (2002; R 2009) Identification, Storage, and Handling of Geosynthetic Rolls and Samples

C. California State Water Resources Control Board (SWRCB), www.swrcb.ca.gov/water_issues/programs/stormwater

D. California Department of Transportation (Caltrans)
   1. Manual of Traffic Controls for Construction and Maintenance Work Zones

1.4 SUBMITTALS

A. Contractor shall coordinate project set-up in SWRCB’s SMARTS online system for SWPPP management with Owner.
   a. Contractor shall submit SWPPP to Owner at least 1 month before start of work at River Bend Project Area.
   b. After submission, the Owner and Owner’s Representative will have 3 business days to review and approve or deny the submittal.

B. Contractor shall prepare an erosion and sediment control plan and submitted to the Owner at least 1 month before start of work.
   a. After submission, the Owner and Owner’s Representative will have 4 business days to review and approve or deny the submittal.

C. Turbidity Management Plan - Include construction sequencing and details to minimize exceeding turbidity thresholds defined in the 401 Permit. Prepare Turbidity Management Plan and submit to Owner for review and approval at least 10 working days prior to breaking ground.
   a. After submission, the Owner and Owner’s Representative will have 2 days to review and approve or deny the submittal.

D. Submit product samples and manufacturer's data sheets for all erosion and sediment control products to be used 10 working days prior to installation, including the following.
   1. Manufacturing Quality Control Sampling and Testing
   2. Quality Assurance Samples and Tests
   3. Certificates
   4. Manufacturer’s literature and technical product documentation for any commercial turbidity control product used in the Turbidity Management Plan.
1.5 SEQUENCING AND SCHEDULING
A. Contractor shall be responsible for coordination and timing of erosion and sediment control materials delivery to Project site.

1.6 QUALITY ASSURANCE
A. Contractor shall appoint a superintendent experienced in applying erosion and sediment control BMPs for SWPPP compliance who shall be onsite during the entire duration of construction.
B. Owner’s Representative has the right to reject erosion and sediment control materials prior to installation if they are unsatisfactory.
C. Contractor Qualifications
   1. At the time of bid, Contractor shall provide a list of three (3) projects that demonstrate previous experience in completing erosion and sediment control work similar in type, scope, and scale to the elements described on Drawings and herein.

1.7 DELIVERY, STORAGE, AND HANDLING
A. Contractor shall receive erosion control materials and follow manufacturer’s recommendations for storage and handling.
B. Contractor shall be responsible for the proper storage, handling, and protection of erosion and sediment control materials once they are delivered to Project site.
C. After delivery, Contractor shall be responsible for replacement of any damaged erosion and sediment control material, as determined by Owner’s Representative at no expense to Owner.

1.8 WARRANTY
A. Warrant that all disturbed areas in each Work area treated with erosion and sediment control measures are stabilized with measures shown on Drawings and as specified in this Section and SECTION 3 29 19 SEEDING, under this Contract through final acceptance of contract work.
B. Exclusions: Contractor shall not be held responsible for failures due to neglect by Owner, vandalism, and acts of Nature, during Warranty Period. Report such conditions.

1.9 REPLACEMENTS
A. Failed Materials:
   1. Repair and/or replace at no cost to Owner all erosion and sediment control materials exhibiting conditions which are determined as unacceptable due to workmanship by the Contractor.
B. Incorrect Materials:
   1. During the Warranty Period, replace at no cost to Owner erosion and sediment control materials revealed as being untrue to Drawings or this Specification under direction of the Owner’s Representative.
   2. Provide replacements of quality to match the erosion and sediment control materials at the time the mistake is discovered.
PART 2 - PRODUCTS

2.1 GENERAL
A. Materials not conforming to these Specifications and requirements shall remain the property of Contractor and shall be removed from the job site at no additional cost to Owner.
B. A minimum of 7 days prior to scheduled use, submit manufacturer’s certificate of compliance stating that the ECB meets the requirements of this SECTION.

2.2 TEMPORARY CONSTRUCTION ENTRANCE (TCE) AND PERIMETER CONTROLS
A. Contractor shall provide TCEs per Caltrans Construction Site Best Management Practices Manual detail TC-1 at River Bend Project Area.

2.3 STREET SWEEPING
A. Provide street cleaning, such as sweeping or vacuuming, on any road outside of the project areas, including River Bend Project Area, Mississippi Bar Stockpile Area, Teichert Aggregates – Perkins Facility Excess Material Stockpile Area where construction traffic has caused tracking of sediments onto the roadway. Using water to wash or flush sediments into adjacent drainage systems is prohibited.
B. Contractor shall inspect any county road at the entrance to the project sites daily, or as required by the SWPPP, and sweep tracked sediment as needed, or as required by the Owner’s Representative.

2.4 STRAW
A. Straw shall be certified weed free.
B. Biodegradable natural-fiber erosion and sediment control products (including netting, filling, and thread) shall be used onsite (i.e., no plastic netting, etc.).

2.5 SILT CURTAINS
A. Silt curtains shall be of appropriate height (depth below water surface), length and permeability to effectively retain sediment over the range of expected flows. Contractor shall investigate site conditions and determine appropriate size and permeability of silt curtains.

PART 3 - EXECUTION

3.1 FIELD QUALITY CONTROL
A. Contractor shall review Drawings and construction schedule to identify when and where the site will require sediment and erosion control measures and what are the appropriate measures. Contractor shall prepare a schedule of construction activities and associated erosion and sediment control measures according to Submittals sub-section in this Section and receive approval from Owner’s Representative prior to initiating work.
B. Compliance Inspections: Periodic compliance inspections may be made by Owner’s Representative.
C. Contractor shall correct any deficiencies to Owner’s Representative’s satisfaction.
3.2 LAYOUT
A. Owner’s Representative reserves the right to make minor adjustments in the implementation and/or layout of all erosion and sediment control measures.

3.3 SEDIMENT CONTROL
A. Contractor shall protect ditches, drainage courses, drain inlets and gutters with appropriate BMPs such as gravel bags, fiber rolls, berms, etc.
B. When transferring gravel and cobble to the river for riffle placement, phase placement in a way that would minimize turbidity. See 401 Permit.
C. Transfer all excavated material to dump trucks within the project site and not on the access roads and paths.

3.4 DUST MANAGEMENT CONTROLS
A. The Contractor will implement the Sacramento Metropolitan Air Quality Management District (SMAQMD) Basic Dust Control Measures. Current measures stipulated by the SMAQMD Guidelines include the following:
   1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day, minimum, or as needed to suppress airborne dust.
   2. All haul trucks transporting soil, sand, dirt-covered LWM, or other loose material off-site shall be covered.
   3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
   4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
   5. All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified visible emissions evaluator.
   6. Post a publicly visible sign at the project entrance with the telephone number and representative of the Contractor to contact regarding dust complaints. Following the review of any dust complaints, the Contractor’s project manager shall respond and take corrective action within 2 hours and immediately report to Owner.

3.5 STREET SWEEPING
A. Contractor shall provide traffic control for street sweeping and schedule cleaning outside of heavy traffic times.
B. Traffic controls shall be per Manual of Traffic Controls for Construction and Maintenance Work Zones.
C. Contractor shall remove of sediment deposits and haul to one of the stockpile locations. If sediment has been contaminated, it shall be disposed of legally off site at no additional cost to Owner.

3.6 TEMPORARY CONSTRUCTION ENTRANCE
A. TCEs shall be constructed at all access points to project sites to limit tracking of dirt onto the paved access road.
B. Contractor shall establish and maintain effective perimeter controls to sufficiently control erosion and sediment discharges from the site.
B. Contractor shall grade the TCE to prevent runoff from leaving the construction site.
C. Contractor shall route runoff from the TCE through a sediment-trapping device before discharge.
D. Contractor shall construct the TCE to support the heaviest vehicles and equipment that will use it.
E. Contractor shall not locate the TCE such that it impedes a drainage feature.
F. Contractor shall remove and take ownership of TCE materials immediately following completion of construction.
G. After removing the TCE, the Contractor shall restore the TCE "footprint" to its original condition according to sub-Section Access Route Restoration.

3.7 TURBIDITY MANAGEMENT
A. Turbidity management measures shall separate disturbed excavation and fill areas from the main river and allow sufficient time to settle as addressed in the Turbidity Management Plan.
   1. During in-water construction activities, turbidity levels downstream of the Project area shall be monitored in accordance with the 401 Permit.
   2. Additional turbidity management measures may be needed during construction based upon recurring testing, or modifications to the Turbidity Management Plan may be requested by the Owner’s Representative if turbidity levels downstream of the Project area exceed thresholds in the 401 Permit.

3.8 ACCESS ROUTE RESTORATION
A. Contractor shall remove imported materials from access routes and prepare the surface to the approval of the Owner’s Representative prior to restoring access routes to original condition. In areas where an existing road was widened for equipment access, Contractor shall restore disturbed areas outside of the original width of access routes. Where new access roads were created, Contractor shall restore entire disturbed area per the Drawings.
B. Restoration of disturbed access routes shall bring site access to pre-project conditions by grading and smoothing surfaces damaged by equipment and decompaction by scarification. Special attention shall be given to grade out any low spots or ruts created during construction.

3.9 SITE CLEAN-UP
A. Contractor shall clean up the Project site following erosion and sediment control activities as follows and as directed by Owner’s Representative:
   1. Clean Project site and work area of all containers, packaging, and other debris resulting from erosion and sediment control operations.
   2. Dispose of all trash and debris legally at licensed disposal facilities.
   3. Remove temporary items.

3.10 ACCEPTANCE
A. Acceptance of erosion and sediment control measures will be made after Work in SECTION 31 25 00 EROSION AND SEDIMENT CONTROL is deemed complete by Owner’s Representative.
END OF SECTION
PART 1 - GENERAL

1.1 SUMMARY

A. Provide all materials, labor, and equipment necessary to perform the Work for seeding as shown on Drawings and as specified herein.

B. This SECTION includes:
   1. Seed procurement, delivery, and storage
   2. Seedbed preparation
   3. Broadcast seed mix composition and application
   4. Site clean-up

C. Related Technical SECTIONS
   1. SECTION 31 25 00 EROSION AND SEDIMENT CONTROL
   2. SECTION 32 93 00 PLANTING

1.2 DEFINITIONS

A. NOTICE TO PROCEED: The written authorization by the Owner’s Representative to the Contractor specifying the date the work may begin and any conditions regarding the beginning of the Work.

B. WEED(S): Weeds are defined as those invasive plant species listed in the California Invasive Plant Inventory (CAL-IPC) available at https://cal-ipc.org/ and those species listed by the California Department of Food and Agriculture’s Noxious Weeds list also provides noxious weeds and associated pest ratings available at https://www.cdfa.ca.gov/plant/ipc/encycloweedia/pdf/CaliforniaNoxiousWeeds.pdf

C. SUITABLE SEEDBED: A suitable seedbed is defined as a vegetation- and thatch-free soil surface that has been cultivated and prepared to provide a uniform (i.e., non-undulating) surface, with compaction rates equal to surrounding undisturbed areas.

D. TACKIFIER: shall be a concentrated, biodegradable, organic derivative of corn, Plantago, or other organic material. Provide tackifier in powder form in clearly marked bags stating the contents of each package. Tackifier shall be non-toxic to plant and animal life, noncorrosive and non-crystalline.

1.3 MEASUREMENT AND PAYMENT

A. There are several discrete Work items that will be paid for on a per unit basis. The contract unit price paid for these Work items shall include full compensation for seeding, including furnishing all labor, materials, tools, equipment, and incidentals, as specified in these technical Specifications, Drawings and as directed by Owner’s Representative. Those Work
items include:

1. Seeding of all areas shown on the Drawings including excess material areas, staging area, graded areas and disturbed areas above the waterline at time of construction. Measurement for seeding shall be made per acre, to the nearest 0.1 acre.

B. Full compensation for seeding as specified herein shall be considered as included in the contract unit price paid for each of the Work items identified above and no additional compensation will be allowed.

C. OPTIONAL BID ITEM—See Drawings, Plant Riparian Seed Mix and install Straw in undisturbed areas as shown on the Drawings.

1.4 REFERENCES

A. Nomenclature


B. California Seed Law (California Department of Food and Agriculture). More information is available online at:


C. California Department of Transportation (Caltrans), Standard Specifications, 2018 Edition.

D. All standards shall include the latest additions and amendments as of the date of advertisement for bids.

1.5 SUBMITTALS

A. The Contractor shall be responsible for delivering submittals to the Owner for approval before ordering materials, as indicated below.

B. Within five (5) Business Days of the Notice to Proceed, the Contractor shall submit manufacturer specifications describing all equipment to be used under for the work under this specification section including descriptive data and calibration tests.

C. Within five (5) Business Days of the Notice to Proceed the Contractor shall submit a plan for approval that shows proposed equipment, materials storage, and staging locations.

D. Within 30 days of Notice to Proceed, and at least five (5) Business Days prior to ordering/purchasing, the Contractor shall submit a seed procurement order that shall, at minimum, include: name, address, email address, and phone number of seed suppliers; plant species and variety/ecotype (by botanical and common names); genetic stock source (ecotype) and/or origin location and grow-out location of all seed material; and quantities ordered. The Contractor shall also submit a letter from seed supplier, or appropriate seed lot tags, stating the minimum percent purity and minimum percent germination. Seed mixes shall be as in these Specifications.

E. Prior to seeding the Contractor shall submit photos or scans of the certified seed mix labels
from the supplier affixed to sealed seed mix bags for the Owner’s approval.

F. The Owner’s Representative may at any time request, test, and analyze seeding material samples to ensure their conformance to these Specifications. The Contractor shall furnish these tests, at no additional cost. Seeding materials not meeting the Owner’s Representative’s approval shall immediately be removed from the Project site at the Contractor’s expense.

G. A substitution of products, materials, and/or approaches may be proposed for approval by any bidding contractor as an “equal” to that specified in the construction documents before the close of the submittal of questions during the bid period. All substitutions submitted for approval as “an equal” shall be submitted as a package and not as individual requests for substitution of products, materials, and/or approaches, and shall be fully supported by documented proof of equivalent to the products, materials, and/or approaches specified. At no time during the Contract period will substitutions be considered, unless approved by the Owner and Owner’s Representative.

1.6 SEQUENCING AND SCHEDULING

A. The Contractor shall be responsible for seed storage, delivery and application timeframes and conditions as in these Specifications.

B. Seeding shall be applied after installation of willow pole cuttings and plugs in accordance with Section 32 93 00 “Planting”.

1.7 DELIVERY, STORAGE, AND HANDLING

A. The Contractor shall be responsible for storing and maintaining seeding materials in good condition as delivered until installed.

1. The Contractor may wish to erect a temporary fence and or provide a container box to protect seeding materials. Seed materials shall be maintained in optimal condition and shall be protected at all times from animal damage; vandalism; inclement weather conditions, including wind, frost, toxic water, heat, sunlight, moisture, fungus, and rot; contact with vehicles, equipment, and tools; and any other conditions that would damage or reduce the viability of the seed materials.

2. Unacceptable seeding materials shall be replaced before the start of seeding at the Contractor's expense. Seeding materials not meeting the Owner's Representative’s approval shall immediately be removed from the Project site at the Contractor's expense.

B. All seeding material problems shall be corrected at the Contractor's expense within five (5) Business Days of the date of the initial delivery before any seeding operations.

PART 2 - PRODUCTS

2.1 GENERAL

A. Materials not conforming to these Specifications and requirements shall remain the property of Contractor and shall be removed from the job site at no additional cost to Owner.
2.2 NATIVE SEED MIX

A. The Contractor shall provide all seed, including replacement seed required for re-seeding, during the construction period. Seed mixes shall be collected or grown out in conditions as similar to, and as close to, the Project site as practicable, with a preference for seed mixes from within the same watershed of the Project site. Where not available from within the same watershed, seed mixes shall be grown in neighboring regions in the Sacramento Valley or Delta & Eastside Streams, both subregions of the Great Central Valley Region of California. There shall be no substitutions of species or variety as shown in seed mix tables unless authorized by the Owner’s Representative.

B. Seed shall be fresh, clean and packaged in dealer’s unopened container with original label. Containers opened prior to inspection or without a label or tag will not be accepted. Each seed bag shall be delivered to the Project site sealed and clearly marked as to the species, purity, percent germination, weed seed, inert material, dealer’s guarantee, and date of test. The seed shall be free of mold. The percent of noxious weed seed shall not exceed 1.5 percent by weight of the total seed mixture.

C. Seed mixes shall be as follows:

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>PLS lbs per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GRASSES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGROSTIS EXARATA</td>
<td>spike bentgrass</td>
<td>0.20</td>
</tr>
<tr>
<td>ELYMUS GLAUCUS</td>
<td>blue wildrye</td>
<td>5.00</td>
</tr>
<tr>
<td>ELYMUS TRITICOIDES</td>
<td>creeping wildrye</td>
<td>6.00</td>
</tr>
<tr>
<td>HORDEUM BRACHYANTHERUM SSP BRACHYANTHERUM</td>
<td>meadow barley</td>
<td>10.00</td>
</tr>
<tr>
<td>HORDEUM BRACHYANTHERUM SSP CALIFORNICUM</td>
<td>California barley</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>FORBS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACHILLEA MILLEFOLIUM</td>
<td>yarrow</td>
<td>0.10</td>
</tr>
<tr>
<td>ARTEMISIA DOUGLASIANA</td>
<td>California mugwort</td>
<td>0.40</td>
</tr>
<tr>
<td>ASCLEPIAS FASCICULARIS</td>
<td>narrow leaf milkweed</td>
<td>0.15</td>
</tr>
<tr>
<td>EUTHAMIA OCCIDENTALIS</td>
<td>western goldentop</td>
<td>0.10</td>
</tr>
<tr>
<td>GRINDELIA CAMPORUM</td>
<td>Great Valley gumweed</td>
<td>2.00</td>
</tr>
<tr>
<td>TRIFOLIUM WILLDENOVII</td>
<td>tomcat clover</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>TOTAL PLS LBS PER ACRE</strong></td>
<td></td>
<td>26.45</td>
</tr>
<tr>
<td><strong>APPROXIMATE SEEDS PER SQ FT</strong></td>
<td></td>
<td>100.00</td>
</tr>
</tbody>
</table>
### STAGING AREA SEED MIX

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>PLS lbs. per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GRASSES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELYMUS GLAUCUS</td>
<td>blue wildrye</td>
<td>8.00</td>
</tr>
<tr>
<td>FESTUCA MICROSTACHYS</td>
<td>small fescue</td>
<td>2.25</td>
</tr>
<tr>
<td>HORDEUM BRACHYANTHERUM SSP CALIFORNICUM</td>
<td>California barley</td>
<td>10.00</td>
</tr>
<tr>
<td>POA SECUNDA SSP. SECUNDA</td>
<td>pine bluegrass</td>
<td>0.50</td>
</tr>
<tr>
<td>STIPA PULCHRA</td>
<td>purple needlegrass</td>
<td>6.00</td>
</tr>
<tr>
<td><strong>FORBS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACHILLEA MILLEFOLIUM</td>
<td>yarrow</td>
<td>0.80</td>
</tr>
<tr>
<td>ACMISPON GLABER</td>
<td>deer weed</td>
<td>2.50</td>
</tr>
<tr>
<td>ESCHSCHOLZIA CALIFORNICA</td>
<td>California poppy</td>
<td>1.00</td>
</tr>
<tr>
<td>LASTHENIA CALIFORNICA</td>
<td>California goldfields</td>
<td>0.50</td>
</tr>
<tr>
<td>LUPINUS MICROCARPUS VAR. DENSIFLORUS</td>
<td>chick lupine</td>
<td>11.50</td>
</tr>
<tr>
<td>LUPINUS NANUS/ LUPINUS BICOLOR</td>
<td>sky lupine</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>SHRUBS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BACCHARIS PULARIS</td>
<td>coyote bush</td>
<td>0.10</td>
</tr>
<tr>
<td><strong>total PLS LBS PER ACRE</strong></td>
<td></td>
<td>43.80</td>
</tr>
<tr>
<td><strong>APPROXIMATE SEEDS PER SQ FT</strong></td>
<td></td>
<td>100.00</td>
</tr>
</tbody>
</table>

### ACCESS IMPROVEMENT AREA SEED MIX

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>PLS lbs. per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GRASSES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELYMUS GLAUCUS</td>
<td>blue wildrye</td>
<td>12.00</td>
</tr>
<tr>
<td>FESTUCA MICROSTACHYS</td>
<td>small fescue</td>
<td>5.00</td>
</tr>
<tr>
<td>HORDEUM BRACHYANTHERUM SSP CALIFORNICUM</td>
<td>California barley</td>
<td>12.00</td>
</tr>
<tr>
<td>POA SECUNDA SSP. SECUNDA</td>
<td>pine bluegrass</td>
<td>0.60</td>
</tr>
<tr>
<td>STIPA PULCHRA</td>
<td>purple needlegrass</td>
<td>10.00</td>
</tr>
<tr>
<td><strong>total PLS LBS PER ACRE</strong></td>
<td></td>
<td>39.6</td>
</tr>
<tr>
<td><strong>APPROXIMATE SEEDS PER SQ FT</strong></td>
<td></td>
<td>100.00</td>
</tr>
</tbody>
</table>

D. Variations and substitutions must be approved by the Owner’s Representative.

E. Seeding rates assume the broadcast seeding method would be used. The Contractor will be solely responsible for the cost of additional seed required by use of a different seeding method. The multiplier rates defined below shall be used to adjust the amount of seed utilized per acre for different seeding methods.

<table>
<thead>
<tr>
<th>Method</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill Seeding</td>
<td>.75</td>
</tr>
<tr>
<td>Hydroseeding</td>
<td>1.75</td>
</tr>
</tbody>
</table>

### 2.1 NATIVE GRASS STRAW

A. Straw shall be derived from native grass straw that shall be mold-free, air-dry straw, certified as noxious weed free.
PART 3 - EXECUTION

3.1 FIELD QUALITY CONTROL

A. Contractor shall request and receive approval from Owner’s Representative prior to commencement of Work in this Section and prior to seed installation.

B. Contractor shall inspect Project site and become familiar with any access requirements, access restrictions, and any other site conditions.

C. Contractor shall coordinate with Owner’s Representative to schedule inspections at the following stages:

1. Inspection of seeding areas at least five (5) Business Days prior to seeding to demonstrate that compaction rates in the staging area and access improvement areas equal to that of the surrounding undisturbed areas to a minimum depth of 18 inches. Remediation of compaction will be the responsibility of the Contractor. Inspection of seedbed preparation prior to seeding.

2. Inspection during broadcast seeding.

3. Acceptance of seeding.

D. Progress inspections: In addition to the inspections specified, the Owner’s Representative may make periodic progress inspections.

3.2 BROADCAST SEEDING

A. Timing

1. Contractor shall broadcast seed between September 1 and October 31 unless otherwise approved by Owner’s Representative.

2. Contractor shall coordinate with Owner’s Representative a minimum of five (5) Business Days prior to seed application to ensure that Owner’s Representative will be present during seed application.

3. Seed shall be applied before the onset of winter rains. Work shall be performed only at times when weather conditions at Project site are favorable. No Work shall be performed when wind conditions prohibit uniform distribution of seed unless approved by Owner’s Representative. No Work shall be performed when soils are saturated. A saturated work area is defined as any area specified for work in the Drawings and these Specifications for which the soil moisture content creates conditions that performing work in the area would result in damage (e.g., soil compaction, soil displacement, and track rutting) to the desired condition for the area.

4. Native grass straw application shall be completed within the same day as seeding application.

B. Site Preparation

1. Clear all areas to be seeded of substantial debris and any other impediments to seed soil contact.

2. Contractor shall remove non-native vegetation within areas to be seeded as directed by the Owner’s Representative.
3. Contractor shall smooth transition between differing seed mix areas shall be seamless such that there is no elevational differential at the zone boundary.

4. Contractor shall provide a dozer or tractor capable of pulling tillage equipment (e.g., double-row hydraulic offset disk, ring roller) and leveling equipment (e.g., float, box scraper) needed to prepare a Suitable Seedbed, as defined in this Section, in both the STAGING AREA and ACCESS IMPROVEMENT AREA.

C. Layout
1. RIPARIAN MIX: The riparian seed shall be applied to locations noted on the Drawing; from the edge of water level at time of installation up to the 5-year Water Surface Elevation (WSE).

2. STAGING AREA SEED MIX: The Staging Area Seed Mix shall be applied to locations noted on the Drawings; areas above the 5-year WSE where soil surface has been disturbed by construction activities within the Project Limit of Work, as shown on the Drawings.

3. ACCESS IMPROVEMENT AREA SEED MIX: The Access Improvement Area Seed Mix shall be applied to locations noted on the Drawings; areas above the 5-year WSE where soil surface has been disturbed to provide access for large equipment, as shown on the Drawings.

4. The Contractor shall field mark the start and finish points and lateral boundaries of seeding areas for review by the Owner’s Representative before seeding operations.

D. Seed Application
1. Apply seed with a broadcast seeder that continuously mixes and applies the seed at the specified rate. A carrier may be needed to ensure the mixture flows correctly through the seeder and the seed is distributed evenly throughout the site. If seeding equipment has a single seed hopper, apply the grass species and the forb/shrub species in separate batches.

2. Rake all seed into soil immediately after application. Rake seed bed lightly to cover seed with 1/8-inch to ¼-inch layer of soil. Seed cover shall not exceed ¼ inch.

3. Prevent foot traffic or storage of supplies in seeded areas.

3.3 NATIVE GRASS STRAW

A. Following seed application, apply the native grass straw by hand or using a straw blower to a depth of 2- to 3-inches over all seeded areas, approximately 2000 lbs./acre.

B. Native grass straw shall be applied immediately after seeding and no longer than 24 hours after seeding.

C. Following straw application, all seeded areas shall be track-walked with a small piece of tracked equipment to ensure proper seed to soil contact and to crimp the straw into the soil to help hold it in place. Alternatively, a ring-roller, cultipacker, straw crimper, or similar equipment could be used.

1. Track walking shall be performed by machines operated directly up and down slopes such that tracks are perpendicular with contours. This is intended to slow downhill runoff flow. Tracked areas resulting in downhill flow shall be raked to loosen surface soils and track walked in the correct direction.
D. In areas steeper than 4:1, the contractor shall apply tackifier at a rate of 150 pounds per acre to secure straw mulch in place.

3.4 SITE CLEAN-UP

A. Contractor shall cleanup following seeding activities as follows and as directed by Owner’s Representative:

1. Remove all containers, packaging, and other debris resulting from seeding operations.
2. Dispose of all debris legally at licensed disposal facilities.
3. Clean all surfaces not designated for treatment and remove all residues resulting from mixing, applying, or equipment flushing.
4. Remove temporary items (e.g., site layout materials).

B. Seeded areas disturbed by subsequent construction activities shall be re-seeded within five (5) Business Days of the completion of such activities.

3.5 ACCEPTANCE

A. Acceptance of seeding will be made after Work in Section 32 92 19 Seeding is deemed complete by Owner’s Representative.

END OF SECTION
PART 1 – GENERAL

1.1 SUMMARY

A. Provide all materials, labor, and equipment necessary to perform the Work for plug installation and willow pole cuttings as shown on Drawings, and as specified herein.

B. This SECTION includes:
   1. Willow pole cutting collection and storage.
   2. Willow pole cutting installation.
   3. Plug installation.
   4. Site clean-up

C. Related Technical SECTIONS

1. SECTION 31 25 00 EROSION AND SEDIMENT CONTROL
2. SECTION 32 92 19 SEEDING

1.2 DEFINITIONS

A. NOTICE TO PROCEED: See Section 32 92 19, “Seeding” Article 1.2 “Notice to Proceed” for definition.


1.3 MEASUREMENT AND PAYMENT

A. There are several discrete Work items that will be paid for on a per unit basis. The contract unit price paid for these Work items shall include full compensation for willow pole cutting and plug installation including furnishing all labor, materials, tools, equipment, and incidentals, as specified in these technical Specifications, Drawings and as directed by Owner’s Representative. Those Work items include:

1. Installation of willow pole cuttings as shown on the Drawings which includes willow pole cutting collection and proper transportation and storage until time of installation at the Project Site. Measurement and payment for willow pole cuttings shall be made for each individual willow pole cutting completely supplied and installed by the Contractor and approved by the Agency.

2. Installation of plugs within the Riparian Seeding Area as shown on the Drawings, with locations field fit by the Owner’s Representative. This includes proper transportation and storage until time of installation at the Project Site. Measurement and payment for plug
plantings shall be made for each individual plug planting completely supplied and installed by the Contractor and approved by the Agency.

B. OPTIONAL BID ITEM- See Drawings, Plant Willow Pole cuttings and install Sedge Plugs in undisturbed areas as shown on the Drawings.

C. Full compensation for plantings as specified herein shall be considered as included in the contract lump sum price paid for each of the Work items identified above and no additional compensation will be allowed.

1.4 REFERENCES

A. Nomenclature


B. All standards shall include the latest additions and amendments as of the date of advertisement for bids.

1.5 SUBMITTALS

A. The Contractor shall be responsible for delivering submittals to the Owner for approval before ordering materials or harvesting willow pole cuttings.

B. Within 30 Calendar Days of the Notice to Proceed, the Contractor shall submit manufacturer specifications describing all equipment to be used for the work under this specification section including descriptive data and calibration tests.

C. Within five (5) Business Days of the Notice to Proceed the Contractor shall a plan for approval that shows proposed equipment, materials storage, and staging locations.

D. Within 30 Calendar Days of the Notice to Proceed, the Contractor shall submit in writing suitable locations and approach for willow pole cutting and harvesting. If not otherwise guided by the Owner's Representative, the contractor shall include the location, species, property owner, and a letter indicating permission has been granted from the property owner to harvest plant material.

E. Within 30 Calendar Days of the Notice to Proceed, the Contractor shall submit a copy of the plant procurement order from a reputable nursery or multiple nurseries that specialize in native plants, including but not limited to the name, address, and phone number of said nursery; plant species and variety (by botanical and common names); container types and sizes; and quantities ordered.

F. Within 30 Calendar Days of the Notice to Proceed, the Contractor shall submit for review and approval a detailed schedule addressing plant procurement, including storage, and anticipated delivery dates. The Contractor shall be responsible for providing weekly written updates of said schedule thereafter.

G. The Owner's Representative may at any time request, test, and analyze plug or willow pole cutting material to ensure their conformance to these Specifications. The Contractor shall furnish these tests, at no additional cost. Plugs or willow pole cuttings not meeting the
Owner’s Representative’s approval shall immediately be removed from the Project site at the Contractor’s expense.

H. A substitution of products, materials, and/or approaches may be proposed for approval by any bidding contractor as an “equal” to that specified in the construction documents before the close of the submittal of questions during the bid period. All substitutions submitted for approval as “an equal” shall be submitted as a package and not as individual requests for substitution of products, materials, and/or approaches, and shall be fully supported by documented proof of equivalent to the products, materials, and/or approaches specified. At no time during the Contract period will substitutions be considered, unless approved by the Owner and Owner’s Representative.

1.6 SEQUENCING AND SCHEDULING

A. The Contractor shall be responsible for plug storage, delivery and installation timeframes and conditions as in these Specifications. The Contractor shall coordinate the sequencing of plug installation with the Owner’s Representative.

B. The Contractor shall be responsible for willow pole cutting collection, storage, delivery and installation timeframes and conditions as in these Specifications. The Contractor shall coordinate the sequencing of willow pole cutting collection and installation with the Owner’s Representative.

C. Willow cuttings shall be installed before plugs all of which is prior to seeding.

1.7 DELIVERY, STORAGE, AND HANDLING

A. After willow cutting harvest/collection, the contractor shall seal the top end of each plant cutting by dipping it in 1:1 mix of light-colored latex paint and water. Assign one different color to each species. This prevents loss of water via transpiration through the exposed cut end during transport.

B. The Contractor shall place the bottom 50 percent of the willow cuttings in buckets of clean water immediately after they are harvested and until they are installed. The Contractor shall wrap the tops of the cuttings in separate bundles by species in burlap or other suitable material that protects the cuttings from sunlight, heat, and wind, and allows air to circulate.

C. Cuttings shall be soaked in water for a minimum of 24 hours before planting, or as directed by the Owner’s Representative. If cuttings must be stored for a longer period, they shall be kept in buckets with water, covered with moistened burlap or similar breathable material and stored in a cool, dark place. Stored cuttings shall be kept moist and in a dark location for a maximum period of 96 hours. Cuttings shall be labeled with the date they were collected. The Contractor shall avoid soaking latex-painted cutting tops.

D. The Contractor shall be responsible for storing and maintaining the plugs as delivered throughout the Construction Period. The Contractor may wish to erect a temporary fence to protect container plants. The plugs shall be maintained in optimal condition and shall be protected at all times from animal damage; vandalism and theft; inclement weather conditions, including drought, wind, and frost; toxic water; excessive sunlight, heat, or moisture; fungus and rot; or contact with vehicles, equipment, and tools and any other conditions that would damage or reduce the health and vigor of the container plants. Soil in plant containers shall be kept moist at all times before planting and shall be completely watered 1 hour or less before installation and shall be moist when installed.

E. The Contractor shall handle all materials carefully to ensure that plugs or willow pole cuttings are

03/25/2024

32 93 00

WILLOW POLE CUTTINGS
not damaged or subjected to excessive heat, wind, or desiccation. At no point shall the contractor leave plugs or willows exposed to direct sunlight prior to planting. The Contractor shall remove and replace split or damaged plugs or cuttings in the event that any are damaged during storage or transport.

PART 2 – PRODUCTS

2.1 GENERAL

A. Materials not conforming to these Specifications and requirements shall remain the property of Contractor and shall be removed from the job site at no additional cost to Owner.

2.2 WILLOW POLE CUTTINGS

A. The Contractor shall provide willow pole cuttings collected in accordance with these Specifications that are vigorous, free of insects and disease. The Contractor shall provide willow pole cuttings from with the same watershed and within 50 miles of the project site as approved by the Owner’s Representative. Cuttings shall be collected from various suitable sources, at minimum 2 locations per species, to ensure genetic diversity of the plant material.

B. Willow pole cuttings shall be comprised of the following species:

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SALIX EXIGUA</td>
<td>sandbar willow</td>
</tr>
<tr>
<td>SALIX LAEVIGATA</td>
<td>red willow</td>
</tr>
<tr>
<td>SALIX LASIANDRA</td>
<td>shining willow</td>
</tr>
<tr>
<td>SALIX LASIOLEPIS</td>
<td>arroyo willow</td>
</tr>
</tbody>
</table>

Each willow species shall compromise at least 10% of total number cuttings. Both Salix exigua and Salix lasiandra shall be planted at the lowest elevations.

2.3 PLUGS

A. The Contractor shall provide all plugs for planting. Plugs shall be provided by the Contractor from reputable nurseries specializing in native plant propagation and employ best management practices (Working Group for Phytophthoras in Native Habitats 2016, or more current guidance) aimed at limiting the establishment of soil borne pathogens (e.g., Phytophthora spp.) in soil, pots, and water systems, as well as plants.

B. Plugs shall be at minimum 1.25-inches square x 2-inches deep.

C. Plugs shall be collected or grown out in conditions as similar to, and as close to, the Project site as practicable, with a preference for genetic stock from within the same watershed of the Project site. Where not available from within the same watershed, plugs shall be grown in neighboring regions in the Sacramento Valley or Delta & Eastside Streams, both subregions of the Great Central Valley Region of California. There shall be no substitutions of species or variety unless authorized by the Owner’s Representative.

D. Plugs shall have a normal habit of growth and shall be sound, healthy, vigorous, and free of insect infestations, plant diseases, sun scalds, or other objectionable disfigurement. The plugs should have fibrous root systems which are not root or pot bound.
E. Plugs shall be of the following species and quantity.

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAREX BARBARAE</td>
<td>valley sedge</td>
<td>1500 plugs</td>
</tr>
</tbody>
</table>

PART 3 – EXECUTION

3.1 FIELD QUALITY CONTROL

A. Contractor shall request and receive approval from Owner’s Representative prior to commencement of Work in this Section and prior to willow pole cutting collection and installation.

B. Contractor shall inspect Project site and become familiar with any access requirements, access restrictions, and any other site conditions.

C. Contractor shall coordinate with Owner’s Representative to schedule inspections at the following stages:
   1. Inspection at willow harvest locations.
   2. Inspection willow pole cutting installation.
   3. Inspection during plug installation.
   4. Acceptance of plug and willow pole cutting installation.

D. Progress inspections: In addition to the inspections specified, the Owner’s Representative may make periodic progress inspections.

3.2 WILLOW POLE CUTTING COLLECTION

A. Timing
   1. Willows shall be dormant when harvested. The Contractor shall collect live cuttings after grading and LWM installation is complete and approved by the Owner’s representative. Notice of harvesting shall be made to the Owner’s Representative a minimum of 72 hours in advance of harvest for approval.

B. Willow pole cutting collection shall conform to the Drawings and these Specifications. If adjustments are necessary, the Contractor shall proceed only after receiving approval from the Owner’s Representative for such adjustments.

C. All tools shall be cleaned with 70% ethanol or a 10% bleach solution (one part bleach to nine parts water) to avoid spreading disease. The contractor shall clean tools before use in each new area of harvesting.

D. The Contractor shall minimize disturbance to the donor areas. The Contractor shall harvest cuttings from healthy, vigorous plants. Additionally, no more than 30 percent of each individual plant shall be cut during harvesting from each suitable collection area. Branches shall be removed from the inside of the crown area rather than the more visually obvious exterior area.

E. The Contractor shall collect willow pole cuttings that are reasonably straight, 3–5 feet in length, a minimum of 1/2 inch in diameter, with at least 5–6 dormant nodes where the buds are formed. For easy recognition of top and bottom of plant cutting at time of planting, cut off...
top end with a horizontal square cut above a leaf bud, bottom end with a cut at 45-degree angle below a leaf bud. Clean cuts shall be made without any additional damage or scarring of parent shrub or tree. The Contractor shall avoid cutting the willows down to size after initial collection.

F. The contractor shall make cuts with sharp, clean tools including pruning shears, lopping shears, small wood saw or brush cutters. Chain saws are prohibited from use for willow harvesting. Anvil type shears of any type are also prohibited from use for willow harvesting as these tend to crush and split cutting ends.

3.3 WILLOW POLE CUTTING INSTALLATION

A. Timing

1. The Contractor shall install cuttings within 96 hours after collection and keep wet until planted. The Contractor shall not plant cuttings that have soaked more than 96 hours after cutting (unless stored properly upon Owner’s Representative approval).

2. Contractor shall coordinate with Owner’s Representative at least five (5) Business Days prior to willow pole cutting installation to ensure that Owner’s Representative will be present.

3. At no time shall the Contractor’s equipment be operated during rain events or on saturated work areas. Contractor shall coordinate with the Owner’s Representative to determine when work can begin following alleviation of saturated work area conditions.

A. Site Preparation

1. Contractor shall remove all trimmings, trash, and debris found within the planting area and recycle or otherwise dispose of materials in accordance with State and local regulations.

2. Contractor shall remove non-native vegetation within areas to be planted as directed by the Owner’s Representative.

B. Layout

1. The Contractor shall field mark the start and finish points and lateral boundaries of willow pole cutting areas for review by the Owner’s Representative before installation.

C. Installation

1. The contractor shall make planting holes for each cutting or trenches for multiple cuttings to be placed perpendicular to the ground. The contractor may excavate by use of an auger, post hole digger, waterjet stinger, or similar tools. Planting holes shall be made large enough to receive the cuttings without damaging the bark. Where rock or other hard material prohibits holes from being excavated as specified, new holes shall be excavated, and the abandoned holes backfilled.

2. To maintain optimal conditions, if the soil in and around the planting area is not wet prior to planting, the Contractor shall water the soil and maintain in a wet state until the cuttings are planted. It is essential for the planted cuttings to have good contact with the soil for roots to sprout. After inserting the plant cutting into planting hole, the Contractor shall prepare mud slurry by mixing native soil and water and fill the planting hole with the soil water slurry. Tamp soil around the cutting thoroughly to remove any air pockets. Compaction shall be adequate to prevent the cutting from being easily removed from the
soil. Slurry shall be contained within the planting area and shall not enter unauthorized areas.

3. Cuttings shall be planted with approximately 75 percent of their length in good contact with soil and such that at least two bud scales are visible. At a minimum, stakes shall be buried two feet below ground surface. The bottom of the cutting must make contact with the saturation zone. The cuttings shall not protrude more than 25 percent of their length above the ground level.

4. Cuttings shall be planted with the bottom angle-cut ends in the ground and (latex painted straight-cut) tops above ground. Leaf bud scars shall point up. Damage to the cuttings, stripping of bark or splitting cuttings during installation shall be avoided. Hammering of cuttings into the soil shall not be permitted.

5. Cuttings shall be planted on average at 5 ft O.C. at the direction of Owner’s Representative. The Contractor shall not plant cuttings in a grid pattern. See Drawings.

3.4 PLUG INSTALLATION

A. Timing

1. Plugs shall be installed following willow pole cutting installation and prior to seeding.

B. Site Preparation

1. Contractor shall remove all trimmings, trash, and debris found within the planting area and recycle or otherwise dispose of materials in accordance with State and local regulations.

2. Contractor shall remove non-native vegetation within areas to be planted as directed by the Owner’s Representative.

D. Layout

1. Plug planting layout shall be marked in the field by the Owner’s Representative. Within these marked locations, Individual plants shall be equally distributed with 3’ O.C. spacing.

E. Installation

1. Plugs shall be set out at the project site daily, ensuring that the number of plugs distributed to the planting area can be installed and watered on the same day as they are set out.

2. Plug planting holes shall be dug by hand to avoid compacting the planting hole. The hole shall be 1.5 to 2 times the diameter of the root ball. The Contractor shall remove plugs from their containers without damaging the plant or root system and the root ball shall be entirely intact. The root ball, if visible at the soil surface, shall be slightly scarified and inserted in the planting hole without bending or damaging the roots. The plug shall be placed so the root crown is at grade and covered with a maximum of 0.25-inch layer of backfill. The hole shall be backfilled as needed with the original soil that was removed. The Contractor shall tamp soil so that all air pockets are removed, and the plant is secure and at the proper grade.

F. The Contractor shall be responsible for ensuring that the plugs are properly watered before, and during, the installation to maintain the plugs in a healthy and vigorous condition during installation. At minimum all plugs shall be thoroughly watered immediately after installation,
completely saturating each plant location twice as deep as the lowest part of the root ball.

3.1 SITE CLEAN-UP

A. Contractor shall clean up following seeding activities as follows and as directed by Owner’s Representative:
   1. Remove all containers, packaging, and other debris resulting from cutting installation operations.
   2. Dispose of all debris legally at licensed disposal facilities.
   3. Remove temporary items.

3.2 ACCEPTANCE

A. Acceptance of willow pole cutting and plug installation will be made after Work in Section 32 93 00 Plantings is deemed complete by Owner’s Representative.
PART 1 – GENERAL

1.1 DESCRIPTION

A. This Section includes requirements for the size and grade of logs and whole orchard trees and fastening requirements to be used for the Large Woody Material (LWM) procurement and installation as shown in the Drawings.

1.2 MEASUREMENT AND PAYMENT

A. The contract unit price paid for each LWM structure installation shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in orchard tree and anchor log acquisition, harvest, transport, storage, placement, and necessary earthwork as specified in these technical Specifications, Drawings and as directed by the Owner’s Representative, required for construction of the LWM structures.

1.3 SUBMITTALS

A. Orchard Tree Source Identification, Harvesting, and Hauling Plan
   a. To be submitted to Owner at least 1 month before start of work at River Bend Project Area.
   b. The Orchard Tree Source Identification, Harvesting, and Hauling Plan shall include the following items:
      i. Species, variety, age, average dimensions, and information of the orchard trees
      ii. Location and background information of the orchard including last harvest date and last irrigation date.
      iii. Photos of the orchard trees
      iv. Proposed equipment to load, unload, and place the orchard trees.
      v. Proposed methods to minimize damage to trees.
   c. Contractor shall grant Owner’s Representative access to tree harvest site to inspect candidate trees. Contractor shall accompany Owner’s Representative to tree harvest site and identify trees intended for use on the Project.
   d. After Owner’s Representative tree inspection and Contractor’s submittal, Owner and Owner’s Representative will have 3 days to review and approve or deny the submittal.

PART 2 – PRODUCTS

2.1 PRODUCT DATA

A. Anchor Logs – Contractor shall acquire and deliver anchor logs to be used as ballast for the LWM installations. Delivery and storage location shall be coordinated with the Owner prior to mobilization.
   a. Anchor logs shall consist of straight conifer (fir or pine) logs that have been debarked and untreated with an average diameter of 8-12 inches and 30-35 feet in length.
B. Orchard Trees – Contractor shall acquire and deliver whole, live almond trees or approved equivalent (including intact rootwad) to be used as habitat and provide velocity refuge.
   a. Whole almond trees or approved equivalent (including intact rootwad) shall have a Diameter at Breast Height (DBH) between 8 and 12 inches, tree bole of 4-8 feet in length, and canopy of 10-15 feet in diameter.
   b. Prior to excavation from the donor location, trees shall be watered in the same regiment as the trees in the fruit producing orchard.
   c. When delivered to the site, the trees shall be alive. When bark is scraped on a branch of ½ inch in diameter or larger, the cambium layer must be moist and vibrant and not brown or brittle. Branches up to one (1) inch must be able to be bent at a 45 degree angle without breaking. Leaves shall be green. No more than 5% of the tree shall have dead leaves or brittle branches.
   d. Trees shall be free of bacteria soft rot and disease.
   e. Orchard trees shall be delivered to the site with main branches unbroken and fine branching structure intact.

C. Slash – Contractor shall acquire and deliver slash to be placed in the void spaces between the orchard tree, anchor logs, and the ground, See Drawings.
   a. Slash, also known as branches, limbs, and other woody material, shall be sourced from orchard trees or other approved equivalent hardwood. Branches shall be 1 to 4 inches in diameter at base and 5 to 10 ft long.

2.2 MATERIALS AND EQUIPMENT

A. Care must be taken while removing, transporting, and handling the orchard trees to minimize breakage. Terrestrial equipment must be used to load and unload. No dumping is permitted. The Owner/Owner’s Representative may refuse trees with greater than 10% breakage, at the cost of the Contractor. Minimize the number of times each element is handled to prevent damage. At a maximum, habitat feature elements shall be 1) loaded, 2) unloaded and stockpiled and 3) placed in final installation location.
   a. Contractor shall use straps wrapped around the orchard trees while loading, unloading, and handling on-site in order to reduce damage to orchard trees.

B. Contractor to provide 1 inch diameter manilla rope and galvanized steel staples for attaching the rope to logs. The staples shall be wide enough to fit over the rope without puncturing it and long enough to provide 2 inches minimum embedment in logs.

C. The Contractor shall furnish all materials, tools, equipment, facilities, and services as required for providing the necessary log placement work and facilities. Provide back-up equipment as necessary for replacement and for unanticipated emergencies.

PART 3 – EXECUTION

3.1 DELIVERY, STORAGE, AND HANDLING

A. Whole orchard trees must be harvested no earlier than 1 week before the first LWM installation.
   a. The period between harvest of orchard trees and final LWM installation shall be no longer than two weeks.

B. LWM transported to the River Bend Project Area shall be handled with care to minimize damage to root stock and branch structure. Terrestrial equipment shall be used to carefully load and unload the LWM with the use of straps wrapped around trunks and/or large branches of orchard trees. No dumping is permitted.
C. Owner’s Representative shall be on site for the duration of LWM installation. Contact Owner 2 weeks prior to installation. Some level of field fitting, to be directed by Owner’s Representative, may be required to locate, and orient the LWM structures in the channel.

3.2 LWM INSTALLATIONS

A. Each LWM structure shall consist of 2 anchor logs, 1 whole orchard tree, and 15 pieces of slash (i.e., branches) to be installed in void spaces between the orchard tree, anchor logs, and the ground, See Drawings.

B. Anchor logs and orchard trees to be used for the LWM shall be inspected by the Owner’s Representative prior to any in-river installation.

C. With the direction of the owner’s representative, some branches may need to be trimmed and a minimal amount of localized grading may need to be performed in order to install the orchard trees.

D. Due to variability in specific tree geometry, LWM structures shown on plan sheets C5 and C6 are for schematic purposes and are approximate. Owner’s Representative will be on site during LWM installation to assist contractor with field fitting the structures based on specific orientation, tree geometry, and channel geometry.

E. 1 inch diameter manilla rope shall be used to fasten the anchor log and orchard tree by use of a clove hitch in a minimum of 2 locations on each LWM. The tag end of the clove hitch shall be a minimum of 1 foot and secured with 3 galvanized steel staples, each with a minimum of 2 inches of embedment into the log.

F. Anchor logs must extend at least 25 ft into the bank and achieve a minimum embedment of 4 feet.
   a. Native alluvium shall thoroughly fill any void spaces and log haunches. Tamp or compact with equipment to eliminate voids.

3.3 FIELD QUALITY CONTROL

A. The LWM structures must be installed in cooperation with the Owner’s Representative over the course of no more than 7 consecutive business days.
   a. The LWM structures must be installed for the entire duration of a working day in order to maximize efficiency while coordinating with the Owner’s Representative.

B. The contractor shall notify the Owner’s Representative to accept the placement of the anchor logs, whole orchard tree, and slash along with their roped connections prior to backfilling the LWM structure.
   a. The contractor shall allow the Owner’s Representative 1 day to make any changes to the LWM placement and/or roped connections.

3.4 SITE CLEAN-UP

A. Contractor shall clean up the Project site following LWM structure installations as follows and as directed by Owner’s Representative:
   a. Clean Project site and work area of all containers, packaging, and other debris resulting from LWM structure installations.
   b. Dispose of all trash and debris legally at licensed disposal facilities.
   c. Remove temporary items.
3.5 ACCEPTANCE

A. Acceptance of large woody material installations will be made after Work in SECTION 35 42 13.23 LARGE WOODY MATERIAL INSTALLATION is deemed complete by Owner's Representative.

END OF SECTION