
PROFESSIONAL SERVICES CONTRACT AE24-048
with Q3 Consulting

VR2 Ventura River Levee Final Design (Project No: P6081927)

This contract is made and entered into this 23rd day of July 2024 by and between the Ventura County Watershed Protection District, hereinafter referred to as AGENCY, and Q3 Consulting, hereinafter referred to as CONSULTANT, regarding CONSULTANT's performance of the work and services described in Exhibit A hereto (the "Work"). CONSULTANT, or a principal of the firm, is registered, licensed or certified by the State of California as a Professional Engineer number C47583.

In consideration of the mutual promises contained herein and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Scope of Work; Standard of Performance

AGENCY hereby retains CONSULTANT to perform the Work described in Exhibit A hereto. The Work shall be performed in accordance with the terms and conditions of this contract and the County of Ventura Public Works Agency Consultant's Guide to Ventura County Procedures ("Guide") as amended from time to time, which is on file in the office of the Public Works Agency, and which by reference is made a part hereof. This contract shall take precedence over the Guide in case of conflicting provisions; otherwise they shall be interpreted together. In performing the Work CONSULTANT shall exercise the degree of skill and care customarily exercised by professionals in the State of California when providing similar services with respect to similarly complex work and projects.

2. Time Schedule

All Work and any portion thereof separately identified shall be completed within the time provided in the "Time Schedule" attached hereto as Exhibit B. AGENCY will issue a suspension of the contract time if CONSULTANT is delayed by any public agency reviewing documents produced by CONSULTANT under this contract, or solely due to acts or omissions of AGENCY, provided that CONSULTANT promptly notifies AGENCY in writing of such delays.

3. Fees and Payments

Payment shall be made monthly, or as otherwise provided, on presentation of a completed AGENCY Consultant Services Invoice Form in accordance with the "Fees and Payment" provisions attached hereto as Exhibit C.

4. Termination

AGENCY retains the right to terminate this contract for any reason prior to completion of the Work upon five days written notice to CONSULTANT. Upon termination, AGENCY shall pay CONSULTANT for all Work performed prior to such termination, provided however, that such charges shall not exceed the maximum fee specified in Exhibit C for completion of any separately identified task/phase of the Work which, at the time of termination, has been started by request of AGENCY, plus the outstanding amount of contract retention withheld to date.

5. Right to Review

AGENCY shall have the right to review the Work at any time during AGENCY's usual working hours. Review, checking, approval or other action by the AGENCY shall not relieve CONSULTANT of CONSULTANT's responsibility for the accuracy and completeness of the Work.

6. Work Product

On completion or termination of the contract, AGENCY shall be entitled to immediate possession of, and CONSULTANT shall promptly furnish, on request, all reports, drawings, designs, computations, plans, specifications, correspondence, data and other work product prepared or gathered by CONSULTANT arising out of or related to the Work (collectively, "Work Product"). AGENCY has a royalty-free

nonexclusive and irrevocable right to reproduce, publish, or otherwise use, and authorize others to use, Work Product for government purposes. CONSULTANT may retain copies of the Work Product for its files. Work Product prepared by CONSULTANT pursuant to this contract shall not be modified by AGENCY unless CONSULTANT's name, signatures and professional seals are completely deleted. CONSULTANT shall not be responsible for any liabilities to AGENCY for the use of such Work Product that is modified by persons other than CONSULTANT. CONSULTANT is authorized to place the following statement on the drawings, specifications and other Work Product prepared pursuant to this contract:

"This drawing [or These specifications], including the designs incorporated herein, is [are] an instrument of professional service prepared for use in connection with the project identified hereon under the conditions existing on [date]. Any use, in whole or in part, for any other project without written authorization of [CONSULTANT's name] shall be at the user's sole risk."

7. Errors and Omissions

Without limiting AGENCY's other available remedies, if a construction change order is required for the subject project as a proximate result of an error or omission of CONSULTANT in the preparation of the construction or survey documents pursuant to this contract, regardless of whether or not such error or omission was the result of negligence, the necessary amendment or supplement to the construction documents required for such change order shall be made by CONSULTANT at no additional charge to AGENCY.

8. Correction of Work

If any Work performed by CONSULTANT does not conform to the requirements and professional standards of this contract, AGENCY may require CONSULTANT to correct the Work until it conforms to said requirements and standards at no additional cost to AGENCY. AGENCY may withhold payment for disputed Work until CONSULTANT correctly performs the Work or the dispute is otherwise resolved in accordance with this contract. When the Work to be performed is of such a nature that CONSULTANT cannot correct its performance, AGENCY may reduce the CONSULTANT's compensation to reflect the reduced value of the Work received by AGENCY. If CONSULTANT fails to promptly correct non-conforming Work, AGENCY may have the Work performed by a third party in conformance with the requirements and professional standards of this contract and charge CONSULTANT, or withhold from payments due CONSULTANT, any costs AGENCY incurs that are directly related to the performance of the corrective work. AGENCY shall not unreasonably withhold or reduce payment for CONSULTANT's Work under this section.

9. Sub Consulting

With the prior written consent of AGENCY, CONSULTANT may engage the professional services of subconsultants for the performance of a portion of the Work ("Subconsultants"). CONSULTANT shall be fully responsible for all Work performed by Subconsultants which must be performed in accordance with all terms and conditions of this contract. All insurance requirements set forth in section 13 below, "Insurance Requirements," shall apply to each Subconsultant, except to the extent such requirements are modified or waived in writing by AGENCY. CONSULTANT shall ensure that each Subconsultant obtains and keeps in force and effect during the term of this contract the required insurance.

10. Independent Contractor

a. No Employment Relationship. CONSULTANT is an independent contractor, and no relationship of employer and employee is created by this contract. Neither CONSULTANT nor any of the persons performing services for CONSULTANT pursuant to this contract, whether said person be a principal, member, partner, officer, employee, agent, volunteer, associate, Subconsultant or otherwise of CONSULTANT, will have any claim under this contract or otherwise against AGENCY for any salary, wages, sick leave, vacation pay, retirement, social security, workers' compensation, disability,

unemployment insurance, federal, state or local taxes, or other compensation, benefits or taxes of any kind. AGENCY is not required to make any deductions from the compensation payable to CONSULTANT under the provisions of this contract. CONSULTANT shall be solely responsible for self-employment Social Security taxes, income taxes and any other taxes levied against self-employed persons. CONSULTANT does not assign such obligation to AGENCY for collection or administration except as may be required by federal and state law.

b. No AGENCY Control of Means and Methods of Performance. Except as otherwise provided in this contract, AGENCY will have no control over the means or methods by which CONSULTANT will perform services under this contract, provided, however, that CONSULTANT will perform services hereunder and function at all times in accordance with approved methods of practice in the professional specialty of CONSULTANT.

c. Third Parties Employed by CONSULTANT. If, in the performance of this contract, any third parties (including, without limitation, Subconsultants) are employed by CONSULTANT, such third parties will be entirely and exclusively under the direction, supervision and control of CONSULTANT. All terms of employment, including hours, wages, working conditions, discipline, hiring and discharging, and other applicable requirements of law will be the responsibility of and determined by CONSULTANT, and AGENCY will have no right or authority over such third parties or the terms of such employment, except as provided in this contract.

d. Compliance with Workers' Compensation Laws. CONSULTANT will comply with all applicable provisions of the Workers Compensation Insurance and Safety Act of the State of California (codified as amended commencing at Labor Code section 3200), including, without limitation, divisions 4 and 5 of the California Labor Code, and all amendments thereto, and all applicable similar state and federal acts or laws, and will indemnify and hold harmless AGENCY from and against all Third Party Claims (defined elsewhere herein) presented, brought or recovered against AGENCY, for or on account of any liability under any of said laws which may be incurred by reason of any services to be performed under this contract.

e. Indemnity for Claims of Employer-Employee Relationship. CONSULTANT agrees to defend, through attorneys approved by AGENCY, indemnify and hold harmless AGENCY and its boards, agencies, departments, officers, employees, agents and volunteers from and against any and all Third-Party Claims (defined elsewhere herein) made against AGENCY based upon any contention by any third party that an employer-employee relationship exists by reason of this contract. CONSULTANT further agrees to hold AGENCY harmless from and to compensate AGENCY for any Third-Party Claims against AGENCY for payment of state or federal income or other tax obligations relating to CONSULTANT's compensation under the terms of this contract. CONSULTANT will not settle or otherwise compromise a Third-Party Claim covered by this subsection without AGENCY's advance written approval. This subsection does not apply to any penalty imposed by any governmental agency that is not caused by or the fault of CONSULTANT.

11. Duty of Loyalty; Conflicts of Interest

- a. CONSULTANT owes AGENCY a duty of undivided loyalty in performing the Work under this contract, including the obligation to refrain from having economic interests and participating in activities that conflict with AGENCY's interests with respect to the Work and subject project. CONSULTANT shall take reasonable measures to ensure that CONSULTANT and its principals, officers, employees, agents and Subconsultants do not possess a financial conflict of interest with respect to the Work and subject project. CONSULTANT shall promptly inform AGENCY of any matter that could reasonably be interpreted as creating a conflict of interest for CONSULTANT with respect to the Work and subject project. This section is not intended to modify the standard of performance as set forth in Section 1.

- b. CONSULTANT acknowledges that the California Political Reform Act (“Act”), Government Code section 81000 et seq., provides that principals, officers, employees and agents of consultants retained by a public agency may be deemed “public officials” subject to the Act if they make or advise AGENCY on decisions or actions to be taken by AGENCY. To the extent AGENCY determines that the Act applies to CONSULTANT or its principals, officers, employees or agents, each designated person shall abide by the Act, including the requirement for public officials to prepare and file statements disclosing specified economic interests, as directed by AGENCY. In addition, CONSULTANT acknowledges and shall abide by the contractual conflict of interest restrictions imposed on public officials by Government Code section 1090 et seq.
- c. During the term of this contract CONSULTANT shall not employ or compensate AGENCY’s current employees.

12. Defense and Indemnification

If this contract is a contract “**for design professional services**” within the meaning of Civil Code section 2782.8, then subsection b. applies, and subsection a. does not apply and is not part of this contract, notwithstanding its inclusion below. Otherwise, subsection a. applies, and subsection b. does not apply and is not part of this contract, notwithstanding its inclusion below.

- a. CONSULTANT agrees to defend, through attorneys approved by AGENCY, indemnify and hold harmless AGENCY and the County of Ventura (if not defined as AGENCY) and their boards, agencies, departments, officers, employees, agents and volunteers (collectively, “Indemnitee”) from and against any and all claims, lawsuits, judgments, debts, demands, and liability (including attorney fees and costs) (collectively, “Third Party Claims”), including, without limitation, those arising from injuries or death of persons and/or damage to property, whether against CONSULTANT, AGENCY or others, arising directly or indirectly out of the obligations herein described or undertaken or out of operations conducted or subsidized in whole or in part by CONSULTANT, save and except third party claims arising through the sole gross negligence or sole willful misconduct of Indemnitee. CONSULTANT shall not settle or otherwise compromise a Third-Party Claim covered by this section without AGENCY’s advance written approval.
- b. CONSULTANT agrees to defend, through attorneys approved by AGENCY, indemnify and hold harmless AGENCY and the County of Ventura (if not defined as AGENCY) and their boards, agencies, departments, officers, employees, agents and volunteers (collectively, “Indemnitee”) from and against any and all claims, lawsuits, judgments, debts, demands and liability (including attorney fees and costs) (collectively, “Third Party Claims”), including, without limitation, those arising from injuries or death of persons and/or damage to property, that arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of CONSULTANT or its principals, officers, employees, agents or Subconsultants in the performance of this contract. This indemnity provision does not apply to Third Party Claims arising from the sole negligence or willful misconduct of Indemnitee, or to the extent caused by the active negligence of Indemnitee. The cost to defend charged to CONSULTANT or an Indemnitee shall not exceed its proportionate percentage of fault. However, notwithstanding the previous sentence, in the event one or more defendants is unable to pay its share of defense costs due to bankruptcy or dissolution of the business, CONSULTANT shall meet and confer with Indemnitee and any other defendants regarding unpaid defense costs. In the event AGENCY or Third-Party tenders, a Third-Party Claim to CONSULTANT for defense under this subsection 12.b., AGENCY and CONSULTANT shall meet and confer in good faith and make best efforts to agree to an equitable sharing of the costs of defense between them prior to any determination and apportionment of fault (or if no such determination and apportionment is made) based on the allegations of the claim. CONSULTANT shall not settle or otherwise compromise a Third-Party Claim covered by this section without AGENCY’s advance written approval.

13. Insurance Requirements

- a. Without limiting CONSULTANT's duty to defend and indemnify AGENCY as required herein, CONSULTANT shall, at CONSULTANT's sole cost and expense and throughout the term of this contract and any extensions hereof, carry one or more insurance policies that provide at least the following minimum coverage:
 - i. Commercial general liability insurance shall provide a minimum of \$1,000,000.00 coverage for each occurrence and \$2,000,000.00 in general aggregate coverage.
 - ii. Automobile liability insurance shall provide a minimum of either a combined single limit (CSL) of \$1,000,000.00 for each accident or all of the following: \$250,000.00 bodily injury (BI) per person, and \$500,000.00 bodily injury per accident, and \$100,000.00 property damage (PD). Automobile liability insurance is not required if CONSULTANT does no traveling in performing the Work.
 - iii. Workers' compensation insurance in full compliance with California statutory requirements for all employees of CONSULTANT in the minimum amount of \$1,000,000.00. This workers' compensation insurance requirement may only be waived by AGENCY in writing if CONSULTANT is a sole proprietor with no employees and CONSULTANT provides AGENCY with evidence of such before commencing any work under the contract.
 - iv. Professional liability (errors and omissions) insurance shall provide a minimum of \$1,000,000.00 coverage per claim and \$2,000,000.00 in annual aggregate coverage.

If CONSULTANT maintains higher limits than the minimums shown above, AGENCY requires and shall be entitled to coverage for the higher limits maintained by CONSULTANT. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to AGENCY.

- b. With respect to any coverage written on a "claims made" basis, CONSULTANT shall, for three years after the date when this contract is terminated or completed, maintain such policy with a retroactive date that is on or before the start date of contract services or purchase an extended reporting period endorsement (tail coverage). AGENCY may withhold final payments due until satisfactory evidence of the continued maintenance of such policy or the tail coverage is provided by CONSULTANT to AGENCY. Such policy shall allow for reporting of circumstances or incidents that may give rise to future claims.
- c. CONSULTANT shall notify AGENCY immediately if CONSULTANT's general aggregate of insurance is exceeded by valid litigated claims in which case additional levels of insurance must be obtained to maintain the above-stated requirements. All required insurance shall be written by a financially responsible company or companies authorized to do business in the State of California. CONSULTANT shall notify AGENCY of any and all policy cancellations within three working days of the cancellation.
- d. The commercial general liability policy shall name AGENCY and the County of Ventura (if not defined as AGENCY) and their respective officials, employees, and agents as additional insureds ("Additional Insureds"). All required insurance shall be primary coverage as respects the Additional Insureds, and any insurance or self-insurance maintained by Additional Insureds shall be in excess of CONSULTANT's insurance coverage and shall not contribute to it. Coverage shall apply separately to each insured, except with respect to the limits of liability, and an act or omission by one of the named insureds shall not reduce or avoid coverage to the other named insureds. Additional Insured coverage shall include both ongoing and completed operations. In

the case of policy cancellation, AGENCY shall be notified by the insurance company or companies as provided for in the policy.

- e. CONSULTANT hereby waives all rights of subrogation against AGENCY, the County of Ventura, all special districts governed by the Board of Supervisors, and each of their boards, directors, employees and agents for losses arising directly or indirectly from the activities or Work under this contract. The commercial general liability, automobile liability and workers' compensation policies shall contain a provision or endorsement needed to implement CONSULTANT's waiver of these rights of subrogation.
- f. Prior to commencement of the Work, CONSULTANT shall furnish AGENCY with certificates of insurance and endorsements effecting all coverage required hereunder. Copies of renewal certificates and endorsements shall be furnished to AGENCY within 30 days of the expiration of the term of any required policy. CONSULTANT shall permit AGENCY at all reasonable times to inspect any policies of insurance required hereunder.
- g. Each insurance policy required above shall state that coverage shall not be canceled except with notice to AGENCY.

Claims and Disputes

- a. Administrative Review. Prior to filing a complaint in arbitration against AGENCY seeking payment of money or damages regarding the Work, an extension of contract time, or an interpretation or adjustment of the terms of this contract, including "pass-through" claims asserted by CONSULTANT on behalf of a Subconsultant (collectively referred to hereinafter as "claim"), CONSULTANT shall first exhaust its administrative remedies by attempting to resolve the claim with AGENCY's staff in the following sequence: 1) Project Manager, 2) Deputy Director of Public Works ("Department Director") and 3) Director of Public Works Agency ("Agency Director"). CONSULTANT shall initiate the administrative review process no later than 30 days after the claim has arisen by submitting to the Project Manager a written statement describing each claim and explaining why CONSULTANT believes AGENCY is at fault, as well as all correspondence and evidence regarding each claim. CONSULTANT may appeal the decision made by the Project Manager to the Deputy Director and may appeal the decision made by the Deputy Director to the Agency Director, provided that AGENCY receives such appeal in writing no later than seven days after the date of the decision being appealed. If CONSULTANT does not appeal a decision to the next level of administrative review within this seven-day period, the decision shall become final and binding and not subject to appeal or challenge.
- b. Arbitration. All CONSULTANT claims not resolved through the administrative review process stated above shall be resolved by arbitration unless AGENCY and CONSULTANT agree in writing, after the claim has arisen, to waive arbitration and to have the dispute litigated in a court of competent jurisdiction. Arbitration shall be pursuant to article 7.1 (commencing with section 10240) of chapter 1 of part 2 of the Public Contract Code and the regulations promulgated thereto, chapter 4 (commencing with section 1300) of division 2 of title 1 of the California Code of Regulations (collectively, "Rules for Public Works Contract Arbitrations"). Arbitration shall be initiated by a complaint in arbitration prepared, filed and served in full compliance with all requirements of the Rules for Public Works Contract Arbitrations. CONSULTANT consents and agrees that AGENCY may join it as a party to any arbitration involving third party claims asserted against AGENCY arising from or relating to any Work performed by CONSULTANT hereunder.

12. Compliance with Laws and Regulations; Permits and Licenses

CONSULTANT shall perform its obligations hereunder in compliance with all applicable federal, state, and local laws and regulations. CONSULTANT certifies that it possesses and shall continue to maintain or shall cause to be obtained and maintained, at no cost to AGENCY, all approvals, permissions, permits, licenses, and other forms of documentation required for it and its principals, officers, employees, agents

and Subconsultants to comply with all applicable statutes, ordinances, and regulations, or other laws, that apply to performance of the Work. AGENCY is entitled to review and copy all such applications, permits, and licenses which CONSULTANT shall promptly make available upon AGENCY's request.

13. Prevailing Wage Requirements

Certain work to be performed under this contract may be considered "public works" subject to prevailing wage, apprenticeship and other labor requirements of Labor Code division 2, part 7, chapter 1, section 1720 et seq. Such public works may include work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work. CONSULTANT is solely responsible for determining whether the Work, or any portion thereof, is subject to said requirements, and for complying with all such requirements that apply. All such public works projects are subject to compliance monitoring by the California Department of Industrial Relations (DIR). AGENCY has obtained from the DIR general prevailing wage determinations for the locality in which the Work is to be performed that are on file with AGENCY's Public Works Agency and are available upon request. CONSULTANT is responsible for posting job site notices as prescribed by regulation pursuant to Labor Code section 1771.4(a)(2). CONSULTANT acknowledges that it is aware of state and federal prevailing wage and related requirements and shall comply with these requirements to the extent applicable to the Work, including, without limitation, Labor Code sections 1771 (payment of prevailing wage), 1771.1 (registration with DIR) and 1771.4 (submission of certified payrolls to Labor Commissioner).

14. Miscellaneous

- a. Entire Understanding. This contract is an integrated agreement and constitutes the final expression, and the complete and exclusive statement of the terms of, the parties' agreement with respect to the subject matter hereof. This contract supersedes all contemporaneous oral and prior oral and written agreements, understandings, representations, inducements, promises, communications or warranties of any nature whatsoever, by either party or any agent, principal, officer, partner, employee or representative of either party, with respect to the subject matter hereof. Without limiting the foregoing, CONSULTANT acknowledges that no representation, inducement, promise or warranty not contained in this contract will be valid or binding against AGENCY.
- b. No modification, waiver, amendment or discharge of this contract shall be valid unless the same is in writing and signed by duly authorized representatives of both parties.
- c. Non-assignability. CONSULTANT will not assign this contract or any portion thereof to a third party without the prior written consent of AGENCY, and any attempted assignment without such prior written consent will be null and void and will be cause, at AGENCY's sole and absolute discretion, for immediate termination of this contract. AGENCY may withhold its consent to assignment at its discretion. In the event AGENCY consents to assignment, the obligations of CONSULTANT hereunder shall be binding on CONSULTANT's assigns.
- d. Third Party Beneficiaries. Except for indemnitees under sections 10.e and 12 above, this contract does not, and the parties to this contract do not intend to, confer a third party beneficiary right of action on any third party whatsoever, and nothing set forth in this contract will be construed so as to confer on any third party a right of action under this contract or in any manner whatsoever.
- e. Time limits stated herein are of the essence.
- f. Governing Law; Venue. This contract is made and entered into in the State of California and shall, in all respects, be interpreted, governed and enforced in accordance with the laws of the State of California applicable to contracts entered into and fully to be performed therein. The venue for any action, suit, arbitration, judicial reference or other proceeding concerning this contract shall be in Ventura County, California.
- g. All notices, requests, claims, and other official communications under the contract shall be in writing and transmitted by one of the following methods:

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- (1) Personal delivery.
- (2) Courier where receipt is confirmed.
- (3) Registered or certified mail, postage prepaid, return receipt requested.

Such notices and communications shall be deemed given and received upon actual receipt in the case of all except registered or certified mail; and in the case of registered or certified mail, on the date shown on the return receipt or the date delivery during normal business hours was attempted. All notices and communications shall be sent to CONSULTANT at the current address on file with AGENCY for contract payment purposes, and shall be sent to AGENCY as follows:

Public Works Agency
County of Ventura L#1670
800 South Victoria Avenue
Ventura, CA 93009-1670

Either party may change its contact information by providing written notice of the change to the other party in accordance herewith.

- h. Further Actions. The parties hereto agree that they will execute any and all documents and take any and all other actions as may be reasonably necessary to carry out the terms and conditions of this contract.
- i. Legal Representation. Each party warrants and represents that in executing this contract, the party has relied upon legal advice from attorneys of the party's choice (or had a reasonable opportunity to do so); that the party has read the terms of this contract and had their consequences (including risks, complications and costs) completely explained to the party by the party's attorneys (or had a reasonable opportunity to do so); and that the party fully understands the terms of this contract. Each party further acknowledges and represents that the party has executed this contract freely and voluntarily without the undue influence of any person, and the party has not relied on any inducements, promises or representations made by any person not expressly set forth in this contract.
- j. No Waiver. Failure by a party to insist upon strict performance of each and every term, condition and covenant of this contract shall not be deemed a waiver or relinquishment of the party's rights to enforce any term, condition or covenant.
- k. Partial Invalidity. If any provision of this contract is held by a court of competent jurisdiction to be invalid, void or unenforceable, the parties intend, and it shall be so deemed, that the remaining provisions of this contract shall continue in full force without being impaired or invalidated in any way. If such provision is held to be invalid, void or unenforceable due to its scope or breadth, such provision shall be deemed valid to the extent of the scope or breadth permitted by law.
- l. Interpretation of Contract. For purposes of interpretation, this contract shall be deemed to have been drafted by both parties, and no ambiguity shall be resolved against any party by virtue of the party's participation in the drafting of the contract. Accordingly, Civil Code section 1654 shall not apply to the interpretation of this contract. Where appropriate in the context of this contract, the use of the singular shall be deemed to include the plural, and the use of the masculine shall be deemed to include the feminine and/or neuter.
- m. Counterparts. This contract may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same contract.

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CONSULTANT:
Q3 Consulting

AGENCY:
Ventura County Watershed Protection District

Signature

Public Works Director or
Deputy Purchasing Agent

Print Name and Title

Signature

Print Name and Title

20-5345716

Vendor Number

EXHIBIT A - SCOPE OF WORK AND SERVICES

1. Overview of Services and Project

AGENCY has engaged CONSULTANT to provide the following services, which are more specifically described in the Basic Services section below, to assist AGENCY with the following project:

The AGENCY desires to conduct a final design engineering (100-percent Plans, Specifications, Cost Estimate per the AGENCY's guidelines) and geotechnical analyses in pursuit of solutions that address the identified levee deficiencies, and resolves the existing flooding problems, incorporating and considering the future Matilija Dam removal in the final design, and CLOMR/LOMR approval.

This levee design work is part of the Matilija Dam Ecosystem Restoration project and will mitigate potential flooding impacts due to removal of the Matilija Dam and shall satisfy the requirements of Title 44 of the Code of Federal Regulations, Section 65.10 (44CFR65.10) allowing for the submittal of levee certification documents to FEMA for review and approvals.

2. Basic Services

The following Basic Services shall be performed by CONSULTANT:

TASK 1 - PROJECT MANAGEMENT AND COORDINATION

Task 1.1: Project Management

CONSULTANT shall provide project management and coordination activities for schedule 1 for the duration of the project including the following items:

- CONSULTANT shall maintain appropriate project-level coordination and consultation with the AGENCY on all project aspects to ensure progress of the project.
- CONSULTANT shall provide overall quality assurance and quality control (QA/QC), identify development team, independent review team, and required disciplines for implementation and reviews.
- CONSULTANT shall coordinate and manage milestones, the schedule, project roles and responsibilities, the resource plan, and the document control processes of the project team.
- CONSULTANT shall coordinate communication among offices and staff, including meetings, to ensure all tasks are being performed on schedule and per Contract.

Task 1.2: Project Kickoff Meeting

CONSULTANT shall coordinate with AGENCY to schedule and conduct a Project Kickoff Meeting to be held at the AGENCY's office to discuss and lay out the process to achieve the tasks identified within the Contract including the scope of services, task schedule, and project objectives. The kickoff meeting shall include the in-person attendance of SUBCONSULTANTS.

Task 1.3: Progress and Technical Meetings

CONSULTANT shall coordinate with AGENCY to schedule meetings in order to provide the consulting services required to complete the project. CONSULTANT shall ensure that the proper staff members, including from SUBCONSULTANTS, attend the meetings to provide needed consultation and discussion to resolve project related issues and to allow input and feedback during the design process. CONSULTANT shall conduct Three (3) teleconference project coordination meetings and one (1) in-person Progress and Technical Meetings at the AGENCY's office to review and discuss the project's progress and sequencing.

Three (3) Technical Studies Progress (TSP) Meetings will be held via conference call to review specific studies and analyses, and to review the project status and schedule. *Technical Studies Progress Meeting No.1* will be held to review and discuss the project status and schedule, and the completion and results of the data collection efforts, topographic mapping, hydrology, and hydraulic analysis. *Technical Studies Progress Meeting No.2* will be held to review and discuss the project status and schedule, and the completion and results of the sediment transport and scour analyses and the interior drainage/joint probability analysis. *Technical Studies Progress Meeting No.3* will be used to review and discuss the geotechnical testing, analysis, recommendations, and conclusions, the alternatives formulation consistent

with the technical information presented in the analyses, along with the economic analysis, cost estimates, and environmental impacts for preferred alternative.

CONSULTANT shall provide the AGENCY with electronic copies of the completed analyses and all supporting materials, together with a summary memorandum, at least three (3) weeks prior to the teleconference meeting.

Task 1.4: Public Meetings

CONSULTANT shall participate in two (2) in-person public meetings. CONSULTANT shall coordinate with the AGENCY to provide exhibits and PowerPoint slides for the presentation of the project recommendations and design.

Task 1 Deliverable(s):

1. Electronic copies of all agendas, meeting minutes, exhibits, associated documents, correspondence (letters, memos, notes, e-mails), and updated schedules and task lists. Electronic copies of meeting minutes, documents, and correspondence are applicable to all communications between the CONSULTANT and the AGENCY, as well as between the CONSULTANT and others. The CONSULTANT shall provide all necessary documents to the AGENCY in a timely manner to facilitate meetings and decision-making processes.
2. Graphic exhibits, visualization exhibits, and technical support as requested.

TASK 2 - ENVIRONMENTAL SUPPORT AND PERMITS

AGENCY will procure the environmental documents and permits for the project. The CONSULTANT shall assist the AGENCY by providing the requested information and exhibits for the California Environmental Quality Act Notice of Exemption and for expedited regulatory authorization under the AGENCY's existing Routine Operations and Maintenance Programmatic Permits, which allow work within the original facility footprints. The CONSULTANT shall coordinate with the AGENCY during the design to determine project impacts and locations where impacts can be limited and/or avoided.

CONSULTANT shall provide services to assist in the preparation of a detailed project description of the proposed project, as well as the preparation of graphic exhibits, quantity estimates, and temporary and permanent impact areas.

Task 2 Deliverable(s):

1. Electronic copies of written detailed project description and graphic exhibits including preliminary plans, areas of impact, quantity estimates, and technical support.

TASK 3 – FINAL DESIGN TECHNICAL STUDIES

CONSULTANT shall perform engineering analyses for the identification and recommendation of a final configuration for the repair and reconstruction of the VR-2 Levee System. The technical studies shall consist of data collection and review, river hydraulics, scour analyses, interior drainage studies, and geotechnical analysis. These analyses and documents shall be prepared in accordance with the AGENCY's Design Manual, USACE Guidelines, and 44CFR65.10.

Task 3.1: Data Collection and Review

CONSULTANT shall obtain and review recent relevant reports, plans, and topographic mapping including conceptual designs, previous hydrologic and hydraulic studies, environmental documents, and pertinent AGENCY design guidelines. CONSULTANT shall conduct a field visit to familiarize the project team with the project site and constraints including the existing drainage structures, bank protection, street and trail improvements, utilities, and storm drain outlets.

CONSULTANT shall utilize the latest hydrology that is consistent with the ongoing FEMA Flood Insurance Study (FIS) for the Ventura River and tributaries. CONSULTANT shall also check the FIS hydrology against that used in the Matilija Dam Ecosystem Restoration study (Matilija Dam). CONSULTANT shall coordinate with the AGENCY's Hydrology Section to ensure that the best hydrologic information for the levee

certification evaluation in the project area is being utilized. The information includes, but is not limited to, the peak 100-year discharges and associated hydrographs for the Ventura River, San Antonio Creek, Fresno Canyon (existing and future condition), and Coyote Creek, and available information on the probability of timing of flooding source peak flows to allow CONSULTANT to perform an interior drainage analysis in conformance with FEMA requirements. CONSULTANT shall obtain, become familiar with, and utilize the latest hydrology and hydrograph information for use in this project.

No new regional hydrology studies are proposed to be prepared. Hydrology shall be taken from previous studies and the levee design flow rates shall be coordinated with the AGENCY. Additional hydraulic and sediment transport models, if any prepared by others in support of the Matilija Dam Ecosystem Restoration project shall be provided by the AGENCY.

CONSULTANT shall utilize AGENCY provided topographic data for the design. CONSULTANT shall obtain and review available topographic mapping digital files for suitability for design and consistency with the field conditions. The Tetra Tech study included new topographic mapping including LiDAR, conventional survey, and orthophotography. The field survey was performed in January 2018. Additional field surveys in the project reach will be provided by the AGENCY, if necessary.

Task 3.1 Deliverable(s):

1. Electronic copies of any review comments with accompanying photographs.

Task 3.2: Utility Coordination and Mapping

AGENCY will provide coordination with the utility companies by requesting utility location information from utility owners during the design phase. CONSULTANT shall map the existing utilities on the construction plans. CONSULTANT shall include the locations of the existing utilities in the topographic map and identify any conflicts with the proposed levee alignment and design. CONSULTANT shall discuss any utility issues with the AGENCY to resolve potential conflicts during the early design phase. CONSULTANT to prepare utility relocation plans if needed.

AGENCY will contact the utility companies and invite them to attend a project design team meeting, if needed. AGENCY will be responsible for the coordination of utility potholing and utility relocation, if required.

Task 3.2 Deliverable(s):

1. AutoCAD base file of plotted utilities compatible with Civil 3D, 2024 version.

Task 3.3: River Hydraulic Analysis

CONSULTANT shall prepare a new water surface profile analysis to evaluate the hydraulic operation of the river system and compare it with the previous HEC-RAS models prepared by Tetra Tech and others for the current channel conditions (Matilija Dam in-place). CONSULTANT shall prepare 1-D and 2-D hydraulic models using HEC-RAS 6.2 (or latest version). CONSULTANT shall develop channel parameters from field visits and available data and ensure the models reflect the existing field conditions and update as necessary to reflect the recommended levee improvements. CONSULTANT shall determine the exact upstream and downstream extents of the project study area to ensure the hydraulics are no longer impacted by the model boundary conditions.

CONSULTANT shall perform a final river hydraulic analysis for the current and proposed project conditions in accordance with the FEMA requirements of 44CFR65.10. CONSULTANT shall prepare the hydraulic models (Duplicate Effective, Corrected Effective, Existing or Pre-project Condition, Revised or Post-Project Condition) needed for the Conditional Letter of Map Revision (CLOMR).

CONSULTANT shall use the updated hydraulic model for levee freeboard evaluations at the 100-year discharge in order to meet or exceed FEMA criteria and to provide maximum shear velocities for the analysis of local scour potential and design of toe protection.

The AECOM/Stillwater SRH-2D study results shall be used as the basis for the design of the levee system in its future, without-dam condition. CONSULTANT shall utilize the AECOM/Stillwater SRH-2D study results, perform freeboard analysis, and summarize the findings of this study in the Project Design Report.

CONSULTANT shall perform a hydraulic analysis of the recommended levee improvements for the future river conditions (Matilija Dam removed) to determine if there are any flood environment constraints that may have been muted in the large-scale SRH-2D model study of the Ventura River main stem from Matilija Dam to the Ocean relative to a more detailed reach-focused model study of VR-2.

Task 3.3 Deliverable(s):

1. Electronic copies of HEC-RAS input and output files with unique and identifying file names accompanied by a brief description of each model run to aid review.
2. Comparison tables of Project and Existing condition results in a PDF format.

Task 3.4: Sediment Transport and Scour Analysis

CONSULTANT shall prepare a new sediment transport and scour study based on the final levee alignment and configuration in accordance with the FEMA requirements of 44CFR65.10. The study reach shall extend approximately one-half miles downstream of the downstream levee improvements and one mile upstream of San Antonio Creek and shall utilize information developed by Tetra Tech as part of their previous study where possible.

This task shall include a detailed sediment transport analysis and an evaluation of the long-term scour and aggradation potential of the Ventura River adjacent to the proposed VR-2 Levee System. The analysis shall use available information (i.e., long-term flow record, with dam sediment inflows, bed material information, etc.) from previous studies by Tetra Tech, AECOM/Stillwater, USBR and others.

CONSULTANT shall analyze the total scour potential and the required levee armoring and toe protection. Appropriate scour methodology, accepted by FEMA, shall be used to predict maximum total scour along the levee for toe-down depths. Major components of total scour shall include, long-term bed degradation, single-event scour (for 100-year flood), bedform scour, bend scour, local scour, impingement scour, and thalweg scour.

CONSULTANT shall analyze the total aggradation potential attributed to single-event (100-year flood) and long-term general aggradation, bedform contributions, and aggradation along the inner bank of bends.

CONSULTANT shall perform a single event (100-year) and long-term sediment transport analysis of the recommended levee improvements for the future river conditions (Matilija Dam removed) to determine if there are any flood environment constraints that may have been muted in the large-scale SRH-2D model study of the Ventura River main stem from Matilija Dam to the Ocean relative to a more detailed reach-focused model study of VR-2.

Task 3.4 Deliverable(s):

1. Sediment transport models analysis results, graphs, and scour calculations report.

Task 3.5: Interior Drainage Study

CONSULTANT shall prepare an updated interior drainage and joint probability analysis in accordance with FEMA requirements. The analysis will be based on the joint probability of interior and exterior flooding and the capacity of the existing local drainage facilities. CONSULTANT shall use the guidance and criteria contained in the USACE publication EM 1110-2-1413, *Hydraulic Analysis of Interior Drainage Areas*.

CONSULTANT shall map and field verify the existing penetrations and validate facility sizes and closures. The tributary watersheds will be field checked and updated (if necessary) to determine the watershed hydrology. CONSULTANT shall use available as-built storm drain plans for the analysis. If no as-builts are available, CONSULTANT shall request field survey data be obtained by the AGENCY for the elevations at inlets, outlets, catch basins, risers, and/or other critical locations.

Based on prior field investigations and review of as-built plans, there are six storm drain penetrations through the VR-2 Levee. The identified penetrations occur at approximate Stations 2+60 (Fresno 108-inch RCP), 2+85 (two penetrations), 9+00 (existing Fresno RCC and RCP), 21+10, 45+22, 53+3810, and 58+12. The stationing is consistent with the AGENCY's as-built plans for the 2004 and 2007 levee improvements in the Casitas Springs area. CONSULTANT shall obtain copies of any available master plan of drainage studies and storm drain as-builts not already in their possession for each storm drain penetration in the

study area for use in this analysis. CONSULTANT shall note the datums used in the various plans and studies to ensure uniformity in the analysis and results.

A stand-alone interior drainage report will be prepared. The report will identify any deficiencies and residual interior flooding and identify recommendations to mitigate the deficiencies.

Task 3.5 Deliverable(s):

1. Interior drainage report and provide mapping showing the results of the interior drainage analysis.
2. Interior drainage Deficiency Study and Recommendations.

Task 3.6: Interior Drainage Construction Plans

Consultant shall prepare construction plans and specifications for the interior drainage recommended solutions and improvements. The fee for this task is based on the assumption of two (2) storm drain plans and profiles sheets including catch basins, conduits conveyances, and outlet works with flap gates through the levee improvements. If the recommended solution includes additional improvements and/or specialty structural details, this work will be completed under Contract Modification or Extra Services.

Task 3.6 Deliverable(s):

1. Interior drainage construction plans and specifications.

TASK 4: GEOTECHNICAL ANALYSIS

SUBCONSULTANT (Geocon West Inc.) shall provide the following geotechnical services in support of the proposed VR-2 levee improvements design.

Task 4.1: Geotechnical Peer Review, Permits, Permit Support, and Utility Clearance

Prior to initiating/planning field explorations and analysis, Geo-con West Inc. will perform a peer review of the March 2022 PGI by Tetra Tech. The peer review will focus on the exploration methods used, laboratory testing program, and the preliminary analysis and results by Tetra Tech.

Subsurface exploration will likely be within various rights-of-way, including the AGENCY, Ventura County, and/or Caltrans. The CONSULTANT team and appropriate agency shall agree on the exploratory boring locations prior to finalizing the Exploration Plan exhibit required for permit issuance.

The SUBCONSULTANT shall review the data pertaining to the site including, but not limited to, significant geological features, mapped geologic contacts, grading characteristics and engineering properties of the site's surface, bedrock, and engineered fill soils. Based on a previous review of the results of geotechnical tests performed by others for the AGENCY in proximity of the levee, it is expected that very coarse alluvial soils containing cobbles and some boulders will be encountered during the field exploration. The SUBCONSULTANT shall obtain additional test pit and subsurface borings along the levee at strategic locations to define the subsurface soils and the extents of the bank revetment. All explorations must be performed under the direct supervision of a registered engineer or geologist working for SUBCONSULTANT, who shall log the various earth materials encountered and obtain samples for visual examination, classification, and laboratory testing.

SUBCONSULTANT shall use the information obtained from the new explorations and any relevant information from the existing reports to support slope stability, seepage, and settlement analyses, as well as bank revetment conditions. The geotechnical report prepared by SUBCONSULTANT shall cover all the requirements needed to design the levee system improvements and to certify the levee system through FEMA. Information obtained by SUBCONSULTANT through the data review and subsurface exploration may also be pertinent for use in the sediment-transport and scour analysis.

Prior to the start of this task, SUBCONSULTANT shall prepare a work plan for the geotechnical exploration that provides a contextual map of the bore hole and test pit locations, the anticipated exploration depths, soil sampling intervals, and the soil testing methods that follow standard geotechnical procedures and specifications (e.g. ASTM). The locations of previous testing sites must be shown on the work plan map to provide context and clarification. SUBCONSULTANT shall provide AGENCY with the work plan at the earliest possible date in support of procuring the needed regulatory and other permits for the work. The

work plan must be developed in consultation with the AGENCY, including AGENCY's Environmental Staff, to ensure compliance with regulatory guidelines. CONSULTANT shall provide AGENCY with each subcontractor's name, company, and appropriate insurance at the beginning of the permit process. CONSULTANT and AGENCY shall review and agree on the work plan prior to finalizing the plan and beginning the field explorations.

Prior to beginning any field work, SUBCONSULTANT shall mark the proposed borehole and trench exploration locations in the field consistent with the work plan exhibit and contact Underground Service Alert (USA) to review the locations relative to known subsurface utilities. SUBCONSULTANT shall utilize a high torque truck mounted drill rig with hollow stem auger or high-power sonic oscillator to perform the bores through the levee. Per EM 1110-2-1913, it is anticipated that borings will be drilled through the existing levee to a target depth into the levee soil foundations at least equal to the height of the levee, but in no case less than 30 feet in depth.

Upon completion, all drill holes must be backfilled with 2-sack sand cement slurry to within approximately 1-foot of the ground surface and completed to the surface with soil, CMB, or asphalt cold patch, depending on the adjacent surface condition. Additional backfill requirements may be required depending on the locations of the drill holes. Drilling in the levee must be performed consistent with USACE's regulation ER-1110-1-1807, "Drilling in Earth Embankment Dams and Levees," published on December 31, 2014.

SUBCONSULTANT shall deposit excess soil cuttings uncontaminated by drilling fluids at a location reviewed and approved by the AGENCY and indicated on an approved exhibit. In no case can cuttings or excess material be deposited or left on the riverward side of the levee. Any material contaminated through and/or during the drilling process must be properly removed and disposed of by the CONSULTANT and/or their subcontractors. The CONSULTANT shall revise backfill materials to cement-bentonite grout per Ventura County borehole abandonment requirements if groundwater is encountered.

CONSULTANT shall prepare an Exploration Plan showing locations of proposed subsurface explorations.

CONSULTANT shall apply for the required encroachment permits for subsurface exploration with the various agency rights-of-way. We assume that permits from the AGENCY and Ventura County will be provided at no cost. CONSULTANT shall perform the exploratory borings under their Ventura County Annual Well Permit for Engineering Test Holes.

CONSULTANT, prior to mobilization for fieldwork, shall provide support documents and information (e.g., type of equipment, duration, location) for AGENCY to apply for regulatory permits. CONSULTANT shall provide AGENCY with each subcontractor's name, company, and appropriate insurance at the beginning of the permit process, if applicable. CONSULTANT shall be responsible for Caltrans permit if needed.

CONSULTANT shall contact Underground Service Alert (USA) to review the exploration location relative to known underground utilities prior to the commencement of field exploration activities. CONSULTANT shall further engage a private utility locator to further delineate underground utilities not marked by USA subscriber companies.

Task 4.1 Deliverable(s):

1. Exploration Plan and exploration equipment information.
2. AGENCY encroachment permit application package and support documents related to AGENCY and regulatory agency permits and obtain well/boring installation and closure permits and comply with all requirements, obtain traffic control permits, if applicable
3. Encroachment permit application package and support documents for other agencies (Ventura County, Caltrans, etc.) including permit processing and meetings.
4. For geotechnical field investigations, SUBCONSULTANT shall provide all information, photographs, and maps necessary to complete the applications for encroachment or access permits and permissions, as well as applicable permits from CDFW, USACE, and the Regional Water Quality Control Board (RWQCB) and shall ensure that field work is conducted in compliance with all permit conditions.

Task 4.2: Subsurface Exploration

SUBCONSULTANT shall performed subsurface explorations as follows:

- Drill six (6) borings using a limited access tracked sonic drill rig to depths of approximately 50 to 55 feet. Borings will be performed within the existing levee and on the riverside of the levee. Preliminary locations of the borings are shown on the Exploration Map, Figure 1.
 - *Note: Boring locations on the riverside portion of the levee will require an access path through the existing brush from Station 5+00 to Station 28+00.*
- Obtain continuous core samples to the total depth of each boring.
- Perform SPT (ASTM D1586) sampling at 5-foot intervals.
- Upon completion, construct temporary standpipe piezometers in three of the borings using 4-inch PVC well casing.
- Perform either surface wave or downhole seismic shear wave velocity profiling in the three cased borings (piezometers) in order to assess seismic site class and liquefaction potential.
- Install automatic-recording water level indicators in each of the piezometers for long-term groundwater level monitoring.
- Perform slug testing (ASTM D4044) in the piezometers to evaluate hydraulic properties of the aquifer.
- Drill six (6) borings using a truck-mounted hollow-stem auger drilling machine to depths of approximately 30 feet. Borings will be performed within the existing levee to evaluate the existing levee cross-section. Preliminary locations of the borings are shown on the Exploration Map, Figure 1 (attached).
- Obtain relatively undisturbed and bulk samples of the existing levee and underlying materials to the total depth of each boring.
- Upon completion, backfill the borings with drill cuttings and place cold patching or aggregate base for any borings drilled through asphalt or CMB access road.
- Provide a potable water source.
- CONSULTANT shall coordinate with AGENCY 's Environmental Staff to ensure that geotechnical field investigations are monitored by a qualified biologist, and that field personnel receive Environmental Education prior to commencing activities on site.
- Testing, sampling or removal of hazardous material, if required, is not included in this scope of work;
- CONSULTANT shall coordinate with AGENCY to determine stockpile and staging area for equipment storage and excess soil cuttings generated from the borings.

Task 4.3: Streambed Sampling and Testing

SUBCONSULTANT team shall characterize the soils in the channel for scour analyses. Geocon West Inc. shall collect four grab samples of soil from the invert of the channel at the project site and perform laboratory grain-size analyses on a select sample of each in Geocon West Inc. Burbank laboratory. In addition, SUBCONSULTANT shall measure the cobbles and boulders (3 inches and larger) in the field in the sample area to provide a combined gradation representative of the channel sediment for use by the CONSULTANT. The appropriate sample area size to obtain a representative sample of the cobbles and boulders shall be coordinated and agreed to between CONSULTANT team and the AGENCY.

Task 4.3 Deliverable(s):

1. Letter presenting results of combined gradation of the existing channel sediments.

Task 4.4: Geotechnical Laboratory Tests

SUBCONSULTANT shall perform a broad suite of geotechnical laboratory tests for soil classification, moisture and density, grain size, compaction, direct shear strength, corrosion, consolidation, hydraulic conductivity, rock soundness, durability and permeability on selected samples recovered from the boring for geotechnical analysis. The laboratory testing will be used to determine shear strength of levee and foundation soils, seepage characteristics, consolidation potential, and suitability for use as engineered fill and rock riprap.

The SUBCONSULTANT shall perform the laboratory tests listed below, with the anticipated number of test samples or procedures per laboratory test shown as follows:

- In-situ Moisture/Density – 24 tests
- Atterberg Limits, (ASTM D4318) – 2 tests
- Sieve and Hydrometer Analyses, (ASTM D422) – 8 tests
- Direct Shear, (ASTM D3080) – 12 tests
- Unconfined Compressive – 2 tests
- Soil Moisture – 30 tests
- Permeability (Hydraulic Conductivity K) – 2 tests
- Abrasion and Soundness – 2 tests
- Consolidation, (ASTM D2435) – 2 tests
- Corrosion Potential – 2 tests
- Expansion Index, (ASTM D4829) – 1 test

Task 4.5: Draft Geotechnical Report

SUBCONSULTANT shall evaluate the subsurface conditions encountered and prepare a Draft Geotechnical Report for the design of the improvements. SUBCONSULTANT shall submit a draft of the report with the body of the report in MS Word and the appendices in PDF for review by the CONSULTANT and AGENCY. The report shall be prepared under the supervision of a California Registered Geotechnical Engineer and shall include a discussion of the project understanding, existing site conditions, work performed, and subsurface conditions encountered. SUBCONSULTANT shall include the boring logs, laboratory test results, downhole geophysical testing results, aquifer testing results, graphics showing the site and exploration locations, and an interpreted subsurface profile in the report. The report shall provide conclusions and recommendations regarding:

- Geologic setting;
- Soil and groundwater conditions encountered;
- Potential for geologic hazards to impact the proposed improvements (such as seismicity, faulting, or liquefaction);
- Settlement, seepage (transient and steady state), and slope stability analyses;
- Required geotechnical analyses per 44 CFR 65.10 and FEMA MT-2 form;
- Recommended levee geometry – crown width, side slope inclinations, etc.;
- Site/foundation preparation, grading, and drainage considerations for support riprap revetment;
- Scour, erosion control, and surface drainage considerations;
- Compaction and material requirements for imported fill and reuse of onsite soil;
- Recommended foundation type(s) and associated design parameters (bearing capacity, lateral earth pressures, etc.) for floodwalls;
- Construction considerations regarding shoring, groundwater, and excavation.

Task 4.5 Deliverable(s):

1. Electronic version of the Draft Geotechnical Report in PDF and MS Word (report body). Including field pictures of boring operations and trenching.
2. Boring logs in AutoCAD format compatible with Civil 3D, 2024 version for use in the construction plans.

Task 4.6: Final Geotechnical Report

SUBCONSULTANT shall prepare the final Geotechnical Report that incorporates the review comments from the CONSULTANT and AGENCY. The SUBCONSULTANT shall also prepare a memo that indicates the form and location within the report (section and/or page number) of any major revisions between the draft and final reports. SUBCONSULTANT's scope of services does not anticipate incorporating an evaluation of additional alternatives, or information or recommendations for improvements that are not described in other Contract tasks.

Task 4.6 Deliverable(s):

1. Three (3) signed and stamped hard copies of the Final Geotechnical Report and an electronic version in searchable PDF format.
2. Memorandum elucidating the form and location of major changes between the draft and final geotechnical reports, if needed.

TASK 5: 50% DESIGN PLANS AND PROJECT DESIGN REPORT (PDR)

Task 5.1: 50% Design Plans

CONSULTANT shall prepare 50% level of completion design plans for the recommended improvements from the Project Design Report. The 50% plans shall include plan and profile sheets at 1"=40' scale utilizing the compiled base mapping. All plans shall be developed in an AutoCAD format and utilize the Civil 3-D software to the maximum extent possible in order to support the modeling and conflict verification process for coordination of all of the design elements of the project. Additional information to be included on the plans shall be facility sizes, typical cross sections, utility locations/conflicts, grading and work area limits, ROW requirements, and hydraulic profiles. The 50% plans shall clearly delineate and define the project improvements to develop a project description necessary for the preparation of the environmental documents. Structural design shall be sufficient to determine preliminary cross sections including structure types and layout shall be performed for cost-estimating purposes and to evaluate the existing floodwall and the possibility of retrofitting to work with the proposed levee improvements. CONSULTANT shall refer to the AGENCY's Draft Facility Design Manual for the components to be included in the design plans.

Task 5.2: Project Design Report (PDR)

CONSULTANT shall prepare a technical PDR to document the engineering analyses and investigation and present the technical results for the recommended VR-2 Levee System. CONSULTANT shall summarize the design assumptions, guidelines, and criteria developed during the preliminary design and provide the background for the technical work in the PDR. CONSULTANT's written report shall identify the physical project constraints, design requirements and issues, environmental and engineering design constraints, and serve as the basis for the engineering design and the selection of the final improvements. CONSULTANT shall include in the report information on the hydraulic design, geomorphic data, design criteria, constraints, design assumptions, references, preliminary rough construction costs, utility conflicts, dewatering and surface water control, geotechnical issues, constructability, floodplain hydraulics, freeboard, and the levee system design and sizing. CONSULTANT shall ensure all background files are organized and provided to the AGENCY.

CONSULTANT shall provide to AGENCY the geometric design plans (plan and profile) for the levee system that includes the latest topographic and planimetric mapping, approximate existing and conceptual rights-of-way limits, channel centerlines, control lines, calculated geometric layouts, 50- and 100-year water surface elevations, general labeling, and typical sections per AGENCY standards. CONSULTANT shall incorporate the 50% design plans in half size versions in the report to illustrate the important components of the proposed design such as alignments, geometry, cross sections, water surface elevations, bank protection, and preliminary details.

CONSULTANT shall refer to the AGENCY's Draft Facility Design Manual to ensure completeness of the Project Design Report.

Task 5.2 Deliverable(s):

1. Two (2) hard copies of the Draft and Final PDR (signed and stamped) and electronic versions of the Draft in MS Word and the Final in a searchable PDF format.
2. 50-percent level of completion design plans per AGENCY standards in PDF format and AutoCAD compatible with Civil 3D, 2021 version.

TASK 6 - PROJECT MANAGEMENT AND COORDINATION

Task 6.1: Project Management

CONSULTANT shall provide project management and coordination activities for schedule 2 for the duration of the project including the following items:

- CONSULTANT shall maintain appropriate project-level coordination and consultation with the AGENCY on all project aspects to ensure progress of the project.
- CONSULTANT shall provide overall quality assurance and quality control (QA/QC), identify development team, independent review team, and required disciplines for implementation and reviews.
- CONSULTANT shall coordinate and manage milestones, the schedule, project roles and responsibilities, the resource plan, and the document control processes of the project team.
- CONSULTANT shall coordinate communication among offices and staff, including meetings, to ensure all tasks are being performed on schedule and per Contract.

Task 6.2: Progress and Technical Meetings

CONSULTANT shall coordinate with AGENCY to schedule meetings in order to provide the consulting services required to complete the project. CONSULTANT shall ensure that the proper staff members, including from SUBCONSULTANTS, attend the meetings to provide needed consultation and discussion to resolve project related issues and to allow input and feedback during the design process. CONSULTANT shall conduct Three (3) teleconference project coordination meetings and one (1) in-person progress meetings at the AGENCY's office to review and discuss the project's progress and sequencing.

Three (3) Technical Studies Progress (TSP) Meetings will be held via conference call to review specific studies and analyses, and to review the project status and schedule. Technical Studies Progress Meeting No.1 will be held to review and discuss the project status and schedule, and the completion and results of the 50% design, environmental agencies permitting needs, impacts, and requirements, any problem or necessary adjustment due to new existing utilities discovery and Cal-Trans encroachment permit. Also, topographic mapping changes due to large storm events and hydrology, and hydraulic analysis. Technical Studies Progress Meeting No.2 will be held to review and discuss the project status and schedule, the adjustment or incorporation of any design changes, and the interior drainage construction plans. Technical Studies Progress Meeting No.3 will be used to review and discuss final reports, final construction plans, specifications, cost estimating, bid package, construction schedule.

CONSULTANT shall provide the AGENCY with electronic copies of the completed analyses and all supporting materials, together with a summary memorandum, at least three (3) weeks prior to the teleconference meeting.

TASK 7 - FINAL DESIGN

CONSULTANT shall prepare the final design documents including plans, specifications, construction schedule, and quantity and cost estimates for the recommended VR-2 Levee System. CONSULTANT shall prepare the documents in accordance with the *Consultants Guide to Ventura County Procedures*. CONSULTANT shall meet with AGENCY to present and discuss the results of this task prior to the final design stage in Task 4.6. The actual meeting time shall be agreed to between CONSULTANT and AGENCY but will likely occur around the 90% level of completion. This meeting is one in-person meetings referenced in Task 6.2 – Progress and Technical Meetings.

CONSULTANT shall provide engineering services for the preparation of final design documents at 90%, and 100% per the AGENCY's standards and consistent with the AGENCY's Draft Facility Design Manual for each level of design completion. CONSULTANT shall provide to AGENCY the Project Design Report at each level of completion that incorporates and updates all calculations, notes, supporting data and investigations, refined hydraulics, and background materials used to prepare the design package.

CONSULTANT shall prepare design plans on standard size AGENCY layout sheets (1" = 40' Horizontal, 1" = 4' Vertical scale) utilizing the boundary and topographic mapping provided by the AGENCY. CONSULTANT shall prepare the plan and profile, levee, and structure details, cross sections. and typical sections for the recommended improvements sufficient for construction purposes. CONSULTANT shall include the following information in the final design drawings:

1. Title Sheet to include general notes, abbreviations, and symbols
2. General Plan and Sheet Index Map
3. Plan and Profile (1" = 40' Horizontal and 1" = 4' Vertical) for Ventura River levee
4. Typical Sections
5. Structure Details and Notes
6. Floodwall Structure Layout and Details
7. Headwall/Transition Structure Details
8. Fresno Canyon Drain Connection Plan and Details
9. Pipe Outlet Structure Details
10. Interior Drainage Plans and Details
11. Miscellaneous Details (No smaller than 1" = 4' in scale)
12. Chain Link Fence and Gate Details
13. Cross Sections (1" = 10' Horizontal and Vertical, sufficient in number to capture critical design components and impacts of structure)
14. Soil Investigation Drawing (Boring Logs)
15. Alignment and Survey Control
16. Waterline Protection/Relocation
17. Trail Detour and Traffic Control
18. Right-of-Way Map

CONSULTANT shall prepare the specifications in MS Word in accordance with AGENCY's standard format.

CONSULTANT shall prepare and provide a construction schedule using MS Project software at the 100-percent design phase.

CONSULTANT shall provide engineering services for the preparation of quantities and cost estimates throughout the design phases. CONSULTANT shall base the unit costs on the most current cost information for recent similar projects in the area. CONSULTANT shall present the costs and quantities in a tabular format using MS Excel. CONSULTANT shall prepare rough quantities and costs at the 65-percent level of completion. CONSULTANT shall prepare the quantities and costs consistent with the Bid Item table at the 90-percent level of completion. At the 100-percent level of completion, CONSULTANT shall prepare the Schedule of Work and Prices as shown in the Specifications Proposal in addition to updating the Bid Item table.

Task 7.1: 65% Design Plans

CONSULTANT shall prepare 65% level of completion design plans for project team review. CONSULTANT shall further develop the plans based on the preliminary design plans provided with the Project Design Report. CONSULTANT shall refer to the AGENCY's Draft Facility Design Manual for the components to be included in the design plans.

Task 7.1.1: Final Structures Design

CONSULTANT's structural subconsultant shall evaluate the existing walls and structures and prepare final structure design for the VR-2 levee facilities to include headwalls, outlet structures including flap gates, and flood walls. The structures included within this scope of work include the following:

1. Flood Wall. The flood wall will be a reinforced concrete cantilevered wall approximately 8' high (measured from the top-of-footing to the top-of-wall) located along the easterly levee from Sta 39+75 to Sta 44+36. Consultant shall check the existing flood wall structural integrity to see if the wall can be raised without complete removal or reinforced with contour form.
2. Headwall/Transition Structure No. 1. Located at Sta 21+15, this structure will be the inlet into the channel for a 24" Dia RCP and will accommodate a flap gate. The channel slope at this location will be 2H:1V loose rock riprap.
3. Headwall/Transition Structure No. 2. Located at Sta 45+19, this structure will be the inlet into the channel for a 24" Dia RCP and will accommodate a flap gate. The channel slope at this location will be 1.5H:1V concreted rock riprap.
4. Fresno Canyon Drain Connection.
 - 4a. 10'Wx5.5'H Rectangular Reinforced Concrete Open Channel U/S of levee.
 - 4b. 10'Wx5.5'H RCB Culvert through the levee.

- 4c. 10'Wx5.5'H Vertically-tapered Rectangular Reinforced Concrete transition/outlet structure at D/S face of the levee, or.
- 4d. 108-inch RC Pipe or larger under access road with RC headwall and transition structures on both sides with flap gate on riverside with concrete ramp to the existing Fresno drain.

Layout for the structures will be included with the 65% design. Structural drawings shall be included in the 90% plans in accordance with the AGENCY's Draft Facility Design Manual. A complete set of structural calculations shall be provided.

A Civil or Structural Engineer licensed by the State of California shall prepare structural calculations for the selected structures in accordance with AGENCY and USACE design standards. The wall shall be designed based on the soil and foundation parameters recommended by the geotechnical engineer. Structural calculations shall conform to the latest California Building Code, the AGENCY Design manual and FEMA and USACE design standards, including:

- Design and Construction of Levees (EM 1110-2-1913; USACE, 2000)
- Retaining and Flood Walls (EM 1110-2-2502; USACE, 1989)
- Stability Analysis of Concrete Structures (EM 1110-2-2100, USACE, 2005)
- Strength Design for Reinforced Concrete Hydraulic Structures (EM 1110-2-2104, USACE, 2016)
- USACE Process for the National Flood Insurance Program (NFIP) Levee System Evaluation (EC 1110-2-6067; USACE, 2010)

Structures shall be designed according to the Load and Resistance Factor Design (LRFD) method. Structural Design Criteria shall be established in collaboration with the AGENCY prior to design. Calculations shall be prepared in 8½" x 11" format and submitted to the AGENCY for review. Typical and reasonable Load Configurations shall be considered as required by USACE criteria, including:

- Maximum Water Condition on Levee Side
- Maximum Surcharge Pool
- Saturated/Flooded Soil Condition on protected side
- Seismic Condition and any other criteria as required by FEMA

Task 7.2: 90% Design Improvement Plans

CONSULTANT shall prepare 90% level of completion design plans that incorporates the comments provided from the project team's review of the 65% improvement plan submittal. CONSULTANT shall refer to the AGENCY's Draft Facility Design Manual for the components to be included in the design plans.

Task 7.3: Technical Specifications (Special Provisions)

CONSULTANT shall prepare the special provisions portion of the Construction Specifications and Contract Documents suitable for bidding as part of the 90% level of completion submittal in accordance with the latest versions of the Greenbook and the Ventura County Standard Specifications (VCSS). CONSULTANT shall base the special provisions on the standard library of items and language typically utilized by the AGENCY. The CONSULTANT shall submit a complete set of special provisions with the 100% level of completion submittal tied to the plans and the Bid Item List. CONSULTANT shall provide a complete set of the final revisions to the special provisions tied to the plans, Bid Item List, and Schedule of Work and Prices with the Final submittal package. The special provisions will be incorporated by the AGENCY into the overall construction document package.

Task 7.4: Quantity and Cost Estimates

CONSULTANT shall provide and update a Bid Item List tied to the construction plans that lists all construction items (e.g., excavation, turbidity fence, 2-Ton rock riprap, concrete), and the corresponding units, quantities, unit price, and total cost. CONSULTANT shall perform quantity calculations for all the items of construction work based on the construction plans and provide these calculations to the AGENCY. CONSULTANT shall prepare the engineer's construction cost estimate based on the estimated construction item quantities and industry standard unit prices. CONSULTANT shall prepare the Schedule of Work and Prices as shown in the Specifications Proposal and include the payment subsection of the relevant specifications on the list. CONSULTANT shall base the unit costs on the most current cost information for

recent similar projects in the area as compiled by the CONSULTANT or AGENCY and approved by the AGENCY.

Task 7.5: 100% Design Plans, Specifications, Construction Schedule, and Estimate

CONSULTANT shall prepare 100% level of completion design plans, specifications, construction schedule, and quantity and cost estimates that incorporate the comments provided by the project team. CONSULTANT shall prepare the 100% level of completion documents consistent with the AGENCY's VCSS, Consultant's Guide, and Draft Facility Design Manual.

Task 7.6: Final Design Plans, Specifications, Construction Schedule, and Estimate

CONSULTANT shall prepare Final design plans, specifications, construction schedule, and quantity and cost estimates including incorporating comments provided from the project team's review. All items shall be in the AGENCY's format and shall be ready for inclusion in the construction document package.

Task 7.7: Permit Coordination and Processing

Construction of the levee improvements may impact the existing 42-inch Casitas Municipal Water District waterline and the Ojai Valley Trail. CONSULTANT shall coordinate with the Casitas Municipal Water District (CMWD) to finalize the details for incorporation of the utility construction plans into the VR-2 project plans. All coordination efforts shall be handled utilizing teleconferences, electronic correspondence, and field meetings. CONSULTANT shall support the AGENCY with the submittal and processing of proposed improvements to the affective facilities. CONSULTANT shall prepare final plans for the protection and/or relocation of the existing 42-inch Casitas Municipal Water District waterline between Levee Stations 15+50 to 19+00. The waterline shall be designed to meet the Casitas Municipal Water District standards. It is assumed that the waterline protection/relocation will be included in the VR-2 plan set. The cost of construction of the utilities shall be part of the project cost estimate. Trail detour and traffic control plans shall be prepared for the Ojai Valley Trail and processed with the Ventura County Transportation Department and the local agencies. The high-pressure gas line at Ranch Road area shall be incorporated in construction plans.

Task 7.8: Caltrans Permit Coordination and Processing

The upstream terminus of the levee system may encroach into Caltrans right-of-way. If necessary, the CONSULTANT will take the lead in the processing of an encroachment permit. CONSULTANT will meet and coordinate with the Caltrans District 7's encroachment permit department. The department is currently working full-time remotely. CONSULTANT will meet with the department and get a list of requirements for the permit. The expected requirements include the filled-out encroachment permit application form, construction plans within Caltrans R/W, traffic control plan for the levee work, cost estimate within Caltrans R/W, etc.

CONSULTANT shall prepare the traffic control plans (shoulder closure) based on the requirements in the latest edition of California MUTCD Part 6 "Temporary Traffic Control" and Caltrans Standard Plans T Section. The plan submittal (pdf) to Caltrans will be electronic. No hard copies of the plans are anticipated to be submitted. This task includes coordination and virtual meetings with Caltrans to review the recommended improvements and obtain approval of the design. This task includes coordination of exhibits, improvement and traffic control plans, cost estimates, and response to Caltrans review comments.

Task 7.9: Storm Water Pollution Prevention Plan and Storm Water Data Report

CONSULTANT will prepare the Notice of Intent (NOI) Permit Registration Documents (PRDs) and application for (NOI) in accordance with the requirements set forth in the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, California State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ, NPDES No. CAS000002.

Ventura River is listed for Sediment Toxicity on the 303(d) list of the California 2018 Integrated Report. CONSULTANT will prepare a Linear Underground/Overhead Project (LUP) SWPPP for Risk Level 2. The scope assumes that the Legally Responsible Person (LRP) will assign CONSULTANT as an approved data submitter on the SWRCB SMARTS online tool. The AGENCY's contractor shall assume responsibility for executing construction of the Project in conformance with the CGP. The contractor's QSP shall be

responsible for performing construction phase activities pursuant to the CGP and SWPPP, and the contractor's QSD shall be responsible for updating the SWPPP, preparation and filing of Annual Reports, and filing the Notice of Termination (NOT).

CONSULTANT will prepare 40' scale Erosion and Sediment Control Plans (ESCPs) for the limits of temporary construction, inclusive of access through Caltrans' right-of-way. The ESCPs will map potential temporary construction BMPs for consideration by the contractor. All details will be standard using the CASQA Construction BMP Handbook and the County Standard Plans.

To support the encroachment permit application, CONSULTANT will prepare one Storm Water Data Report (SWDR) using the current Caltrans standard forms. Post-Construction BMPs are not required for Linear Underground/Overhead Projects (LUP).

Task 7 Deliverable(s):

1. Copies of the 65% Documents to include the Basis of Design Report in appropriate native electronic formats, Structural Calculations in appropriate electronic format, Quantity and Cost Estimates in Excel spreadsheet, and plans as two (2) full size hard copy sets and the native electronic files in AutoCAD compatible with Civil 3D, 2017 version.
2. Copies of the 90% Documents to include the Basis of Design Report, SWPPP and SWDR in appropriate electronic formats, Specifications in MS Word, Quantity, Unit, and Cost Estimates in the form of a Bid Item List in Excel spreadsheet and plans as two (2) full size hard copy sets and the native electronic files in AutoCAD compatible with Civil 3D, 2024 version.
3. Copies of the 100% Documents to include the Basis of Design Report, SWPPP and SWDR in appropriate electronic formats, Specifications in MS Word, Construction Schedule in MS Project, Units, Cost, and Quantity Estimates in the form of the Bid Item List and Schedule of Work and Prices in Excel format and Plans as two (2) full size hard copy sets and the native electronic files in AutoCAD compatible with Civil 3D, 2024 version.
4. Two (2) hard copies and an electronic copy of the Final Documents to include the Basis of Design Report, SWPPP and SWDR in searchable PDF format plus any refinements to the hydraulics in the native format, Specifications in MS Word, Construction Schedule in MS Project, Units, Cost and Quantity Estimates in the form of the Bid Item List and Schedule of Work and Prices in Excel format, and Plans in AutoCAD compatible with Civil 3D, 2024 version.

TASK 8 – CONDITIONAL LETTER OF MAP REVISION (CLOMR) AND LETTER OF MAP REVISION (LOMR)

CONSULTANT shall prepare a CLOMR application package for the hydraulics, sedimentation/scour, and plans for submittal to FEMA in accordance with the requirements after the 60% documents are finalized. A LOMR application package with the as-built plans shall be prepared and submitted to FEMA at the completion of construction.

Task 8.1: CLOMR Application Package

CONSULTANT shall prepare and process the CLOMR application package to FEMA to modify the floodplain based on the proposed VR-2 project improvements. The application shall be processed with AGENCY approval of the 60% design plans and reports. Upon completion of the 60% design plans, CONSULTANT shall prepare the CLOMR submittal to FEMA. The technical studies and investigations required to develop the 60% design plans will be utilized as the base modeling and the design report. The FEMA Levee (MT-2) forms and appurtenant documentation will be filled out and submitted to obtain a CLOMR. The submittal package shall include written concurrence from the County of Ventura Floodplain Manager indicating agreement with the proposed floodplain modifications and supporting technical analysis. An annotated Flood Insurance Rate Map (FIRM) shall be prepared for the FIRM panels on which the site is located, indicating the extent of the revision. All supporting soils reports, geological data, hydraulic studies, sedimentation studies, interior drainage studies, plans and reports regarding proposed hydraulic structures for the river shall be included for FEMA's review. Once the CLOMR package is complete, CONSULTANT shall process the submittal package through FEMA.

CONSULTANT shall provide engineering services for the processing of the CLOMR submittal package through FEMA, including FEMA's reviewing consultant. Processing shall include additional data requests and correspondence with FEMA and their reviewing consultant.

Task 8.2: Operations and Maintenance Manual

CONSULTANT shall prepare an Operations and Maintenance (O&M) Plan for the VR-2 improvements as required by 44 CFR Section 65.10 (c) and (d). The plan will be processed with the AGENCY to be an officially adopted document. The adopted plan is required by FEMA as part of the submittal package for levee accreditation.

Task 8.3 LOMR Application Package

CONSULTANT shall prepare and process the Letter of Map Revision (LOMR) application package based on the approved CLOMR and the as-built improvement plans to be compiled at completion of the project construction. It is assumed that the as-built plans are in substantial conformance with the plans used for the CLOMR application. No new hydraulic analysis is proposed as part of this task. The initial content for the submittal package will be based on the items identified in the final approval letter from FEMA for the Conditional Letter of Map Revision. This letter typically identifies the minimum items required for the LOMR application besides the standard MT-2 formwork, such as as-built surveys. As-built surveys if required would be provided by the AGENCY. The submittal package shall also include the related FEMA application forms and appropriate data outlined in the Application/Certification Forms and Instructions for Conditional Letters of Map Revision, Letter of Map Revision, and Physical Map Revisions prepared by FEMA. The submittal package shall include written concurrence from the County of Ventura Floodplain Manager indicating their agreement with the proposed floodplain modifications and supporting technical analysis. An annotated Flood Insurance Rate Map (FIRM) shall be prepared for the FIRM panels on which the site is located, indicating the extent of the revision. The supporting as-built plans, geotechnical testing and data, and as-built survey information shall be included for FEMA's review.

Geotechnical certification of the levee compaction and completion of the necessary geotechnical elements MT-2 forms for the levee improvements is excluded from this scope of work. It is assumed that these services will be provided by the firm obtained by the AGENCY for geotechnical testing and observation during construction.

CONSULTANT shall provide engineering services for the processing of the LOMR submittal package through FEMA, including FEMA's reviewing consultant. Processing shall include correspondence with FEMA and their reviewing consultant. CONSULTANT shall prepare revisions to the LOMR submittal package based on comments by the AGENCY and FEMA during the review process. CONSULTANT shall provide consulting services related to project coordination during the process.

Task 8 Deliverable(s):

1. Complete CLOMR application package and appurtenant documentation
2. O&M Plan
3. Complete LOMR application package and appurtenant documentation

3. Extra Services

Extra Services are separate from but related to the Basic Services described above. Extra Services shall be performed by CONSULTANT only after being authorized in writing by the Project Manager for AGENCY. The AGENCY's written authorization will include a statement of the Extra Services required and time schedule for completion. CONSULTANT's billing and AGENCY's payment for Extra Services shall occur pursuant to Exhibit C.

4. County Services

AGENCY will provide or accomplish the following:

1. Full information as to the requirements of the services to be provided by CONSULTANT under the Contract.

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2. Review documents submitted by CONSULTANT and provided a consolidated set of comments per submittal, direction, or approval as needed in a timely manner.
3. Provide all coordination and involvement with stakeholders and CEQA/NEPA meetings.
4. Previous topographic mapping in electronic format, and additional field survey as requested by CONSULTANT during the project design.
5. Available utility information to be shown on the design drawings through contact with project area utility companies.
6. Previous recent studies in hard copy format including hydraulic models and sedimentation and scour studies.
7. All available as built and repair plans and maintenance history for the project area.
8. The necessary hydrologic information for the levee certification evaluation, including master plans of drainage, peak discharges, flood source hydrographs that illustrate the duration of flooding at various discharges, and sufficient information on the probability of timing of the flooding source peak flows so that an interior drainage analysis can be performed consistent with FEMA requirements.
9. Encroachment and/or access permits and permissions, as well as applicable permits from the CDFW, USACE, and the RWQCB for geotechnical field investigations, based on information provided by the CONSULTANT.
10. Full vehicular access to both ends and along the entire length of the VR-2 levee alignment and within AGENCY right-of-way.
11. Digital CAD files for the linework and base files for the right-of-way and easements in the project area.
12. AECOM/Stillwater finalized hydraulic and sedimentation study results and reports for the post-dam removal condition.
13. All fee associated with the FEMA CLOMR and LOMR application and approval process.
14. Environmental and ESA documentation for the CLOMR application package.

End of Exhibit A

EXHIBIT B - TIME SCHEDULE

1. Schedule

All Work on this contract (Schedule1+Schedule2) shall be completed by 6/30/2026.

CONSULTANT shall complete intermediate tasks as follows:

Task Table

Task	Description	Due Date
1	Project Management and Coordination	6/30/2025
1.1	Project Management	6/30/2025
1.2	Project Kick-off Meeting	7/29/2024
1.3	Progress and Technical Meetings	6/30/2025
1.4	Public Meetings	6/30/2025
2	Environmental Support and Permits	6/30/2025
3	Final Design Technical Studies	6/30/2025
3.1	Data Collection and Review	8/30/2024
3.2	Utility Coordination and Mapping	11/22/2024
3.3	River Hydraulic Analysis	1/10/2025
3.4	Sediment Transport and Scour Analysis	1/24/2025
3.5	Interior Drainage Study	3/18/2025
3.6	Interior Drainage Construction Plans	5/19/2025
4	Geotechnical Analysis (Geocon West Inc.)	2/28/2025
4.1	Geotechnical Peer Review, Permits, Permit Support, and Utility Clearance	2/28/2025
4.2	Subsurface Exploration	9/27/2024
4.3	Streambed Sampling and Testing	9/27/2024
4.4	Geotechnical Laboratory Tests	10/31/2024
4.5	Draft Geotechnical Report	11/29/2024
4.6	Final Geotechnical Report	2/27/2025
5	50% Design Plans and Project Design Report (PDR)	6/27/2025
5.1	50% Design Plans	6/27/2025
5.2	Project Design Report (PDR)	3/28/2025
	End Schedule 1- FY2024 - 2025	6/27/2025
6	Project Management and Coordination	6/30/2026
6.1	Project Management	6/30/2026
6.2	Progress and Technical Meetings	6/30/2026
7	Final Design	12/12/2025
7.1	65% Design Plans	9/19/2025
7.1.1	Final Structures Design (Rende Consulting Group, Inc.)	11/14/2025
7.2	90% Design Improvement Plans	12/05/2025
7.3	Technical Specifications (Special Provisions)	12/05/2025
7.4	Quantity and Cost Estimates	12/05/2025
7.5	100% Design Plans, Specifications, Construction Schedule, and Estimate	1/23/2026
7.6	Final Design Plans, Specifications, Construction Schedule, and Estimate	3/6/2026
7.7	Permit Coordination and Processing	12/05/2025

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Task	Description	Due Date
7.8	Caltrans Permit Coordination and Processing (Mark Thomas)	12/05/2025
7.9	Storm Water Pollution Prevention Plan and Storm Water Data Report	12/05/2025
8	Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR)	
8.1	CLOMR Application Package	6/27/2025
8.2	Operations and Maintenance Manual	6/27/2025
8.3	LOMR Application Package	6/30/2026
	End Schedule 2- FY2025 - 2026	6/30/2026

2. Delays

If Work cannot be completed by the dates specified in Exhibit B through no fault of CONSULTANT, the fee for the Work not then completed may be adjusted to reflect increases in cost which occur, due to delay, from the date that the Work was required to be complete as specified in Exhibit B until the time the Work can actually be completed. Any payment of an additional fee as described in this paragraph must be authorized by AGENCY with a modification to this contract.

End of Exhibit B

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EXHIBIT C – Fees and Payments

1. Compensation Summary

The following summarizes the maximum amount of compensation available to CONSULTANT under this contract. The actual amount of compensation shall be established and paid in accordance with the applicable provisions of the contract including this Exhibit C.

Maximum Fees for Basic Services:	\$ <u>1,141,617.00</u>
Maximum Fees for Extra Services:	\$ <u> .00</u>
Maximum Reimbursement for Expenses:	\$ <u> 1,600.00</u>
 Total Amount Not to Exceed:	 \$ <u> 1,143,217.00</u>

2. Fees for Basic Services

AGENCY agrees to pay CONSULTANT the following fees for Basic Services

an **hourly rate** compensation, for actual hours of Basic Services performed that is based upon the hourly rates set forth in the following Rate Table, which rates shall remain fixed for the duration of the contract, not to exceed the **maximum fee amount of \$1,141,617.00**. The maximum fees for the respective tasks identified in Exhibit A as well as the total maximum fee amount are shown in the below Task Table. In no case shall a fee for a specific task exceed that listed below without prior written approval by AGENCY. Rates to be charged are identified in the Rate Table listed below.

Rate Table

Item	Position/Equipment	Unit	Regular ¹	Prevailing ²	Travel ³
1	Project Director	Hour	\$ 265.00	n/a	No
2	Senior Technical Manager	Hour	\$ 240.00	n/a	No
3	Senior Engineer	Hour	\$ 196.00	n/a	No
4	Project Engineer	Hour	\$ 180.00	n/a	No
5	Engineer/Designer	Hour	\$ 160.00	n/a	No
6	Design Engineer	Hour	\$ 142.00	n/a	No
7	Engineer Tech	Hour	\$ 118.00	n/a	No
8	Engineer Intern	Hour	\$ 79.00	n/a	No
9	Compaction Curve	Each	\$ 250.00	n/a	No
10	Consolidated Undrained Triaxial	Each	\$ 335.00	n/a	No
11	Sieve and Hydrometer	Each	\$ 210.00	n/a	No
12	Sieve and #200 Wash	Each	\$ 150.00	n/a	No
13	Sand Equivalent	Each	\$ 169.00	n/a	No
14	Direct Shear Test (CD)	Each	\$ 325.00	n/a	No
15	Permeability (Hydraulic Conductivity – K)	Each	\$ 300.00	n/a	No
16	Consolidation	Each	\$ 350.00	n/a	No
17	Durability Index	Each	\$ 165.00	n/a	No
18	Coarse Specific Gravity	Each	\$ 125.00	n/a	No
19	LA Abrasion	Each	\$ 250.00	n/a	No
20	Sulfate Soundness	Each	\$ 500.00	n/a	No
21	Expansion Index	Each	\$ 225.00	n/a	No
22	Corrosion Potential (Chloride, Sulfate, Ph)	Each	\$ 350.00	n/a	No
23	Soil Cement Hydraulic Conductivity	Each	\$ 300.00	n/a	No
24	Soil Cement Compression Strength	Each	\$ 100.00	n/a	No

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Item	Position/Equipment	Unit	Regular ¹	Prevailing ²	Travel ³
25	Drilling Rig Mob/Demob (Sonic or Hollow Stem)	LS	\$7,500.00	n/a	No
26	Drilling - Onsite	Day	\$7,200.00	n/a	No
27	Backfill Materials – Grout (Vertical Lineal Foot)	LF	\$ 10.00	n/a	No
28	Driller – Per Diem	Day	\$ 600.00	n/a	No
29	Drilling Mud Disposal	Drum	\$ 55.00	n/a	No
30	Excavator – Mob/Demob	Hour	\$ 185.00	n/a	No
31	Excavator – Cat 330 - Onsite	Hour	\$ 185.00	n/a	No

- Notes: 1) The Regular rates shown include all routine general and administrative expenses including but not limited to phone calls, travel within Ventura County (see note 3), incidental photocopying, and office equipment unless otherwise expressly listed in the Rate Table above.
- 2) The Prevailing rates shown include all routine general and administrative expenses including but not limited to phone calls, travel within Ventura County (see note 3), incidental photocopying, and office equipment unless otherwise expressly listed in the Rate Table above.
- 3) The word "Yes" in the Travel column above indicates that reimbursement for travel within Ventura County is authorized for the position described by that item.

Task Table

Task	Description	Maximum Fee
1	Project Management and Coordination	
1.1	Project Management	\$ 20,700
1.2	Project Kick-off Meeting	\$ 4,110
1.3	Progress Meetings	\$ 9,040
1.4	Public Meetings	\$ 10,868
2	Environmental Support and Permits	\$ 20,600
3	Final Design Technical Studies	
3.1	Data Collection and Review	\$ 9,320
3.2	Utility Coordination and Mapping	\$ 10,162
3.3	River Hydraulic Analysis	\$ 99,850
3.4	Sediment Transport and Scour Analysis	\$ 81,620
3.5	Interior Drainage Study	\$ 54,728
3.6	Interior Drainage Construction Plans	\$ 14,548
4	Geotechnical Analysis (Geocon West Inc.)	
4.1	Geotechnical Peer Review, Permits, Permit Support and Utility Clearance	\$ 14,140
4.2	Subsurface Exploration	\$ 136,881
4.3	Streambed Sampling and Testing	\$ 13,506
4.4	Geotechnical Laboratory Tests	\$ 18,115
4.5	Draft Geotechnical Report	\$ 25,160
4.6	Final Geotechnical Report	\$ 4,020
5	50% Design Plans and Project Design Report (PDR)	
5.1	50% Design Plans	\$ 105,628
5.2	Project Design Report (PDR)	\$ 69,520
	Sub-Total Schedule 1- FY2024 - FY2025	\$ 722,516
6	Project Management and Coordination	
6.1	Project Management	\$ 20,700
6.2	Progress Meetings	\$ 9,040
7	Final Design	
7.1	65% Design Plans	\$ 38,421
7.1.1	Final Structures Design (Rende Consulting Group, Inc.)	\$ 89,420
7.2	90% Design Improvement Plans	\$ 64,207

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Task	Description	Maximum Fee
7.3	Technical Specifications (Special Provisions)	\$ 9,650
7.4	Quantity and Cost Estimates	\$ 10,050
7.5	100% Design Plans, Specifications, Construction Schedule, and Estimate	\$ 25,786
7.6	Final Design Plans, Specifications, Construction Schedule, and Estimate	\$ 16,760
7.7	Permit Coordination and Processing	\$ 15,708
7.8	Caltrans Permit Coordination and Processing (Mark Thomas)	\$ 19,838
7.9	Storm Water Pollution Prevention Plan and Storm Water Data Report	\$ 31,189
8	Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR)	
8.1	CLOMR Application Package	\$ 39,375
8.2	Operations and Maintenance Manual	\$ 5,506
8.3	LOMR Application Package	\$ 23,451
	Sub-Total Schedule 2- FY2025 - FY2026	\$ 419,101
	Total Schedule1+ Schedule 2	\$ 1,141,617

3. Fees for Extra Services

For Extra Services authorized in writing in advance by AGENCY in accordance with Exhibit A, AGENCY agrees to pay CONSULTANT an **hourly rate** compensation for actual hours of Extra Services performed that is based upon the hourly rates set forth in the Rate Table for Basic Services above or, if none, then based upon the hourly rates set forth in the following Rate Table for Extra Services, which rates shall remain fixed for the duration of the contract, not to exceed the **maximum fee amount of \$0.00**.

4. Delays

If Work cannot be completed by the dates specified in Exhibit B through no fault of CONSULTANT, the fees for the Work not then completed may be adjusted to reflect increases in cost which occur, due to delay, from the date that the Work was required to be complete as specified in Exhibit B until the time the Work can actually be completed. Any payment of an additional fee as described in this paragraph must be authorized by AGENCY with a written modification to this contract.

5. Reimbursable Expenses

CONSULTANT shall be reimbursed a sum for the following reasonable out-of-pocket expenses that are incurred and paid for by CONSULTANT in furtherance of performance of its obligations under this contract, but only to the extent that such expenses are directly related to CONSULTANT's services hereunder and do not exceed the **maximum reimbursable amount of \$1,600.00**:

(i) Outside printing directly related to deliverables but not for internal uses of CONSULTANT or its Subconsultants.

(ii) Reproduction or reprographic costs directly related to deliverables but not for internal uses of CONSULTANT or its Subconsultants. If CONSULTANT provides allowable reprographic services using its own equipment rather than using an outside service, the unit billing rates for such charges must be approved in advance by AGENCY.

(iii) Shipping, overnight mail, postage, messenger, courier and/or delivery services (but not for CONSULTANT's internal communications);

(iv) Only if authorized in writing in advance by AGENCY, reimbursement for business travel for the specific position descriptions so identified in the Rate Tables for Basic Services or Extra Services set forth above. AGENCY shall reimburse CONSULTANT for transportation, lodging, and meal expenses consistent with the policies and amounts approved for County employees as defined by policy number Chapter VII(C)-1, *Reimbursement of Employees County Business Expenses*, in the County's Administrative Policy Manual (latest edition);

(v) Only if authorized in writing in advance by AGENCY, fees and costs for Subconsultant services that are not included in the Rate Tables for Basic Services or Extra Services set forth above.

Exclusive List. The list of reimbursable expenses set forth above is the sole and exclusive list of reimbursable expenses that CONSULTANT is entitled to receive.

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Approval Limits. Any reimbursable expense wherein a single item exceeds \$500 in value, whether purchased or leased, must be approved in writing in advance by AGENCY.

No Administrative Charge or Mark-Ups. The reimbursement provided for herein shall not include an administrative charge, multiplier or other mark-up by CONSULTANT unless authorized in writing, in advance, by AGENCY.

No Reimbursement for Specified Basic Services Paid for by a Fixed Fee. Notwithstanding the above, expenses related to Basic Services specified in Exhibit B are not reimbursable if CONSULTANT is compensated for Basic Services by a fixed fee.

6. Payment

AGENCY shall make payments to CONSULTANT under the contract as follows:

Requests for Payment

To request payment, CONSULTANT shall complete and submit to AGENCY a Consultant Services Invoice Form that shall include, at a minimum, (i) personnel time records for Basic Services and Extra Services actually performed at the rates specified in this Exhibit C, or the completed task for which payment of the fixed fee provided for in this Exhibit C is requested, as applicable, and (ii) receipts for all authorized reimbursable expense, along with the written AGENCY authorization for any specific reimbursable expenses requested for payment, if required above.

When invoicing for Extra Services, CONSULTANT shall clearly mark on the Invoice Form which services are Extra Services and keep those services separate from Basic Services and shall include a copy of the written AGENCY authorization for the Extra Services for which payment is requested.

CONSULTANT shall submit all **invoices** to:

PWA.consultantinvoices@ventura.org

Payment Schedule

Payments shall be made by AGENCY upon presentation of a properly completed AGENCY Invoice Form as described above. Payments based on an hourly rate compensation shall be made monthly.

Timely Invoicing

Timely invoicing by CONSULTANT is required. Delays in invoicing for services performed increases the management effort required by AGENCY to ensure accurate payments to CONSULTANT and manage project budgets. Accordingly, CONSULTANT shall submit a properly completed invoice no later than 60 calendar days after the services which are the subject of the invoice were performed. An invoice received by AGENCY more than 60 calendar days after the services were performed shall be reduced by 5% to compensate AGENCY for the additional management costs. Additionally, since increases in administrative costs and budgetary problems caused by late invoicing correlate to the length of delay in invoicing, there will be an additional 5% reduction in compensation for each additional 30-calendar-day period beyond 60 days between the date the services were performed and the submission of the invoice for those services.

CONSULTANT shall submit a final invoice form within 60 days of the earliest of the following events: 1) completion and acceptance by AGENCY of all Work required by the contract; or 2) termination of the contract.

End of Exhibit C