MONTEREY COUNTY WATER RESOURCES AGENCY
AGREEMENT FOR PROFESSIONAL SERVICES
WITH SURVEYORS, ARCHITECTS, ENGINEERS AND/OR DESIGN PROFESSIONALS

This is an agreement ("Agreement") between the **Monterey County Water Resources Agency**, hereinafter called "Agency," and **AECOM Technical Services, Inc.**, a California corporation hereinafter called "CONTRACTOR"; each may be referred to herein as a "Party" or collectively as the "Parties".

In consideration of the mutual covenants and conditions set forth in this Agreement, the parties agree as follows:

1. Employment of CONTRACTOR. Agency hereby engages CONTRACTOR and CONTRACTOR hereby agrees to perform the services set forth in Exhibits A, B and C in conformity with the terms of this Agreement. CONTRACTOR will complete all work in accordance with the **Scope of Work/Work Schedule set forth in Exhibits A and B**:

   (a) The scope of work is briefly described and outlined as follows:
   Engineering services for Nacimiento Dam and San Antonio Dam including seismic stability evaluation, and dam surveillance and performance evaluation.

   (b) The CONTRACTOR shall perform its services under this agreement in accordance with usual and customary care and with generally accepted practices in effect at the time the services are rendered. The CONTRACTOR and its agents and employees performing work hereunder are specially trained, experienced, competent, and appropriately licensed to perform the work and deliver the services required by this Agreement.

   (c) CONTRACTOR, its agents and employees shall perform all work in a safe and skillful manner and in compliance with all applicable laws and regulations. All work performed under this Agreement that is required by law to be performed or supervised by licensed personnel shall be performed in accordance with such licensing requirements.

   (d) CONTRACTOR shall furnish, at its own expense, all materials and equipment necessary to carry out the terms of this Agreement, except as otherwise provided herein. CONTRACTOR shall not use Agency premises, property (including equipment, instruments, or supplies) or personnel for any purpose other than in the performance of its obligations hereunder.

2. Term of Agreement. The term of this Agreement shall **begin on June 1, 2020** by CONTRACTOR and Agency, and will **terminate on June 30, 2022**, unless earlier terminated as provided herein.

3. Payments to CONTRACTOR; maximum liability. Subject to the limitations set forth herein, Agency shall pay to CONTRACTOR in accordance with the fee schedule set forth in **Exhibit C**. The maximum amount payable to CONTRACTOR under this contract is **nine hundred thirty eight thousand three hundred fifty dollars**.

($ 938,350.00).

4. Monthly Invoices by CONTRACTOR; Payment.

(a) CONTRACTOR shall submit to Agency an invoice, in a format approved by Agency, setting forth the amounts claimed by CONTRACTOR, together with an itemized basis for such amounts, and setting forth such other pertinent information Agency may require. CONTRACTOR shall submit such invoice monthly or as agreed by Agency, but in no event shall such invoice be submitted later than 30 days after completion of CONTRACTOR's work hereunder. Agency shall certify the claim if it complies with this contract and shall promptly submit such claim to the Monterey County Auditor-Controller, who shall pay the certified amount within 30 days after receiving the invoice certified by Agency. It is understood and agreed that CONTRACTOR shall complete all work described in **Exhibits A and B** for an amount not exceeding that set forth above, notwithstanding CONTRACTOR's submission of periodic invoices.

(b) CONTRACTOR agrees that Agency may withhold five percent (5%) of the amount requested by CONTRACTOR from any progress payment, until such time as all goods and services are received in a manner and form acceptable to Agency.

(c) If, as of the date of execution of this Agreement, CONTRACTOR has already received payment from Agency for work which is the subject of this Agreement, such amounts shall be deemed to have been paid under this Agreement and shall be counted toward Agency's maximum liability set forth above.

(d) CONTRACTOR shall not be reimbursed for travel expenses unless expressly approved in writing in accordance with this Agreement.

5. Indemnification

5.1 For purposes of the following indemnification provisions ("Indemnification Agreement"), "design professional" has the same meaning as set forth in California Civil Code section 2782.8. If any term, provision or application of this Indemnification Agreement is found to be invalid, in violation of public policy or unenforceable to any extent, such finding shall not invalidate any other term or provision of this Indemnification Agreement and such other terms and provisions shall continue in full

force and effect. If there is any conflict between the terms, provisions or application of this Indemnification Agreement and the provisions of California Civil Code Sections 2782 or 2782.8, the broadest indemnity protection for the COUNTY under this Indemnity Agreement that is permitted by law shall be provided by CONTRACTOR.

5.2 Indemnification for Design Professional Services Claims: CONTRACTOR shall indemnify, defend and hold harmless COUNTY, its governing board, directors, officers, employees, and agents against any claims that arise out of, or pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONTRACTOR, its employees, subCONTRACTORs, and agents in the performance of design professional services under this Agreement, excepting only liability arising from the sole negligence, active negligence or willful misconduct of COUNTY, or defect in a design furnished by COUNTY, but in no event shall the amount of such CONTRACTOR's liability exceed such CONTRACTOR's proportionate percentage of fault as determined by a court, arbitrator or mediator, or as set out in a settlement agreement. In the event one or more defendants to any action involving such claim or claims against COUNTY is unable to pay its share of defense costs due to bankruptcy or dissolution of the business, such CONTRACTOR shall meet and confer with the other parties to such action regarding unpaid defense costs.

5.3 Indemnification for All Other Claims or Loss:
For any claim, loss, injury, damage, expense or liability other than claims arising out of the CONTRACTOR's performance of design professional services under this Agreement, CONTRACTOR shall indemnify, defend and hold harmless COUNTY, its governing board, directors, officers, employees, and agents against any claim for loss, injury, damage, expense or liability resulting from or alleging injury to or death of any person or loss of use of or damage to property, arising from or related to the performance of services under this Agreement by CONTRACTOR, its employees, subCONTRACTORs or agents, excepting only liability arising from the sole negligence, active negligence or willful misconduct of the COUNTY, or defect in a design furnished by the COUNTY.

6. Insurance.

6.1 Evidence of Coverage:
Prior to commencement of this Agreement, the CONTRACTOR shall provide a "Certificate of Insurance" certifying that coverage as required herein has been obtained. Individual endorsements executed by the insurance carrier shall accompany the certificate. In addition, the CONTRACTOR upon request shall provide a certified copy of the policy or policies.

This verification of coverage shall be sent to the Agency's Contact, unless otherwise directed. The CONTRACTOR shall not receive a "Notice to Proceed" with the work under this Agreement until it has obtained all insurance required and such, insurance has been approved by the Agency. This approval of insurance shall

neither relieve nor decrease the liability of the CONTRACTOR.

6.2 Qualifying Insurers:
All coverage's, except surety, shall be issued by companies which hold a current policy holder's alphabetic and financial size category rating of not less than A- VII, according to the current Best's Key Rating Guide or a company of equal financial stability that is approved by the County's Purchasing Manager.

6.3 Insurance Coverage Requirements:
Without limiting CONTRACTOR's duty to indemnify, CONTRACTOR shall maintain in effect throughout the term of this Agreement a policy or policies of insurance with the following minimum limits of liability:

Commercial general liability insurance, including but not limited to premises and operations, including coverage for Bodily Injury and Property Damage, Personal Injury, Contractual Liability, Broad form Property Damage, Independent CONTRACTORs, Products and Completed Operations, with a combined single limit for Bodily Injury and Property Damage of not less than $1,000,000 per occurrence.

☐ Exemption/Modification (Justification attached; subject to approval).

Business automobile liability insurance, covering all motor vehicles, including owned, leased, non-owned, and hired vehicles, used in providing services under this Agreement, with a combined single limit for Bodily Injury and Property Damage of not less than $1,000,000 per occurrence.

☐ Exemption/Modification (Justification attached; subject to approval).

Workers' Compensation Insurance, if CONTRACTOR employs others in the performance of this Agreement, in accordance with California Labor Code section 3700 and with Employer's Liability limits not less than $1,000,000 each person, $1,000,000 each accident and $1,000,000 each disease.

☐ Exemption/Modification (Justification attached; subject to approval).

Professional liability insurance, if required for the professional services being provided, (e.g., those persons authorized by a license to engage in a business or profession regulated by the California Business and Professions Code), in the amount of not less than $1,000,000 per claim and $2,000,000 in the aggregate, to cover liability for malpractice or errors or omissions made in the course of rendering professional services. If professional liability insurance is written on a "claims-made" basis rather than an occurrence basis, the CONTRACTOR shall, upon the expiration or earlier termination of this Agreement, obtain extended reporting coverage ("tail coverage") with the same liability limits. Any such tail coverage shall continue for at least three years following the expiration or earlier termination of this Agreement.

☐ Exemption/Modification (Justification attached; subject to approval).

6.4 Other Insurance Requirements.

All insurance required by this Agreement shall be with a company acceptable to the Agency and issued and executed by an admitted insurer authorized to transact Insurance business in the State of California. Unless otherwise specified by this Agreement, all such insurance shall be written on an occurrence basis, or, if the policy is not written on an occurrence basis, such policy with the coverage required herein shall continue in effect for a period of three years following the date CONTRACTOR completes its performance of services under this Agreement.

Each liability policy shall provide that the Agency shall be given notice in writing at least thirty days in advance of any endorsed reduction in coverage or limit, cancellation, or intended non-renewal thereof. Each policy shall provide coverage for CONTRACTOR and additional insureds with respect to claims arising from each subCONTRACTOR, if any, performing work under this Agreement, or be accompanied by a certificate of insurance from each subCONTRACTOR showing each subCONTRACTOR has identical insurance coverage to the above requirements.

Commercial general liability and automobile liability policies shall provide an endorsement naming the Monterey County Water Resources Agency and the County of Monterey, their officers, agents, and employees as Additional Insureds with respect to liability arising out of the CONTRACTOR'S work, including ongoing and completed operations, and shall further provide that such insurance is primary insurance to any insurance or self-insurance maintained by the County and that the insurance of the Additional Insureds shall not be called upon to contribute to a loss covered by the CONTRACTOR'S insurance. The required endorsement form for Commercial General Liability Additional Insured ***is ISO Form CG 20 10 11- 85 or CG 20 10 10 01 in tandem with CG 20 37 10 01 (2000). The required*** *endorsement form for Automobile Additional Insured endorsement is* ***ISO Form CA 20 48 02 99.***

Prior to the execution of this Agreement by the Agency, CONTRACTOR shall file certificates of insurance with the Agency's contract administrator, showing that the CONTRACTOR has in effect the insurance required by this Agreement. The CONTRACTOR shall file a new or amended certificate of insurance within five calendar days after any change is made in any insurance policy, which would alter the information on the certificate then on file. Acceptance or approval of insurance shall in no way modify or change the indemnification clause in this Agreement, which shall continue in full force and effect.

CONTRACTOR shall at all times during the term of this Agreement maintain in force the insurance coverage required under this Agreement and shall send, without demand by Agency, annual certificates to Agency's Contract Administrator. If the certificate is not received by the expiration date, Agency shall notify CONTRACTOR and CONTRACTOR shall have five calendar days to send in

the certificate, evidencing no lapse in coverage during the interim. Failure by CONTRACTOR to maintain such insurance is a default of this Agreement, which entitles Agency, at its sole discretion, to terminate this Agreement immediately.

7. Maintenance of Records. CONTRACTOR shall prepare, maintain and preserve all reports and records that may be required by federal, State, and local rules and regulations relating to services performed under this Agreement. CONTRACTOR shall retain all such records for at least five years from the date of final payment, or until any litigation relating to this Agreement is concluded, whichever is later.

8. Right to Audit at Any Time. Agency officials shall have the right, at any time during regular working hours and on reasonable advance notice, to examine, monitor and audit all work performed and all records, documents, conditions, activities and procedures of CONTRACTOR or its subCONTRACTORs relating to this Agreement. Government Code Section 8546.7 provides that an audit by the State Auditor General may be performed up to three years after the final payment under any contract involving the expenditure of public funds in excess of $10,000.

9. Confidentiality; Return of Records. CONTRACTOR and its officers, employees, agents, and subCONTRACTORs shall comply with all federal, State and local laws providing for the confidentiality of records and other information. To the extent permitted by applicable law and regulations, CONTRACTOR shall maintain confidentiality with respect to Agency 's well database and other water use data.

   CONTRACTOR shall not disclose any confidential information received from Agency or prepared in connection with the performance of this Agreement without the express permission of Agency. CONTRACTOR shall promptly transmit to Agency all requests for disclosure of any such confidential information. CONTRACTOR shall not use any confidential information gained through the performance of this Agreement except for the purpose of carrying out CONTRACTOR's obligations hereunder. When this Agreement expires or terminates, CONTRACTOR shall return to Agency all records, which CONTRACTOR utilized or received, from Agency to perform services under this Agreement.

10. Termination. Either party may terminate this Agreement by giving written notice of termination to the other party at least thirty (30) days prior to the effective date of termination, which date shall be specified in any such notice. In the event of such termination, the amount payable hereunder shall be reduced in proportion to the services provided prior to the effective date of termination. Agency may terminate this Agreement at any time for good cause effective immediately upon written notice to CONTRACTOR. "Good cause" includes, without limitation, the failure of CONTRACTOR to perform the required services at the time and in the manner provided herein. If Agency terminates this Agreement for good cause, Agency may be relieved of the payment of any consideration to CONTRACTOR, and Agency may proceed with the work in any manner, which it deems proper. Costs incurred by Agency thereby shall be

deducted from any sum due CONTRACTOR.

11. Force Majeure. Neither Party shall be responsible for a delay in its respective performance under this Agreement, other than a delay in payment for Services already performed, if such delay is caused by events beyond the reasonable control of the claiming Party, including, but without limitation to, "acts of god," abnormal weather conditions or other natural catastrophes, war, terrorist attacks, sabotage, computer viruses, riots, strikes, lockouts or other industrial disturbances, pandemics, epidemics, health emergencies, disease, plague, quarantine, travel restrictions, discovery of hazardous materials, differing or unforeseeable site conditions, acts of governmental agencies or authorities (whether or not such acts are made in response to other Force Majeure Events), or any other events or circumstances not within the reasonable control of the party affected, whether or not of a similar kind or nature to any of the foregoing (a "Force Majeure Event"). For the avoidance of doubt, Force Majeure Events include the Coronavirus disease (COVID-19) outbreak. The Party seeking application of this provision shall notify the other Party in writing promptly upon learning of the impact of the Force Majeure Event upon the notifying Party's performance of its obligations under this Agreement. Upon the occurrence of a Force Majeure Event, CONTRACTOR shall be entitled to an equitable adjustment to the project schedule. Should a Force Majeure Event substantially prevent or be reasonably likely to substantially prevent CONTRACTOR's performance of the Services for more than thirty (30) days, then either Party shall be entitled to terminate this Agreement without breach. In case of such termination, CONTRACTOR shall be entitled to compensation for those Services performed as of the date of termination.

12. Amendments and Modifications. No modification or amendment of this agreement shall be valid unless it is set forth in writing and executed by the parties.

13. Non-Discrimination. Throughout the performance of this Agreement, CONTRACTOR will not unlawfully discriminate against any person because of race, color, religion, gender, national origin, ancestry, physical disability, medical condition, marital status, age older than 40, or sexual orientation, gender identity or any other status protected under federal, state or local law, either in CONTRACTOR's employment practices or in the furnishing of services to recipients. CONTRACTOR shall ensure that the evaluation and treatment of its employees and applicants for employment and all persons receiving and requesting services are free of such discrimination. CONTRACTOR shall comply fully with all federal, State and local laws and regulations which prohibit discrimination. The provision of services primarily or exclusively to any target population designated herein shall not be deemed prohibited discrimination.

14. Independent Contractor. In its performance under this Agreement, CONTRACTOR is at all times acting and performing as an independent CONTRACTOR and not an employee of Agency. No offer or obligation of employment with Agency is intended in any manner, and CONTRACTOR shall not become entitled by virtue of this Agreement to receive from Agency any form of benefits accorded to employees including without limitation leave time, health insurance, workers compensation coverage, disability benefits, and retirement contributions. CONTRACTOR shall be solely liable for and obligated to pay directly all applicable taxes, including without limitation federal and State income taxes and social

security arising out of CONTRACTOR's performance of this Agreement. In connection therewith, CONTRACTOR shall defend, indemnify, and hold harmless Agency from any and all liability, which Agency may incur because of CONTRACTOR's failure to make such payments.

15. Delegation of Duties; Subcontracting. CONTRACTOR is engaged by Agency for its unique qualifications and abilities. CONTRACTOR may not, therefore, delegate any of its basic duties under this Agreement, except to the extent that delegation to CONTRACTOR's employees is contemplated herein. No work shall be subcontracted without the written consent of Agency, except as provided in this Agreement or its attachments. Notwithstanding any subcontract, CONTRACTOR shall continue to be liable to Agency for the performance of all work hereunder. CONTRACTOR shall not assign, sell, mortgage or otherwise transfer its interest or obligations in this Agreement without Agency 's prior written consent.

16. Agency's Rights in Work Product. All original materials prepared by CONTRACTOR in connection with its work hereunder -- including but not limited to computer codes, customized computer routines developed using proprietary or commercial software packages, reports, documents, maps, graphs, charts, photographs and photographic negatives -- shall be the property of Agency and shall be delivered to Agency prior to final payment. CONTRACTOR may utilize any existing materials developed by

    CONTRACTOR prior to commencement of work under this Agreement, which materials shall remain the property of CONTRACTOR.

17. Compliance with Terms of Federal or State Grant. If any part of this Agreement has been or will be funded pursuant to a grant from the federal or State government in which Agency is the grantee, CONTRACTOR shall comply with all provisions of such grant applicable to CONTRACTOR's work hereunder, and said provisions shall be deemed a part of this Agreement as though fully set forth herein.

18. Conflict of Interest. CONTRACTOR warrants that it presently has no interest and shall not acquire any interest during the term of this Agreement, which would directly or indirectly conflict in any manner or to any degree with its full and complete performance of all services under this Agreement.

19. Governing Laws. This Agreement is entered into in the County of Monterey, State of California, and shall be construed and enforced in accordance with the laws of the State of California. The parties hereby agree that the County of Monterey shall be the proper venue for any dispute arising hereunder.

20. Compliance with Applicable Law. The parties shall comply with all applicable federal, state, and local laws and regulations in performing this Agreement.

21. Construction of Agreement. The parties agree that each party has fully participated in the review and revision of this Agreement and that any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not apply in the interpretation

of this Agreement or any exhibit or amendment. To that end, it is understood and agreed that this Agreement has been arrived at through negotiation, and that neither party is to be deemed the party which prepared this Agreement within the meaning of Civil Code Section 1654. Section and paragraph headings appearing herein are for convenience only and shall not be used to interpret the terms of this Agreement.

22. Waiver. Any waiver of any term or condition hereof must be in writing. No such waiver shall be construed as a waiver of any other term or condition herein.

23. Successors and Assigns. This Agreement and all rights, privileges, duties and obligations hereunder, to the extent assignable or delegable, shall be binding upon and inure to the benefit of the parties and their respective successors, permitted assigns and heirs.

24. Contractor. The term "CONTRACTOR" as used in this Agreement includes CONTRACTOR's officers, agents, and employees acting on Contactor's behalf in the performance of this Agreement.

25. Interpretation of Conflicting Provisions. In the event of any conflict or inconsistency between the provisions of this Agreement and the Provisions of any exhibit or other attachment to this Agreement, the provisions of this Agreement shall prevail and control.

26. Time is of the Essence. The parties mutually acknowledge and agree that time is of the essence with respect to every provision hereof in which time is an element. No extension of time for performance of any obligation or act shall be deemed an extension of time for performance of any other obligation or act, nor shall any such extension create a precedent for any further or future extension.

27. Contract Administrators.

CONTRACTOR's designated principal responsible for administering CONTRACTOR's work under this Agreement shall be
Mr. Stan Kline

Agency's designated administrator of this Agreement shall be
Mr. Chris Moss

28. Notices. Notices required under this Agreement shall be delivered personally or by electronic facsimile, or by first class or certified mail with postage prepaid. Notice shall be deemed effective upon personal delivery or facsimile transmission, or on the third day after deposit with the U.S. Postal Service. CONTRACTOR shall give Agency prompt notice of any change of address. Unless otherwise changed according to these notice provisions, notices shall be addressed as follows:

	TO AGENCY		TO CONTRACTOR
Name:	Mr. Chris Moss	Name:	Mr. Stan Kline
Address:	Monterey County Water Resources Agency 1441 Schilling Place – North Building Salinas, CA 93901	Address:	AECOM Technical Services, Inc. 300 Lakeside Drive, Oakland, CA 94612
Telephone:	831-755-4860	Telephone:	510-874-3191
Fax:	831-424-7935	E-mail:	Stan.Kline@aecom.com
E-Mail:	mossc@co.monterey.ca.us	E-Mail: Claims-related notices shall be copied to: AMER-DCSProjectClaimNotices@aecom.com	

29. Electronic Deliverables. Where feasible, all reports, documents and other printed information provided to the Agency pursuant to this Agreement shall be submitted in both written and Electronic formats in accordance with the specifications listed in attached Exhibits.

30. Non-exclusive Agreement. This Agreement is non-exclusive and both parties reserve the right to contract with other entities for the same or similar services.

31. Execution of Agreement. Any individual executing this Agreement on behalf of an entity represents and warrants that he or she has the requisite authority to enter into this Agreement on behalf of such entity and to bind the entity to the terms and conditions hereof. This Agreement 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 agreement.

32. Exhibits. The following Exhibits are attached hereto and incorporated by reference:

Exhibit A - Scope of Work & Work Schedule (Nacimiento Dam Seismic Stability Evaluation)
Exhibit B - Scope of Work & Work Schedule (San Antonio Dam Surveillance & Performance Evaluation)
Exhibit C - Payment Provisions

33. Entire Agreement --As of the effective date of this Agreement, this document, including all exhibits hereto, constitutes the entire agreement between the parties, and supersedes any and all prior written or oral negotiations and representations between the parties concerning all matters relating to the subject of this Agreement.

MONTEREY COUNTY WATER RESOURCES AGENCY
AGREEMENT FOR PROFESSIONAL SERVICES
WITH SURVEYORS, ARCHITECTS, ENGINEERS AND/OR DESIGN PROFESSIONALS

IN WITNESS WHEREOF, AGENCY and CONTRACTOR execute this agreement as follows:

MONTEREY COUNTY WATER RESOURCES AGENCY:

BY: 

Brent Buche E-Sign 6/8/2020
General Manager

Date: June 8, 2020

CONTRACTOR:

BY: Theodore B. Feldsher

Type Name: Theodore B. Feldsher

Title: Vice President

Date: May 27, 2020

BY: Jacqueline C. Shulters

Type Name: Jacqueline C. Shulters

Title: Vice President

Date: May 27, 2020

INSTRUCTIONS: If CONTRACTOR is a corporation (including limited liability and nonprofit corporations), the full legal name of the corporation shall be set forth together with the signatures of two specified officers. If CONTRACTOR is a partnership, the name of the partnership shall be set forth together with the signature of a partner with authority to execute this Agreement on behalf of the partnership. If CONTRACTOR is contracting in an individual capacity, the individual shall set forth the name of his or her business, if any, and shall personally sign the Agreement.

MCWRA - AECOM
Agreement June 1, 2020

* *

Approved as to form [1]:

Kelly L. Donlon
Deputy County Counsel

Dated: 6/1/2020

Approved as to fiscal provisions:

Juan Pablo Lopez
Administrative Analyst

Dated: 06/01/2020

County Counsel – Risk Manager:

Dated:

BMousa
Auditor-Controller [2]:

Dated: 6/1/2020

[1] Approval by County Counsel is required, and/or when legal services are rendered
[2] Approval by Auditor-Controller is required

EXHIBIT A

Nacimiento Dam Seismic Stability Evaluation

SCOPE OF WORK and WORK SCHEDULE

INTRODUCTION

This Scope of Work includes geotechnical investigations and analyses to provide an up-to-date seismic safety evaluation of the Nacimiento Dam embankment. This work includes establishing updated embankment and foundation material properties, updated site-specific ground motions for seismic analysis, analysis of liquefaction potential of streambed materials under the dam shells, and estimation of potential embankment deformation under seismic loading. This work is expected to provide applicable information to facilitate further subsequent definition and categorization of potential failure mode (PFM) Nos. S-01, S-02, S-03, S-08, and S-09 described in the 2019 7th FERC Part 12D Report (2019 PFM Nos. S-01 and S-02, and S-03 were previously designated as PFM Nos. 5 and 6, respectively, in the 2014 6th FERC Part 12D Report). Nacimiento Dam is under the jurisdiction of the Federal Energy Regulatory Commission (FERC) and the California Department of Water Resources, Division of Safety of Dams (DSOD). Coordination of this work with FERC and DSOD is necessary, and the results of this work will be subject to review by FERC and DSOD.

The Scope of Work and associated basis and assumptions are presented in the following task descriptions. This Scope of Work focuses on the seismic stability of the dam embankment. Static slope stability, rapid drawdown, and other static loading conditions are not included because these load cases are not expected to be as critical to the performance and safety of the dam as the seismic load case, and these load cases are not identified in the 2019 Potential Failure Mode Analysis (PFMA) as needing further evaluation. The field investigation program proposed in this work is focused on the central core and downstream shell zones of the dam, and the downstream alluvium foundation, with drilling and sampling into these materials from the dam crest and downstream slope for material characterization. Drilling and sampling of drain and filter zone materials for assessment of filter compatibility between core and shell zones is not part of this scope.

Payment Provisions and Budget for this work are described in Exhibit C. This Scope of Work has been prepared using the best available information. However, due to the unknown nature of the materials to be drilled, sampled and laboratory tested, it is acknowledged that work beyond that described in this Scope may be needed depending on field conditions encountered and review of results from the program outlined herein.

SCOPE OF WORK

TASK 1 - EXISTING DATA REVIEW

This task includes supplemental review of available existing information on the investigation, design, construction, and subsequent evaluations of the Nacimiento Dam embankment. This task builds on the review already carried out to support the *Nacimiento Dam Geotechnical Drilling and Piezometer Installation Plan* development, and covers data needed to support the proposed investigation and analyses. Applicable data will be identified from the review to guide the direction and focus of investigation and analysis for the dam embankment seismic evaluation. This task includes existing data review by field staff and expectation for field identification to anticipate material types and differences between dam shell and existing streambed materials, for advanced preparation. The project documents anticipated for review include the following, to supplement prior review:

- Site topography
- Geotechnical and geologic investigation reports
- Design reports
- Construction plans, specifications, reports
- Historic photos
- Stability reports
- FERC and DSOD reports and records

TASK 2 - FINAL GEOTECHNICAL INVESTIGATION WORK PLAN

The existing geotechnical investigation work plan, titled *Nacimiento Dam Geotechnical Drilling and Piezometer Installation Plan*, will require finalizing upon receipt of FERC and DSOD comments. Some responses to comments and associated revisions are expected, and up to 50 labor hours are budgeted for this effort. The scope of work for this task includes addressing one round of review comments from FERC and DSOD and development of a single revised, final work plan. The revised work plan will be submitted to MCWRA for their review and submission to FERC and DSOD. Developing responses to comments from MCWRA, DSOD, and/or FERC beyond 50 labor hours is not included in the budget for this task.

TASK 3 - FIELD INVESTIGATION

The proposed field investigation will provide data to support the seismic stability evaluation of the dam embankment. The investigation will be carried out to obtain data to address the following subjects:

- Engineering properties of the dam embankment materials
- Thickness and engineering properties of the alluvium in the dam foundation
- Lithology and engineering geology of the foundation bedrock
- Phreatic surface in the dam embankment core and downstream shell zones

To accomplish these objectives, the proposed geotechnical investigation program includes the following activities:

- Drilling and sampling 12 rotary wash soil borings through the dam embankment, underlying alluvium, and into bedrock;
- Extending one boring at least 30 meters into bedrock;
- Performing downhole P-wave and S-wave seismic velocity surveys in five of the borings;
- Constructing open standpipe PVC piezometers in six of the borings; and
- Laboratory testing of recovered soil samples.

The proposed exploratory boring locations are shown in plan view on Figure 1 of the *Nacimiento Dam Geotechnical Drilling and Piezometer Installation Plan* (AECOM, 2020). The borings are laid out on the dam crest and downstream slope with two rows of four borings each perpendicular to the dam crest approximately on either side of the maximum section, three additional borings on the lower berm, and one additional boring at the downstream toe between the two four-boring rows. The planned depths, drilling methods, and field testing for each boring are listed in Table 1 of the *Nacimiento Dam Geotechnical Drilling and Piezometer Installation Plan*. Selected borings located on the crest, upper berm, and lower berm will be completed with open standpipe piezometers. One boring at the downstream toe will be drilled at least 30 meters into rock underlying the alluvium beneath the embankment to allow for development of a Vs30 shear wave seismic velocity profile. The proposed number and distribution of borings and piezometers were developed to provide sufficient geotechnical data for the foundation liquefaction potential assessment and seismic stability analysis.

Access to the upper berm on the downstream slope of the dam requires driving directly up a steep portion of the left side of the dam, and therefore, the use of an all-terrain, track-mounted drill is planned. In addition, the assistance of a small bulldozer is anticipated to be needed to pull the track-mounted drill up to the upper berm. The crest borings and all borings on the downstream slope lower berm and at the downstream toe of the dam can be accessed with either an all-terrain or truck-mounted drill rig. All proposed boring locations are on horizontal surfaces and will not require grading.

Although subsurface utilities are not anticipated at the proposed exploration locations, MCWRA engineering and maintenance personnel will be consulted regarding any underground utilities, and boring locations will be cleared by contacting the Underground Service Alert one-call number.

Access to drilling locations on the dam crest will be accomplished with truck-mounted drilling equipment, and will require closing one lane of traffic on Nacimiento Lake Drive during the course of the drilling. This will require an encroachment permit from San Luis Obispo County Department of Public Works. A traffic control subcontractor will be retained to provide necessary signs, cones, and personnel to secure lane closure during drilling operations on the dam crest in accordance with encroachment permit standards. Drilling on the downstream face of the dam or at locations near the dam toe will not require traffic control.

Task 3.1 - Permitting

Drilling and well construction permits will be obtained by AECOM from the San Luis Obispo County Department of Environmental Health for drilling of geotechnical borings and piezometer construction. Other permits and authorizations that may potentially be needed are listed in Section 1.2 of the *Nacimiento Dam Geotechnical Drilling and Piezometer Installation Plan*. Other permits will be obtained by MCWRA.

Task 3.2 - Health and Safety Plan

A Health and Safety Plan (HASP) will be developed to describe required procedures for safe completion of the various field tasks included in the geotechnical investigation. The HASP will include descriptions of the appropriate procedures and hazard mitigation measures related to each task. The HASP will provide contact information for AECOM site personnel as well as Project Manager, Project Geotechnical Engineer, and Project Engineering Geologist. Directions to the nearest hospital and associated map will also be included.

Task 3.3 - Drilling, Sampling, and Piezometer Installation

Rotary wash drilling methods will primarily be used, although hollow stem augers (HSA) will be used to drill the upper 30 feet of the two dam crest borings to advance into the embankment core zone. The HSA will be left in place or steel casing will be inserted into the HSA-drilled hole to act as conductor casing while these borings are drilled deeper with rotary wash equipment. This will isolate the upper cased portion of the boring from the hydraulic pressure generated by the drill fluid. The borings will be advanced using 4½-inch to 6-inch diameter drag or tricone bits at the end of N-size rods. The larger size bit will be necessary on all of the piezometer borings to create a bore hole with suitable annular space around the 2-inch PVC piezometer casing. Each of the borings will be drilled into the in-place rock underlying the dam such that the top of rock elevation can be identified. One boring at the dam toe will be drilled with rock coring equipment at least 30 meters into bedrock to allow for measurement of shear wave velocity (Vs) data.

The general geotechnical drilling and sampling procedures will be as follows:

- Boring locations will be recorded using a handheld GPS device.

- Rotary wash soil drilling methods in accordance with American Society for Testing and Materials (ASTM) D5783 will be the primary drilling technique. HSA drilling methods will be used in the upper 30 feet of the dam core zone borings on the crest. Rock coring will be used in the deep boring 30 meters into bedrock. The rotary wash borings will be advanced using a 4½-inch-diameter drag or tricone bit at the end of N-size rods. Piezometer borings will either be drilled initially with a 6-inch bit or will be reamed with a 6-inch bit after initially drilling to final depth with the 4½-inch bit.
- Samples in the dam core zone borings will be collected with a modified California drive sampler, described in ASTM D3550/D3550M, with a nominal outside diameter of 3 inches and with a Pitcher barrel sampler. Samples in the downstream dam shell zone and underlying alluvial deposits will primarily be collected with a 2-inch outside diameter SPT drive sampler in accordance with ASTM D1586.
- Drive samples will be advanced into the soil using an auto-trip hammer weighing 140 pounds, with a drop height of 30 inches. A hammer calibrated within the last 12 months will be used, or an onsite hammer calibration will be performed.
- A 3-inch diameter Pitcher barrel sampler will be used to obtain relatively undisturbed samples of the dam core zone materials for laboratory testing. The Pitcher barrel sampler will be advanced slowly while carefully monitoring the drill fluid pump pressure. If the pressure increases above the maximum allowed limit (½ psi per foot of boring depth), the sampler advancement will be stopped, and the pump pressure will be reduced to within the allowable limit before proceeding.
- The SPT will be used primarily in granular soils to evaluate the density of the soils. In gravely soils, SPT blow counts will be noted for each 1-inch of penetration.
- Backfilling of the geotechnical borings will comply with County boring permits using a mixture of neat cement grout that is tremie pumped up from the bottom of the hole.
- At the completion of drilling each boring, drill cuttings and fluids will be placed into drums or bins and disposed of at an approved off-site disposal facility.

The general piezometer installation procedures will be as follows:

- Six open standpipe 2-inch diameter PVC piezometers will be installed in select boreholes: two on the crest, two on the upper berm, and two on the lower berm, as described in Table 1, shown on Figure 1, and detailed on Figure 8, of the *Nacimiento Dam Geotechnical Drilling and Piezometer Installation Plan*.
- Piezometer depths within the boreholes will be chosen to provide a thorough understanding of the piezometric surface within the embankment.
- The piezometers will typically be installed with the slotted portion of the casing and the associated sand pack near the bottom of the borehole.
- One piezometer will be constructed with the sensing zone within the downstream shell zone of the dam, well above the underlying alluvium.
- One of the two planned core zone piezometers will be constructed with a higher sensing zone.
- A bentonite seal will be constructed above the sand pack to prevent infiltration by the overlying cement grout that will backfill the majority of the borehole annulus above the sensing zone of the piezometers.

The drilling, sampling, and piezometer installation field program is based on a subcontract driller operating on a time and materials basis, estimated for an eight-week duration to accomplish the outlined tasks.

Task 3.4 - Geophysical Surveying

Downhole seismic P-wave (Vp) and S-wave (Vs) surveys will be conducted in selected borings, as listed in Table 1 of the Nacimiento Dam Geotechnical Drilling and Piezometer Installation Plan, to provide engineering data for dynamic site response analysis. These seismic surveys involve lowering a probe into the fluid-filled length of a borehole to measure the subsurface compression (P) and shear (S) wave velocities. The probe has an energy source (an internal hammer that can strike the borehole wall) and a receiver that detects when the energy pulse reaches it. Measurements are taken at closely spaced intervals throughout the length of the borehole to provide a detailed seismic velocity profile.

TASK 4 - LABORATORY TESTING

A geotechnical laboratory testing program will be developed to provide index properties and engineering characteristics of the dam embankment and the underlying foundation materials. The testing program will be refined and finalized during subsurface field exploration activities, after the soil and bedrock samples have been obtained and inspected in the laboratory. Reviewed field logs will support the basis for laboratory testing assignments.

The key objectives of the laboratory testing program include: (1) supporting liquefaction assessment of embankment and foundation alluvial soils, and (2) developing updated material characterization of the core zone materials including shear strength characteristics. For liquefaction characteristics, the laboratory testing program will include tests for percentage of fines, plasticity, gradation, and moisture content. For shear strength characteristics, the planned tests will include undrained shear strength and effective and total strength parameters through triaxial ICU tests on relatively undisturbed Pitcher barrel samples.

The anticipated types of laboratory tests include but are not limited to the following:

- Index properties tests (moisture, density, gradation, Atterberg limits - 60 of this testing suite estimated)
- Triaxial shear strength tests for soils (3 unconsolidated undrained and 6 consolidated undrained tests estimated)
- Unconfined compressive strength for bedrock materials

TASK 5 - DATA EVALUATION AND MATERIAL CHARACTERIZATION

Task 5.1 - Data Evaluation

The field boring logs will be reviewed by a Project Engineering Geologist and/or Project Geotechnical Engineer. This QA review of the field logs includes comparison of the descriptions on the logs with the recovered samples. The field logs will be revised and updated as needed based on the laboratory testing results. The field and lab testing data will be summarized and tabulated to facilitate evaluation of the data and material characterization providing the basis for engineering analysis.

Task 5.2 - Investigation Summary Report

A report will be prepared summarizing the results of the field investigation and laboratory testing work. This report will contain a description of the field operations, drafted exploratory boring logs, piezometer construction details, geophysical survey results, and geotechnical laboratory data. The report will not include interpretation of the data. This report will be included as an appendix to the Seismic Stability Report, as described below under Task 6.5.

Task 5.3 - Material Characterization

Results from the field investigations will be used to develop interpreted transverse and longitudinal sections through the dam. These sections will include stick logs of the borings prepared in Task 5.1 and piezometric data gathered from the installed piezometers. The material characterization will include soil conditions in the embankment and foundation in terms of stratification, material types, density, strength, SPT resistance, and other key engineering properties. Previous cross-sections of the dam developed by others will be reviewed and updated and additional sections will be prepared to incorporate new data, as appropriate. Graphical and tabular summaries of the index and engineering properties in the embankment and foundation will be developed. Interpreted density, strength, and other index property characteristics of embankment and foundation materials will be summarized.

TASK 6 - ENGINEERING EVALUATION

The 2019 7th FERC Part 12D Report for Nacimiento Dam indicates that further seismic stability analysis is needed, including determination of the liquation potential of streambed gravels beneath the dam (PFM Nos. S-01, S-02, and S-03). The completed initial phase of work to address this directive included development of the *Nacimiento Dam Geotechnical Drilling and Piezometer Installation Plan*, which was submitted by MCWRA to FERC and DSOD for review and comment in February and March 2020, respectively. Once the geotechnical investigations are complete, the seismic performance of the dam will be assessed following state-of-the-practice procedures for evaluating the potential for liquefaction and earthquake-induced deformation of earthfill embankments. The analyses will include the following subtasks:

Task 6.1 - Earthquake Ground Motions

Design earthquake ground motions for use in the analyses will be developed in two steps: 1) development of appropriate earthquake parameters for the site, and 2) development of appropriate ground motion time histories. To reduce the potential for rework, it is planned to submit results of the first step to FERC and DSOD for review and concurrence before proceeding with the second step. This way, any comments on the response spectra can be resolved with FERC and DSOD before the acceleration time histories are developed. It is assumed that conference calls with FERC and DSOD will be sufficient for this purpose. The elements of each step in the process of developing the earthquake ground motions are described below.

Earthquake Parameters

The earthquake parameters that will be developed include magnitude, distance, style of faulting, response spectra, and Arias Intensity for potential maximum credible events on all seismically capable faults in the vicinity of the site. Because of the close proximity and large potential magnitude from the Rinconada Fault, this fault is expected to be the deterministic controlling fault for the ground motions at the site, but will be determined from this evaluation. This work will include developing earthquake parameters and a recommended design response spectrum for Nacimiento Dam. The response spectrum will be developed for site-specific bedrock conditions using the latest Next Generation Attenuation relationships (NGA-West2). The NGA-West2 ground motion prediction models use the shear wave velocities measured in bedrock at the dam site from Tasks 3.3 and 3.4. After receiving concurrence from FERC and DSOD on the proposed response spectra, acceleration time histories will be developed for use in the analysis of the dam.

Earthquake Motions

After receiving concurrence on the proposed earthquake parameters and response spectra from FERC and DSOD, acceleration time histories will be developed for use in the analyses. Three sets of time histories will be developed for the approved design spectrum.

Task 6.2 - Liquefaction Potential

Seismic response analysis will be performed to estimate earthquake-induced stresses using a two-dimensional equivalent linear dynamic finite element analysis program such as QUAD4M. Inputs to the dynamic response analyses will include the acceleration time histories developed as described in Task 6.1. The site response analysis will be performed using the maximum section of the dam.

The dam embankment foundation alluvium liquefaction potential will be evaluated using the results of the two-dimensional dynamic response analyses performed as described above, and the empirically-based method of Boulanger and Idriss (2014). Specifically, the dynamic response analyses will be used to evaluate the earthquake-induced accelerations and stresses within the dam embankment and foundation, and in situ penetration resistance measurements will be used to estimate the cyclic strength and liquefaction resistance of granular soils. The results of these analyses also will be used to estimate the seismic reduction in shear strength (if any) of clayey soils in the dam.

Task 6.3 - Seismic Stability / Deformation Analysis

Permanent deformations of the dam embankment slopes from seismic shaking will be initially estimated by a Newmark type deformation analysis using the yield acceleration concept proposed by Newmark (1965) and modified by Makdisi and Seed (1978). The dynamic response analyses performed in Task 6.2 will provide average seismic coefficient time histories within potential sliding masses in the upstream and downstream slopes of the dam embankment. These time histories will be double integrated (using appropriate yield acceleration thresholds) to estimate the permanent deformation for each potential sliding mass. As part of this task, pseudostatic slope stability analysis will be performed using the computer program SLOPE/W to estimate yield accelerations for the potential critical sliding masses. The computed deformations will be used to develop initial estimates of the residual freeboard, the potential for cracking, and the overall seismic stability of the dam embankment.

Task 6.4 - Nonlinear Deformation Analyses

Assuming the results of the Newmark-type deformation analyses may not show acceptably small deformations, two-dimensional finite difference nonlinear deformation analyses will also be carried out, to provide a better understanding of the seismic performance of the embankment. These analyses will be performed using the computer program FLAC which incorporates a nonlinear constitutive model capable of simulating earthquake induced pore pressure generation (e.g. Dawson et al., 2001; Wang and Makdisi, 1999). The nonlinear analyses will be used to estimate the deformed shape of the dam embankment due to strength loss and seismic loading. This will be used to refine the estimates of residual freeboard, the potential for cracking, and the overall seismic stability of the dam embankment.

Task 6.5 - Seismic Stability Report

Once the analyses are completed, the results of the foundation liquefaction potential assessment and seismic stability / deformation evaluation will be presented and documented in a written seismic stability report. The report will discuss the existing data and the results from the field and laboratory investigations

supporting the liquefaction and seismic stability analyses. Pertinent backup information and discussion of engineering analyses providing the basis for the study findings will also be presented. The field and laboratory data compiled under Task 5.2 will be included as an appendix to the report. The report will discuss the engineering analysis methodology and summary of results. This report is expected to provide applicable information to facilitate further subsequent definition and categorization of PFM Nos. S-01, S-02, S-03, S-08, and S-09 established in the 2019 7th FERC Part 12D Report. A draft report will be submitted to MCWRA for review and comment. Once all MCWRA comments are addressed and incorporated, a revised draft will be prepared for submittal to FERC and DSOD. Comments from FERC and DSOD will be addressed and incorporated and a final report will be prepared.

TASK 7 - PROJECT MANAGEMENT

Throughout the duration of the work, the following project management activities will be carried out under this task:

- Project execution plan preparation and updates as appropriate
- Regular communication and coordination with MCWRA
- Regular progress reporting and invoicing
- Internal team management and progress meetings
- QA/QC review activities
- Project control activities

TASK 8 - MEETINGS

This task includes meetings and conference calls at key times throughout the course of the work. The following meetings are assumed, with up to four senior professionals attending each meeting:

- Three half-day meetings with MCWRA at AECOM's Oakland office, following the field investigation, once results from the engineering evaluation are available, and in preparation of presentations to FERC and DSOD.
- Two all day meetings at FERC offices
- Two 2-hour conference calls with DSOD after completion of the field and laboratory data evaluation and materials characterization, and during establishment of ground motion parameters
- One all-day meeting at the DSOD office for presentation of evaluation results

DELIVERABLES

The deliverables planned as part of the work scope presented above are as follows:

- Final geotechnical investigation work plan (Task 2).
- Investigation Summary Report (draft and final) (Task 5.2).
- Seismic Stability Report (draft, revised draft, and final) (Task 6.5).

POTENTIAL CONTINGENCIES

Possible unforeseen conditions or requirements that may arise during the course of the work could include the following:

- Additional work plan finalization effort due to extensive or delayed FERC or DSOD comments.
- Additional field, lab, or analysis efforts as a result of unexpected FERC or DSOD comments or requirements.
- Additional field work effort due to unforeseen subsurface conditions causing additional work or delays to the work. For example, if drilling within the embankment is slowed or stopped by the

presence of cobbles, boulders, or caving conditions, increased field work cost may occur due to performance of the work later than estimated.

- Additional field work effort due to the presence of very gravelly or cobbly fill and/or alluvial foundation deposits requiring Becker hammer investigation work. Becker hammer subsurface investigations are not included in this Scope of Work because available information on the embankment and streambed materials does not establish a clear need for this more expensive investigation method, though field conditions may be found that require its use. (Becker hammer penetration test data is sometimes required for in-situ density and associated liquefaction susceptibility analysis of gravelly or cobbly soils.)

WORK SCHEDULE

The estimated Work Schedule follows:

Description	Estimated Schedule*
Receive FERC and DSOD comments on and finalize the *Nacimiento Dam Geotechnical Drilling and Piezometer Installation Plan*	Jun-Jul 2020
Permitting	Jun-Sep 2020
Field Investigation (Drilling, Sampling, Piezometer Installation, Geophysical Survey, Traffic Control)	Apr-Jul 2021
Laboratory Testing, Data Evaluation/Material Characterization	Jul-Aug 2021
Engineering Evaluation (Seismic Stability Analysis)	Sep-Dec 2021

* Extended FERC or DSOD review time will adjust schedule.

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EXHIBIT B

San Antonio Dam Surveillance and Performance Evaluation

SCOPE OF WORK and WORK SCHEDULE

INTRODUCTION

San Antonio Dam is under jurisdiction of the California Department of Water Resources, Division of Safety of Dams (DSOD). Annual surveillance and performance evaluation of the dam is prudent and required by DSOD. This Scope of Work includes annual surveillance and performance reporting for San Antonio Dam for the 2020 calendar year.

Payment Provisions and Budget for this work are described in Exhibit C.

SCOPE OF WORK

TASK 1 - ANNUAL INSPECTION

Provide on-site inspection of San Antonio Dam at a time to be scheduled by the Agency. The inspection will include, at a minimum, examination of the instrumentation, relief wells, drains, embankment slopes, dam crest, and spillway for visible signs of failure, distress, erosion, or maintenance needs, and observation of operating mechanisms, including but not limited to valves, gates, drains, and safety devices for signs of malfunction or wear.

Deliverable: AECOM will provide field notes to the Agency after inspection is completed and any appropriate recommendations. One inspection per year.

TASK 2 - PIEZOMETER / DRAIN DATA REVIEW

Review and evaluate bi-monthly data from approximately 85 piezometers, 34 drains, and 10 relief wells. Data will be collected and provided to AECOM by the Agency supplied in electronic spreadsheet format. This review includes comparison of current monitoring data with past data during periods of similar reservoir conditions and against original design assumptions and criteria, as appropriate, to check for development of significant trends or changes in the data. AECOM is to make recommendations for corrective action if required. Up to six (6) data sets will be provided to AECOM per year.

Deliverables: AECOM will provide the Agency a brief summary of data review conclusions and any appropriate recommendations, promptly upon each periodic review, and prior to development of the surveillance and performance evaluation report.

TASK 3 - SURVEY DATA REVIEW

Review and evaluate annual dam, spillway, and outlet tunnel survey displacement data supplied by the Agency. Include a comparison of current monitoring data with past data during periods of similar reservoir conditions and against original design assumptions and criteria, as

appropriate, to check for development of significant trends or changes in the data. AECOM is to make recommendations for corrective action if required.

Deliverable: AECOM will provide a brief summary of data review conclusions and any appropriate recommendations upon review, and incorporate review and conclusions into the surveillance and performance evaluation report.

TASK 4 - INSTRUMENTATION DATA PLOTS

Generate piezometer and drain flow data plots, and survey displacement data plots from data provided by the Agency. AECOM shall organize and format the plots for ease of interpretation. The plots will include data for the past ten (10) years. The plots will be generated annually.

Deliverable: Included in Task 5 deliverables.

TASK 5 - REPORTING

Prepare an annual dam surveillance and performance evaluation report (report) for Agency submittal to DSOD. The report will include evaluation of the current annual piezometer, drain, and survey monitoring data with comparison to historic data and trends; documentation of the field inspection; conclusions regarding the current condition of the dam, appurtenant facilities, and instrumentation; and applicable recommendations for repair, maintenance, or adjustments to the instrumentation and surveillance program. The report will be submitted initially as a draft; after receiving and incorporating Agency comments, the report will be presented in final form.

Deliverables:

- Send via e-mail copy of draft report to Agency's Project Manager and provide up to three (3) hard copy draft reports upon Agency request.
- Three (3) bound copies of the final report, plus two (2) bound final reports with wet signature and engineer's stamp, totaling five (5) bound final reports.
- Copy of final report in Adobe® Portable Document Format (.PDF) on Compact Disc (CD).
- Electronic data shall be readable using Microsoft® Word, Excel, Project, and plan sets in AutoCAD by Autodesk®. ESRI ArcGIS® and AutoCAD, images to be imported in a document are to be provided at 300 dpi.
- Digital photos shall be 2048 x 1536 pixels at 72 pixels per inch or better, and delivered in .PDF, .TIFF or .JPEG formats.

TASK 6 - MEETINGS

AECOM will allow for additional meetings as required, in addition to the site inspection, with the Agency and/or DSOD. Such meetings are in addition to Task 1.

Deliverables: Allow for two (2) meetings per year.

TASK 7 - ON-CALL RESPONSE

AECOM shall be available on a time and expense basis in the event of a natural disaster or other threat to San Antonio Dam, or other unexpected urgent situation or unusual operating condition regarding the safety or integrity of the dam. AECOM, in the event of such situation,

would be expected to inspect the dam within 24 hours, or provide detailed monitoring data review and evaluation as applicable, consult with the Agency as needed, and prepare written recommendations for the continued safe operation of the structure. This task would be funded on an as-needed basis.

Deliverables: Allow for one on-site inspection and inspection report per year, or equivalent data review and evaluation effort.

TASK 8 - EARTHQUAKE EVENT DATA REVIEW

When requested by Agency in the event of a significant earthquake, piezometer, drain, and other data will be collected on a more frequent basis, perhaps daily or weekly. These additional data will need to be evaluated and incorporated in the surveillance and performance evaluation report. The evaluation may be requested at the time immediately after data collection for such event. This task would be funded on an as-needed basis.

Deliverables: Allow for up to 12 data sets to be evaluated and presented in the surveillance and performance evaluation report.

WORK SCHEDULE

The schedule for performing work associated with the 2020 annual surveillance program is based on receipt of all final monitoring data from the Agency by the end of January 2021. Submittal of the draft report is then anticipated by the end of April 2021, with receipt of Agency comments by the middle of May 2021, allowing submittal of the final report by the end of May 2021.

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EXHIBIT C

PAYMENT PROVISIONS

PAYMENT:

For the Scopes of Work defined in Exhibits A and B, Agency shall pay Contractor on a time and expense basis an amount not to exceed $938,350. Payable costs shall be the sum of direct labor costs, other direct costs and sub-consultant mark-up as defined below. If Contractor time and expense cost necessary to complete the Scopes of Work defined in Exhibits A and B are less than $938,350 the Agency enjoys the savings. If Contractor requires time and expense to complete the Scopes of Work defined in Exhibits A and B over and above $938,350 the maximum amount payable to Contractor remains $938,350. Budget detail is shown in Tables 1 and 2 herein.

Direct Labor Costs: Are the hourly billing rate, per the Direct Labor Rate Schedule herein, times the number of hours worked by the personnel.

Other Direct Costs: Other Direct Costs are identifiable costs necessarily incurred to complete the Scope of Work. Such costs include, but are not limited to, travel and subsistence expenses, document reproduction costs, postal, and materials costs. Expenses shall be accounted for in each invoice by submittal of receipts for such costs and a description of their necessity. Monterey County Travel Policy requires overnight lodging, meals, and incidentals be billed at U.S. General Services Administration (GSA) rates, no mark-up; mileage is billable at IRS allowable rate at time of travel, no mark-up. Non-Travel Policy costs may be marked-up 10%.

Sub-Contractor Mark-up is the percentage multiplier designated for each sub-Contractor times the sum of sub-Contractor direct labor and other direct charges. All sub-Contractor mark-up multipliers shall not exceed 1.10 (10% mark-up).

DIRECT LABOR RATE SCHEDULE:

The Direct Labor Rate Schedule herein shall be valid for a twelve-month period, beginning July 1, 2020. The hourly billing rate schedule and other direct costs chargeable to the project may be modified as agreed by Agency and Contractor after said period of time. Any agreed labor rate increase shall not exceed the 12-month San Francisco Bay Area CPI for the prior February. The parties shall agree to such modifications in writing as an Amendment to the Agreement.

AECOM Labor Rate Schedule	Rate/Hour
Principal Engineer	$260.00
Senior Technical Lead	$225.00
Project Manager	$210.00
Senior Engineer	$185.00
Project Engineer/Geologist	$155.00
Senior Staff Engineer	$140.00
Staff Engineer	$125.00
Support GIS	$145.00
Support CAD	$125.00
Support Administrative	$105.00

INVOICES:

Invoices may be submitted monthly. Invoices shall include the direct labor costs by individual and task, showing the individual's hours charged, hourly rate and total amount charged to each task. Other direct charges shall be added to the sum of the direct labor costs by task. Other direct charges shall be accounted for in each invoice by submittal of receipts for such costs and description of their necessity. Percent of task completion shall be included on each invoice.

NOTIFICATION:

When, during performance of the work, Contractor incurs 75 percent of the total task cost allotted to a task, Contractor shall so notify the Agency to that effect. If Consultant has reason to believe that the costs which it expects to incur to finish the task, when added to the costs previously incurred, will exceed the total task cost, Contractor shall so notify the Agency to that effect. The notice shall state: (1) the estimated amount of additional funds required to complete the task; (2) justification for the need for additional funds; and (3) the estimated date Contractor expects its total costs incurred to meet the total task cost.

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Table 1. Nacimiento Dam Seismic Stability Evaluation Budget.

	Table 1 Budget															
Discipline:	QA / QC	Manage	Geotechnical		Geology			Geotech	Seismic	Support			Total Labor Hours	AECOM Labor Costs	SUB with 10% markup	Other Direct Costs	Total Costs
Role:	Senior Reviewer/ PIC	Project Manager	Senior Geotech Lead	Project Geotech Engineer	Senior Geology Lead	Project Engineering Geologist	Staff Geologist	Sr Staff Geotech	Project Seismic	GIS	CAD	Admin					
2020 Rate:	$260.00	$210.00	$225.00	$155.00	$225.00	$155.00	$125.00	$140.00	$155.00	$145.00	$125.00	$105.00					
Task 1 - Existing Data Review		8	8	8	8	8	8	8					56	$ 9,880			$ 9,880
Task 2 - Final Geotechnical Investigation Work Plan		8	2	2	8	16	8			2		4	50	$ 8,430			$ 8,430
Task 3 - Field Investigation	0	28	8	0	82	409	96	0	0	0	0	0	623	$ 101,525	$ 405,000	$ 3,795	$ 510,320
3.1 - Permitting					2	8	8						18	$ 2,690		$ 795	$ 3,485
3.2 - Health and Safety Plan		2			2	8	8						20	$ 3,110			$ 3,110
3.3 - Drill / Sample / Piezometer (w/ traffic cntrl)		24	8		70	385	80						567	$ 92,265	$ 375,000	$ 3,000	$ 470,265
3.4 - Geophysical Surveying		2			8	8							18	$ 3,460	$ 30,000		$ 33,460
Task 4 - Laboratory Testing	4	4	8	16									32	$ 6,160	$ 35,000		$ 41,160
Task 5 - Data Evaluation / Material Characterization	4	16	24	68	40	56	96	80	0	8	40	8	440	$ 68,220			$ 68,220
5.1 - Data Evaluation			8	8	16	16	16						64	$ 11,120			$ 11,120
5.2 - Investigation Summary Report		8			16	40	80			8		8	160	$ 23,480			$ 23,480
5.3 - Material Characterization	4	8	16	60	8			80			40		216	$ 33,620			$ 33,620
Task 6 - Engineering Evaluation	16	16	112	440	0	0	0	256	120	0	0	0	960	$ 155,360	$ -	$ -	$ 155,360
6.1 - Earthquake Ground Motions									120				120	$ 18,600			$ 18,600
6.2 - Liquefaction Potential	4		24	40				16					84	$ 14,880			$ 14,880
6.3 - Seismic Stability / Deformation Analysis	4		24	120				120					268	$ 41,840			$ 41,840
6.4 - Nonlinear Deformation Analyses			24	240				80					344	$ 53,800			$ 53,800
6.5 - Seismic Stability Report	8	16	40	40				40					144	$ 26,240			$ 26,240
Task 7 - Project Management	40	192										40	272	$ 54,920			$ 54,920
Task 8 - Meetings	22	40	40	26	30				2				160	$ 34,210		$ 500	$ 34,710
Total Hours	86	312	202	560	168	489	208	344	122	10	40	52	2,593				
Total Costs	$22,360	$65,520	$45,450	$86,800	$37,800	$75,795	$26,000	$48,160	$18,910	$1,450	$5,000	$5,460		$ 438,705	$ 440,000	$ 4,295	$ 883,000

Table 2. San Antonio Dam Surveillance and Performance Evaluation Budget.

	Rate:	$225.00	$210.00	$155.00	$125.00	$105.00			
Task No	Task Description	Yadon Principal	Kline PM / PE	Eng. Support	CAD / Prod. Support	Admin. Support	Subtotal Manhours	Expenses	Task Cost Estimate
1	Annual Inspection	0	10	0	0	0	10	$200	$2,300
2	Piezometer / Drain Data Review	0	40	0	0	0	40	$0	$8,400
3	Survey Data Review	0	16	0	0	0	16	$0	$3,360
4	Instrumentation Data Plots	0	32	16	0	0	48	$0	$9,200
5	Reporting	6	56	16	16	10	104	$500	$19,140
6	Meetings	0	12	0	0	0	12	$150	$2,670
7	On-Call Response	0	22	0	0	4	26	$200	$5,240
8	Earthquake Event Data Review	0	24	0	0	0	24	$0	$5,040
	Total:	**6**	**212**	**32**	**16**	**14**	**280**	**$1,050**	**$55,350**

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