SITES PROJECT AUTHORITY

Request for Qualifications
Engineering Services
RFQ No. 19-03

July 5, 2019

RFQ Submittal Deadline

July 31, 2019

Noon Pacific Standard Time (PST)

Form of Submission
Electronic Submittal Only
procurement@sitesproject.org

Contact Person

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Sites Reservoir Project
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Request for Qualifications

Project Development Support Services
RFQ No. 19-03

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EXHIBITS

Sites Project Authority

Statement of Qualifications for Engineering Services RFQ No. 19-03

1.0 Overview and Background

The Sites Reservoir Project (previously known as the North-of-Delta-Offstream-Storage Investigation) has progressed to require new and augmented engineering services in preparation for the final project approval, construction, and commissioning.

The Sites Project Authority (Authority) issued a Request for Qualifications (RFQ) on September 5, 2018 for the nine service areas listed below to further the Sites Project.

A) Project Integration

B) Project Controls

C) Communications

D) Operations Simulation Modeling

E) Environmental Planning and Analysis

F) Permitting and Agreements

G) Real Estate

H) Engineering Services

I) Geology and Geotechnical Engineering

Future "primary"[1] procurements include:

J) Construction Management Services (potentially multiple contracts)

K) Construction (multiple contracts) & Commissioning Services[2]

The RFQ included requested scope of services for engineering services (Service Area H). The Authority decide to not proceed with further evaluation of SOQs for engineering services and to withdraw Service Area H from RFQ No. 18-04 in accordance with Section 3.6 - Rights Reserved to the Authority. This provided the opportunity for the Authority to issue this new engineering services RFQ, which is more-

[1] Secondary procurements include, but are not limited to, specialty and/or advisory services.

[2] Depending on the final delivery methods, operations will be a "primary" procurement that could occur either early as part of an alternative delivery procurement process or towards the end of the construction phase.

clearly structured to define both the expected role of the Engineer of Record (Refer to Section 6) and the depth of engineering and technical expertise across the diverse set of infrastructure facility types needed to complete the Sites Project. This revised process is also expected to improve the program's overall quality and risk management programs as well as provide the opportunity for multiple awards. Further, separate procurement processes will be used to retain architectural and engineering services related to the recreational facilities and services related predominately to biological mitigation.

The Authority is planning to acquire the engineering scope of services through RFQ 19-03 and invites qualified firms (each a Respondent), including teams of firms, with extensive expertise and experience in the diverse range of engineering services presented in this RFQ to respond to the opportunity to support this large, complex and highly technical water management and infrastructure project in California.

Due to the breadth of required engineering and technical expertise, complexity of the requested services, and anticipated schedule, the Authority is requesting SOQs for two separate engineering services contracts. The two engineering services contracts are for Sites Reservoir (Service Area HR) and Conveyance (Service Area HC). The detailed scope of services for these two service areas is provided in Section 6.0. Respondents may choose to submit on one but not both engineering service areas HR or HC as discussed in Section 2.3.

Note that the performance of some of these engineering services in this project planning and approval phase may prevent successful Respondents from participating in future phases of the Sites Project. Details are provided in Section 2.3.

In addition, more-specialized contracts for related or other professional and/or technical services needed to support final project approval, construction, and commissioning are expected to be acquired through additional Authority procurements.

1.1 The Sites Project Authority

The Authority is currently governed by 9-voting member Board of Directors (11 agencies) that includes Colusa County, Colusa County Water District, Glenn County, Glenn-Colusa Irrigation District, Placer County Water Agency/City of Roseville, Reclamation District 108, Sacramento County Water Agency/City of Sacramento, the Tehama-Colusa Canal Authority, and Westside Water District. In addition, the Board currently includes two types of non-voting and advisory representatives; Sacramento Valley water agencies; consisting of agencies; consisting of Maxwell Irrigation District, "TC 4 Districts" (Cortina, Davis, Dunnigan, and LaGrande), Western Canal Water District, and both the US Bureau of Reclamation (Reclamation) and the California Department of Water Resources (DWR).

The Authority's stated mission is "to be a proponent and facilitator to design and potentially acquire, construct, finance, manage, govern, and operate Sites Reservoir and related facilities; to increase and develop water supplies; to improve the operation of the state's water system; and to provide a net improvement in ecosystem and water quality conditions in the Sacramento River system and the Delta". To accomplish this mission, the Authority created the Reservoir Committee, which, for Phase 2, is currently comprise of 21 voting local and regional water agencies located statewide to advance the construction of the Sites Reservoir Project. The representative agencies include Colusa County, Colusa County Water District, Glenn-Colusa Irrigation District, Reclamation District 108, Cortina Water District,

Davis Water District, Dunnigan Water District, LaGrande Water District, City of American Canyon, Antelope Valley-East Kern Water Agency, Carter MWC, Coachella Valley Water District, Desert Water Agency, Metropolitan Water District of Southern California, San Bernardino Valley Municipal Water District, San Gorgonio Pass Water Agency, Santa Clara Valley Water District, Santa Clarita Valley Water Agency, Westside Water District, Wheeler Ridge-Maricopa Water Service District, and Zone 7 Water Agency. The Reservoir Committee also includes both Reclamation and DWR as non-voting members.

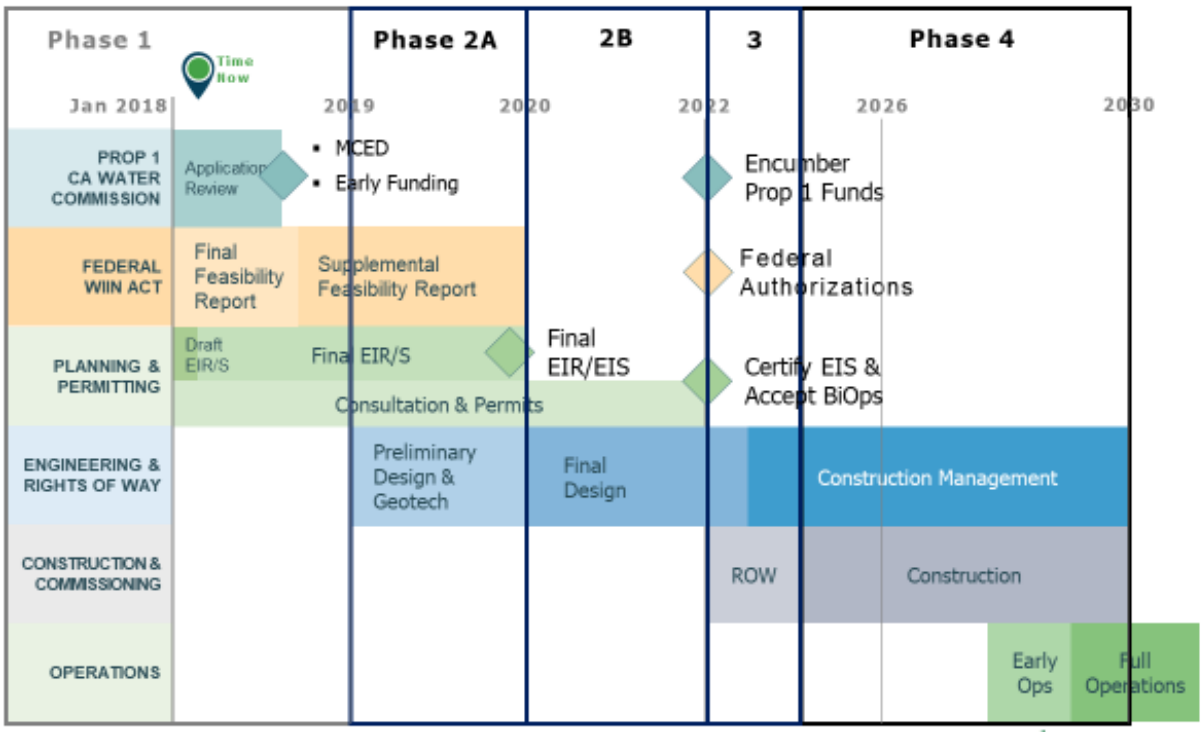
The Authority and Reservoir Committee are also working in partnership with both, Reclamation and DWR (non-voting members) to improve the operation of the state's interdependent water system for both consumptive and environmental beneficial uses.

1.2 The Sites Reservoir Project

Located approximately 10 miles west of the City of Maxwell, California, the Sites Reservoir as currently proposed will include a 1.8 million-acre-foot reservoir off-stream of the Sacramento River. The Sites Reservoir Project includes the Sites Reservoir, new facilities to integrate with both the existing Tehama-Colusa Canal and Glen-Colusa Irrigation District's Main Canal, and new facilities connecting to the Sacramento River (Section 6, Figure 6.1). The Project's facilities will be independently owned and operated by the Sites Project Authority under its own water rights and other regulatory requirements; but in cooperation with Reclamation and DWR in their operation of the Central Valley Project and State Water Project, respectively. The summary objective of the Sites Project is to make California's water system more efficient, flexible, and reliable to provide local, statewide, and national benefits. The project helps to achieve the objectives of the California Water Action Plan by providing a substantial supply of high-quality water, to support the statewide economy, and to enhance the environment. The Project has also been deemed eligible for state funding from voter-approved Proposition 1 (2014) Water Storage Investment Program and is receiving federal funding for planning and preconstruction activities from appropriations in compliance with the WIIN Act.

Development of the Sites Project is schedule driven. Construction is currently planned to start in January 2022 and is expected to take over 7 years to complete (refer to Figure 1.1). Some pre-construction activities may occur before 2022, should the Authority authorize such efforts and agreements.

Figure 1.1: Phase-level schedule



Prospective Respondents are encouraged to review the Sites Project website for further information on the project: www.sitesproject.com. Applicable information about the proposed project can be found in Tab A3 - Project Description of the August 2017 submission to the California Water Commission located on the Sites Project website. Some characteristics may have been adjusted as a result of the planning and engineering activities that have occurred since the submittal to the Water Commission, but such adjustments do not substantially change the requirements described in this RFQ. Furthermore, the Phase 2 Work Plan is provided as Exhibit A to this RFQ. Finally, recent information can also be found under the Sites Project website's Procurement tab, Open RFP/Qs.

1.3 Roles

Authority – The Sites Project Authority is a joint exercise of powers authority formed on August 26, 2010 pursuant to Government Code Section 6500 et seq. Membership in the Authority is limited to public agencies having service areas within the Sacramento Valley Hydrologic Region. To accomplish its mission, the Authority can create separate Project Agreement Committees to address specific facets. Currently, the Authority has only created the Reservoir Committee and may create additional Project Agreement Committees to address other needs as the Project evolves. Each Project Agreement Committee is formed through the execution of an Authority-approved participation agreement that delineates the responsibilities being delegated by the Authority down to each Committee and establishing expectations and obligations for those electing to participate. Further, as the project evolves, participation in the Authority is expected to change and, for the Reservoir Committee, has identified key milestones to enable participation to change. These milestones coincide with the end of key project phases or terms in the respective participation agreement.

While work that has been delegated by the Authority to the Reservoir Committee to be performed under the Reservoir Committee's direction and oversight, for the purposes of this RFQ, the term "Authority" refers to the Board of Directors who represent the contracting entity.

Reservoir Committee – For the purposes of this RFQ, the Reservoir Committee refers to the Reservoir (Project Agreement) Committee, who will finance, direct, and oversee the work to be performed under the scope of services listed in this RFQ in accordance with the authorities delegated to it by the Authority[3]. As such and as appropriate, the Reservoir Committee also provides findings and/or recommendations to the Authority for the Authority's consideration. To manage the work, the Reservoir Committee has formed Work Groups, each of whom is responsible for working to develop recommendations to specific matters for the full Reservoir Committee's consideration. Further, as the Project continues to evolve, additional Work Groups to the Reservoir Committee may be created and applicable portions of the services listed in this RFQ may be assigned to support any such newly created Work Group to the Reservoir Committee.

Authority's Agents - Consultants retained by the Authority to accomplish its mission and who are authorized to represent the Authority on all related matters.

Authority's Advisors –Consultants retained by the Authority to provide executive-level and/or specialized consultation and advisory services to the Authority and/or Committee.

Authority's Representatives - Consultants retained by the Authority to provide program integration services and real estate support to the Authority's Agents. The program integration consultant will ensure that work being performed by Authority's Consultants meets the agreed to performance requirements and to verify the work is being performed in accordance within the respective industry's standards of care, but not direct the day-to-day work assigned to an Authority's Consultant. The Real Estate service area provider will assist in negotiating access and eventual acquisition agreements. The Authority Representatives may represent or otherwise stand in place for the Authority's Agent for decision-making purposes, **but they do not have the authority to act on behalf of the Authority's Agents and do not have contractual authority over Authority's Consultants.**

Authority's Consultants - Consultants retained by the Authority and working directly for the Authority to provide professional, technical, management, and other services that are related to the development of the Sites Reservoir Project and/or enabling the Authority to accomplish other facets of its mission.

Engineer of Record - The Person who has been accepted by the Authority to be responsible for performing or providing direct oversight of engineering work that complies with the standard of care applicable for each facility and for compliance with and the sealing of documents in accordance with the California Professional Engineers Act, which typically includes the preparation of engineering plans,

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[3] In November 2016, the Phase 1 Reservoir Project Agreement was executed to create the Reservoir Committee and complete Phase 1 activities (e.g., release a Draft EIR/EIS and secure Proposition 1 funding conditional commitment). On March 31, 2019, the Phase 2 (2019) Reservoir Project Agreement was executed to refine the Sites Project's reservoir operations and finance plan, develop responses to comments to the Draft EIR/EIS, support Reclamation in completing the congressionally mandated Feasibility Report, and execute either a new (or amended) participation agreement for the remainder of Phase 2.

technical specifications, cost estimates (PS&Es), and/or other documents, such as and not limited to technical memorandums, that summarize the results of technical analysis and/or studies some of which will be provided to regulating agencies for their use and/or approvals.

Specifically, The Engineer of Record:

1. Will, depending upon the proposed delivery method, either have a direct contractual relationship with the Authority (refer to Section 6, Process A) or an indirect contractual relationship (refer to Section 6, Process B).

2. At the facility level and under the same engineering services contract, shall not simultaneously serve in the capacity of being the Authority's Engineer.

Authority's Engineer - The person who has been accepted by the Authority to provide oversight of the engineering work being performed by another engineering services provider (i.e. an Engineering Manager role). Specifically, oversight of the engineering and technical work being performed by the Engineer of Record to ensure it meets the Project's performance specifications and to verify the work is being performed in accordance within the engineering industry's standards of care, which may be different for different facilities (e.g. design of the dams vs. powerlines).

Specifically, the Authority's Engineer:

1. For those facilities where the Engineer of Record will not have a direct contractual relationship with the Authority (refer to Section 6);

    a. Perform the initial studies and analysis needed to develop the engineering concepts, facility locations, and other relevant information to be used in the subsequent procurement to retain a final designer and constructor (i.e. bridging documents).

    b. Then, once the Engineer of Record has been accepted by the Authority, provide the prerequisite oversight of the Engineer of Record to ensure the engineering work complies with the standard of care applicable for each facility and for compliance with and the sealing of documents in accordance with the California Professional Engineers Act

2. For those facilities where the Engineer of Record will have a direct contractual relationship with the Authority (refer to Section 6);

    a. At the facility level and under the same engineering services contract, shall not simultaneously serve in the capacity of being the Engineer of Record.

    b. At the facility level but not under the same engineering services contract, may, upon acceptance by the Authority, perform the duties and responsibilities of the Authority's Engineer (e.g. oversight) of engineering work being performed by another engineering services contractor's Engineer of Record - providing adequate checks and balances exist.

1.4 Partnering

The Authority is committed to developing the Sites Reservoir Project through a formal partnering process, such as those developed by the Construction Industry Institute and the United States Army

Corps of Engineers (USACE), to efficiently and effectively develop the Sites Reservoir Project in a manner that strengthens both project and partners, improves schedule performance, ensures quality, and utilizes the inherent strengths of each partner.

A key element to ensuring a strong partnership program will be to secure a strong partnering facilitator who will work with all consultant partners to ensure effective communication between all project participants; help to instill a project spirit and personal attitude of cooperation; quality service and products that meet or beat agreed to realistic schedules and cost estimates; is consistent, fair, and reasonable resolution of issues; guidance interpretations and other decisions between all project participants meetings; and living up to commitments required in documents.

The Authority intends to select a partnering facilitator later in Phase 2 based on developing a list of potential candidates by obtaining input from service area providers. The Authority and service area providers will then jointly review the list and select a mutually agreed to partnering facilitator.

In addition, the Authority intends to convene, on at least a semi-annual basis, meetings with the respective engineering and other service area providers' Principle in Charge. The goal is to foster teamwork across the service areas, to address any contractual interface-related concerns between service areas, to identify areas for team's improvement, and other matters relevant to developing the Project in the most expeditious and cost-effective manner.

1.5 Safety

The Authority is committed to developing a strong culture of safety throughout all phases of the Project. Factors such as the Respondent's Experience Modification Ratio (where relevant) will be a factor in the evaluation process for applicable service areas.

1.6 Quality

The Authority is committed to developing a robust quality control and assurance program throughout all phases of the Project. Use of best practices applicable to each industry, compliance with ISO, documented workflows, and use of technologies will be considerations in the evaluation process; including future decisions by the Authority to negotiate contract extensions or to re-compete for services (refer to Section 2.0).

2.0 Professional Services Required

2.1 Engineering Service Areas

The Authority seeks the services of highly qualified firms to provide engineering services for new and augmented technical areas for the implementation of the preparation for the final project approval and construction of the multi-billion-dollar water infrastructure project.

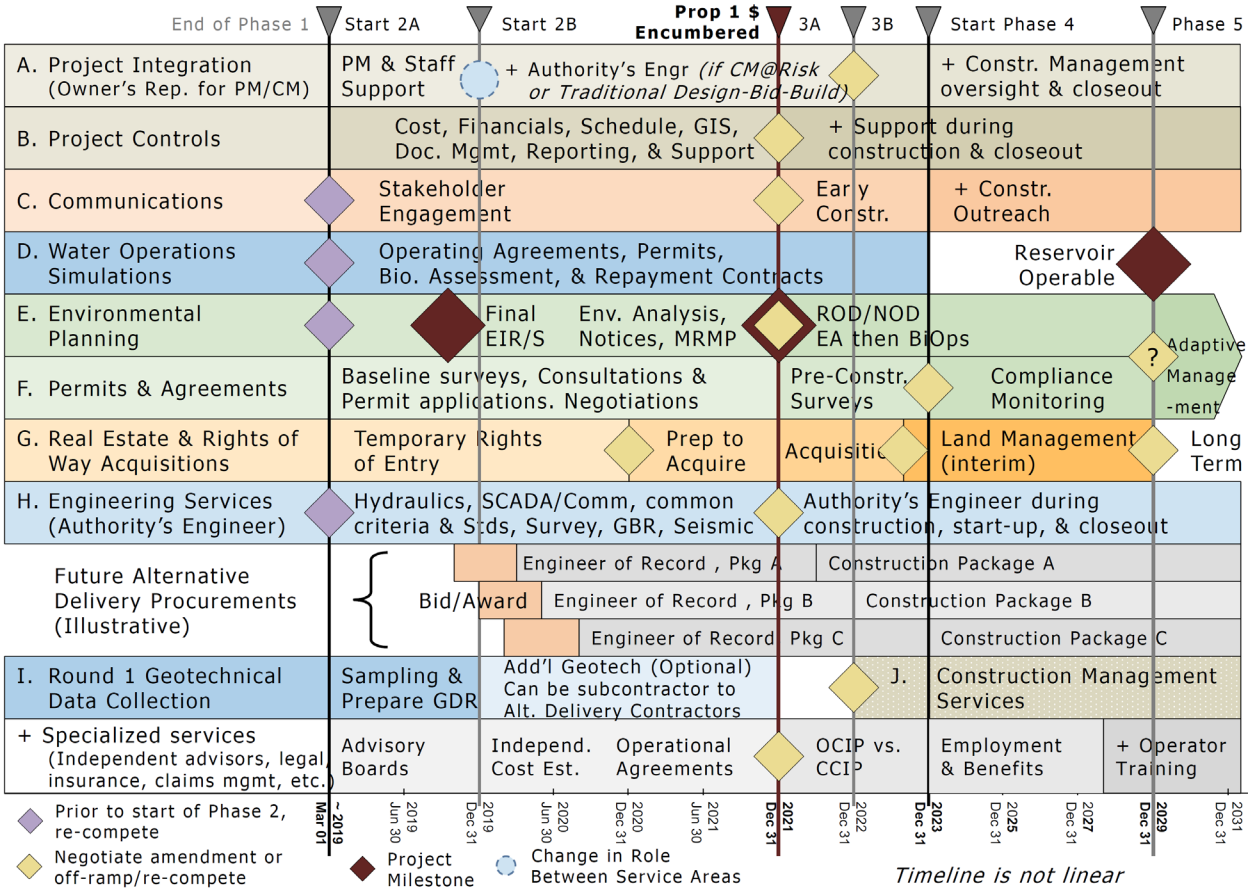
It is anticipated that Notices of Intent to Award these services will be issued in mid-2019 and/or with task orders issued late 2019. Specific details of these engineering services are provided in Section 6.0. Services provided in each engineering service area must be made available to support analyses and products from all services areas, as needed.

As this large and complex Project continues to evolve through Phase 2, the actual requirements and services needed will become better defined. When the Authority determines that additional services are needed, these service areas will serve as a guideline to assign such work to the applicable and qualified service area provider. Other considerations the Authority will use include, but are not limited to, performance to date (which includes scope management, cost and schedule considerations), quality, maintaining adequate checks and balances, and risk allocation. However, primarily for small scopes of new work, the Authority may elect to contract with other qualified companies to achieve other goals, such as small business and/or “local content”.

2.2 Approximate Duration of Service Areas

The intent is for each engineering service area agreement to be awarded in mid-2019 and continue through project completion (planned for 2030). Each engineering service area agreement will include a contract performance review in late 2021 near the end of Phase 2, where a decision will be made to either extend the agreement, recompete the service area contract or off-ramp to conduct another procurement process. Performance, value, and quality, as determined by the Authority will be key factors used by the Authority to decide if a contract will be renewed or off-ramp to a new procurement process. The below (Figure 2.2) service area schedule provides these approximate decision points along with other service area milestones.

Figure 2.2: Anticipated Duration of Service Areas



NOTE: Milestones shown are approximate and subject to change.

2.3 Contracting Approach and Conflict of Interest

The general approach to contracting is to provide a contract document that can be used for the products and services associated with each engineering service area from late 2019 through project completion (planned for 2030), as needed. After the completion of the planning phase, all contracts awarded for engineering service area providers HR – Sites Reservoir and HC - Conveyance are intended to remain in later phases. However, as stated earlier, a decision is required by the Authority to either extend the agreement or off-ramp to conduct another procurement process.

Given the anticipated length of these contracts and desire to ensure accountability, the Authority discourages, but does not preclude, the use of Joint Ventures. Further, a proposed prime consultant to one of the engineering service areas (i.e., HR or HC) cannot be a subconsultant on the other engineering service area to allow for appropriate checks and balances during the engineering processes.

The Authority will be reviewing not only the potential for conflict of interest (COI) in its contracting approach for both engineering services contracts but also as it relates to the roles of those consultant firms currently under contract to the Authority.

To minimize the potential for a COI to occur, the Authority has developed a process to allow Respondents an opportunity to resolve a potential Conflict of Interest from occurring (refer to Section 3.3) and has specifically identified the following limitations or clarifications:

1. Authority's Agents are precluded from being a prime or subconsultant to perform any of the scope of services listed in this RFQ while being under contract to the Authority.
2. Authority's Advisors are precluded from being a prime or subconsultant to perform any of the scope of services listed in this RFQ while being under contract to the Authority.
3. The Program Integration Consultant and their subconsultants (Service Area A) are precluded from being a prime or subconsultant on any of the other service areas C through K
4. The Program Controls Consultant and their subconsultants (Service Area B), while not explicitly precluded, have the potential of a COI to occur, especially given their current role includes contract administration and compliance; which includes invoice review and support to dispute-resolution processes.
5. The Geotechnical Services Provider (Service Area I) is not explicitly precluded from supporting the Engineer of Record in collecting geotechnical data and in the preparation of a final Geotechnical Data Report (GDR). However, there is the potential for a COI to occur if their role also includes activities such as, but not limited to, the preparation of the final Geotechnical Baseline Report (GBR) or support to the preparation of the final Design Basis Report (DBR).
6. In General, each of the selected Engineering Services Providers will be precluded from being on any design-build (or similar) team where they are already serving as the Authority's Engineer for the same facility or combination of facilities. And, their subconsultants may also be preclude (refer to Section 6 for more details).

To assist Respondents in their COI reviews, the following information is provided:

- Table 2.2.1: Lists each Sites Authority prime consultant along with their subconsultants and service area.
- Table 2.2.2: Is a program level responsibilities matrix that summaries the primary relationship and required integration between the engineering services (Service Area H) being requested in this RFQ and the other service area providers. Section 6 contains a responsibility matrix between the two engineering service areas (HR and HC).

As presented in Section 4.1F, a Respondent needs to identify potential COIs and where one is identified, provide an acceptable solution in their SOQ before any Intent to Award could be considered by the Authority.

Table 2.3.1 Sites Project Authority Current Consultants

Prime Consultant Services Firm	Service Area	Subconsultants
AECOM Technical Services, Inc.	Phase 1 Engineering[4] Engineering support to the US Bureau of Reclamation[5]	None
Bender Rosenthal, Inc.	Service Area G: Real Estate	Anchor CM, Best Best & Krieger, LLP, Botsko / NV5, Sierra West Valuation, Inc., Smokey Stover
Brown and Caldwell	Service Area B: Project Controls	Stantec Consulting Services, pc[3]
Capital Project Strategies, LLC (‡)	Alternative Project Delivery Advisor	None
CH2M Hill Engineers, Inc. (Jacobs)	Service Area D: Operations Simulation Modeling	ICF, Natural Resource Scientists, Cramer Fish Sciences, QEDA
David Houston (‡)	Financial Advisor	None
Dunn Consulting (‡)	Legislative/Regulatory/Strategic Support	None
Forsythe Group, Inc. (‡)	Environmental Planning and Permitting Manager	None
Fugro USA Land, Inc.	Service Area I: Geologic and Geotechnical Engineering Services	Wood Environment & Infrastructure Solutions, Inc., Shannon & Wilson, Ninyo & Moore, COWI, InfraTerra
Gerald (Jerry) Johns (‡)	Reservoir Operations and water rights support	None

[4] With the delay in procuring post-Phase 1 engineering services, this contract has been extended to provide as-requested services that are primarily related to CEQA and NEPA; both responding to public comments on the Draft EIR/EIS and refinements to the Project Description. Award of contracts for engineering services HR and HC will supersede this contract to allow closeout activities to occur.

[5] Reclamation has a separate engineering services contract to specifically assist in completing the congressionally mandated NODOS Feasibility Report, which is expected to occur later in year 2019, but may extend into year 2020. An important note is a final Feasibility Report, in compliance with applicable federal requirements, includes a Final EIS. The Authority, in coordination with Reclamation is preparing the Final EIS with consultant services provided through Service Area E: Environmental Planning and Analysis and, where appropriate, Service Area F: Permits and Agreements.

Prime Consultant Services Firm	Service Area	Subconsultants
HDR Engineering, Inc.	Service Area A: Project Integration	Phenix Environmental Planning, SAGE Engineers, Hatch
ICF Jones and Stokes, Inc.	Service Area E: Environmental Planning and Analysis	AECOM, CH2M Hill, GEI, Horizon, Larsen Wurzel & Associates, ESA, Natural Resource Scientists
ICF Jones and Stokes, Inc.	Service Area F: Permitting and Agreements	AECOM, CH2M Hill, Enviromine, Far Western, GEI, Horizon, Larsen Wurzel & Associates, Madrone, ESA, Natural Resource Scientists, Stillwater, 347 Group
J.C. Watson, Inc. (‡)	General Manager	None
Katz and Associates	Service Area C: Communications	Kim Floyd Communications
Larsen Wurzel & Associates, Inc.	Cost Development Model	None
MBK Engineers (‡)	Primary support to Reservoir Operations and water rights. And associated Engineering/ Tech Services	None
Montague DeRose & Associates, LLC (‡)	Municipal Financial Advisor	None
Perkins Coie, LLP (‡)	Special Legal counsel	None
RDJT Associates, Inc (‡)	Assistant General Manager & Reservoir Operations Manager	None
Spesert Consulting (‡)	Communications & Real Estate Manager	None
Stradling Yocca Carlson & Rauth (‡)	Bond Counsel	None
Trapasso Consulting Services (‡)	Program Operations Manager	None
Wiseman Consulting Group (‡)	Support to ROW and Land Management	None
Young Wooldridge, Law Offices, LLP (‡)	General Legal Counsel	None

(‡) For the purposes of this RFQ, denotes an Authority's Agent or Advisor

Table 2.3.2 Program Level Responsibility Matrix

Program Management Areas	Other Service Area Providers	Service Area HR: Sites Reservoir	Service Area HC: Conveyance
Management oversight of deliverables and work products requiring input from multiple service areas or required by Authority or other service area provider(s)	HDR (Svc Area A)	Support	Support
Management oversight of engineering and technical deliverables and work products (i.e., the interface points between HR and HC) Program team communications (Internal)	HDR (Svc Area A)	Support	Support
Shared document management and geospatial information system (GIS)	HDR (Svc Area A)	Support	Support
Controls and reporting Status and progress reports, schedule, budgets, and costs, and contract compliance	Brown &Caldwell (Svc Area B)	Support	Support
Regulatory Coordination and Compliance (External)			
▪ Federal	Reclamation led	Support	Support
▪ State	Authority led	Support	Support
▪ Regional, counties, and local	Authority led	Support	Support
▪ Utilities & Railroads	Authority led	Support	Support
▪ Operational and construction effects to the natural and built environment (NEPA/CEQA and ESA/CESA), water rights, air and water quality, cultural, historic, tribal assets, etc.	Analysis, studies, and documentation led by ICF (Svc Area E and F) with support from Ch2m (Svc Area D)	Support	Support

Program Management Areas	Other Service Area Providers	Service Area HR: Sites Reservoir	Service Area HC: Conveyance
▪ Other operational and construction effects related to safety of dams and levees, hydropower, local communities (e.g., traffic).	Support by ICF (Svc Areas E & F), BRI (Svc Area G), and Katz (Svc Area C)	Analysis, studies, and documentation for applicable facilities Section 6, Table 6.3: Facilities Table	Analysis, studies, and documentation for applicable facilities Section 6, Table 6.3: Facilities Table
Public and stakeholder communications and Engagement (External)	Authority led Katz (Svc Area C)	Support	Support
▪ Landowner Coordination	Authority led Support by BRI (Svc Area G) and Katz (Svc Area C)	Support	Support
Reservoir Operations (Technical analysis)	Ch2m (Svc Area D)	Support (as lead for reservoir inlet/ outlet designs)	Support (as lead for conveyance Hydraulics)
Facility Engineering and Technical Studies	Support by Fugro (Svc Area I), BRI (Svc Area G), Ch2m (Svc Area D), ICF (Svc Areas E & F)	Lead for applicable facilities (see Section 6, Table 6.3: Facilities Table	Lead for applicable facilities (see Section 6, Table 6.3: Facilities Table

3.0 INFORMATION FOR RESPONDENTS

3.1 General Information

Prospective Respondents to this RFQ are encouraged to carefully review this RFQ in its entirety prior to submitting their SOQ. All SOQs submitted will become the property of the Sites Project Authority and the SOQ of the successful Respondent will become part of their contract.

The Authority shall not be liable for any pre-contractual expenses incurred by respondents in the preparation of their SOQ. Prospective respondents shall not include any such expenses as part of their SOQ or, should Respondent be selected, to include any such cost in any resulting task order. Pre-contractual expenses are defined as any cost incurred by the Respondent in preparing and submitting the SOQ in response to this RFQ; attendance at the mandatory pre-submittal conference; interviewing with the Authority; negotiating with the Authority on any matter related to this procurement process; and/or the development of task orders (refer to Section 3.10).

The Authority at its sole discretion may consider a SOQ to be non-responsive (a) if conditional, incomplete, or if it contains alterations of form, additions not called for, (b) if there are other irregularities that may constitute a material change to the SOQ (refer to Section 4.0) or (c) if Appendix A (Proposed Exceptions to the Sample Agreement) to the SOQ contains significant modifications.

Schedule: Presented below is a tentative solicitation schedule. The Authority does not anticipate any changes to the schedule. However, some minor adjustments may occur due to the number of respondents to a service area and if the review of submitted SOQs for a specific service area are completed ahead of schedule. Notification to those firms to be interviewed and those interviews may occur sooner than presented below.

Firms attending the mandatory pre-submittal conference will be notified of any schedule change, exclusive of any firm(s) being notified of early interviews, as noted above.

Table 3.1: Tentative Solicitation Schedule (subject to change)

Activity	Date (2019) *
Release of RFQ	July 5
Written questions pertaining to any potential COI due	July 11 12:00pm
Mandatory pre-submittal conference Project Office: 122 Old Highway 99W, Maxwell	July 12 10:30 am
Written questions pertaining to RFQ due	July 15 3:00 pm

Activity	Date (2019) *
Response to written questions emailed to mandatory pre-submittal conference's attendees	No later than July 17
SOQs due	July 31, 12:00 pm
Interview firms notified	August 6
Interviews	August 13/14
Authority Board issues Notice of Intent to Award Contracts	Authority Board August 26 meeting
Authority Board approval of contracts and authorizes staff to negotiate work orders	Authority Board September 23 meeting
Authority Board considers approval of contract work orders	Authority Board October 23 meeting

* All times noted in this RFQ are PST

3.2 Mandatory Pre-Submittal Conference

A mandatory pre-submittal conference for prospective Respondents will be held **July 12, 2019** starting at 10:30 am at the Sites Project Office in Maxwell, California. The Authority will only accept SOQs from Respondents that attended the mandatory pre-SOQ submittal conference.

Only the prospective respondents to this RFQ are required to attend. Subconsultants to a Respondent are not required to attend the pre-submittal conference.

Prospective Respondents attending this pre-SOQ submittal conference will receive information regarding the RFQ and SOQ submittal process. Prospective Respondents need only have one attendee at this conference to ensure the Respondent's SOQ will be accepted for further consideration (refer to Section 3.1) and to receive any additional information on the engineering service areas. Any attendee to the mandatory pre-SOQ submittal conference should sign in for only one prospective Respondent.

3.3 RFQ Questions and Clarifications Requests - Conflict of Interest

To address any **potential COI concerns** (refer to Section 2.3), prospective Respondents can email the Contact Person (refer to cover page) **before 12:00 pm July 11, 2019** with a request. The email should

clearly present any actual or potential COI and how the prospective respondent proposes to mitigate the issue. Communication to the Contact Person on a potential COI by the above noted date will not result in the disqualification of a prospective respondent's SOQ.

3.4 RFQ Questions and Clarifications Requests - All Other

Prospective RFQ respondents may submit written questions pertaining to this RFQ prior to **3:00 pm on July 15, 2019** via email to: jtrapasso@sitesproject.org.

The Contact Person (refer to cover page), who is an Authority's Agent, is solely responsible for providing official responses to any questions and clarifications in an addendum that will be provided to all mandatory pre-submittal conference attendees and posted on the Sites website. Should a conflict exist between this information and other information, the information provided by the Contact Person shall take precedence.

Once the RFQ has been publicly released, any communications related to the preparation of a SOQ by a prospective Respondent with any of the Authority Board's members; Reservoir Committee's members; Authority's Agents, Advisors or staff, other than the Contact Person, may result in any ensuing SOQ that was submitted by the prospective Respondent as being deemed not accepted, which will result in the SOQ(s) not being further considered. The only exception will be communications that may occur during the mandatory pre-submittal conference and communication regarding solely the potential for a COI to occur.

3.5 SOQ Submittal

Respondents should prepare their submittal to either of the two engineering services areas following the requirements listed in Section 4.0.

Respondents should provide an electronic copy of their SOQ and all its appendices in a single bookmarked pdf file for each service area to: jtrapasso@sitesproject.org **before 12:00 pm on July 31, 2019** for a respondent to be considered. SOQs submitted after this time will not be accepted and deemed to be non-responsive. An email response will be provided to each respondent that their SOQ was received. The Authority will only accept a respondents' initial SOQ and will NOT accept another SOQ that makes changes to their initial submittal.

3.6 SOQ Review, Respondent Interviews and Selection

The Authority will evaluate each SOQ received before the time listed in Section 3.4 with regard to the criteria and process identified in Section 5.0.

The Authority's selection committee intends to conduct the interviews at either the Sites Project Office in Maxwell or at another location in or near Sacramento.

Following the interviews, the Authority's selection committee will then make a recommendation to the Reservoir Committee. The Reservoir Committee will consider the SOQs submitted for each engineering service area and the recommendation from the selection committee, to then provide a recommendation to the Authority Board. The Authority will consider the SOQs and recommendations,

and, if approved, to then direct the General Manager to seek to enter into a contract with one respondent from each service area.

3.7 Rights Reserved to the Authority

In addition to rights established elsewhere in this RFQ, the Authority reserves the right to:

A. Reject any or all SOQs;

B. Verify all information submitted in the SOQ;

C. Recommend to respondents that are highly qualified in a portion of a service area to work closely with other respondents to more completely meet the needs of the Authority;

D. Select the respondent's submittal most advantageous to the Authority;

E. Withdraw or amend this RFQ at any time without prior notice;

F. Decide not to award any contract to any respondent that submitted an SOQ;

G. Decide not to award to any of the engineering service areas;

H. Decide to award or not to award a contract for services associated with either engineering service area that only received one responsive SOQ;

I. Negotiate the final contract and task orders with any respondent as necessary to serve the best interests of the Authority, including the recommendation of alternative subcontractors or replacement of key personnel or key staff with more appropriate experience related to the Sites Project needs;

J. Suspend or cancel any approved task order to ensure the work progresses and aligns with the best interest of the Authority as the Project's requirements continue to evolve

K. Suspend, cancel, or reassign to another service area provider any approved task order should the successful respondents' performance - including, but not limited to, the level of quality or value - not meet the Authority's needs;

L. To separately contract with qualified companies who are deemed by the Authority to be capable of providing a small portion of the services being requested in this RFQ in order to achieve small business or "local content" goals. Currently, the Authority has not established any goals.

M. Not award either service areas where a respondent submitted a SOQ; and

N. Amend the final contract to incorporate any necessary exhibits to reflect negotiations between the Authority and the successful respondent.

3.8 Confidentiality

As a public agency, the Authority is subject to the Public Records Act, California Government Code Section 6250 et. seq. Consequently, respondents should not submit, unless specifically required by the solicitation, proprietary or non-public data. In addition, the SOQ should not include personal data such

as, but not limited to, driver's license information and social security numbers to avoid the possibility of inadvertent disclosure of this personal information.

3.9 Sample Agreement

Exhibit B is the Authority's proposed Consulting Agreement. Before submitting a SOQ, respondents are instructed to carefully review and comment as necessary on any of the provisions set forth in the Sample Agreement. In Appendix A to each SOQ, respondents, requesting to take exception to a provision in the proposed Agreement, shall propose alternative language and/or terms and conditions they deem appropriate. The Authority will give all such proposed changes due consideration but shall be under no obligation to accept or adopt them. The Authority reserves the right to modify, add or delete any of the provisions of the Agreement prior to issuance. For example, as federal and state funding is received, the Sites Project Authority Agreement may be modified for some service area agreements to include requirements for Small and/or Disabled Veteran Business Enterprise (SBE/DVBE) programs.

3.10 Award of Contract

After a respondent is selected, the award of a contract (agreement) is contingent upon the successful negotiation of terms, acceptability of rates and fees, and formal approval by the Authority. If acceptable terms and conditions with the recommended respondent cannot be reached in a timely manner, the respondent ranked second may be contacted to begin negotiations.

After the Authority approves the contract awards, staff will then to work with the successful engineering service area providers to develop and negotiate the initial task orders.

3.11 Task Orders

Exhibit C is a sample task order. Prospective respondents should note that the services they may be awarded as a result of this solicitation will be negotiated and acquired through the issuance of a written task order.

- Task orders will be used to further define elements of services and upon request by the Authority, consultant will complete and submit to the Authority a response to the task order for the specific project or activity, including pricing with a ceiling price.
- The Authority's goal is to minimize the number of task orders while ensuring there is appropriate level of control and management oversight.
- Any special requirements and costs should be negotiated during the task order proposal process. This will include determining the pricing structure for each task order. For Phase 2 (2019), task orders will utilize a time and material with a not-to-exceed method. However, in subsequent years as the requirements for each task order become more-clearly defined, the Authority intends to pursue alternative price structures, such as, but not limited to lump-sum and may consider cost structures utilizing performance-based incentives.
- Task orders will outline the scope of services and may include services methodology, delineate the effort between the prime and any subconsultants, estimated budget, schedule, personnel and any

special requirements, such as the potential need to retain any specialized subconsultant that was not included in the SOQ.

- All task orders must be approved and signed by both the Consultant and the Authority's Agent prior to proceeding with any services.

Costs to prepare and negotiate task orders will not be reimbursable. However, costs to prepare and negotiate Authority requested changes orders to previously approved task orders will be reimbursable.

3.12 Certificate of Insurance

Insurance coverage required for this RFQ will be negotiated with the selected respondent based on risk-based factors applicable to the delivery of services associated with each respective service area.

4.0 STATEMENT OF QUALIFICATIONS INSTRUCTIONS

4.1 Response Requirements

The SOQ should be prepared simply and economically, providing straightforward and concise information to satisfy the requirements of this RFQ. Emphasis should be on completeness and clarity of content with sufficient detail to allow for accurate evaluation and comparative analysis. A material departure from the format requirements listed below may render the SOQ as non-responsive.

a. The SOQ should contain, at minimum, sufficient information for an objective evaluation of those qualifications when compared to the criteria described in Section 5.0. Pages for each SOQ shall be counted based on a single-sided sheet of 8 ½" by 11" paper. The page limits *excluding the* cover letter and dividers, shall not exceed the following page limits. Further and applicable to the required appendices, respondents are encouraged to limit the number of pages and to not include extraneous information.

b. Sites Reservoir (Service Area HR) **20 pages** (*)

(*) See Subsection E (below) for additional 22 pages that are allowed for Respondent to provide their approach to the specific topics listed in Subsection E.

c. Conveyance (Service Area HC) **20 pages** (*)

(*) See Subsection E (below) for additional 28 pages that are allowed for Respondent to provide their approach to the specific topics listed in Subsection E.

d. Appendix B: Firm's (Team's) Other Relevant Experience: **25 pages**

e. Appendix C: Resume for each person respondent proposes to designate **2 pages**

as either key personnel, having a significant role, or serving as a senior level advisor to their proposed team.

f. The SOQ shall not contain any font smaller than 11 point. Respondent SOQs may contain 11" by 17" if necessary for figures or graphics but such sheets will be counted as 2 sheets of 8 ½" by 11' paper towards the page limit, unless otherwise specified.

g. For a SOQ to be deemed complete, it shall be organized in separate sections tabbed with corresponding numbers and related headings in the order presented below and shall only include the required appendices listed below. At a minimum, the Authority will deem a timely-submitted SOQ as non-responsive and not consider it for further evaluation if (a) it exceeds the specified page limits, (b) it is missing sections or appendices or (c) if contains additional information than what has been requested (i.e. additional sections or appendices).

A. Cover Letter/Introduction and Brief Statement of Understanding

B. Executive Summary

C. Firm (Team) Performance and Experience

D. Personnel Performance and Experience

E. Technical Approach and Staffing Plan

F. Business Efficiencies and Practices

Appendix A Proposed Exceptions to the Sample Agreement

Appendix B Firm's (Team's) Other Relevant Experience

Appendix C Detailed organization chart and Resumes

Appendix D Proposed List of Task Orders to Support the First 12 Months of Work

Appendix E Latest Annual Financial Report

Appendix F Response to Conflict of Interest and Disputes

A - Cover Letter/Introduction and Brief Statement of Understanding

Provide information regarding the respondent's understanding of the services to be performed and its ability to meet the requirements of this RFQ. This letter shall be no more than **two pages** and include information identifying the corporate structure of the respondent. This letter must also include the following information:

- Name of Firm (as it appears on W-9 Tax form)
- Other name(s) of Firm (with acronym)
- Address
- City, state and zip code
- Direct or Main telephone number
- Contact name
- Contact telephone number
- Contact e-mail address

The letter shall be signed by an individual authorized to bind the submitting respondent or by two corporate officers authorized to bind the proposing respondent as set forth in the California Corporations Code. A cover letter that is unsigned or signed by an unauthorized individual will be grounds for Authority to not accept the SOQ for further consideration.

B - Executive Summary

The Executive Summary shall provide a summary of the qualifications, proposed key personnel, and the approach proposed for performing the specific services to be provided to the Authority. The Executive

Summary shall identify the project role of each of the proposed key personnel, team members and subconsultants, and their credentials for serving that role.

C - Firm Performance and Experience

The respondent shall describe their firm's (or team's) qualifications and experience that demonstrates the ability of the firm and their subcontractors to perform services similar in scope and size to that required in this RFQ. Specifically, this referenced service experience shall be related to major infrastructure facilities.

The respondent shall describe projects (no more than 5), either ongoing for a minimum one year or completed within the last 10 years that are most relevant to the services being requested under this RFQ. For each, provide the project title, a brief narrative/description, and indicate the firm's role (e.g., lead firm, subcontractor, support), the project role of key personnel that are included in the SOQ, and the final product, outcome and the benefits realized by the client as a result of the services provided.

The descriptions of relevant projects must include all pertinent information including but not limited to:

- Client name and address
- For reference check, client's contact name, current telephone, and email address
- Dates during which the respondent provided services
- Dollar amount of the contract; both at time of award and at either time of completion or as currently authorized.
- Names of key personnel and staff of the respondent's team that participated on the named projects and their specific role and responsibilities.

The respondent may include additional pertinent information on their corporate qualifications related to the performance of their SOQ services area in Appendix B.

D - Personnel Performance and Experience

The availability, experience and expertise of the individuals identified to support the Sites Project is critical to both the selection of the respondent and their ability to perform the services requested. The respondent should identify its key personnel (including those from subconsultants as applicable) and, describe the relevant experience and qualifications of each key staff. In addition, the number of years key personnel have performed in the role being proposed for them. Respondent shall describe its personnel's qualifications, including relevant professional licenses, certifications, availability to work on the Sites Project during Phase 2, and experience relevant to services similar in scope and size to those being requested in this RFQ.

For each key personnel and staff, the respondent shall identify the projects that are most relevant to the services requested under this RFQ. For each, provide the project title, size of project/task, a narrative/description, and indicate the key personnel's role/responsibilities and the benefits realized by the client as a result of their services.

In the description of the relevant projects for respondent's key personnel and staff, provide all pertinent information including but not limited to:

- Client name and address
- Client contact name, telephone and fax numbers, and email address
- Dates during which the key personnel provided the services
- Size of the contract/project

The respondent should include resumes of key personal and other important staff, highlighting the similar past experience of services requested in this RFQ. Resumes shall be included in Appendix C.

In addition to the key personnel, the respondent, at their discretion, should identify additional significant positions (i.e. senior level advisors) that may be required to accomplish the scope outlined for the service area contract. Sufficient information to properly evaluate the relevant qualifications and experience of such individuals shall be provided.

A detailed organization chart of the respondent's proposed staff shall be included in Appendix C.

E - Technical Approach and Staffing Plan

The respondent shall describe their understanding of the Sites Project, the program goals and the challenges associated with successfully completing their proposed service area. The descriptions shall also state how the respondent intends to execute the services to address the program goals and challenges in a quality (including appropriate quality standards) and responsive manner meeting the ambitious Sites Project schedule. In addition, Respondent shall describe their approach to the following topics:

E-1. Common to engineering services HC and HR: **14 Additional Pages**

1. In no more than 4 additional pages, provide your approach to providing engineering services where the Engineering Services Provider ***is*** the Engineer of Record (refer to Section 6.1, Process A).
2. In no more than 4 additional pages, provide your approach to providing engineering services where the Engineering Services Provider ***is not*** the Engineer of Record but will serve as the Authority's Engineer to provide engineering services and oversight (Section 6.1, Process B).

   At a minimum, for those facilities listed in table 6.3 as considering the potential use of a Design-Build-Operate delivery method, include your approach with specific discussion related to the preparation of the bridging documents and then oversight from award through design, construction, commissioning, and then through an assumed 10- to 15-year operating and maintenance period.

For both items #1 and #2, at a minimum, the approach needs to address scope management, quality management, risk management, and response to external (to the engineering service provider) schedule changes. The approach needs to address how the approach would change as services progress from preliminary design, final design, and construction support.

3. Seismic Performance: In no more than 4 additional pages, your approach to develop and maintain:

    a. the program-level (i.e., site-specific) earthquake ground motions by conducting both deterministic and probabilistic seismic hazard assessments to establish criteria for the seismic analysis and design at the facility level, and

    b. the program-level and facility-level seismic design criteria, conduct geologic explorations, investigations, and analysis.

    If applicable, identify the role of other Service Area Providers.

4. Surveying & Topographic Controls: In no more than 2 additional pages, your approach to develop and maintain:

    a. program level controls and monuments, and

    b. local controls needed at the facility level to support construction.

    If applicable, identify the role of other Service Area Providers.

As separately listed in Table 6.3, for each topic item #3 and #4, the Authority plans to use these responses to select the team that will lead this effort vs. provide support.

E-2. Engineering Service Provider HR: Sites Reservoir: **8 Additional Pages**

1. Dam Safety: In no more than 6 additional pages, your approach to work with California's Division of Safety of Dams (DSOD); including,

    a. To advance the concept of staggered approvals to, if authorized, enable partial and early storage while the remainder of the dams' construction is still progressing. If applicable, identify the role of other Service Area Providers.

    b. To address the emergency drawdown requirements and managing the resulting releases in conjunction with the Project's Emergency Action Plan.

2. Community Access (Road and Bridge Options): In no more than 1 additional page, your approach to develop a recommended option within 6-months of receiving an approved task order and notice to proceed.

3. Reservoir Bridge: In no more than 1 additional page, your approach to develop an appropriate design criteria for the seismic design of a bridge across the Sites Reservoir. If applicable, identify the role of other Service Area Providers.

E-3. Engineering Services Provider HC: Conveyance: **14 Additional Pages**

1. SCADA and Communications: In no more than 2 additional pages, your approach to develop and maintain program-level requirements and specifications and then to ensure all Sites Project facilities are integrated into a centralized SCADA system. If applicable, identify the role of other Service Area Providers.

2. Hydraulics and Transient Analyses: In no more than 3 additional pages, your approach to develop and maintain the project's hydraulic modeling and surge analysis to ensure all facilities can reliably operate within an approved performance specification - for both a with hydropower and without hydropower scenario. If applicable, identify the role of other Service Area Providers.
3. Regulating Reservoirs, specifically addressing the Fletcher and Holthouse Options: In no more than 2 additional page, your approach to develop a recommended option within 6-months of receiving an approved task order and notice to proceed. If applicable, identify the role of other Service Area Providers.
4. Hydropower (conventional and pumped-storage): In no more than 4 additional pages, your approach to develop a recommended strategy and related studies needed to advance the project's hydropower potential within 9-months of receiving an approved task order and notice to proceed. If applicable, identify the role of the Service Area Providers.
5. Grid Interconnection: In no more than 2 additional pages, your approach to work with potential utilities, local balancing authorities, and CAISO to recommend a grid interconnection strategy - for both a with hydropower and without hydropower scenario - and within 6-months of receiving an approved task order and notice to proceed. If applicable, identify the role of other Service Area Providers.
6. Commissioning and Start-up: In no more than 1 additional page, your approach to start-up and commissioning from the individual facility to all integrating all facilities and assuming a phased operations with varying hydrology and/or ability to divert water into storage.

As a partner with the Authority and other Service Area Providers, describe how your company's role will contribute in making the Project a success and your expected outcomes or needs.

The respondent shall provide a detailed listing of initial task order~~s~~ for the first 12 months of the SOQ engineering service area in Appendix D. The listing shall be in enough detail to demonstrate their thorough knowledge of the needs and challenges of the Sites Project for the engineering SOQ service area. And, for each task order, the proposed price structure should also be included.

The respondent shall address the time availability and commitment of key personnel and support staff (including key personnel being provided by subcontractors, as applicable) assigned to the project relative to their involvement with other ongoing or expected projects. The Staffing Plan shall address availability and commitment to undertake these services immediately upon task order award and in accordance with the overall program growth and evolution, schedule and dedicate the necessary personnel and resources to the project to meet the proposed schedule. Service area contract awards will require that proposed key personnel, accepted by the Authority, be held to the availability and commitments presented in the respondent's respective SOQ, within the control of the Consultant. Failure to provide the stated availability and commitments may affect award of any contracts, assignment and scope of services within the services, and/or assignment of task orders.

The respondents shall disclose all actual and apparent conflicts of interest known at the time of SOQ submission for their firm and proposed subconsultants and describe any mitigation measures needed to resolve both actual and potential perceived conflicts of interest in Attachment F.

F - Business Efficiencies and Practices

Financial: The Authority expects to negotiate fair and reasonable labor rates that are comparable to similar large infrastructure contracts with other public agencies and in consideration with respondent's government approved overhead rates, if available. Respondent should provide a description of the business practices and efficiency factors including project direct factors (fringe, overhead, general and administrative, and any material handling fees). Respondents shall also include a description of what cost categories are included and not included in their overhead rate. In addition, provide any other specialty rates or charges (e.g., charges for field equipment, per diem rates) that may be applied to a respondent's invoice to the Authority and other items that may help to differentiate respondent's ability to perform the work in the most cost-effective manner.

The respondent shall also submit rates for non-labor and other direct costs based on the estimate of the services being requested. The Authority will reimburse non-labor/other direct cost only at the Consultant's actual cost.

The Authority may accept and incorporate the submitted direct factors and specialty factors as part of the award/agreement process without further negotiations or, alternatively, may use it as the basis for negotiations. Consequently, respondents are encouraged to provide their best business efficiencies and practices in their SOQ.

A financial report or statement representing the respondent's latest financial results for the prior fiscal year that has been signed by Certified public Accountant or other independent and competent individual shall be provided in Appendix E. If respondent has teamed with any firm that is estimated to be providing more than 25% of the estimated services being requested in this RFQ, a similar financial report is required.

Proposed Consulting Agreement: As stated in Section 3.8, respondents are instructed to carefully review and comment, as necessary, on the Authority's proposed Consulting Agreement (Exhibit B). Any proposed exceptions to the Agreement shall be provided in Appendix A in a list format that references the section and subsection along with proposed changes in redline strikeout format. It shall be accompanied with a short description stating the business reason why the Authority should consider any modifications to Exhibit B.

Conflict of Interests: Respondent shall endeavor to identify in Appendix F potential COI that may be created either due to (a) an existing contract with the Authority or (b) a current approved project participant. This shall include disclosure where Respondent (i.e., as a "prime") is also listed as a potential subconsultant on another Respondent's SOQ related to a different service area. Due to the number and diverse disciplines and skills needed to develop the Project, the Authority may need to work with potentially successful respondents to adjust the scope and nature of their services being provide by each potentially successful Respondent to ensure adequate checks and balances are in place to avoid a

potential COI from occurring. Further, as the Project continues to evolve, additional changes may be needed or requested by a respondent to ensure conflicts of interest are avoided.

Disputes: Respondent shall identify in Appendix F disputes or claims that are either active or have been resolved within the past 5 years involving respondent and/or any subconsultant whose participation is estimated to be at least 25% of the scope of services being requested within the applicable service

In addition: The Authority is committed to:

- **Safety:** The Authority is committed to developing a strong culture of safety throughout all phases of the Project. Factors such as the respondents Experience Modification Ratio will be a factor in the evaluation process for applicable service areas. While the Project-level safety program is being developed by the Integration service area provider, include a description of the respondent's internal safety program; initially applicable to Phase 2 activities.
- **Quality:** The Authority is committed to developing a robust quality control and assurance program and to use best practices applicable to each industry. While the Project-level quality program is being developed by the Integration service area provider and the Controls services provider is the lead in the development and use of business practices and technologies, include a description of the respondent's internal quality control and assurance program, how it would be used at the interface with other service areas, and proposed use of best practices and technologies applicable to the proposed service area for Phase 2.

5.0 EVALUATION CRITERIA, PROCESS AND NEGOTIATIONS

5.1 Evaluation Criteria

The following criteria will be used for the evaluation and selection of respondents. Each SOQ will be evaluated on its relative strengths and weaknesses against the criteria listed below and the subject engineering service area and be given qualitative evaluation marks. The order of the listed criteria is not indicative of their priority, weighting, or importance; however, the Respondent's proposed personnel and demonstrated ability to provide value are viewed as important evaluation criteria. Respondents shall provide enough information in their SOQs for the evaluation team to appropriately evaluate the ability of the respondent to perform the requested services.

Respondents will be evaluated based on the following for each engineering service area:

5.1.1 Firm Performance and Experience

- Overall experience, technical competence and qualifications to provide the requested services on projects similar in size and complexity as those services being requested for the Sites Project.
- Successful delivery on schedule intense past projects of technical reports and documents with similar scope and complexity.
- Demonstrated success in delivering quality work products, documents, and reports (e.g., monthly progress reports, invoices) in a timely, cost-effective, and quality manner on large scale infrastructure projects.
- Evaluation of any past, current (within past five years), and pending litigation or claims that were provided by respondent in Appendix E.
- Quality of response to reference checks, including successfully completing tasks on time, within budget, and quality work products on similar large infrastructure projects.
- Identification of firm's responsibilities, problems/issues encountered, solutions recommended, and outcome - essentially what was the value added by your firm's participation in the project.
- Experience and qualifications of any subconsultants being proposed for the applicable service areas.

5.1.2 Personnel Performance and Experience

- Demonstrated experience and qualifications of key personnel and additional significant project positions performing in their proposed position on large scale and complex infrastructure projects similar to the Sites Reservoir Project.
- Quality of responses to personnel reference checks, including completing tasks on time, within budget, quality work products for large infrastructure projects.
- Demonstrated experience of key personnel and support staff on maintaining their long-term commitments to be assigned to a project.

5.1.3 Technical Approach and Staffing Plan

- Knowledge of laws, statutes, and requirements applicable to the development and operation of water and hydropower infrastructure in California and as applicable to the services to be provided under the SOQ service area.
- Thorough understanding of the Sites Project's challenges and needs for the requested service area.
- Demonstrated understanding of the sequencing of work, anticipated engineering analysis and design, deliverables, potential challenges, and how respondent will address the roles and responsibilities of key staff during the design process and additional items that the Authority should consider for design.
- Understanding of the approach to addressing seismic; surveying and controls, SCADA and communications; and hydraulics challenges (where applicable) for the Sites Project.
- Clear evidence through narratives and examples of prior services that the respondent has the capability to carry out all the required services for a complex and large-scale infrastructure project like the Sites Project
- Thorough and efficient plan to accomplish the requested tasks
- Identification of unique challenges and approaches to successfully address them - essentially what is expected to be the value-added through the efforts of respondent's key personnel on the Project.
- Identification of potential program costs and/or schedule saving strategies.
- Demonstrated project experience in successfully delivering and maintaining staffing plans regarding the timely availability and commitments of key personnel and support staff.
- Ability to adapt to changes in project requirements, especially those that may be expected to occur in Phase 2.

5.1.4 Business Efficiencies and Practices

- Proposed project direct charging factors including fringe, overhead, general and administrative, and material overhead (handling).
- Proposed overhead items included and not included in the overhead category.
- Proposed other fees, charges, and/or specialty rates.
- Proposed use of business processes and practices that support cost-effective and expeditious development of the Sites Project.
- Proposed management strategies to reduce/or to equitably allocate risks.
- Proposed management strategies to ensure quality and performance requirements can be achieved.

- Extent and significance of proposed exceptions to the Standard Agreement.
- Respondents Experience Modification Ratio for applicable service areas.
- Respondents Conflict of Interests and Disputes

5.2 Evaluation Process

Each SOQ will initially be reviewed by Authority staff to verify compliance with submission instructions, response requirements, and minimum qualifications. Any SOQ not meeting the minimum qualifications will be deemed non-responsive and may not be further evaluated.

Staff from other agencies or organizations may assist the Authority in the SOQ review and selection process.

During the evaluation process, the evaluation team may request clarification, as necessary, from respondents. Respondents should not misconstrue a request for clarification as negotiations. Afterwards, respondents will be notified via email regarding the status of its SOQ submitted for each service area.

Following the evaluation of the submitted SOQs, a short list of the most qualified respondents may be developed based on the criteria outlined in Section 5.0. The Authority may elect to have the shortlist of respondents give oral presentations. Short-listed respondents must be prepared to give their presentation within four business days of the request by the Authority. The evaluation interview panel may ask questions about Respondent's written SOQ and other issues regarding the scope of services. Following the evaluation of the oral presentations along with the submitted SOQ, an interview panel will select a firm for a recommendation to the Reservoir Committee. The Reservoir Committee will consider the evaluations, and the recommendation of the selection committee, and then make a recommendation to the Authority Board. The Authority Board will then review the recommendations and consider the issuance of a Notice of Intent to Award to a respondent for each of the engineering service areas (HR and HC).

5.3 Negotiations

Negotiations regarding agreement terms, conditions, scope of services, and pricing will be conducted with respondents. Therefore, a submitted SOQ should contain the respondent's most favorable terms, and business efficiencies and practices to the Authority. If the Authority engages the Respondent in negotiations and satisfactory agreement provisions cannot be reached in a timely manner, then negotiations may be terminated at the Authority's sole discretion. The Authority may elect to contact another respondent to negotiate for the same service area submitting a SOQ. This sequence may continue until an agreement is reached.

6.0 SCOPE OF SERVICES FOR SERVICE AREA H: ENGINEERING SERVICES

6.1 Services Summary

The Authority seeks the services of two highly qualified firms, or teams of firms (Engineering Service Providers), having the capabilities to provide engineering planning, design and architectural services for the Sites Reservoir Project (the Project). The Engineering Services Providers will work in one of two engineering service areas, each referred to as 1) Engineering Service Area HR: Sites Reservoir; and 2) Engineering Service Area HC: Conveyance. The Engineering Services Providers will also provide support to planning, permitting, communications, and real estate services (provided by other service area providers), prepare engineering criteria and standards, perform engineering and technical studies and analysis, and varying levels of engineering design and/or oversight. Depending on the Project facility, the Engineering Services Providers, when authorized by the Authority, will either serve as the Engineer of Record and prepare the final design documents (Process A); or serve as the Authority's Engineer in preparing initial design concepts and then overseeing the design documents when the Engineer of Record for the respective facility is not under direct contract with the Authority (Process B). Process A and Process B are further defined as follows:

Process A: Engineering Services Provider ***is*** the Engineer of Record. These services are anticipated to be associated with construction that will utilize either traditional design-bid-build, construction manager at risk, or other delivery method[6] where the Engineer of Record has a direct contract with the Authority to provide the final design documents and will not perform construction. The design process will utilize a "gate" system (e.g., deliverables required at 30%, 60%, 90%, pre-final, and final) to verify the requirements are being met and aid in implementation of a change management process. Further, the Authority's Engineer role (refer to Section 2) will either be assigned to the Integration Service Provider (Service Area A), another Engineering Service Provider, or performed through a separate contract.

Process B: Engineering Services Provider ***is not*** the Engineer of Record but will serve as the Authority's Engineer to provide engineering services and oversight as appropriate. These services are anticipated to be associated with the use of procurement processes that are based on either progressive design-build (PDB), design-build (DB), design-build-operate (DBO), or any other delivery method where the Engineer of Record does not contract directly with the Authority, but instead is in a direct contractual relationship with the construction contractor (i.e., either a prime/subcontractor relationship, joint venture, or similar relationship) to

[6] For the purposes of this RFQ, the term Construction Management at Risk (CM@Risk) is generally used to represent the range of potential alternative delivery methods that utilize early contractor involvement to work with the Engineer of Record to incorporate potential means and methods into the designs as well as to evaluate the effects in order to avoid, r minimize, or mitigate for such impacts in order to secure applicable construction permits.

provide design services and ultimately the final design documents[7]. This design process will also utilize a "gate" system (e.g., deliverables required at 30%, 60%, 90%, pre-final, and final) to verify the requirements are being met.

In addition, procurement related services, which will involve, among other services, preparing the initial studies and analysis for the proposal documents the Authority will use to contract with a design-builder, assisting the Authority during the evaluation of design-build proposals, and after award to a design-builder, serve as the Authority's Engineer to ensure the design-builder complies with the engineering and technical requirements of their respective contracts.

Role of the Engineer: For each of the two Engineering Service Areas, an initial determination of the engineer's role is provided in Section 6.2: Scope of Services. It is important to note that the final determination of the engineer's role and corresponding scope of services will be defined through the development of the Construction Contracting Plan (CCP), which will be completed in Phase 2A. The CCP will be prepared by the Project Integration Service Provider with direct input from each of the two successful Engineering Services Providers (i.e., Sites Reservoir and Conveyance). Both the initial and final CCP will:

1) utilize, to the maximum extent practicable, alternative delivery methods to obtain best value to the Authority through the use of early contractor involvement and will aid in defining the level of preliminary design at the facility level that needs to be prepared (i.e., traditionally expressed as a percent of total design) and

2) be based on factors such as, but not limited to, construction means and methods, allocation of risks, permit requirements, schedule, key materials and equipment, procurements, quality, and performance (or levels of service).

Due to the different types of facilities and associated factors affecting the construction of the Project's facilities(e.g., regulatory approvals like USACE), the Scope of Work for each Engineering Service Provider will include certain facilities where the Engineering Services Provider is expected to serve as the Engineer of Record (i.e., Process A); and other facilities where the Engineering Services Provider is expected to serve as the Authority's Engineer (i.e., Process B). Further, the initial construction packages includes a combination of facilities, some that will utilize different delivery methods ranging from construction only of a specific facility (i.e., Engineer of Record is directly under contract to the Authority) to utilizing a design-build or a variant (i.e., the Authority's Engineer will provide oversight of the Contractor's Engineer of Record).

[7] For the purposes of this RFQ, the term Design-Builder is (a) generally used to represent the range of potential alternative delivery methods where the Engineer of Record is not under a direct contract with the Authority and (b) applied at the facility level, where the Authority contemplates combining multiple facilities into one design-build contract.

6.2 Conflict of Interest

In additional to the conflict of interest requirements identified in Section 2.3,

1) The selected Engineering Services Provider will be precluded from being on any design-build (or similar) team where they are already serving as the Authority's Engineer for the same facility or combination of facilities (e.g., the Authority's Engineer for the bridge across Sites Reservoir would be precluded from having a role on the design-build contract for this bridge, but may, pending the Authority's approval, be allowed to have a role on the design-build of the powerlines - assuming they did not have a role in the earlier powerline design and/or development of the performance requirements).

2) The Engineering Service Provider's subconsultants, depending on their role, may also be precluded from being on any design-build (or similar) team where they are already serving as the Authority's Engineer for the same facility or combination of facilities (e.g., a mechanical subconsultant service as the Authority's Engineer for a pumping plant would be precluded from having a role on the design-build contract for that pumping plant, but may, pending the Authority's approval, be allowed to have a role on the processing of materials to be used in the dam construction - assuming they did not have a role in the earlier materials processing design and/or development of the performance requirements).

3) For construction of facilities that will utilize the design-build method, the Engineer of Record for a specific facility may be precluded from being the Engineer of Record for other facilities.

The approved CCP along with other considerations will be used by the Authority, at its sole discretion, to determine if there are areas of the Project where an Engineering Services Provider could be allowed to compete for future work in a manner that there is no potential for a conflict of interest to be created and to ensure there are adequate checks and balances in place.

6.3 Scope of Services

Each Engineering Services Provider will provide engineering and architectural services as directed by the Authority's Agents. These services will reflect the operational analyses, environmental planning and permitting, and work products developed by other Service Area Providers, as appropriate. Each Engineering Services Provider will work collaboratively with the Authority's Agents, each other, and other Service Area Providers to advance the existing designs used in the development of the:

- California Water Commission – Water Storage Investment Program (WSIP) application (August 14, 2017) and associated submissions to the Water Commission
- Sites Project Draft Environmental Impact Report/Statement (August 14, 2017)
- Draft North-of-Delta Offstream Storage Investigation – Feasibility Report (August 14, 2017)

Each of the Engineering Services Providers will ultimately provide services under both Process A and Process B, as defined above. Respondents will be allowed to propose on one of the two Service Areas (i.e., Sites Reservoir or Conveyance).

The primary facility components requiring detailed engineering designs of the Sites Project are presented in Section 6, Table 6.3: Facilities Table, which includes a listing of the Sites Project's primary facilities along with the associated engineering service areas and concept-level delivery method. A generalized map of Project facilities is included Figure 6.1.

6.3.1 Scope of Services and Responsibility Matrix

Table 6.2.1 summarizes the primary engineering-related roles and responsibilities for the engineering services being requested either as part of the Sites Reservoir (HR) or Conveyance (HC) scopes of work. This table also addresses the responsibilities based primarily on which firm will eventually be assigned to be the Engineer of Record for the final design of each facility, which are listed in Table 6.3. Based on the different delivery methods being contemplated, the Authority plans to finalize the procurement method (refer to CCP) and then authorize the firm that will be assigned to be the Engineer of Record prior to releasing any Requests for Proposal for Design-Build services. Therefore, the proposed assignments listed in this RFQ are subject to change.

NOTE: A summary of the primary roles and responsibilities between Engineering (Service area H) and the other service area providers is included in Section 2.3.

Table 6.2.1: Primary Engineering-Related Roles and Responsibilities

Engineer, Procure, Construct Technical Areas	**Role of Other Service Area Providers**	**Sites Reservoir (Service Area HR)**	**Conveyance (Service Area HC)**	**Service Area K: Design-Builder**
Facility assignments (See Section 6, Table 6.3: Facilities Table)		Lists facilities assigned to service area HR	Lists facilities assigned to service area HC	Lists concept-level delivery methods
External Coordination & Communications (e.g., landowners, public, regulators, utilities, railroads, or others)	Led by Authority (See Section 2)	Support	Support	Support
Compliance with the Standard of Care for engineering and related professional services.	Verification by HDR (Svc Area A)	Lead for those facilities under contract to be the EOR	Lead for those facilities under contract to be the EOR	Lead for those facilities under a Design-Build

Engineer, Procure, Construct Technical Areas	Role of Other Service Area Providers	Sites Reservoir (Service Area HR)	Conveyance (Service Area HC)	Service Area K: Design-Builder
				contract to be the EOR
Facility-Level Basis of Design Reports				
▪ Prepare Basis of Design Reports (BDR) Process A: The Final BDR will be part of the construction bid documents Process B: The "bridging" documents will include (a) if Design-Build, the Final BDR and (b) if Progressive Design-Build, an amended draft BDR for the Design-Builder to finalize	Verification by HDR (Svc Area A)	Lead when EOR and prior to Design-Build contract award[8] *(See Footnote)*	Lead when EOR and prior to Design-Build contract award *(See Footnote)*	Lead after the Design-Build contract has been awarded *(See Footnote)*
▪ Post-design, verify construction complies with the BDR	Support by Construction Management (Svc Area J) contracts	Lead when EOR	Lead when EOR	Lead when EOR

[8] For each facility (refer to Section 6, Table 6.3: Facilities Table), the Engineering Service Area Provider is initially responsible in either a lead or support role until the Design-Build contract has been awarded (Process B); which allows these responsibilities to be transferred to the Design-Builder. Once these responsibilities have been transferred to the Design-Builder, the Service Area Provider will become the Authority's Engineer (AEng) and serve in an oversight role.

For each facility the Engineering Service Area Provider is assigned to be the Engineer of Record (EOR) (i.e., Process A), the Lead or Support role does not change since there is no Design-Builder to transfer this responsibility to. This table assumes the role continues unchanged and therefore no additional clarification is needed.

Engineering Plans and Specifications				
▪ Process A: Develop other design criteria[9], perform analysis and technical studies to prepare plans and specifications using a "gate" system such as 30%, 60%, 90%, pre-final, and final.	Verification by HDR (Svc Area A)	Lead when EOR Support RFI process during construction bid-award process and post-award Support start-up and commissioning activities	Lead when EOR Support RFI process during construction bid-award process and post-award Support start-up and commissioning activities	Not Applicable
▪ Process B - Procurement Support: Develop other design criteria (owner's requirements), perform analysis and technical studies to prepare initial design concepts to include in the "bridging" documents.	Verification by HDR (Svc Area A)	Lead prior to Design-Build contract award	Lead prior to Design-Build contract award	Not Applicable
▪ Process B - Post Award: Finalize other design criteria, perform analysis and technical studies to prepare plans and specifications using a "gate" system such as 30%, 60%, 90%, pre-final, and final.	Verification by HDR (Svc Area A)	Oversight after Design-Build contract award Support to construction cost estimate and risk management process	Oversight after Design-Build contract award Support to construction cost estimate and risk management process	Lead after the Design-Build contract has been awarded Support RFI process during construction. Support start-up and

[9] The scope of work includes preparation of other design criteria including, but not limited to, seismic performance, hydrologic and/or hydraulic, metrological, Design Baseline Reports, Geotechnical Data Reports, Geotechnical Baseline Reports, program-level standards, procedures, and requirements.

		Support to any specialized equipment procurement	Support to any specialized equipment procurement	commissioning activities
Program and facility-level costs and schedules				
▪ Develop and maintain program-level schedules, cost plans, cash flow projections	Led by B&C (Svc Area B)	Support when EOR and prior to Design-Build contract award *(See Footnote)*	Support when EOR and prior to Design-Build contract award *(See Footnote)*	Support after the Design-Build contract has been awarded
▪ Develop and maintain detailed facility-level schedules for design through construction ▪ Develop and maintain detailed facility-level construction cost estimates or opinions of probable cost	Verification by B&C (Svc Area B)	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded.
Risk Management				
▪ Develop and maintain program-level risk management plan	Led by HDR (Svc Area A)	Support	Support	Support
▪ Implementation of and compliance with program-level risk management plan at the facility level	Verification by HDR (Svc Area A)	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded
Quality Assurance & Quality Control				
▪ Develop and maintain program-level quality program	Led by HDR (Svc Area A)	Support	Support	Support

▪ Implementation of and compliance with each firm's quality assurance and control program	Approval of firm's quality program by HDR (Svc Area A)	Lead when EOR and prior to Design-Build contract award Verification after Design-Build contract award	Lead when EOR and prior to Design-Build contract award Verification after Design-Build contract award	Lead after the Design-Build contract has been awarded
Proposal (Bid) Documents and Construction Contracts:				
▪ Construction insurance program (OCIP vs CCIP)	Led by Authority, and HDR (Svc Area A)	Support	Support	Support as applicable
▪ Develop and maintain a Specialty Equipment Procurement Plan (owner-furnished vs contractor furnished)	Led by Authority & HDR (Svc Area A)	Support for assigned facilities	Support for assigned facilities	Support for assigned facilities
▪ Develop and maintain a Construction Contract Packaging plan (CPP)	Led by Authority & HDR (Svc Area A)	Support for assigned facilities	Support for assigned facilities	Support for assigned facilities
▪ For each type of delivery method to be used, prepare commercial terms and conditions (i.e., front-end requirements and specifications)	Led by Authority, HDR (Svc Area A), & Legal counsel	Support for assigned facilities	Support for assigned facilities	Not Applicable
▪ Process A: Prepare technical sections to include, such as, but not limited to, the final plans, specifications, and construction cost estimates (PS&Es) and	Verification by HDR (Svc Area A)	Lead for assigned facilities	Lead for assigned facilities	Not Applicable

final BDR, GDR, and GBR				
▪ Process B: prepare initial design concepts such as plans and specifications (i.e., technical sections to "bridging" documents). The "bridging" documents will also include (a) if Design-Build, the final BDR, GDR, and GBR and (b) if Progressive Design-Build, an amended draft BDR, GDR, and GBR for the Design-Builder to finalize.	Verification by HDR (Svc Area A) & Legal counsel	Lead for preparing. Support to proposal evaluation	Lead for preparing Support to proposal evaluation	Support when applicable & for assigned facilities
Hydraulic Performance, Modeling, Surge, & transient Analysis				
▪ Program-level Operations (Diversions & Releases)	Led by Ch2m (Svc Area D)	Support as reservoir lead	Support as conveyance lead	Support to reservoir or conveyance lead
▪ Develop and maintain program level hydraulics model and surge analysis; including the change management process	Verification by HDR (Svc Area A) at the facility levels	Support	Lead	Support after the Design-Build contract has been awarded
▪ Implementation of and compliance with the approved Hydraulics modeling and surge analysis		Lead when EOR	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded
▪ Facility or component-specific hydraulic modeling and surge analysis HR Sites Reservoir PMF analysis, Inlet/outlet works, and Spillway		Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded

HC Screened Sacramento River diversions HC Pump and pump/turbine, and turbine hydraulic modeling and analysis			Verification of OEM modeling and analysis	OEM lead
Seismic Performance				
▪ Develop the program-level (i.e., site-specific) earthquake ground motions by conducting both deterministic and probabilistic seismic hazard assessments to establish criteria for the seismic analysis and design at the facility level	Support by Fugro (Svc Area I) and HDR (Svc Area A)	Lead or Support will be determined based on approach presented in SOQ	Lead or Support will be determined based on approach presented in SOQ	If applicable, support after the Design-Build contract has been awarded
▪ Develop and maintain program-level and facility-level seismic performance criteria and requirements; including the change management process	Verification by HDR (Svc Area A)	Lead	Support	Support after the Design-Build contract has been awarded
▪ Implementation of and compliance with the approved seismic performance criteria and requirements	Verification by HDR (Svc Area A)	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded
Geology & Geotechnical				
▪ To develop the program-level and facility-level seismic design criteria, conduct geologic explorations, investigations, and analysis	Support by HDR (Svc Area A) & Fugro (Svc Area I)	To be determined based on SOQ	To be determined based on SOQ	Support after the Design-Build contract has been awarded
▪ Compile prior data and prepare a facility-level Geotechnical Data Report	Led by Fugro (Svc Area I)	Not Applicable	Not Applicable	Not Applicable

(GDR)				
▪ Prepare the Final GDR for each facility by conducting additional investigations to Process A: The Final GDR will be part of the construction bid documents Process B: The "bridging" documents will include (a) if Design-Build, the final GDR and (b) if Progressive Design-Build, an amended draft GDR for the Design-Builder to finalize	Support by Fugro (Svc Area I)	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded
▪ Prepare the Final Geotechnical Baseline Report (GBR) for each facility Process A: The Final GBR will be part of the construction bid documents Process B: The "bridging" documents will include (a) if Design-Build, the final GBR and (b) if Progressive Design-Build, an amended draft GBR for the Design-Builder to finalize.	Support by Fugro (Svc Area I)	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded

Power Delivery (Grid Interconnection)				
▪ Perform studies and analysis and prepare technical documents to be used by utilities to perform System Impact Studies, Facility studies, and other related studies. Also, review and analysis of utility's results to recommend for Authority's approval, a grid interconnection scheme	Verification by HDR (Svc Area A)	Support when EOR and prior to Design-Build contract award	Lead	If applicable, support after the Design-Build contract has been awarded
▪ Implementation of and compliance with the approved grid interconnection plan to serve all facilities (e.g. substation design, line routing, equipment selection)	Verification by HDR (Svc Area A) Lead until award of Recreation contract	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded
Power Generation (Conventional Hydropower and Pumped-Storage)				
▪ Perform technical studies and prepare technical documents to be used by the Authority to understand the renewable energy regulatory environment and potential future market conditions and to be able to approve and implement a power generation strategy	Support by HDR (Svc Area A)	Support for Sites Reservoir	Lead when EOR and prior to Design-Build contract award	Support after the Design-Build contract has been awarded

▪ Implementation of and compliance with the approved hydropower strategy	Verification by HDR (Svc Area A)	Support for Sites Reservoir	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded
Land surveying and topographic controls				
▪ Develop and maintain program level controls and monuments; including the change management process	Verification by HDR (Svc Area A)	Lead or Support will be determined based on approach presented in SOQ	Lead or Support will be determined based on approach presented in SOQ	Support after the Design-Build contract has been awarded
▪ Establishing and maintaining local controls at the facility level	Verification by HDR (Svc Area A)	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded
▪ Conduct topographic surveys	Verification by HDR (Svc Area A)	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded
▪ For facilities located in waterways, conduct bathymetric surveys HC Diversions at Sacramento River, Funks Reservoir HR Downstream improvements	Verification by HDR (Svc Area A)	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded

SCADA & Communications				
▪ Develop and maintain program-level requirements and specifications; including the change management process	Verification by HDR (Svc Area A)	Support when EOR and prior to Design-Build contract award	Lead	Support after the Design-Build contract has been awarded
▪ Implementation of and compliance with the approved SCADA & Comms requirements and plan	Verification by HDR (Svc Area A)	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded
Facility Security & Public Safety				
▪ Develop and maintain program-level and facility-level security requirements and specifications; including the change management process	Led by HDR (Svc Area A)	Support when EOR and prior to Design-Build contract award	Support when EOR and prior to Design-Build contract award	Support after the Design-Build contract has been awarded
▪ Develop and maintain dam safety requirements (e.g., Emergency Action Plan) that comply with regulatory requirements		Lead for Sites Reservoir	Lead for regulating reservoirs	Support after the Design-Build contract has been awarded
▪ Develop and maintain levee safety requirements that comply with regulatory requirements		Support if needed (e.g. downstream improvements)	Lead for Sacramento River levee	Support after the Design-Build contract has been awarded
▪ Implementation of and compliance with the approved security and dam safety requirements and plan		Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded

Architectural Requirements				
▪ Develop and maintain the approved architectural theme to be implemented program level	Authority will adopt a program wide theme	Support when EOR and prior to Design-Build contract award	Lead	Support after the Design-Build contract has been awarded
▪ Develop strategy and recommendations for Authority's consideration regarding potential certification under Leadership in Energy and Environmental Design (LEED)	Authority will adopt a strategy	Support when EOR and prior to Design-Build contract award	Lead	Support after the Design-Build contract has been awarded
▪ Implementation of and compliance with the Authority-approved architectural theme	Verification by HDR (Svc Area A) at the facility level	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded
Temporary construction facilities, staging areas, traffic plans Utility locating, demolition and/or relocation Prepare logistical studies and investigations to determine cost-effective methods to deliver equipment, materials, supplies, and labor to each construction site	Verification by HDR (Svc Area A)	Lead when EOR and prior to Design-Build contract award	Lead (a) when EOR and prior to CM@Risk contract award and (b) prior to Design-Build contract award	Lead after the Design-Build contract has been awarded

Design of small utilities to each facility or eligible parcel (e.g., potable water, wells, wastewater/ septic, telecommunications (if not included under SCADA related services), propane/gas)	Coordination led by HDR (Svc Area A)	Lead when EOR and prior to Design-Build contract award	Lead when EOR and prior to Design-Build contract award	Lead after the Design-Build contract has been awarded

6.4 Facilities Table

Since the engineer's role will vary dependent upon the proposed delivery method (i.e., Process A or Process B), Table 6.3 (Facilities Table) summarizes the engineer's intended role at the facility level and concept-level CCP. Until the CCP has been approved, the delivery method and therefore the engineer's role may change from what is presented in this RFQ. Therefore, Respondent should use this information as a guide in preparing their SOQ.

Table 6.3: Facilities By Engineering Service Area (HR vs HC) and Planned Engineering Role

Summary of Sites Facilities, Associated Engineering Service Area and Concept-level Delivery Method

Primary Facility	Service Area	Constr Pkg	Concept-level Delivery Methods	Feature	Size/Capacity (Alternative D)
Sites Reservoir	Informational		N/A	Gross Storage Capacity	1.8 MAF
				Water Surface Elevation	520 feet msl
				Dam Crest Elevation	540 feet msl
				Minimum Operating Pool	340 feet msl
				Inundation Area (approximate)	14,200 acres
				Reservoir release capacity	15,000 cfs to 24,000 cfs (emergency release)
				Probable Maximum Flood & Emergency Drawdown through multiple release points	~ 6,000 cfs through the Sites Dam Diversion Tunnel/low level outlet into Stone Corral Creek ~ 6,000 cfs through either the Signal or Passive Spillway at the North End of Sites Reservoir ~ 2,000 cfs through the Delevan Pipeline to the Sacramento River ~ 10,000 cfs through Outlet Works adjacent to Golden Gate Dam directly into Funks Creek (bypassing Sites Pump/Generating Plant)
SCADA/ Communications	HC (EOR)	SCADA (or w/ Intertie+)	Design-Bid-Build (or CM@Risk)	Microwave towers w/ back-up power supply	Interconnect project facilities and integrate dam safety into overall SCADA/Comms system
	HR (EOR)			Facilities required to support EAP & Dam Safety requirements	Instrumentation & surveillance
Sites Reservoir's Sites Dam w/ Secondary Outlet	HR (EOR)	Sites Reservoir	CM@Risk (or Design-Bid-Build)	Location	Logan Ridge, Across Stone Corral Creek
				Type	Earth/Rockfill Embankment
				Crest Length	850 feet
				Maximum Height	290 feet
				Embankment Volume	3,520,000 cubic yards

Source: Draft Facility Table (July 04, 2019)

Primary Facility	Service Area	Constr Pkg	Concept-level Delivery Methods	Feature	Size/Capacity (Alternative D)
		(or separate tunneling contract)	CM@Risk (or Design-Bid-Build)	Secondary Low-Level Outlet Tunnel & Works	Tunnel sized for construction, but valve sized for emergency drawdown operations
Sites Reservoir's Golden Gate Dam	HR (EOR)	Sites Reservoir	CM@Risk (or Design-Bid-Build)	Location	Logan Ridge, Across Funks Creek
				Type	Earth/Rockfill Embankment Proposed contractual "Match Point" with Fletcher Option needs to be determined
				Crest Length	2,120 feet
				Maximum Height	310 feet
				Embankment Volume	9,200,000 cubic yards
Sites Reservoir's Saddle Dams	HR (EOR)	Sites Reservoir	CM@Risk or Design-Bid-Build)	Location	On Logan Ridge, North End of reservoir from Funks Creek to Hunters Creek (mostly in Glenn County)
				Type	Earth/Rockfill Embankments
				Saddle Dams	40 to 50 feet high: Numbers #1, #4, & #9 70 to 130 feet high: Numbers #2, #3, #5, #6, #7, & #8
Sites Reservoir's Signal Spillway	HR (EOR)	Sites Reservoir	CM@Risk (or Design-Bid-Build)	Location	Saddle Dam #6
				Release capacity	See Sites Reservoir Facility
				Diameter	7-foot RCP
				Inlet Elevation	525.5 feet (top of PMF storage)
Sites Reservoir's Passive Spillway (Option)	HR (EOR)	Sites Reservoir	CM@Risk (or Design-Bid-Build(	Location	TBD
				Release capacity	See Sites Reservoir Facility
				Invert Elevation	TBD
Sites Reservoir's Primary Inlet/ Outlet Works	HR (EOR)	Sites Reservoir	CM@Risk (or Design-Bid-Build)	Facility to fill (& for emergency drawdown):	Low-Level Inlet/Outlet works
				Reservoir release capacity	See Sites Reservoir Facility
				Facility for normal releases:	Screened Multi-level Inlet Tower

Primary Facility	Service Area	Constr Pkg	Concept-level Delivery Methods	Feature	Size/Capacity (Alternative D)
adjacent to Golden Gate Dam				Reservoir fill capacity	6,000 cfs
		(or a separate tunneling contract)	CM@Risk (or Design-Bid-Build)	Inlet/Outlet Conduit Size	Two 27-foot-diameter concrete and steel-lined tunnels Proposed contractual "Match Point" to be at downstream tunnel portal that is immediately west of the Sites Pumping/Generating facility
Sites Reservoir's Downstream Improvements	HR (EOR)	w/ Roads (or a separate contract)	CM@Risk (or Design-Bid-Build)	Emergency Drawdown Flow Passage Facilities	From Sites Reservoir into Colusa Basin Drain. For flow capacities, see Sites Reservoir Facility Proposed contractual "Match Point" with conveyance facilities needs to be determined
Sites Pumping/ Generating Plant	HC (AEng)	Sites P/G	Progressive Design-Build-Operate (or Progressive Design-Build w/ Extended Maintenance)	Location	Downstream from Golden Gate Dam
				Flow Capacity (Pumping)	5,900 cfs pumping
				Flow Capacity and Head (Release)	5,900 cfs generating 330 feet (Holthouse) 5,900 cfs generating approximately 300 ft (Fletcher). TCCA and GCID will constrain releases closer to 3,900 cfs without bypasses.
				Incidental Power Generation	110.3 MW at max water level in Sites Reservoir
				Project Switchyard & Substation	TBD
				Station Power & Substation	TBD
Fletcher Regulating Reservoir (Option)	HC (EOR)	Intertie+	CM@Risk (or Design-Bid-Build)	Maximum Height	70 feet
				Max WSE	268.5 feet msl
				Total Capacity	6,000 AF Proposed contractual "Match Point" with Golden Gate dam needs to be determined
				Dead Storage	2,000 AF
	HC			Location	Existing Red Bluff Pumping Plant and Fish Screen facility

Primary Facility	Service Area	Constr Pkg	Concept-level Delivery Methods	Feature	Size/Capacity (Alternative D)
Tehama-Colusa Canal Improvements	(AEng or EOR)	Intertie+, separate contract, or assignment to TCCA/ USBR	Progressive Design-Build, Design-Bid-Build, (or Not Applicable)	Description	The facility includes two open bays to allow additional pumps to be installed and integrated with the current operations.
				Flow Capacity	2 – 250 cfs pumping (each). Head = 12.81 ft
			Progressive Design-Build, Design-Bid-Build, (or Not Applicable)	Location	Existing Tehama-Colusa Canal from diversion facility at Red Bluff to Funks Reservoir
				Description	The lined canal may require improvements to meet the Sites Project's operational reliability requirements.
				Flow Capacity	2,100 cfs (at Funks) Diversion to Sites Project 2,000 cfs Release from Sites Project
Funks Pumping Plant (Fletcher Option)	HC (AEng)	Intertie+	Progressive Design-Build-Operate (or Progressive Design-Build w/ Extended Maintenance)	Location	Between Funks Reservoir and Sites Pumping/ Generating Plant
				Flow Capacity	2,100 cfs pumping, 1,000 cfs return flow
				Flow Capacity and Head	2,100 cfs and 40 feet (Fletcher only)
				Incidental Power Generation	None
				Station Power & Substation	TBD
Holthouse Regulating Reservoir Option (Expanded Funks)	HC (EOR)	Intertie+	CM@Risk (or Design-Bid-Build)	Maximum Height	45 feet
				Max WSE	205 feet msl
				Total Capacity	6,500 AF
				Dead Storage	1,000 AF
Delevan Pipeline from Sacramento River to T-C Canal	HC (AEng)	Pipeline	Design-Build or Progressive Design-Build	Flow Capacities	2,000 cfs pumping 1,500 cfs releasing (design criteria) 2,500 cfs releasing (maximum)
				Size	Two 12-foot-diameter RCC pipe

Source: Draft Facility Table (July 04, 2019)

Primary Facility	Service Area	Constr Pkg	Concept-level Delivery Methods	Feature	Size/Capacity (Alternative D)
(Funks Regulating Reservoir)				Approx. Length of Segment 1	11.3 [14 - 2.8] miles from Sacramento River through Colusa Basin Drain to contractual "Match Point" near TRR. Includes crossings under I-5, Railroad, and G-C Canal
		Intertie+	Same as TRR Pipeline	Approx. Length of Segment 2	2.3 miles from contractual "Match Point" near TRR to Funks Regulating) Reservoir (or Holthouse Regulating Reservoir) 1.13 miles with a tunnel section. From Funks to Fletcher Regulating Reservoir (Northerly Alignment Option) 2.14 miles. From Funks to Fletcher Regulating Reservoir (Southerly Alignment Option)
Delevan Fish Screened Intake & Pumping/ Generating Plant	HC (AEng)	Intertie+	Progressive Design-Build-Operate (or Progressive Design-Build w/ Extended Maintenance)	Location	West side of Sacramento River, near Highway 45
				Flow Capacities	2,000 cfs pumping at 150 ft (Holthouse only) 1,500 cfs releasing sustainable releases with short-duration releases of 2,500 cfs
				Incidental Power Generation	4.4 MW at 1,500 cfs
				Station Power & substation:	TBD
				Fish Screens Required	Yes
	HC (EOR)		CM@Risk or Design-Bid-Build	Sacramento River Levee Improvements	TBD
Glenn-Colusa Canal Improvements	HC (AEng or EOR)	Intertie+, separate contract, or assignment to GCID	Progressive Design-Build, Design-Bid-Build, (or Not Applicable)	Location	Existing Glenn-Colusa Canal from the diversion facility at Hamilton City to the TRR
				Description	The unlined canal may require improvements to meet the Sites Project's operational reliability requirements.
				Flow Capacity	1,800 cfs diversion to Sites Project 1,000 cfs release from Sites Project
	HC (EOR)	Intertie+		Capacity	1,200 AF

Primary Facility	Service Area	Constr Pkg	Concept-level Delivery Methods	Feature	Size/Capacity (Alternative D)
G-C Canal's Terminal Regulating Reservoir (TRR)			CM@Risk (or Design-Bid-Build)	Footprint	191 acres
				Depth	17 feet
				Maximum Embankment Height	21 feet
TRR Pumping/ Generating Plant	HC (AEng)	Intertie+	Progressive Design-Build-Operate (Progressive Design-Build or w/ Extended Maintenance)	Location	TRR Reservoir
				Capacity	1,800 cfs pumping 900 cfs generating 1,200 cfs releasing (split between GCID, Funks Creek, Canal on McDermmot Road)
				Pumping Head	105 ft
				Incidental Power Generation	4.7 MW at 900 cfs
				Station Power & Substation	TBD
TRR Pipeline	HC (AEng)	Intertie+	design-Build or Progressive Design-Build	Location	TRR Reservoir
				From/To	TRR Reservoir to Holthouse Regulating Reservoir (or Fletcher Regulating Reservoir)
				Size	Two 12-foot-diameter RCPs
				Flow Capacities	1,890 cfs pumping 1,200 cfs releasing
				Length (approximate)	2.3 miles to Holthouse 1.13 miles to Fletcher (Northerly Alignment) 2.14 miles to Fletcher (Southerly Alignment)
Power delivery (Grid Interconnection): Permanent Power Transmission & Distribution	HC (AEng)	Separate Power (or w/ the Intertie+)	Design-Build or Progressive Design-Build	Westside Grid Interconnection	WAPA or PG&E connection for Sites PGP, TRR, and Funks PP (Fletcher Option) 5 miles of 230 kVA powerlines Proposed contractual "Match Point(s)" to provide power to Sites Reservoir's appurtenant structures needs to be determined

Primary Facility	Service Area	Constr Pkg	Concept-level Delivery Methods	Feature	Size/Capacity (Alternative D)
				Delevan Intake Grid Interconnection	WAPA line near town of Colusa 13 miles of 115 kVA powerlines
				Project Substation in Colusa	TBD
Temporary Power	HR (AEng)	Part of Sites Reservoir	Design-Build or Progressive Design-Build	Temporary Construction Power (if permanent facilities are not an early construction)	Reservoir construction
	HC (AEng)	Part of Intertie+	Design-Build or Progressive Design-Build		Conveyance facilities construction
Permanent Roads & Bridges	HR (AEng)	Roads (or w/ the Sites Reservoir)	Design-Build or Progressive Design-Build	Bridge	Access across Sites Reservoir
				Community Roads	Restore access to private property (with Bridge)
					Access around Sites Reservoir (Alternative to bridge)
	HC (AEng)	Intertie+	Design-Build or Progressive Design-Build	Project Roads	Restricted access to project facilities (& to private property) Proposed contractual "Match Point(s)" needs to be determined
Utility Relocations & Demolition	HR (AEng)	Sites Reservoir (or a separate contract)	Progressive Design-Build (or CM@Risk)	Within Sites Reservoir	Utility Relocations & construction vegetation management
	HC (AEng)	Intertie+	Design-Build or Progressive Design-Build	Pipeline ROW Utility Relocations	From Sites Pump/Gen Plant to TRR
		Pipeline			From TRR to the Sacramento River
Temporary Construction Facilities	HR (AEng)	Roads (or w/ the Sites Reservoir)	Design-Build or Progressive Design-Build	Temporary Community Access Roads	Northern Bypass Road while Sites-Ladoga Road is closed & potentially other roads

Source: Draft Facility Table (July 04, 2019)

Primary Facility	Service Area	Constr Pkg	Concept-level Delivery Methods	Feature	Size/Capacity (Alternative D)
	HR (EOR)	Sites Reservoir		Funks Creek storm flow cutoff channel	Divert Funks Creek flows over to Stone Corral Creek
				Local Borrow/Spoil areas	For Sites Reservoir Dam Construction,
	HR (AEng)	Roads			For community road construction (alternative to Bridge)
	HC (AEng)	Pipeline			For the Pipeline construction from Sacramento River to Funks Res.
	HC AEng	Intertie+			For the Regulating Reservoir construction
	HR (EOR)	Sites Reservoir		Staging, laydown, & other facilities	Support the construction of Sites Reservoir
	HC (AEng)	Intertie+			Support the construction of pumping/generating facilities
		Pipeline			Support the construction of the pipelines, including dewatering & temporary features to minimize impacts to agricultural production
Biological Mitigation	N/A	TBD	TBD (likely to be either Design-Bid-Build or Progressive Design-Build	Conservation Easements	Golden Eagle and Giant Garter Snake (GGS)
Recreation	N/A	TBD	TBD (likely to be either Design-Bid-Build or Progressive Design-Build)	Facilities & utilities	Stone Corral, Peninsula Hills, & Boat Ramp

NOTES:

1. Intertie+ represents the facilities that (a) represent the potential Maxwell Water Intertie Project, which would be constructed solely to provide rural community benefits (i.e. utilize the USDA conditional loan) PLUS (b) the additional or expanded facilities constructed as part of the Sites Reservoir Project.

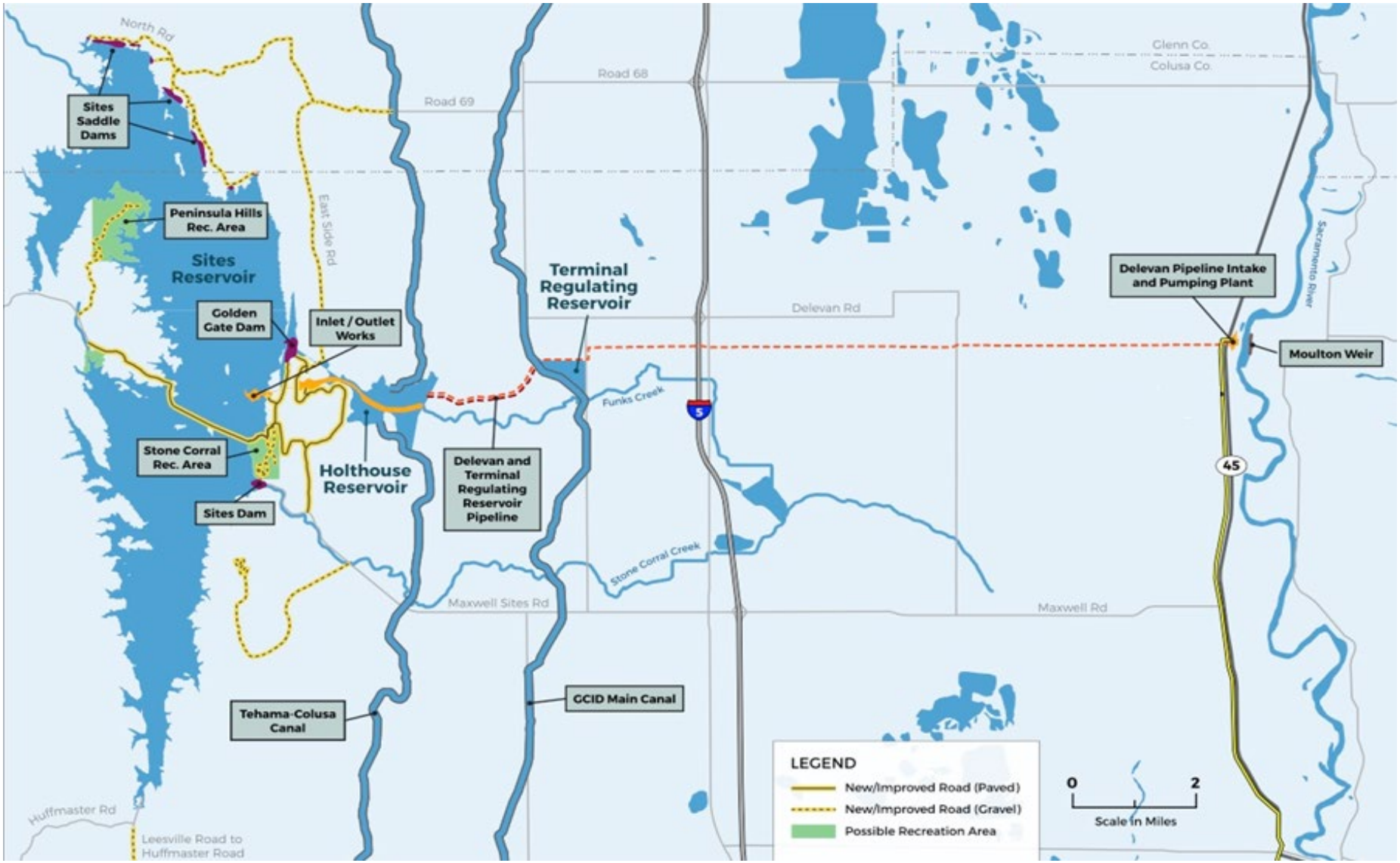
Source: Draft Facility Table (July 04, 2019)

Sites

Legend:

AEng	=	Authority's Engineer for final design (i.e. when the EOR is part of design-build team) & for preliminary design, advances the plans, develops the performance specification to retain a design-builder, and maintains the construction cost estimate
AF	=	acre- feet
cfs	=	cubic feet per second
CM@Risk	=	Construction Management at Risk (or Construction Manager/General Contractor) delivery method
CVFPB	=	Central Valley Flood Protection Board jurisdiction
DB	=	Design Build delivery method
DBB	=	Design-Bid-Build (or traditional) delivery method
DBO	=	Design-Build-Operate delivery method
DSOD	=	Division of Safety of Dams jurisdiction
EOR	=	Engineer of Record for preliminary & final design. Responsible for preparing plans, technical specifications, and construction cost estimates (PS&Es)
EAP	=	Emergency Action Plan (dam safety)
G-C	=	Glenn-Colusa (canal)
MAF	=	million acre-feet
msl	=	mean sea level
MW	=	Megawatt
N/A	=	Not Applicable
NODOS	=	North-of-the-Delta Offstream Storage
PDB	=	Progressive Design Build delivery method
PG&E	=	Pacific Gas and Electric Company
PGP	=	Pumping/Generating Plant
PMF	=	probable maximum flood
RCP	=	reinforced-concrete pipe
T-C	=	Tehama-Colusa (canal)
TBD	=	To Be Determined
TRR	=	Terminal Regulating Reservoir
USACE	=	US Army Corps of Engineers jurisdiction
WAPA	=	Western Area Power Administration
WSE	=	Water surface elevation

Figure 6.1: Facilities Map



Source: Draft Facility Table (July 04, 2019)

7.0 KEY PERSONNEL REQUIREMENTS FOR SERVICE AREA H: ENGINEERING SERVICES

7.1 Key Personnel

Respondents shall provide a description of those individuals whom the Respondent considers to be "Key Personnel" required to perform the scope of services described in Section 6.3. Key Personnel must:

- Have excellent interpersonal skills, exemplary written and presentation skills, and consensus and team building skills.
- Be well organized and demonstrate an ability to multi-task.
- Possess an active professional engineering license (ideally in the State of California).
- Understand the requirements of producing the designs described in Section 6.3 and be familiar with the interface of the preliminary design process with the final design and construction phases, including alternative construction delivery methods.

The Authority has provided below its views on those positions the authority believes would be classifies as "Key Personnel", as well as some criteria and descriptions of valued characteristics that may be considered in the evaluation of Key Personnel. Respondents are encouraged to identify any additional key personnel or to propose alternative positions that will be required to successfully perform the required scope of services and include their qualifications and experience on large infrastructure projects similar to the Sites Project.

7.1.1 Services to be Assigned to *either* the Sites Reservoir (HR) or Conveyance (HC) Service Area Provider:

<u>Seismic Lead</u>

The Seismic Lead will function as the overall lead for the development of site-specific ground motions and seismic design criteria for Sites Project. He/she will have appropriate experience leading the seismic components of the planning and design of major earthen dams and saddle dams, and the other key facilities, of similar size and dimension to those planned for the Sites Project. The Seismic Lead must have demonstrated experience conducting probabilistic and deterministic seismic hazard analyses following the Division of Safety of Dams (DSOD), the Federal Energy Regulatory Commission (FERC), the USACE, and Reclamation guidelines and criteria. They will also facilitate the independent technical review of the seismic program with the Project Integration Service Provider. An active California professional engineering license is required.

<u>Survey and Topographic Controls Lead</u>

The Survey Lead will function as the overall lead for the Sites Project. They shall have appropriate experience leading all aspects of surveying and mapping necessary for the planning and design of major projects that are similar in size and dimension to those planned for the Sites Project. The Survey Lead

will be responsible for establishing and maintaining topographic survey controls, and coordinating land and bathymetry surveys to: establish location of all facilities, provide data for preliminary and final design, and support property acquisition activities. The Survey and Topographic Controls Lead will also facilitate the survey and topographic controls associated with each of the different facilities (i.e., work with each of the Engineers of Record assigned to each facility) and the independent technical review of the survey program with the Project Integration Service Provider. And, preferably have experience with alternative delivery methods ranging from Construction Management to Design-Build An active California Land Surveyor license is required.

7.1.2 Services to be Assigned to Sites Reservoir - Services Area Provider (HR):

Engineering Services Manager

The Engineering Services Manager needs to have demonstrated adequate experience with leading the engineering design of large complex water resources management projects in the western United States. Experience with the design and construction of all relevant facilities for projects of similar size as the Sites Project may also be relevant. The Engineering Services Manager must have demonstrated experience with water resources management in California and applicable regulations and guidance related to the relevant engineering design, as well as the ability to manage other key staff providing specialty services to the Sites Project. The Engineering Services Manager (and other key design team members) must demonstrate experience with large-scale water management and planning/ development projects, and the required reports and analysis tools used to support future development phases of the Sites Project and interface with permit applications and reports. An active California professional engineering license is required.

Sites Reservoir Dam Lead

The Dam Design Lead shall have appropriate engineering experience leading the planning, design, and construction of major earthen dams and saddle dams that are similar in size and dimension to those planned for the Sites Project. The Dam Design Lead shall be experienced with working on projects that involve the DSOD, the Division of Dam Safety and Inspection of the FERC, and permits related to the construction and certification of jurisdiction dams. The Dam Design Lead shall be experienced in coordinating technical studies with DSOD (and potentially FERC) to meet permit requirements and preferably have experience with alternative delivery methods such as Construction Management at Risk and/or Construction Management/General Contractor. An active California professional engineering license is required.

Tunnel Lead

The Tunnel Lead shall have appropriate planning, design, and construction experience in tunneling, and must have worked in an engineering leadership role on faulted rock tunnel projects with an excavated diameter of 15 feet or greater. The Tunnel Lead shall also have experience with design-build projects, including the development of initial concepts to be used in the procurement of a design-builder,

providing oversight of the design-builder, and managing the oversight team's scope of services, schedule, staffing, and budget as well experience in effectively communicating with clients and the project team. An active California professional engineering license is preferred.

Bridge Lead

The Bridge Lead will have appropriate engineering experience leading the planning, design and construction of bridges which are of similar size and complexity to that planned for the Sites Project. The Bridge Lead will have the demonstrated ability to provide technical direction to produce design criteria, design plans, design calculations, and specifications. The Bridge Lead shall be well versed in both local and national bridge codes. The Bridge Lead shall also have experience with design-build projects, including the development of initial concepts to be used in the procurement of a design-builder, providing oversight of the design-builder, and managing the oversight team's scope of services, schedule, staffing, and budget as well experience in effectively communicating with clients and the project team. An active California professional engineering license is required.

Road Lead

The Road Lead will have appropriate engineering experience leading the planning, design, and construction of road projects that are similar in size and dimension to those planned for the Sites Project. The Road Lead will have demonstrated ability to provide technical direction in completing preliminary engineering through detailed development of highway design projects according to local, Caltrans and AASHTO standards. They will have design expertise for the production of roadway, lighting, signing, pavement marking, staging and traffic handling plans, and the ability to coordinate with all technical disciplines (environmental, roadway, structural, geotechnical, traffic, drainage, landscaping, etc.) involved in the project. The Road Lead shall also have experience with design-build projects, including the development of initial concepts to be used in the procurement of a design-builder, providing oversight of the design-builder, and managing the oversight team's scope of services, schedule, staffing, and budget as well experience in effectively communicating with clients and the project team. An active California professional engineering license is preferred.

Discipline-Specific Lead Engineers

As the Authority's Engineer and to ensure consistency across all facilities, the Respondent should identify their lead engineer for at least the following disciplines: Electrical, Mechanical, Control Systems, Fire Protection, Structural, Geotechnical, Geology, Hydrogeologist, Civil, Land Surveyor, Traffic, Corrosion, Metallurgical, and Agriculture. Each lead shall have demonstrated competence in their respective discipline. For each, an active California professional engineering license is required when the Engineering Services Provider will be the Engineer of Record and is preferred when the Engineering Services Provider is the Authority's Engineer.

7.1.3 Services to be Assigned to Conveyance Service Area Provider (HC):

Engineering Services Manager

The Engineering Services Manager needs to have demonstrated adequate experience with leading the engineering design of large complex water resource management projects in the western United States. Experience with the preparation of all relevant facilities for projects of similar size as the Sites Project may also be relevant; preferably with demonstrated experience with the implementation of alternative delivery methods ranging from Construction Management to Design-Build. The Engineering Services Manager must have demonstrated experience with water resource management in California and, applicable regulations and guidance related to the relevant engineering design as well as the ability to manage other key staff providing specialty services to the Sites Project. The Engineering Services Manager (and other key design team members) must demonstrate experience with large-scale water management and planning/development projects, and the required reports and analysis tools used to support future development phases of the Sites Project and interface with permit applications and reports. An active California professional engineering license is required.

Regulating Reservoir Dam Lead

The Dam Design Lead shall have an appropriate engineering experience leading the planning, design, and construction of major earthen dam and saddle dams that are similar in size and dimension to those planned for the Sites Project. The Dam Design Lead shall be experienced with working on projects that involve the Division of Safety of Dams (DSOD) of the Department of Water Resources, the Division of Dam Safety and Inspection of the Federal Energy Regulatory Commission (FERC), and permits related to the construction and certification of jurisdiction dams. The Dam Design Lead shall be experienced in coordinating technical studies with DSOD (and potentially FERC) to meet permit requirements and preferably have experience with alternative delivery methods such as Construction Management at Risk and/or Construction Management/General Contractor. An active California professional engineering license is required.

Hydraulics Lead

The Hydraulics Lead will have appropriate experience leading the hydraulic planning and design of systems that are similar in size and complexity to those planned for the Sites Project. They will serve as the overall Project Lead Hydraulics Engineer. Extensive hydrological modeling has been completed to evaluate the Sites Project. However, these tools are too coarse to provide design-level information for the Project. The modeling effort will help inform numerous engineering elements, including the following: hydraulic design criteria for each facility, operational requirements, surge and transient analyses, confirming facility configuration/sizing, determining system response under various operational scenarios, and supporting other related design efforts. The Hydraulics Lead will also facilitate the integration of the design of the different facilities (i.e., work with each of the Engineers of Record assigned to each facility) and the independent technical review of the hydraulic design program with the Project Integration Service Provider. The hydraulic lead must have the experience necessary to tier off of previous modeling efforts with an appropriate modeling platform that will operate on a finer

time step and can be used to inform design decisions and preferably have experience with alternative delivery methods ranging from Construction Management at Risk to Design-Build and Design-Build-Operate. An active California professional engineering license is required.

Intakes Lead

The Intakes Lead will have appropriate engineering experience leading the planning, design, and construction of screened intakes with diversion capacity of 300 cfs or greater. The Intakes Lead will be experienced with working on projects that involve USACE permits related to the alteration and modification of USACE levees and heavy civil construction in aquatic environments. The Intakes Lead shall be experienced in coordinating technical studies with regulatory agencies to meet permit requirements and preferably have experience with alternative delivery methods such as Construction Management at Risk and/or Construction Management/General Contractor. An active California professional engineering license is preferred.

Pipeline Lead

The Pipeline Lead will have appropriate planning, design, and construction experience in the tunnel and large diameter pipeline industry, and must have experience on large diameter (i.e., over 66-inch diameter) installation of reinforced concrete pipelines using open trench and bore-and-jack methods. The Pipeline Lead shall also have experience with design-build projects, including the development of initial concepts to be used in the procurement of a design-builder, providing oversight of the design-builder, and managing the oversight team's scope of services, schedule, staffing, and budget as well experience in effectively communicating with clients and the project team. An active California professional engineering license is preferred.

Tunnel Lead

The Tunnel Lead will have appropriate planning, design, and construction experience in tunneling, and must have worked in an engineering leadership role on faulted rock tunnel projects with an excavated diameter of 15 feet or greater. The Tunnel Lead shall also have experience with design-build projects, including the development of initial concepts to be used in the procurement of a design-builder, providing oversight of the design-builder, and managing the oversight team's scope of services, schedule, staffing, and budget as well experience in effectively communicating with clients and the project team. An active California professional engineering license is preferred.

Pumping/Generating Plant Lead

The Pumping/Generating Plant Lead will have appropriate experience in the planning, design, and construction of pumping plants and water conveyance facilities. The individual should have demonstrated experience leading the planning, design, and construction of pumping plants with a capacity of 600 cfs or greater. The Pumping/Generating Plant Lead shall also have experience with design-build projects, including the development of initial concepts to be used in the procurement of a design-builder, providing oversight of the design-builder, and managing the oversight team's scope of

services, schedule, staffing, and budget as well experience in effectively communicating with clients and the project team. An active California professional engineering license is preferred.

Site Development Lead

The Site Development Lead will have appropriate experience in leading site development in remote project locations including: bringing electrical power to site, developing overall site access, utility relocation and developing site utilities, and logistics planning. The Site Development Lead should preferably have experience in methods ranging from Construction Management at Risk and/or Construction Management/General Contractor to Design-Build, providing oversight of the design-builder, and managing the oversight team's scope of services, schedule, staffing, and budget as well experience in effectively communicating with clients and the project team. An active California professional engineering license is required.

Power Delivery Lead

The Power Delivery Lead will have appropriate experience in the planning, design, and construction of grid interconnection facilities, power transmission and distribution systems, and power substations. The individual should have demonstrated experience leading the planning, design, and construction of powerlines rated to 230 kV or higher. The Power Delivery Plant Lead shall also have experience with design-build projects, including the development of initial concepts to be used in the procurement of a design-builder, providing oversight of the design-builder, and managing the oversight team's scope of services, schedule, staffing, and budget as well experience in effectively communicating with clients and the project team. An active California professional engineering license is required.

Hydropower Lead

The Hydropower Lead shall have appropriate experience in the planning, design, and construction of both conventional and pumped-storage hydropower, including the licensing process through the Division of Hydropower Licensing of the FERC. The individual should have demonstrated experience leading the planning, permitting, design, and construction of multi-unit conventional hydropower facilities rated at 50 MW or larger (and pumped-storage facilities), as well as leading the planning, permitting, and design of multi-unit pumped-storage hydropower facilities rated at 50 MW or larger. The Hydropower Lead shall also have experience with design-build projects, including the development of initial concepts to be used in the procurement of a design-builder, providing oversight of the design-builder, and managing the oversight team's scope of services, schedule, staffing, and budget as well experience in effectively communicating with clients and the project team. An active California professional engineering license is preferred.

Discipline-Specific Lead Engineers

As the Authority's Engineer and to ensure consistency across all facilities, the Respondent should identify their lead engineer for at least the following disciplines: Electrical, Mechanical, Control Systems, Fire Protection, Structural, Geotechnical, Geology, Hydrogeologist, Civil, Land Surveyor, Traffic,

Corrosion, Metallurgical, and Agriculture. Each lead shall have demonstrated competence in their respective discipline. For each, an active California professional engineering, land surveyor, geology or hydrogeology license as appropriate is required when the Engineering Services Provider will be the Engineer of Record and is preferred when the Engineering Services Provider is the Authority's Engineer.

Exhibit A

Phase 2 Work Plan

Exhibit B

Sample Agreement

Exhibit C

Sample Task Order