

## **EXHIBIT "A"**

### **PRELIMINARY SCOPE OF WORK**

#### **SJCDPW- RFP-26-01A**

The EXHIBIT "A" will define task unique to each bridge where it is appropriate. Interested consulting firms will need to response all tasks as defined in EXHIBIT "A". The preliminary Scope of Work described in this Request for Proposal is provided for guidance only. The Proposal needs to be detailed and defined in order to accomplish each task successfully. All work must comply with County policies, the Local Assistance Procedure Manual (LAPM), latest Caltrans Standard Plans and Specifications, AASHTO latest release of its Highway and Street Design "Green Book", HEC 23 for countermeasure design for bridge scour and stream instability, and the most recent guidelines for the Highway Bridge Program (HBP).

#### *The Elliot Road Bridge No. 29C-249:*

The Elliot Road Bridge No. 29C-249 across Dry Creek was originally constructed in 1990 and consists of a continuous concrete slab with a substructure comprised of two reinforced concrete diaphragm abutments, one reinforced concrete pier wall, and fifteen reinforced concrete columns/piles which are all placed on reinforced concrete piles. The bridge is 29 ft wide with 27.89ft of clear width and 425 ft. in length.

In October of 2020, Caltrans performed a scour evaluation of the substructure and waterway to determine the scour potential. The scour evaluation determined that the rock slope protection (RSP) at Pier 17 (south bank) was currently stable, but so steep that the long term effectiveness of the RSP is in question; that the pile cap at Pier 18 (in the channel) is exposed on the downstream side with three piles visible; and the RSP at Pier 19 (north bank) is unstable and failing as it is placed on a steep bank with no method to keep it in-place. This led to the structures National Bridge Inventory (NBI) item 113 "Scour" change from a 5 to a 3 which makes the structure scour critical. The scour concerns at Pier 19 were further increased when the north bank was washed out in late 2021. After the wash out at Pier 19, the County placed additional RSP around the exposed piles in order to mitigate any further scour until a more permanent solution could be design and put in place.

Per Bridge Preventive Maintenance Program (BPMP) guidelines, an engineered mitigation using Hydraulic Engineering Circular (HEC 23) is required. The engineered mitigations will extend outside the pier/pier walls and all the way up the channel banks. These engineered countermeasures will protect the structural integrity of the entire bridge and extend the service life.

#### *Blossom Road Bridge No. 29C-116:*

Blossom Road Bridge No. 29C-116 across Beaver slough was constructed in 1980 and consists of continuous reinforced concrete slabs on column pile extensions at six bents and end-diaphragm abutments. The bridge is continuous 7-span cast in place reinforced concrete flat slab on PC/PS column/pile (6) bents and end-diaphragm abutments with monolithic wingwalls on driven PC/PS concrete piles. The bridge is 28.5 ft wide with 27.9 ft clear width and 227 ft. in length.

This bridge has a history of bank erosion which has been reported in past State Bridge Inspection Reports (BIRs). Previous scour countermeasures in the form of broken concrete installed by County staff are continuously deteriorating, compromising the ability to protect the embankments and increasing scour susceptibility.

The project will address the vertical scour at Abutment 8 and failing Rock Slope Protection (RSP) at Abutment 1. The work will be engineered using HEC 23. The analysis will determine the minimum size of rock required if using RSP or provide suitable alternatives, i.e., articulated concrete blocks (ACB), or other engineering methods.

## **TASK 1.0 PROJECT MANAGEMENT & REVIEW MEETINGS**

### **TASK 1.1 – COORDINATION/MEETINGS/PROJECT ADMINISTRATION**

Project Management: Project Manager will be responsible for directing the consultant project team during the development and execution of the project, as well as communication with the County staff, and documenting the process and decisions made during the entire project. This involves all aspects of project management including financial management, invoicing, schedule, quality control, and turning in deliverables as requested. Progress reports will be issued with invoices to the County detailing major items worked on during the billing period and percentage completion for each task, with substantiation backup.

Project Kick-Off Meeting: A Project “Kick-off” Meeting will be held following the Notice to Proceed. This meeting includes representatives from the County, Consultant, sub-consultants, and other involved agencies. The primary meeting objectives will be to present the project, its goals, review the project scope and action item list, explain the project schedule, identify key project issues, and facilitate a general exchange of views and ideas regarding the completion of the project.

Project Development Team Meetings: A coordination and status phone meeting will be held on a monthly basis to review project status, design and budget to obtain required County input, make decisions, and discuss issues that have the potential of affecting the project design, budget, or schedule. Consultant will prepare all meeting agendas and minutes in consultation with SJCDPW’s Project Manager.

Project Schedule: The schedule will be prepared in Microsoft Project and identify the beginning dates and duration of each task. If necessary, the schedule will be updated on a yearly basis.

#### ***Deliverables:***

- ✓ Meeting agendas and minutes
- ✓ Project Schedule
- ✓ Invoices with Progress Reports

### **TASK 1.2 – COORDINATION WITH OTHER AGENCIES**

Consultant will be responsible for the identification of and coordination with required regulatory agencies. Consultant will initiate communication with the U.S. Army Corps of Engineers (USACOE), Regional Water Quality Control Board (RWQCB), San Joaquin County Flood Control Division (SJCFCD), Central Valley Flood Protection Board (CVFPB) and any other affected agencies regarding agency requirements for the scour mitigations. These agencies will be provided proposed project plans during various design engineering stages (35%, 65%, & 95%) for their review and input. Consultant will provide the County minutes and copies of written correspondence with each impacted agency.

### **TASK 1.3 – PROGRESS REPORTS**

On a monthly basis, progress reports will be issued with invoices to the County detailing major items worked on during the billing period and percentage completion for each task, with substantiation for backup.

**Deliverables:**

- ✓ Invoices with Progress Reports

**TASK 1.4 – DATA RESEARCH AND COLLECTION**

Consultant will review project limits, identify available and required documents, contact information, scope, schedule, budget, regulatory items, County and other agency approval processes, and other administrative procedures. Consultant will also review any project material available from the County, the CVFPB, various utility companies, Caltrans, and other stakeholders. The project material will include, but not be limited to: as-built plans, Caltrans Maintenance reports, right-of-way maps, scour analysis studies, potential traffic detour plans, traffic count data, FEMA and CVFPB flood maps, hydrologic data, and utility company plat drawings which might indicate site constraints including buried and overhead utilities, etc.

**TASK 2.0 PROJECT SURVEYING, MAPPING, AND CONTROL****TASK 2.1 – SURVEYING**

Consultant will perform topographic surveying and channel cross sections as required to provide digital topography and base mapping necessary for the detailed hydraulic studies as well as project plans. Field survey procedures will meet the accuracy standards as specified by Caltrans Orders of Survey Accuracy Standards for Supplemental Project Control in the Caltrans Survey Manual.

The survey will, at a minimum, address the following:

- Location of bridge limits, approach railing and end treatments, top of channel bank, toe of channel bank, road limits, existing County right-of-way lines, existing parcel boundaries, existing utilities, adjoining structures, ditches, power lines, communication lines, irrigation facilities, trees and any other significant features (pumps, pipes, etc.).
- Control survey will be performed to locate all existing survey monuments (mins, nails, bench marks, etc.) within the project area. Survey and transfer Bench Mark control to site from published NGS (National Geodetic Survey) control points. NAD (North American Datum) of 1983 and NAVD (North American Vertical Datum) of 1988 will be used unless otherwise specified.
- Monuments will be shown on the plans. Existing monuments will be protected in place or relocated if currently on a facility to be removed. Survey Control will also provide, at minimum, two (2) on-site control points (horizontal and vertical) for the Project, and tie the vertical control to local datum.
- Perform a detailed topographic survey around abutments and under the bridge to locate grade breaks, abutment lines, and concrete support columns.
- Cross sections will reference a line that runs parallel to the channel at the top of the bank. Cross sections will be set perpendicular to the reference line.
- Provide an electronic drawing (AutoCAD-2024 or higher version) and PDF of the completed topographic survey.
- Adjacent property information, such as assessor's parcel number, owner name, and street address, shall be shown for the properties that may be affected by project improvements.

The consultant will also provide a document search and mapping of right-of-way limits that can be used to determine the need for and preparation of temporary construction easements

**TASK 2.2 – RIGHT-OF-WAY SURVEY**

It is assumed that there will be no right-of-way acquisitions necessary as all work should be within channel limits. However, Consultant must verify the existing easements in parcels adjacent to the channel to allow the necessary channel work.

The Consultant shall identify preliminary right-of-way needs, utility, temporary construction, or other pertinent easements. The Consultant will be required to identify and evaluate the right-of-way issues and impacts to the affected driveways, encroachments, easements, etc. The Consultant shall determine the requirements for all permanent easements and for all temporary construction easements.

SJCDPW will obtain all necessary right of entry permits from affected property owners necessary to complete the preliminary engineering studies, geotechnical studies, field surveying, topographical data collection, and environmental studies for the Project.

***Deliverables:***

- ✓ AUTOCAD Base Drawing with temporary construction easement requirements (Prepare by Consultant) (If necessary)
- ✓ Exhibits/Sketches, Temporary Easement (If necessary)

**TASK 2.3 PROJECT BASE MAP**

Consultant will assemble all the materials gathered in Tasks 2.1 – 2.2 and prepare a composite project base map for use in the Project plans.

***Deliverables:***

Project Base Map (same scale as project plans with 1' contour intervals).

**TASK 3.0 HYDRAULIC AND HYDROLOGY STUDIES**

**TASK 3.1 – HYDROLOGY**

The Consultant shall analyze the hydrologic and hydraulic characteristics of the waterway for considerations in scour countermeasure designs and determine the design flows. Consultant shall review available recorded hydraulic and hydrology information on the bridge including historic hydrologic and hydraulic data from the County, North San Joaquin Water Conservation District, CVFPB and FEMA and any available floodplain mapping.

**TASK 3.2 – CREATE A HEC-RAS BASE MODEL FOR THE EXISTING BRIDGE**

Based on design flows, survey data provided and channel cross sections, the consultant will create a base existing conditions HEC-RAS hydraulic model. A hydraulic profile through the bridge will be calculated and plotted for the scour study. The consultant will provide profiles for the 2-yr, 50-yr, 100-yr, and overtopping flood per Caltrans Local Programs Manual.

**TASK 3.3 – SCOUR ANALYSIS**

The consultant will use the hydraulic results from Task 3.2 to perform scour calculations at the abutments and the piers (if present) for the existing bridge. Existing scour and potential scour depths under existing conditions will be determined and presented in the report.

The consultant will work with the County to determine appropriate measures to restore the channel and provide for future erosion protection against scour. Based on the findings in Task 3.3 we will determine the level of countermeasures necessary while maintaining flood neutrality. The consultant will perform a

detailed hydraulic analysis to determine the design flow characteristics for the proposed scour countermeasures (rock size and depth) conditions including the limits and water surface profiles through the study area.

As part of this analysis, a proposed conditions hydraulic model will be created to show any hydraulic impacts (changes in the water surface profile) that may result from the recommended countermeasures. Adjustments to the proposed measure will be made if necessary so that no significant hydraulic impacts will result. Scour countermeasure proposed shall be based on HEC 23 for scour countermeasure design for bridge scour and stream instability.

### **TASK 3.4 – HYDRAULIC AND SCOUR MITIGATION REPORT**

The consultant will provide a report with back-up scour calculations, HEC-RAS graphics and 35% scour mitigation design drawings as appendices. The report will be in accordance with Caltrans Location Hydraulic Study criteria and will include: 1) a base condition and project description, 2) existing conditions hydraulic model results, 3) future scour potential and recommended scour mitigation measures, 4) project schedule and 5) opinion of probable costs for the improvements.

#### ***Deliverables:***

- ✓ Final Hydraulic Study Report including Final Sediment Transport Analysis Technical Memo

### **TASK 4.0 ENVIRONMENTAL ANALYSIS**

#### **TASK 4.1 – INITIAL ASSESSMENT AND PRELIMINARY ENVIRONMENT STUDY (PES)**

The initial Environmental Assessment shall identify potential environmental issues (such as noise, air quality, aesthetics, water quality, wildlife habitat, compliance with the Endangered Species Act, etc.), and the anticipated corresponding technical studies. The Consultant shall prepare the PES form based on the selected Project alternative and schedule a field review with Caltrans and County to discuss and determine the technical studies that will be needed.

The assessment work which includes, but is not limited to, the following:

- Prepare a PES form
- Prepare a Project Footprint Map for the preferred alternative
- Conduct a field review with Caltrans and County. Consultant shall prepare all documents required to complete “Field Review Form”, as defined in Chapter 7 of the LAPM. After the meeting, Consultant will prepare meeting minutes, update the form as appropriate and submit it to the County for distribution to Caltrans.
- Respond to any Caltrans comments regarding PES environmental related documentation

Since the Project is federally funded, environmental documentation must be prepared in accordance with the State of California's Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) requirements.

#### ***Deliverables:***

- ✓ Project Footprint Map for selected/approve alternative
- ✓ PES Form
- ✓ Field Review Agenda, attendance roster, and meeting minutes
- ✓ Field Review Form (Exhibit 7-B)

The Environmental Consultant will lead this task. The Consultant will provide engineering support to the Environmental Consultant to complete the environmental document and permit applications in the following subtasks:

#### **TASK 4.2 – ENVIRONMENTAL TECHNICAL STUDIES**

Upon approval of the PES, Consultant will provide the necessary environmental technical studies identified in the approved PES Form.

If the Consultant feels there is additional work necessary for completing the environmental documentation that is not noted in the tasks below, please include in the proposal.

Prepare Environmental Project Description: Prior to preparation of environmental technical studies, Consultant will prepare a description of the proposed Project and design detail suitable for use in the environmental technical studies. The details of construction methodology, proposed equipment and duration of use, phasing, schedule, staging and traffic management, graphical depictions of the proposed Project suitably formatted for graphical inclusion in studies will be provided by engineering team for inclusion in the environmental Project description.

Prepare Technical Studies: Consultant will conduct the following technical studies for the approved preferred alternative/Bridge replacement design.

Biology: Consultant will evaluate the biological resources present in the Project area and determine Project effects to those resources. A key objective of the evaluation will be to identify any special-status plant or wildlife species, or sensitive habitats that may be affected by the Project.

Consultant will request a list of special-status species from the United States Fish and Wildlife Service (USFWS) and will query the California Natural Diversity Data Base and California Native Plant Society Online Database. As part of this process, a biologist will informally coordinate with the California Department of Fish and Wildlife (CDFW) and/or USFWS, as necessary, regarding the potential presence of special-status species on the Project site.

Consultant will prepare any necessary reports to document biological resources in the Project area and evaluate potential Project effects to biological resources. The reports could include but are not limited to:

- Natural Environmental Study (NES)
- Delineation Report
- Biological Assessment

Cultural Resources: Consultant will conduct cultural resource studies that are needed for the County and Caltrans to address requirements of Section 106 of the National Historic Preservation Act, NEPA, CEQA, and the Caltrans First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans, regarding compliance with Section 106 of the National Historic Preservation Act, as it pertains to the Administration of the Federal-Aid Highway Program in California (2013). Consultant will conduct the following tasks to identify cultural resources in the Project's Area of Potential Effects.

Consultant will prepare a draft APE map for cultural resources in consultation with Caltrans and other Project design staff. The APE will include all areas that may be directly affected by Project construction

and operation. The APE map will likely be modified depending upon alterations to the Project, a consultation with Caltrans, and the findings of the field survey. All changes will be reflected in the final APE, which will be included in the technical documents.

The Native American Heritage Commission in Sacramento will be contacted for (1) a review of the Sacred Lands File to determine if the Study Area contains any listed sites, and (2) a list of Native American contacts who may have concerns about the APE. Letters with current Project information will be sent to the local Native Americans and up to two follow-up telephone calls will be made to inquire about any concerns or information they may have.

Consultant will conduct an archaeological inventory as part of the initial Project research. It is assumed that the final APE will be the same as the original area survey. An architectural field survey will be conducted of the proposed Project area to record buildings, structures, and historic features through digital photography and written descriptions.

Consultant will prepare a Historic Property Survey Report, a Historical Resources Evaluation Report and an Archaeological Survey Report per Caltrans standards. A preliminary Archaeological Sensitivity Assessment will be included in the Archaeological Survey Report. Consultant will prepare a DPR inventory form for one property as part of the Historical Resources Evaluation Report documentation.

Noise: Consultant will prepare a noise study memorandum in accordance with the requirements of Title 23, Section 772 of the Code of Federal Regulations (23 CFR 772) and the Caltrans oversight is involved, a noise study must be prepared in accordance with procedures specified by FHWA and the Protocol. The memo will summarize the construction noise impact analysis, which will be based on the United States Department of Transportation guidance.

For CEQA, background information on noise will be discussed, and the existing noise environment will be described. Applicable County noise regulations and planning guidelines will be summarized including those contained in the County General Plan Noise Element and the County Noise Ordinance. Construction noise will be evaluated based on the United States Department of Transportation guidance. Construction noise impacts will be evaluated using noise standards in the County Noise Ordinance. If significant construction noise impacts are identified, mitigation, if feasible, to reduce impacts will be identified.

Visual Resource Technical Study: The Visual Resources Assessment will be in accordance with Caltrans guidelines and will be based on methods and protocol developed by FHWA, in combination with elements of other visual resource assessment methods (including United States Forest Service and Bureau of Land Management). The physical setting will be described in terms of the visual character and quality of the view-sheds, key vantage points, and site resources. Views both of and from the site will be considered. Representative photographs will be included to document key views and typical conditions. Visual simulations from two post-Project vantage points will also be prepared. Viewer groups will be described, as well as their relative sensitivity to changes in views. Views from adjacent islands, roadways, and waterways will be evaluated for construction-and operation-related impacts.

Hazardous Waste Initial Site Assessment (ISA): Consultant may be required to prepare a Hazardous Waste ISA to identify all documented hazardous waste sites located within the Project study area. Consultant will conduct an agency records search to identify all hazardous waste sites located within the Project study area and classified as a hazardous waste site under State law. Consultant will conduct a visual survey of the Project area via available public access to identify any obvious area of hazardous waste contamination. If hazardous waste sites are identified within the Project study area (via

governmental records and/or the visual survey), Consultant will determine the potential impacts to the Project and identify subsequent procedures to determine the extent of contamination and remediation requirements. Potential hazardous materials for these bridges may include lead based paint or pesticide laden soil from adjacent farmland.

Air Quality Technical Memorandum: Construction impacts will be assessed qualitatively with mitigation measures based on requirements included in San Joaquin Valley Unified Air Pollution Control District's fugitive dust regulation (Regulation VIII).

### **TASK 4.3 – FINAL ENVIRONMENTAL DOCUMENT**

Prepare Administrative Draft Initial Study: After technical studies have been approved by Caltrans, Consultant will use studies and additional minimal research conducted to complete the remaining checklist issue topics to prepare an administrative version of the draft Initial Study/Mitigated Negative Declaration (IS/MND).

Consultant will analyze air quality and climate change impacts associated with preferred alternative, and document the results in the IS/MND. The format of the IS/MND will either use a Consultant-provided template, or a clean work template provided by the Project Development Team that does not require any additional formatting by Consultant.

The environmental checklist section will include responses for each question in the different issue areas followed by a discussion of the potential impacts including direct and indirect as well as cumulative impacts. The responses will provide the basis for the determination provided in the checklist. Consultant will provide a PDF copy of the administrative draft for County review.

Prepare Public Draft IS/MND: Consultant will incorporate one (1) set of comments on the administrative draft IS/MND from County and will prepare the revised draft (PDF) for approval prior to printing the public draft IS/MND.

Consultant will prepare the Notice of Intent to adopt and arrange for the necessary public filing/distribution. Consultant will provide a camera-ready PDF of the public draft IS/MND for County duplication and mailing to the County's public/agency mailing list. Consultant will prepare and deliver necessary copies to the State Clearinghouse along with a Notice of Completion transmittal form.

Assist with Public Comments: Following the 30-day public comment period, Consultant will review comments received. The Consultant must address the comments received prior to approving the Project.

Consultant will prepare and file the Notice of Determination with the County Clerk and pay the Department of Fish and Wildlife CEQA filing fee.

Prepare Mitigation Monitoring Plan: Consultant will prepare the mitigation monitoring plan. The format and features of the Project's mitigation monitoring plan will be developed in consultation with the County.

#### ***Deliverables:***

- ✓ Administrative Draft and Revised Draft Initial Study
- ✓ Public Draft IS/MND

## **TASK 5.0 PERMIT PROCESS**

Consultant shall identify all permitting requirements and, in conjunction with Public Works staff, establish how these requirements will be implemented. The incorporation of all permitting requirements in preliminary engineering, environmental mitigations, and final PS&E through construction shall be accomplished during the appropriate phases of work.

Consultant shall prepare permit applications. The Consultant, in close coordination with the Public Work's project manager, shall serve as the liaison between Public Works and other concerned agencies.

### **TASK 5.1 – PERMITTING**

The proposed Project may affect wetlands or other jurisdictional waters in the Calaveras River that may be under the jurisdiction of the Army Corps of Engineers, Regional Water Quality Control Board (RWQCB), California Department of Fish and Game, and/or California Department of Fish and Wildlife.

Nationwide Permit Verification (Clean Water Act, Section 404): Under Section 404 of the Clean Water Act, a permit is required from the Corps for the placement of dredged or fill material into waters of the United States, including wetlands. Projects may be authorized under existing general permits or may require an individual permit. A "Nationwide Permit Preconstruction Notification" will be prepared to meet Corp's requirements for processing nationwide permits. One meeting with the Corps to clarify the conditions of permit approval is included in this scope.

Under Section 10, of the Rivers and Harbors Act, the Corps regulates activities in, under, or over navigable waters of the United States, except for the construction of bridges. The County anticipates a Section 10 permit unless the new Bridge incorporates a feature (such as a power line), that is not fully integrated into the Bridge design, and affects navigable waters. Under this latter situation, the Corps would issue a combined Section 404/10 permit.

Water Quality Certification (Clean Water Act, Section 401/Porter-Cologne Water Quality Act): A Water Quality Certification will be required from the RWQCB for the proposed Project, should it affect wetlands or other waters of the State, to certify that the Project is consistent with water quality goals and objectives. Consultant will prepare an application package for submittal to the RWQCB. A processing fee must be included with the submittal (to be provided by the COUNTY, amount to be determined based on a detailed written and drawn description of the final design (60%) provided by the engineering team prior to the start of application preparation. A single combined set of comments on the draft application will be received and addressed prior to submission of the application to the agency.

Streambed Alteration Agreement (Fish and Game Code, Section 1602): The proposed Project will require notification of proposed streambed alteration to the California Department of Fish and Game if work will modify the bed or bank of Calaveras River or associated riparian vegetation. On site visit with the Department of Fish and Wildlife Environmental Scientist must be included. Consultant will prepare a notification package for submittal to California Department of Fish and Game. A notification fee must be included with the submittal (to be provided by the COUNTY, amount to be determined based on Project cost). The application will be based on a detailed written and drawn description of the final design (60%) provided by the engineering team prior to the start of application preparation. A single combined set of comments on the draft application will be received and addressed prior to submission of the application to the agency.

Floodway Encroachment Permit (Title 23, CA Water Code): Consultant may be required to submit the necessary notifications and prepare necessary application forms requesting authorization to work within the applicable waterway. The application materials will include the Project description, photographs of the floodway, construction drawings, and technical studies including hydraulic and scour analysis, and geotechnical reports are available. The application will be based on a detailed written and drawn description of the final design (60%) provided by the engineering team. A single combined set of comments on the draft application will be received and addressed prior to submission of the application to the agencies. If the Project does not land on the County Board of Supervisors consent calendar, the engineering Project manager will attend the Board meeting.

***Deliverables:***

- ✓ All draft Permit Applications
- ✓ Copy of Each Final Permit Application

**TASK 6.0 PLANS, SPECIFICATIONS, AND ENGINEER'S ESTIMATE (PS&E)**

**TASK 6.1 – PREPARATION OF 35% PS&E (PRELIMINARY BASE PLANS)**

The Consultant will develop Preliminary Base Plans that incorporate one-foot contour topography, sufficiently extend to show transitions from the proposed improvements to the existing conditions. The Preliminary Base Plans will be developed in accordance with San Joaquin County policies, procedures, manuals, standards, and the Local Assistance Program. These preliminary plans, drawn to a scale of 1"=40', shall be submitted to SJCDPW for review and approval as the thirty-five percent (35%) design stage submittal. 35% plans will consist of the title sheet, typical section, and channel layout plan and profile sheet.

***Deliverables:***

- ✓ Preparation of 35% PS&E in AutoCAD (2024 or higher version)

**TASK 6.2 – PREPARATIONS OF 65% (PS&E)**

The purpose of this task is to perform the detailed design of the recommended project alternative, obtain design approval, and produce the construction drawings, special provisions, and construction estimate required for the construction documents. The plans, specifications and estimate will be prepared to State Standards and in accordance with the SJCDPW policies, procedures, manuals, and standards.

These plans will include all details necessary to construct the project and conform to existing levees and channel profiles. Consultant will prepare Plans, Specifications and Engineer's Estimate (PS&E) and will include the following minimum items listed below:

- Title/Cover Sheet (SJCDPW format)
- Typical Section
- Channel Layout Plan and Profile
- Channel Grading Plan
- Detour or Traffic Staging Plan (if required)
- Channel Protection Detail
- Construction Details
- Construction Staging Plan (if required)

- Temporary Erosion/Pollution Control Sheet
- Summary of Quantities Sheet
- Quantity support calculations
- Engineer's Estimates in Microsoft Excel

A meeting will be held after the county review 65% submittal to discuss the County's review (redlines and comments) of the draft PS&E. Consultant will provide the following deliverables for PS&E:

***Deliverables:***

- ✓ Preparation of 65% PS&E in AutoCAD (2024 or higher version) including
  - 1 Electronic version in PDF format
  - Technical specifications
  - Engineer's Estimate
  - Working Days Schedule
  - Response/Review Matrix to the redlines of the 35% plan submittal

Project technical specifications, including special provisions based on Caltrans Standard Special Provisions (SSP) and County provided specifications format will be developed in Microsoft Word. The County will provide boilerplate specifications, to combine with the consultant prepared project specific technical specifications for the 65%, 95% and 100% (final) submittal.

**TASK 6.3 – PREPARATIONS OF 95% (PS&E)**

The draft PS&E package consisting of plans, specifications, and estimate, along with design, QA/QC check, and quantity calculations, will be submitted to the County for their review. This submittal will also include any design exceptions proposed for the project.

***Deliverables:***

- ✓ Preparation of 95% PS&E in AutoCAD (2024 or higher version) including
  - 1 Electronic version in PDF format
  - Technical specifications
  - Engineer's Estimate
  - Revised Working Days Schedule
  - Response/Review Matrix to the redlines of the 65% plan submittal

Prior to 95% design submittal, Consultant will perform an internal quality and constructability review of the entire PS&E package. This review includes checking all pay items for consistency with the bid list, plans, quantities and special provisions. A meeting will be held after the county review (redlines and comments) the 95% submittal to discuss plans.

**TASK 6.4 – PREPARATIONS OF 100% (FINAL PS&E)**

Upon receiving review comments from the County and other agencies, each comment will be reviewed, discussed, and addressed in writing. Appropriate modifications will then be made to the plans, specifications, and estimate, which will be submitted to the County, to form a complete package that is ready to advertise for construction.

***Deliverables:***

- ✓ Preparation of 100% PS&E in AutoCAD (2024 or higher version) including
  - 1 Electronic version in PDF format
  - 1 set of 22x34 wet signed plans on Mylar (or SJCDPW approved equivalent)
  - 1 set of Stamped and Signed Technical specifications
  - Final Engineer's Estimate
  - Project Working Days Schedule
  - Quantity and quantity check calculations
  - Response/Review Matrix to the redlines of the 95% plan submittal

Electronic files will be a version of the applicable software as specified below.

- AutoCAD format electronic files – plans and drawings
- Microsoft Word format electronic files – specifications
- Microsoft Excel format electronic files – Engineer's Estimate, design calculations, quantity check calculations
- Microsoft Project working schedule

**TASK 7.0 BIDDING ASSISTANCE ANC CONSTRUCTION SUPPORT**

**TASK 7.1 – Bidding Assistance:**

Consultant will provide technical assistance to the County through bidding process. Services include providing clarification or answers to questions received from prospective bidders, attendance at Pre-Bid meeting and assist in preparing addendums, if necessary. This assistance could include necessary design revisions if SJCDPW deems it necessary. SJCDPW will be responsible for receiving all inquiries received during the bidding period, forwarding them to the Consultant and relaying all consultant responses to bidder's questions.

**TASK 7.2 – RESPONSE TO QUESTIONS DURING CONSTRUCTION**

The consultant will be available to answer contractor questions during construction that require input of the design engineer. This effort assumes the Consultant can review all submittals and the majority of change requests (Cos) and requests for information (RFIs), with only minimal assistance from the County.

**TASK 7.3 – PREPARE AS-BUILT PLANS**

After completion of construction, the consultant will take mark-ups from the County CM (also provided by the Contractor) and prepare As-built drawings.

***Deliverables:***

- ✓ Final As-built drawings on Mylar
- ✓ 1 hard copy set of As-built plans

**TASK 8.0 OPTIONAL GEOTECHNICAL ANALYSIS REPORT**

If required as part of the Scour Design, Consultant will obtain all geotechnical and/or geological information necessary for the design of the Project. Geotechnical and/or geologic exploration will be of

sufficient detail to facilitate planning and detailed design of the Project. The Consultant will provide a draft geotechnical report for structure type selection. The geotechnical report and analysis will include, but not be limited to the following:

- 1) Site investigation;
- 2) Subsurface exploration;
- 3) In-situ soil sampling, boring, and laboratory test;
- 4) R-Values;
- 5) Recommendation on Scour protection;
- 6) Traffic control measures as required for field sampling operation;
- 7) Log of test borings.

A final geotechnical report will be prepared to aid in determining the proposed scour protection, environmental constraints and anticipated construction sequencing. The geotechnical report will also provide site geology and subsurface conditions, construction considerations and cost data. Consultant will provide three (3) draft copies and a final geotechnical report for the scour design.