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* A portion of this SOW will be performed by WSDOT
WSDOT Southwest Region
I-5 / E. Fork Lewis River Bridge – Bridge Replacement
Scope of Work

Project Description

Interstate 5 (I-5) is a major north-south route connecting Mexico, California, Oregon, Washington, and Canada. Within Washington, I-5 extends from the Oregon State line and ends at the Canadian border.

In Clark County along northbound I-5, Bridge No. 005/036E crosses the East Fork of the Lewis River. The existing bridge is deteriorating and classified as Structurally Deficient with a Sufficiency Rating of 33.08.

The Washington State Department of Transportation (WSDOT) has a project that will replace the existing northbound three-lane bridge on I-5 between mileposts 18.21 and 18.37. The I-5 / E. Fork Lewis River Bridge – Bridge Replacement Project (Project) will be delivered using the Design-Build method.

The approved Project Definition recommended a three-stage construction plan that would replace the bridge adjacent to its current alignment; this alternative will be the basis for the Conceptual Plan that will be forwarded through the Preliminary Engineering and Procurement Phases:

Stage 1: Two-thirds (2/3) width of the new bridge will be constructed between the northbound and southbound existing I-5 structures. Due to the profile grade difference in the northbound and southbound I-5 alignments, walls will be required.

Stage 2: All three lanes of northbound I-5 traffic will be shifted to this new, partially-constructed bridge allowing the existing bridge to be demolished.

Stage 3: Construct the remaining one-third (1/3) width of the new bridge.

Although a three-stage construction plan will be used as the basis for the Conceptual Plan, the Technical Requirements shall be developed to allow the Proposers the flexibility to be creative and innovative in their approaches to replace the bridge.

WSDOT is seeking a CONSULTANT to perform Preliminary Engineering (up to 30% design) in order to prepare the Basic Configuration, Conceptual Plan, design documentation, estimate and schedule in support of WSDOT Design-Build procurement documents for the Project.

The CONSULTANT Scope of Work shall also include the development of the Design-Build procurement documents (the Request for Qualifications (RFQ) and the Request for Proposals (RFP) including the Instructions to Proposers (ITP), Chapter 1- General Provisions, Chapter 2 – Technical Requirements, and the Appendices) for the Project.

RFP documents are to be completed to meet an “Issue RFP” date no later than June 1, 2019 for an anticipated Notice to Proceed to the Design-Builder in January 2020.

Except as noted below, the CONSULTANT shall be responsible for all aspects of Preliminary
Engineering and Procurement Document Development, which include, but are not limited to:

- Project Management and Quality Control
- Public Involvement Support
- Project Schedule (Preliminary Engineering, Procurement, & Design-Build Phases)
- Construction Staging and Constructability Reviews
- Construction Estimate
- Request for Qualifications
- Request for Proposals – Instructions to Proposers, General Provisions, Forms
- Request for Proposals – Preliminary Engineering (10-30% Design and Conceptual Plans), Technical Requirements & Appendices
  - Survey
  - Geotechnical *
  - Pavement *
  - Environmental *
  - Communications
  - Utility Conflicts
  - Roadway
  - Project Documentation
  - Bridge and Structures *
  - Hydraulics and Drainage
  - Roadside Restoration
  - Illumination
  - Intelligent Transportation Systems (ITS)
  - Signing
  - Pavement Marking
  - Traffic Operations
  - Maintenance of Traffic
  - Right-of-Way
  - Control of Materials
  - Quality Management Plan
  - Maintenance During Construction

and all other analyses and/or design activities necessary to complete the contract documents.

* a portion of this work will be performed by WSDOT staff. See appropriate chapter in Section 2 of this Scope of Work for details.

Assumptions

- The Project will be delivered with the Design-Build method.
- The Project will employ a Practical Design approach, as outlined in the WSDOT Design Manual, for this Project.
- WSDOT will perform a portion or all of the following services (See appropriate chapter in Section 2 of this Scope of Work for details):
  - Geotechnical Design
  - Pavement Design
  - Environmental Permitting
  - Bridge Design

The WSDOT Southwest Region Design-Build Office (Project Office) will be active
members of the Project team assisting with Project decisions and direction, providing reviews, attending meetings, performing Procurement activities (such as SOQ and RFP evaluations and shortlisting/selection of Best Value Proposer, preparing for construction administration, etc.), and acting as the conduit between the Project team and WSDOT support groups.

- Complete design to a level (up to 30%) and on a schedule that will allow environmental documents and permits to be complete prior to issuing the RFP.
- For all deliverables associated with design reports, analysis, or documentation, the CONSULTANT shall provide draft deliverables (60% and 90%), respond to a single consolidated set of comments from WSDOT, and finalize the deliverable.
- WSDOT anticipates that the Project can be constructed entirely within right of way that WSDOT owns in fee. Washington State Parks leases the area under the bridge on the south bank of the river from WSDOT for one of their state parks (Paradise Point.) On the north bank of the river, the bridge crosses over NW Toenjes Road. Minimum vertical clearance to NW Toenjes Road will need to be provided.
- All new bridge piers will be outside the Ordinary High Water Mark although they could be located within the 100-year flood plain.
- A decision on whether access to Paradise Point State Park and NW Toenjes Road will be maintained during construction has not been made at this time.

**Design Standards and References**

The design shall be prepared in accordance with the standard practices of WSDOT. The design documentation, reports, and design file items shall be prepared in accordance with WSDOT standards and practices, which includes, but may not limited to, the following reference material for the Project:

- WSDOT Design Manual M22-01
- WSDOT Highway Surveying Manual M22-97
- WSDOT Bridge Design Manual LRFD M23-50
- WSDOT Highway Runoff Manual M31-16
- WSDOT Hydraulics Manual M23-03
- WSDOT Plans Preparation Manual M22-31
- WSDOT Right of Way Manual M26-01
- WSDOT Utilities Manual M22-87
- WSDOT Roadside Manual M25-30
- WSDOT Traffic Manual M51-05
- WSDOT Standard Plans M21-01
- WSDOT Standard Specifications M41-10
- WSDOT Electronic Engineering Data Standards M3028
- WSDOT Environmental Manual M31-11
- WSDOT DRAFT Design-Build Manual

These manuals are a baseline for estimating work efforts. If future revisions to these manuals necessitate changes to work already completed, WSDOT and the CONSULTANT shall evaluate changes in scope, and shall initiate a scope change, if appropriate.

**Work Elements**

**PM - PROJECT MANAGEMENT AND QUALITY CONTROL**

- **PM A - Project Management**
The CONSULTANT Project Manager shall be responsible for internal project management and communications with the Project Office. The Project Office Project Engineer will act as the WSDOT Project Manager for this Project.

The CONSULTANT project manager shall be co-located in the WSDOT SWR HQ Building with the Project team two (2) days a week, at a minimum. Co-location frequency can be subject to revision with the concurrence of the WSDOT Project Manager depending on Project schedule.

After Notice to Proceed is given, the CONSULTANT shall prepare a Project Management Plan (PMP) for endorsement by WSDOT.

This Scope of Work describes coordination efforts required between WSDOT, the CONSULTANT, and the Subconsultants. The Project Office will be the point of contact between the CONSULTANT and WSDOT support groups and be involved in all aspects of the Project. The CONSULTANT shall coordinate with personnel from various WSDOT offices, including Survey, Geotechnical Division, Materials, Environmental, Communications, Utilities, Engineering Services, Bridge Office, Hydraulics, Traffic, Maintenance, Headquarters Construction Office and Headquarters Design Office over the course of the Project. The CONSULTANT shall ensure that all WSDOT input and comments are addressed and incorporated into the deliverables.

The CONSULTANT shall prepare a Risk Matrix for the Preliminary Engineering and Procurement Phases of the Project. Reporting of emergent issues, and if necessary, potential changes or revisions to the Project schedule or cost estimate shall be provided on a regular basis.

**Deliverable(s):**
- Project Management Plan.
- Risk Matrix for Preliminary Engineering and Procurement Phases.

**PM B - Subconsultant Coordination**
The CONSULTANT shall manage their Subconsultants to ensure adherence to the Project scope, schedule, and budget.

**Scope:** The CONSULTANT shall provide direction to their Subconsultants and review their work over the course of the Project. This work element includes attending meetings, communicating current Project developments, planning work items with the Subconsultants, and performing Quality Assurance reviews of their work.

Prior to the start of any work, the CONSULTANTS shall confer with their Subconsultants and the WSDOT Project Office and support groups. At this time, these groups shall discuss and agree on expectations, the Subconsultants’ work plan, deliverables, and the QA/QC review process.

**Schedule:** The CONSULTANT shall monitor the status of individual work elements and review monthly Subconsultant progress reports.
**Budget:** The CONSULTANT shall monitor the Subconsultant’s budgets and costs/invoices on a monthly basis over the course of the Project.

Subconsultants shall submit changes in overhead schedules and rate tables on an annual basis through the CONSULTANT to WSDOT for approval.

**Deliverable(s):**
- Subconsultant monthly invoice and progress report.
- Annual changes to Subconsultant overhead schedules and rate tables.

**PM C – Develop and Update the Schedule (Preliminary Engineering and Procurement Phases)**

Within ten (10) working days after task order execution, the CONSULTANT shall prepare and submit to WSDOT a draft critical path method Project schedule (for the Preliminary Engineering and Procurement Phases) utilizing Primavera P6 with the following information:

1. All activities necessary to complete the Project.
2. Planned order of work activities in a logical sequence.
3. Durations of work activities in working days.
4. Activity durations that are reasonable for the intended work.
5. Sufficient detail to evaluate the progress of individual activities on a daily basis.
6. Physical completion of all work within the authorized task order timeframe.

Restraints may be utilized but may not serve to change the logic of the network or the critical path. The schedule shall display, at a minimum, the following information:

1. Contract and Agreement Number and Title.
2. Critical Path.
3. Activity Description.
4. Milestone Description.
5. Activity Duration.
6. Predecessor Activities.
7. Successor Activities.
8. Early Start and Early Finish for each activity.
9. Total Float and Free Float for each activity.
10. Start and Completion Dates for Preliminary Engineering and for Procurement
11. Procurement Milestones – RFQ Issue Date, SOQ Due Date, Notification of Short-listed Submitters, RFP Issue Date, ATC Submittal Deadline, Proposal Due Date, and Announce Best Value Proposer.
12. Data Date.

A rough preliminary schedule has been developed by WSDOT and will be provided to the CONSULTANT to use as an optional starting point for the draft schedule. The CONSULTANT can choose to make modifications to the WSDOT-provided schedule or develop an independent schedule. WSDOT will review the CONSULTANT’s draft schedule and return comments within fourteen (14) calendar days after receipt. The CONSULTANT shall respond to WSDOT comments and finalize the schedule within fourteen (14) calendar days for endorsement by the WSDOT Project Manager. The endorsed schedule shall be made the baseline and be included in the PMP.
Typical procurement milestone timeline requirements are outlined in the Design-Build RFP and ITP template documents. A procurement schedule template (in Excel) is available on the WSDOT Design-Build Sharepoint site and can also be utilized to provide a quick outline of the procurement schedule.

The CONSULTANT shall submit an updated Project schedule on a monthly basis.

The CONSULTANT shall report on the status of the schedule, including items completed and items remaining, within the monthly progress reports.

**Deliverable(s):**
- Draft and Final Project Schedule in electronic PDF format.
- Updated Project Schedule on a monthly basis in electronic PDF format.

**PM D - Monthly Progress Reports and Invoices**
The CONSULTANT shall submit monthly invoicing and progress report for work performed that period.

The CONSULTANT shall develop cost projections on a bi-monthly timeframe and propose corrective actions as needed. Corrective actions could include formal requests for scope of work and/or budget modifications.

The CONSULTANT shall submit changes in overhead schedules and rate tables on an annual basis to WSDOT for approval.

**Deliverable(s):**
- Monthly invoice and progress report.
- Cost projections that include both CONSULTANT and Subconsultant costs by month for the Project duration shall be delivered every two months to coincide with WSDOT’s aging reporting cycle.
- Annual changes to overhead schedules and rate tables.

**PM E - Coordination Meetings**

**E.1 Project Kick-off Meeting**
Prior to beginning work, the CONSULTANT shall coordinate with the WSDOT Project Office to set up a Project Kick-off Meeting which shall include the CONSULTANT, Subconsultants, and WSDOT Project Office and support groups. This meeting is an opportunity to discuss and confirm the Project requirements, scope, timelines, and issues. This meeting will be used to obtain team endorsement of the PMP and schedule.

**Deliverable(s):**
- Kick-off meeting agenda, invitee list, and meeting materials.
- Draft and Final Meeting Minutes.

**E.2 Project Management Meetings**
The CONSULTANT shall meet monthly with the WSDOT Project Office to ensure timely progress of the work. Subconsultants and WSDOT support groups shall be attendees as
needed. Meetings will occur monthly and will be in person, or coordinated via conference call and Skype for Business or similar technology, as mutually agreed.

The CONSULTANT shall schedule, prepare the meeting agenda, facilitate the meeting, and maintain records for the meeting:

- The meeting agenda shall include the Project status regarding scope, schedule, and budget. Agenda items shall report on the status of current and upcoming (within the next three (3) to six (6) months) critical path activities and upcoming milestone deliverables.
- Meeting notes shall include action items with assignments and deadlines. The following meeting shall follow up on outstanding action items.
- This meeting will provide an opportunity for WSDOT and the CONSULTANT to identify and discuss any new issues and to manage risk. Issue logs and risk matrices shall be updated accordingly.

**Deliverable(s):**

- Monthly Project Management meetings.
- Meeting agendas, draft and final meeting minutes, issues log, updated Risk Matrix.

E.3 Combined Risk Assessment Value Engineering (CRAVE) A.K.A. Value Engineering with Risk Assessment (VERA)

The objective of the CRAVE is to reduce risk and to verify or improve upon the conceptual design and subsequent construction scenarios by reviewing the Conceptual Plan and procurement documents. Additional elements of focus will be determined during the Prep-Meeting.

The CRAVE shall be included as an activity on the Schedule.

The CONSULTANT shall provide a CRAVE Team Leader who is independent from the Project Consultant and WSDOT team. The Team Leader shall communicate scope and schedule with the team members, prepare study materials for the CRAVE team, review project data prior to the study, lead/facilitate the CRAVE team in the Risk Analysis and Value Engineering process (Job Plan).

The CONSULTANT shall organize and participate in a Prep-Meeting between WSDOT and the CONSULTANT. The purpose of the meeting is to establish the goals and objectives of the CRAVE Study, determine what information is available for the study team, and confirm technical experts required for the study. Meeting will be in person, or coordinated via conference call and Skype for Business or similar technology, as mutually agreed.

The CONSULTANT shall organize, participate in and facilitate a 3.5-day CRAVE study for the Project. On the last day of the study, the CONSULTANT shall conduct a CRAVE report-out presentation. WSDOT will identify and invite audience participants for the CRAVE report-out presentation.
The WSDOT Strategic Analysis and Estimating Office (SAEO) will be a participant in the study and will write the Draft and Final CRAVE reports. The CONSULTANT shall provide WSDOT with comments to the Draft CRAVE report within five (5) working days of receipt.

Assumption(s):
- WSDOT will arrange for and supply all CRAVE team members except for the Team Leader and a member from the Project Consultant team who is familiar with the estimate, schedule, and conceptual design.

Deliverable(s):
- Schedule for CRAVE process.
- Agenda and notes for CRAVE Prep-Meeting.
- Cost model, graphics, estimates, schedules, and other project data, including project constraints, for use during the workshop.
- Agenda and invitee list for CRAVE Study.
- 3.5 day CRAVE Study.
- Presentation of Study findings (PowerPoint).
- Comments to the Draft CRAVE Report.

E.4 RFQ – Page Turns
The CONSULTANT shall coordinate with the WSDOT Project Office to schedule “page-turn” meetings for technical reviews of the RFQ one (1) week after 60% and 90% turn-in. Meetings will be in person, or coordinated via conference call and Skype for Business or similar technology, as mutually agreed.

During the page-turn meeting, the CONSULTANT shall “track-changes” to incorporate revisions to the text that can be made quickly during the meeting. Otherwise, the CONSULTANT shall add comments into the document with a short description of the input/feedback and initials of the person who will follow up to address the input/feedback.

The CONSULTANT shall incorporate and follow up on all page-turn meeting feedback within two (2) weeks of the page-turn meeting.

Deliverable(s):
- 60% and 90% RFQ Page-Turn Meetings w/ modified document.
- Revisions in response to WSDOT review comments at 60% and 90% reviews.

E.5 RFP – Page Turns
The CONSULTANT shall coordinate with the WSDOT Project Office to schedule “page-turn” meetings with Subconsultants and WSDOT support groups for technical reviews of the RFP two (2) weeks after 60% and 90% turn-in. Meetings will be in person, or coordinated via conference call and Skype for Business or similar technology, as mutually agreed. Different time slots shall be scheduled for page-turn meetings to review different sections of the RFP according to discipline.
The CONSULTANT shall incorporate and follow up on all page-turn meeting feedback within two (2) weeks of the page-turn meeting.

*Deliverable(s):*
- 60% and 90% RFP Page-Turn Meetings w/ modified document.
- Revisions in response to WSDOT review comments at 60% and 90% reviews.

**E.6 Constructability Reviews**
The CONSULTANT shall conduct two (2) meetings with WSDOT for constructability reviews. The constructability review meetings shall occur within two (2) weeks after the Project Kick-off Meeting and one (1) week after the 60% RFP-completion milestones to ensure that the Project Concept Plan and Basic Configuration are constructible and maintainable. Meetings will be in person, or coordinated via conference call and Skype for Business or similar technology, as mutually agreed.

The CONSULTANT shall facilitate the meeting and lead the discussion of complex constructability issues including, but not limited to, construction duration including in-water work period, construction staging strategies, worker and public safety including I-5 traffic control and public/private access to park and adjacent properties, maintenance of Project infrastructure, and potential construction cost-saving measures.

The CONSULTANT shall coordinate the scheduling of this meeting with the WSDOT Project Office. The WSDOT Project Office will identify the WSDOT attendees.

The CONSULTANT shall develop construction staging approach, concepts, and plans, as necessary to aid in the discussion, and shall distribute materials at least one (1) week prior to the meetings to allow time for participants to prepare and review. The CONSULTANT shall document the meetings and review, resolve, and provide responses to the WSDOT’s review comments.

*Deliverable(s):*
- CONSULTANT shall develop Conceptual construction staging approach, concepts and plans, as necessary, for the Project.
- Technical information, graphics and plans for the constructability review, meeting notes, recommendations, and commitments.
- CONSULTANT shall facilitate Constructability reviews with WSDOT.
- Responses to the 60% and 90% RFP-completion review comments and meeting minutes for the 60% and 90% RFP-completion constructability review meetings.

**PM F – Project Setup**

**F.1 Basemap and InRoad files**
The CONSULTANT shall create basemap and InRoads files (Digital Terrain Model [DTM] and ALG files) that document existing conditions in the field, provide sufficient information and detail for preliminary engineering and environmental documentation to proceed, and for final design by the Design-Builder.
The CONSULTANT shall utilize Bentley MicroStation Version 8i, Power InRoads Version 8i and the WSDOT InRoads Feature Code List (Updated 3/21/17). Deliverables shall be compatible with the WSDOT Plans Preparation Manual and the WSDOT Electronic Engineering Data Standards Manual. Underlying WSDOT CAE resource files can be found on the internet WSDOT CAE Support website.

See also Section 2.5 Survey in this Scope of Work.

**Deliverable(s):**
- Project InRoads-compatible DGN base map files and InRoads-compatible Digital Terrain Model [DTM] of the Project site and ALG files.
- Proposed right-of-way centerline in an InRoads ALG file.
- Records of Surveys in the area and existing and proposed centerlines of I-5 along with the right-of-way footprint.

**F.2 Document Control and Management**
Throughout the life of the Project, ProjectWise will be utilized to allow WSDOT, the CONSULTANT and the SUBCONSULTANTS to manage, share, distribute, and review documents. The CONSULTANT shall set up the contract file structure for document control and manage the Project documents in ProjectWise. See also Section PROC of this Project Scope of Work.

**Deliverable(s):**
- Contract file structure in ProjectWise V8i (SELECTseries 4).

**PM G - Quality Assurance / Quality Control (QA/QC) Reviews**
The CONSULTANT shall provide QA/QC reviews for services performed under this Scope of Work in accordance with an approved CONSULTANT QA/QC plan.

The CONSULTANT shall designate (a) qualified staff member(s) to perform QA/QC reviews on all deliverables. The reviews shall cover documents, reports, plans, and pertinent information on an ongoing basis.

The CONSULTANT shall submit a CONSULTANT QA/QC plan for approval by WSDOT that outlines a review of the assumptions, concepts, production, and presentation of product format that assures the overall Project objectives are being fulfilled. The Quality Control process shall address how changes in Project scope, schedule, and budget will be addressed when they are identified.

The WSDOT Project Office and support groups will provide additional reviews. The CONSULTANT Project Manager shall work with the Project Office to coordinate these reviews with the appropriate WSDOT staff members. WSDOT support groups will be utilized to review and provide direction of pertinent work items, and will coordinate with the CONSULTANT’s Project Manager and pertinent staff members.
QA/QC reviews of specific work elements are included in respective sections of this Scope of Work.

Deliverable(s):
- CONSULTANT QA/QC Plan.

PM H –  Public Involvement
The CONSULTANT shall prepare a Public Involvement Plan in coordination with the Region Communications Office and the Project Office that outlines a process for providing information to and obtaining input from the public about the Project. The plan will serve as a roadmap during the Preliminary Engineering and Procurement Phases of the Project for carrying out public involvement with a target audience consisting of users of the state park and the freight community and commuters who travel along Interstate 5.

Access to Paradise Point State Park and NW Toenjes Road during construction will be a discussion item.

The WSDOT Region Communications Office will develop and update a Project website throughout the Project. The CONSULTANT shall provide necessary project information to the WSDOT Region Communications Office that could include, but is not limited to, displays or folio graphics so they can implement the plan.

The CONSULTANT shall consider public input and feedback received and, with Project Office concurrence, incorporate it into the Preliminary Engineering and Procurement documents.

Deliverable(s):
- The Public Involvement Plan shall be no more than five pages.
- Project information in display or graphic format, as needed.

PM I -  Develop the Schedule (Design-Build Phase)
The CONSULTANT shall prepare and submit to WSDOT a critical path method Project schedule (for the Design-Build Phase) utilizing Primavera P6 with the following information:
1. All activities necessary to complete the Project. Activities shall be grouped under Design or Construction, as applicable.
2. Planned order of work activities in a logical sequence.
3. Durations of work activities in working days.
4. Activity durations that are reasonable for the intended work.
5. Sufficient detail to evaluate the progress of individual activities on a daily basis.
6. Physical completion of all work within the authorized task order timeframe.

Restraints may be utilized but may not serve to change the logic of the network or the critical path. The schedule shall display, at a minimum, the following information:
1. Contract and Agreement Number and Title.
2. Critical Path.
3. Activity Description.
4. Milestone Description.
5. Activity Duration.
6. Predecessor Activities.
7. Successor Activities.
8. Early Start and Early Finish for each activity.
9. Total Float and Free Float for each activity.
10. Start and Completion Dates for the Design-Build Phase.
11. Design-Build Phase Milestones - Notice to Proceed, Substantial Completion, Operational Completion, Physical Completion, and Project Completion.

The CONSULTANT shall determine activity durations utilizing the procedure outlined in the WSDOT Plans Preparation Manual based on quantities calculated, production rates, schedule, and critical path. The CONSULTANT shall provide backup calculations to support the durations determined for each activity. “Notes to the Engineer” shall be included in the same binder with the backup calculations to document background information and assumptions made.

**Deliverable(s):**
- Project schedule at 60%, 90%, and 100% RFP-completion.
- Binder with backup documents.

**PM J - Design-Build Estimate**
The CONSULTANT shall prepare an Engineer’s Estimate to reflect the expected Design-Build costs for the Project.

**J.1 Bid-Based Parametric Construction Cost Estimate**
The CONSULTANT shall base the construction estimate on the Conceptual Plan. For estimation purposes, the CONSULTANT shall break down the lump sum Project construction costs by WSDOT standard bid items whenever possible. The CONSULTANT shall follow guidance provided in the WSDOT Plans Preparation Manual and base costs on bid item history from recent projects. If a WSDOT standard bid item is not used for the estimate, the CONSULTANT shall make a reasonable estimate of those costs based on experience, supplier/fabricator quotes, or cost manuals. For the discipline areas where preliminary engineering is not a part of this SOW (see the appropriate section in Chapter 2 Technical Specifications) and the Conceptual Plan is not defined enough to even develop rough quantities, the CONSULTANT shall make a reasonable scoping-level estimate for those items.

The CONSULTANT shall coordinate with the WSDOT Project Office to review the estimate at 60% and 90% of RFP completion. Reviews should evaluate whether estimates reflect current bidding climate and trends and adjustments made accordingly.

**J.2 Design-Builder Design and Quality Management Plan Costs**
The CONSULTANT shall provide a cost estimate for the Design-Builder to design the Project and deliver Ready for Construction (RFC) Drawings. The CONSULTANT shall also estimate the Design-Builder’s costs to develop and implement a Quality Management Plan during the Design-Build Phase of the Project.

**J.3 Other Costs**
The CONSULTANT shall include in the estimate all other miscellaneous costs that are not
included in J.1 and J.2 including, but not limited to, Washington State Patrol, Environmental mitigation costs, Partnering, Disputes Review Board, and the Design-Build stipend.

The CONSULTANT shall prepare backup calculations and spreadsheets to illustrate quantities and prices for each item, as needed. “Notes to the Engineer” shall be included in the same binder with the backup calculations to document background information or assumptions made.

The WSDOT Project Office will calculate costs to administer and perform Quality Verification audits of the Project during the Design-Build Phase. The WSDOT Project Office will also enter the total Project cost into EBase.

**Deliverable(s):**

- Estimate at 60%, 90% and 100% RFP-completion.
- Binder with backup documents.

**PM K - Design Support Continuity in Design-Build Process**

The CONSULTANT shall provide one (1) senior professional design engineer, or the equivalent resource level who will be an active design team member and who will provide continuity throughout all stages of the Design-Build process (Preliminary Engineering, Procurement, and the Design-Build).

The CONSULTANT designated design engineer shall have expert-level roadway design experience and shall be experienced in delivering WSDOT projects that adhere to the WSDOT standards, practices, and policies.

During the Design-Build stage, the CONSULTANT designated design engineer shall support the Project Office with reviews of roadway design submittals from the Design-Builders and participation in roadway over-the-shoulder reviews and task force meetings.

**PROC - PROJECT PROCUREMENT (Request for Qualifications & Request for Proposals – Instructions to Proposers, CHAPTER 1 General Provisions, Appendices, and Forms)**

The Project will use a two-stage procurement process. The CONSULTANT shall prepare and complete all Contract procurement documents needed for issuing the RFQ and RFP.

The Project Office will perform all other aspects of the Project Procurement including HQ Contract Ad and Award Office coordination, meeting with Submitters/Proposers, answering RFQ/RFP questions, reviewing Alternate Technical Concepts (ATCs), performing evaluations, shortlisting Proposers, and assigning technical credits for use in the Best Value determination. The CONSULTANT may be requested to assist with technical reviews in support of these efforts.

To develop the RFQ and RFP documents, the CONSULTANT shall provide an individual with good writing skills who can also act as the primary “gate-keeper” in ProjectWise to ensure documents are filed correctly and that the latest version of a document is being worked on. The CONSULTANT shall also manage access into ProjectWise. In addition to document control, this person shall also merge/assemble the different sections into one final document and shall bookmark
To develop the RFQ and RFP documents, the CONSULTANT shall utilize the most-current FHWA-approved Design-Build Microsoft Word RFQ, ITP, and RFP templates (available on the WSDOT Design-Build Program SharePoint site) as a starting point for the Project. The CONSULTANT shall add project information to the template fill-ins (indicated by asterisks **--**). The CONSULTANT shall also make modifications to the templates to reflect, at a minimum, Project-specific requirements, project size, region practice, and Project Office Design-Build lessons-learned.

The CONSULTANT shall follow the WSDOT Design-Build Style Guide and make all edits in Microsoft Word using “track-changes”. The CONSULTANT shall also add comments in the document that provide the background or justification for each change. The CONSULTANT shall not “Accept” any changes until the Final version and the Assistant State Construction Engineer has concurred with all the changes. As the last step prior to “Issue”, the CONSULTANT shall merge “Accepted” individual sections into one Final document, format the Table of Contents, and save the file as a pdf.

If new versions of the FHWA-approved documents are released before the Project RFQ/RFP documents are “Issued” for response by the Submitters/Proposers, the CONSULTANT shall update all Project documents to reflect the changes unless directed otherwise by the Project Office.

The CONSULTANT shall coordinate reviews of the RFQ and the RFP procurement documents with WSDOT at 60%, 90%, and Final-completion. See Section E.4 RFQ – Page Turns and E.5 RFP – Page Turns in this Scope of Work.

The 90% procurement documents shall be submitted for review a minimum of six (6) weeks prior to the issue date. The CONSULTANT shall respond to, address, and/or revise the documents based on WSDOT comments for each review.

The Final documents shall be submitted two (2) weeks prior to the issue date.

The CONSULTANT shall assist the Project Office with preparing addenda to the RFQ/RFP documents as requested.

**PROC A - Request for Qualifications**
The CONSULTANT shall work with the Project Office to determine the Project Goals and develop the RFQ documents. The CONSULTANT shall also edit the RFQ forms to reflect the project information and format the electronic documents to be “fillable” by the Submitters.

**PROC B - Request for Proposals – Instructions to Proposers**
The CONSULTANT shall work with the Project Office to determine the requirements for the Proposal content, including but not limited to page limits, goals and evaluation criteria, and technical credits. The CONSULTANT shall develop the ITP document.

**PROC C – Request for Proposals – CHAPTER 1 General Provisions**
The CONSULTANT shall work with the Project Office to define the Basic Configuration and
develop RFP – CHAPTER 1 General Provisions section.

WSDOT will establish contract goals for DBE Participation and amounts to assess as Liquidated Damages for traffic impacts.

PROC D - Request for Proposals – Appendices
Starting with the RFP Appendices for the most recent Design-Build project in the region, the CONSULTANT shall consult with the WSDOT Project and support offices to obtain, assemble, and edit, as needed, all current and relevant Contract, Basic Configuration, and Reference documents consistent with specifications and standards across the state or in the Southwest Region. The CONSULTANT shall review each document with the WSDOT Project Office and designate them as either Contract, Basic Configuration, or Reference documents. The CONSULTANT shall incorporate these documents into the RFP Appendices.

WSDOT will develop several documents that may constitute a portion of the documents the Consultant shall include in the Appendices for the following disciplines (See appropriate chapter in Section 2 of this Scope of Work for additional details):

- Geotechnical Design.
- Pavement Design.
- Environmental Permitting.
- Bridge Design.

Deliverable(s):
- 60%, 90% and Final RFP Appendices – Contract, Basic Configuration, and Reference documents, as applicable.

PROC E - Request for Proposals – Forms
The CONSULTANT shall coordinate with the Project Office to determine the required RFP forms (Contract Form and the forms included in Appendix A of the ITP). The CONSULTANT shall edit the RFP forms to reflect the project information and format the electronic documents to be “fillable” by the Proposers.

The CONSULTANT shall submit all 60%, 90%, and Final documents electronically in Microsoft Word format (with tracked changes and comments except for the Final) into a designated folder on the Project document control web site. In addition, the CONSULTANT shall also submit all Final documents, except for “fillable” forms, electronically in pdf format for posting to the WSDOT Project Page.

Deliverable(s):
- 60%, 90%, and Final RFQ documents.
- 60%, 90%, and Final RFP documents.
- Final Excel, Word, and pdf electronic files.

2 – PRELIMINARY ENGINEERING & PROJECT PROCUREMENT (Request for Proposals – CHAPTER 2 Technical Requirements)
The CONSULTANT shall perform preliminary engineering and prepare the Technical Requirements (including developing the Basic Configuration, Conceptual Plans (unless noted
otherwise in this Scope of Work), and design documentation) and all Contract procurement documents needed for issuing the RFP.

The CONSULTANT shall coordinate reviews of the RFP procurement documents with WSDOT at 60%, 90%, and Final-completion. See Section E.5 RFP – Page Turns in this Scope of Work.

The 90% procurement documents shall be submitted for review a minimum of six (6) weeks prior to the issue date. The CONSULTANT shall respond to, address, and/or revise the documents based on WSDOT comments for each review.

The final documents shall be submitted two (2) weeks prior to the issue date.

The CONSULTANT shall use Bentley MicroStation Version 8i to produce the Computer Aided Design (CAD) files for any plan sheets created in support of the procurement documents.

The CONSULTANT shall submit all 60%, 90%, and Final documents electronically in Microsoft Word format (with tracked changes and comments except for the Final) into a designated folder on the Project document control web site. In addition, the CONSULTANT shall also submit all Final documents, except for “fillable” forms, electronically in pdf format for posting to the WSDOT Project Page.

2.1 - General Information

2.1.A Preliminary Engineering and Conceptual Plans - Not Applicable

2.1.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.1 – General Information to reflect the Project technical requirements.

Deliverable(s):
• 60%, 90% and Final RFP Chapter 2.1 – General Information.

2.2 - Mandatory Standards

2.2.A Preliminary Engineering and Conceptual Plans - Not Applicable

2.2.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.2 – Mandatory Standards to reflect the Project technical requirements.

Deliverable(s):
• 60%, 90% and Final RFP Chapter 2.2 – Mandatory Standards.

2.3 - Vacant

2.4 - Vacant

2.5 - Survey

2.5.A Preliminary Engineering and Conceptual Plans
Project Datum Control
The CONSULTANT shall establish Project Datum Control Network (Horizontal Datum= NAD83/91 + C.F. = 100,000 Meters on Ground Dist. & Vertical Datum= NAVD88) at the Project site.

Survey
The CONSULTANT shall perform all survey of the Project site to advance the preliminary engineering and procurement for delivery of the Project including, but not limited to:

- Topographic survey of I-5 (one hundred fifty (150) feet each side of centerline that includes both northbound and southbound and in the median) and the area in the vicinity of the E. Fork of the Lewis River Bridge between I-5 MP 17.71 and 18.87,
- Bathymetric survey of the E. Fork of the Lewis River (200 feet upstream and 200 feet downstream from northbound bridge),
- Wetlands and Ordinary High Water Mark (OHWM) as delineated by WSDOT crews (See Section 2.8A Environmental).
- Geotechnical boring and instrumentation locations (up to thirty [30] locations)
- WSDOT monumentation in the roadway and on the right of way, property corners, fence lines, any physical improvements at the site, utilities above and below ground and any other features to encompass the Project site to be used in the preliminary design.
- Outer limits of right-of-way acquisition needs (See Section 2.24 Right-of-Way) as identified by the CONSULTANT that may include, but is not limited to:
  - Fee title acquisition areas
  - Permanent Easements
  - Temporary Construction Easements
  - Location, extent and type of limited access
  - Turnback lines
  - Relinquishment areas
- Key features to be included on the Right-of-Way Plans (See Section 2.24 Right-of-Way) that may include, but is not limited to:
  - Mitigation Areas
  - Stormwater Treatment Areas
  - City limits
  - Park limits
  - Wells, septic tanks, buildings, railroad tracks, diking district features, major utility corridors (such as BPA or Gas) all within 100’ of the proposed R/W line.

For safety along the highway, the CONSULTANT shall collect survey data along I-5 utilizing drone technology, Lidar, or other survey method that will have sufficient accuracy for the Design-Builder’s final design and will not place surveyors or equipment on the highway to collect the data.

The CONSULTANT will be provided Right of Entry by WSDOT to perform the designated work.

The CONSULTANT will set control points on Project Datum that meet the accuracy and standards described in the WSDOT Highway Surveying Manual.

The CONSULTANT shall perform all work using WSDOT methodologies described in the
WSDOT Highway Surveying Manual.

The CONSULTANT will be responsible to provide any necessary traffic control outside of mainline I-5 and shall submit all traffic control plans to WSDOT for approval.

See also Section PM-F.1 Project Basemap and InRoad Files in this Scope of Work.

**Deliverable(s):**
- CSV/XLS raw data survey files.
- Control points on Project Datum.
- Traffic Control Plans.

### 2.5.B RFP – Technical Requirements

The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.5 – Survey to reflect the Project technical requirements.

**Deliverable(s):**
- 60%, 90% and Final RFP Chapter 2.5 Survey.

### 2.6 Geotechnical

**2.6.A Preliminary Engineering and Conceptual Plans**

The WSDOT Geotechnical Division will perform geotechnical drilling, field and lab testing, engineering, and seismic design.

At the start of the work, the WSDOT Geotechnical Division will update the CONSULTANT with an initial overview of the Project geotechnical conditions based on readily available geotechnical and geologic data for the Project area. The WSDOT Geotechnical Division will identify geotechnical factors that may have an impact on the Project.

The CONSULTANT shall coordinate with the WSDOT Geotechnical Division and provide any necessary design information for the WSDOT Geotechnical Division to plan and conduct the field investigation for the Project including project site data for wall alignments.

The CONSULTANT shall work with the WSDOT Project Office to establish due dates for deliverables produced by both parties for the others use.

The WSDOT Geotechnical Division will write the Geotechnical Baseline Report, Geotechnical Data Report, and Reference Report. The CONSULTANT shall incorporate these reports into the RFP Appendices.

**Deliverable(s):**
- Project site data.
- Deliverable schedule.

### 2.6.B RFP – Technical Requirements

The WSDOT Geotechnical Division will write RFP Chapter 2.6 – Geotechnical for the Project. The CONSULTANT shall incorporate this version of Chapter 2.6 into the RFP.
2.7 - Pavement

2.7.A Preliminary Engineering and Conceptual Plans
The WSDOT Materials Laboratory will core the asphalt along northbound I-5 (MP 18.37 to 18.41) to determine existing pavement depths and condition (Portland Cement Concrete (PCC) panels are outside of these milepost limits). The Materials Laboratory will also design the permanent roadway pavement section for the Project; temporary paving sections for staging will be designed by the Design-Builder.

The CONSULTANT shall coordinate with the WSDOT Materials Laboratory and provide any necessary design information for them to plan and conduct the field investigation for the Project.

The CONSULTANT shall work with the WSDOT Project Office to establish due dates for deliverables produced by both parties for the other’s use.

WSDOT will prepare the Project Resurfacing Report for the permanent roadway pavement section. The CONSULTANT shall incorporate this report into the RFP Appendices.

*Deliverable(s):*
- Project site data.
- Deliverable schedule.

2.7.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.7 – Pavement to reflect the Project technical requirements.

*Deliverable(s):*
- 60%, 90% and Final RFP Chapter 2.7 - Pavement.

2.8 - Environmental

2.8.A Preliminary Engineering and Conceptual Plans
The WSDOT Region Environmental Office will be responsible for preparing environmental documentation and obtaining most environmental permits. (The Design-Builder will be responsible for the National Pollutant Discharge Elimination System (NPDES) permit and other local permits including the Floodplain Permit, and the DNR Right of Entry for construction.) The CONSULTANT shall assist WSDOT as needed and provide any design information necessary to complete the environmental tasks.

The WSDOT Environmental Office staff will be responsible for preparing environmental documentation in conformance with the National Environmental Policy Act and State Environmental Policy Act. WSDOT will obtain most environmental permits needed for the Project including, but not limited to, the following:
- Section 404 of Clean Water Act - US Army Corps of Engineers.
- Section 401 Water Quality Certification/Individual Permit.
- Hydraulic Project Approval - Washington Department of Fish and Wildlife.
• Endangered Species Act Consultation.
• Section 106 of Historic Preservation Act.
• Section 4(f)* and 6(f) Review and Consultation.
• DNR Aquatic Easement.
• Clark County Shoreline Substantial Development Permit.
• Clark County Critical Area Ordinance.

* The right-of-way for I-5 is owned in fee and the land under the bridge on the south bank of the river is leased by State Parks. Therefore, any work within the right-of-way is not subject to Section 4(f). However, if construction access utilizes the roadway into the park or any other construction activity occurs outside of the right-of-way for I-5, there may be a need for de minimis reporting for Section 4(f).

The WSDOT Region Environmental Office will complete JARPA drawings for the application. They will also determine the wetland delineation, Ordinary High Water Mark (OHWM), and other Critical Resource Areas.

The CONSULTANT shall provide assistance to WSDOT by providing data and information needed for environmental documentation and permits including, but not limited to:
- Written detailed project description narrative,
- Area of Potential Effect (APE),
- Biological Assessment (BA),
- Preliminary plans,
- Cut and fill area and earthwork quantities,
- Clearing and grubbing limits, including any potential stormwater facilities, staging, stockpile, or access areas
- Area and quantities of cut and fill above and below Ordinary High Water Mark,
- Area and quantities of cut and fill within wetlands and wetland buffers,
- Temporary and permanent vegetation impacts (upland and riparian disturbance areas),
- Existing and proposed quantities of impervious surface,
- Endangered Species Act Stormwater Design Checklist,
- Details regarding the proposed structure and construction methods,
- Estimated number of working days,
- Construction equipment list,
- Estimated number of days for impacts to recreational resources,
- Number of days of in-water work,
- BMPs proposed for in-water work,
- Potential staging locations,
- Potential construction access,
- Stormwater treatment details (if required),
- Information on any proposed stream-bypass methods.

The CONSULTANT shall respond to WSDOT’s questions and additional data requests.

The CONSULTANT shall coordinate with WSDOT representatives, as necessary, to identify probable mitigation needs and include associated Project goals and/or mitigation performance specifications in the Project Procurement documents, as deemed necessary.
The CONSULTANT shall incorporate the WSDOT-prepared permit documents indicated above into the RFP Appendices.

The CONSULTANT shall provide an experienced biologist and qualified BA senior author. The CONSULTANT biologist shall meet the following criteria as outlined on the WSDOT webpage [WSDOT - Biological Assessment Author Qualifications](https://wsp.wa.gov/). The CONSULTANT shall prepare a BA for Endangered Species Act listed and proposed species and critical habitat likely to occur in the project Action Area, including all species potentially found at the Project site as listed on the U.S. Fish and Wildlife Service Information, Planning and Conservation website ([https://ecos.fws.gov/ipac/](https://ecos.fws.gov/ipac/)) and National Oceanic and Atmospheric National Marine Fisheries Service website.

The CONSULTANT biologist shall prepare an Essential Fish Habitat (EFH) analysis, as an appendix in the BA.

The CONSULTANT biologist shall evaluate the habitat in the Project Action Area for its suitability for supporting listed species. If habitat is suitable, species presence will be assumed in the absence of appropriate surveys.

The CONSULTANT biologist shall prepare a preliminary assessment of the Project impacts on listed species and habitats using the WSDOT BA format. The CONSULTANT will assess indirect effects of the Project on listed species which shall include considerations of impacts resulting from added impervious surface and associated stormwater runoff and changes in land use. The CONSULTANT biologist will complete a stormwater assessment and HI-RUN model for the BA with input from the CONSULTANT hydraulics engineer (See Section 2.14 Hydraulics).

The CONSULTANT shall develop the BA using the latest WSDOT BA guidance. The CONSULTANT shall include a map in the BA that shows the Project Action Area and photos showing existing habitat conditions.

The CONSULTANT shall prepare and submit two drafts of the BA for WSDOT review. The CONSULTANT shall prepare and submit the final BA after incorporating relevant WSDOT comments.

The CONSULTANT shall attend two pre-BA meetings with WSDOT. The first will occur after the Project Kickoff Meeting to confirm project designs. The second will occur prior to submittal of the draft BA to confirm appropriate analyses are integrated.

The CONSULTANT design staff shall provide Project description details as listed above, including information on conceptual Project footprints, timing, stormwater management, and likely construction methods.
The CONSULTANT biologist shall provide all required tasks in compliance with the current WSDOT Biological Assessment Manual and associated guidance available on the WSDOT BA webpage (http://www.wsdot.wa.gov/Environment/Biology/BA/BAguidance.htm).

**Deliverable(s):**
- Area of Potential Effect (APE).
- Project description with construction methodology for environmental permits.
- Assistance, as needed, with drawings/figures showing proposed impact areas, including wetland, OHWM and wetland buffer impacts, and other drawings and technical data needed for environmental documentation and permits.
- Drawings showing probable impacts to Critical Area Resources.
- Draft and Final Biological Assessment including a Project Action Area Map, Essential Fish Habitat (EFH) analysis, preliminary assessment of the Project impacts on listed species and habitats, stormwater assessment, and HI-RUN model.
- Attendance at two (2) Pre-BA meetings.

2.8.B RFP – Technical Requirements
The WSDOT Region Environmental Office will write RFP Chapter 2.8 – Environmental for the Project. The CONSULTANT shall incorporate this version of Chapter 2.8 into the RFP.

2.9 Communications
2.9.A Preliminary Engineering and Conceptual Plans - Not Applicable

2.9.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.9 – Communications to reflect the Project technical requirements.

**Deliverable(s):**
- 60%, 90% and Final RFP Chapter 2.9 Communications.

2.10 Utilities and Relocation Agreements
2.10.A Preliminary Engineering and Conceptual Plans
The CONSULTANT shall identify utilities that will be impacted by the Project. Known utilities in the Project area include:
- Qwest Corporation dba CenturyLink (telecom).
- Northwest Natural Gas (natural gas).
- WSDOT ITS.
- Lewis River Telephone/TDS (phone).
- Clark PUD (power and water).

WSDOT Region Utilities will perform all coordination with the utility companies with the CONSULTANT providing assistance as necessary. The CONSULTANT shall provide WSDOT with Conceptual Plans to assist with any utility coordination efforts.

**Deliverable(s):**
• Drawings and data needed to support utility coordination.

2.10.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.10 – Utilities to reflect the Project technical requirements.

Deliverable(s):
• 60%, 90% and Final RFP Chapter 2.10 - Utilities.

2.11 - Roadway
2.11.A Preliminary Engineering and Conceptual Plans
The CONSULTANT shall develop the preliminary roadway design consistent with the Project Conceptual Plans. The Project roadway geometry, including the vertical and horizontal alignments, for I-5 mainline and any temporary roadway alignments for use during construction shall be designed in accordance with the WSDOT Design Manual and other applicable design standards/manuals.

The CONSULTANT shall document, and submit to WSDOT for approval, all design decisions.

Deliverable(s):
• Submit preliminary design for all roadway elements and any associated documentation of design decisions for WSDOT concurrence.
• Conceptual plans consisting of, at a minimum, vertical and horizontal profiles and cross-sections.

2.11.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.11 – Roadway to reflect the Project technical requirements.

Deliverable(s):
• 60%, 90% and Final RFP Chapter 2.11 Roadway.

2.12 - Project Documentation
2.12.A Preliminary Engineering and Conceptual Plans
The CONSULTANT shall develop and assemble the Design Approval package in accordance with the WSDOT Design Manual and other applicable design standards and in consultation with WSDOT and FHWA.

WSDOT will provide engineering documentation previously completed by WSDOT such as the Project Definition and the Project Delivery Method Selection Guide worksheet.

The CONSULTANT shall submit the Preliminary and Intermediate Design Approval package at the 60% and 90% completion level of the RFP documents and the Final Design Approval package six (6) weeks before the RFP issue date. The Final Design Approval package will need to be approved and signed off by WSDOT region, WSDOT HQ, and FHWA.

The CONSULTANT shall assume two (2) meetings with WSDOT HQ and FHWA to review.
Deliverable(s):
- Two (2) meetings.
- Preliminary and Intermediate Design Approval package for review.
- Final Stamped Design Approval package for signatures.
- Writeable, electronic copy of the Final Design Approval package.
- Any associated design calculations and backup.

The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.12 – Project Documentation to reflect the Project technical requirements.

Deliverable(s):
- 60%, 90% and Final RFP Chapter 2.12 - Project Documentation.

2.13 - Bridges and Structures
2.13.A Preliminary Engineering and Conceptual Plans
The CONSULTANT shall prepare Bridge Site Data for the Project that includes all applicable items on the Structure Site Data Checklist (Exhibit 710-1) in the WSDOT Design Manual. Bridge Site Data shall be submitted to the WSDOT Bridge Office by the delivery date mutually agreed on and shown on the endorsed Project schedule.

WSDOT Bridge Office will complete the Conceptual Bridge Plans. The CONSULTANT shall coordinate with the WSDOT Bridge Office and provide them with any necessary design information.

The CONSULTANT shall prepare Conceptual Wall Plans that tie into the Conceptual Bridge Plan wingwalls.

The CONSULTANT shall also develop bridge and wall costs that reflect the Conceptual Plans to be included in PM J - Design-Build Estimate of this Scope of Work.

Deliverable(s):
- Bridge Site Data and all applicable CAD files, tables, forms, cross-sections, and other items identified on the Structure Site Data Checklist (Exhibit 710-1) in the WSDOT Design Manual.
- Conceptual Wall Plans.

The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.13 – Bridges and Structures to reflect the Project technical requirements.

Deliverable(s):
- 60%, 90% and Final RFP Chapter 2.13 – Bridges and Structures.

2.14 - Hydraulics
2.14.A Preliminary Engineering and Conceptual Plans
The CONSULTANT shall provide a Licensed Professional Engineer(s) with ten (10) years of experience in specialty design work including bridge scour design and analysis, stream grading, stream or river embankment stabilization, floodplain analysis, zero rise analysis, backwater analysis, roadway drainage, and stormwater. The CONSULTANT shall perform technical analysis, preliminary design (with required software: 1D model HEC-RAS, 2D model SRH) and documentation activities which may include: development of anticipated hydrology, topographic map review, structure sizing, scour analysis and associated design, roadway drainage design, and slope and channel stabilization.

The CONSULTANT will prepare the Preliminary Hydraulic Design that establishes the site hydrology, preliminary channel cross section, structure channel span, channel alignment, channel complexity, and floodplain analysis following the template provided by WSDOT. The CONSULTANT shall include the Preliminary Hydraulic Design in the RFP Appendices as a Reference Document and could be utilized by the Design-Builder as the basis for the Final Hydraulic Design.

The CONSULTANT shall provide supporting data to complete a JARPA application and the BA (See Section 2.8 Environmental).

The CONSULTANT shall develop a Conceptual Hydraulic Report and associated roadway drainage design for the Project in accordance with the WSDOT Hydraulics Manual and Highway Runoff Manual. The Conceptual Hydraulic Report shall be included in the RFP Appendices as a Reference Document and could be utilized by the Design-Builder as the basis for the Final Hydraulic Report.

**Deliverable(s):**
- Conceptual Hydraulics Report for all roadway elements and any associated documentation of design decisions for WSDOT concurrence. Engineer preparing the Conceptual Hydraulics Report shall have current (2014 or newer) HRM certification through WSDOT.
- Conceptual drainage plans and details.
- Preliminary Hydraulic Design (PHD) with hydraulic design files used.
- JARPA Supporting Documentation.


The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.14 – Hydraulics to reflect the Project technical requirements.

**Deliverable(s):**
- 60%, 90% and Final RFP Chapter 2.14 - Hydraulics.

**2.15 - Roadside Restoration**

**2.15.A Preliminary Engineering and Conceptual Plans**

The Southwest Region Landscape Architect will develop a Conceptual Roadside Restoration Plan to restore anticipated disturbed areas and roadside function in accordance with the WSDOT Roadside Policy Manual. Based on the Conceptual Plan, the CONSULTANT shall provide information and Project environmental impacts such as the Project footprint and...
anticipated disturbed areas to WSDOT (See Section 2.8 Environmental).

The WSDOT Region Environmental Office will locate and design off-site mitigation areas, if applicable. (See Section 2.24 Right-of-Way)

2.15.B  RFP – Technical Requirements  
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.15 – Roadside Restoration to reflect the Project technical requirements in consultation with the WSDOT Region Environmental Office and Southwest Region Landscape Architect.

*Deliverable(s):*
- 60%, 90% and Final RFP Chapter 2.12 – Roadside Restoration.

2.16 - Illumination  
2.16.A Preliminary Engineering and Conceptual Plans - Not Applicable

2.16.B RFP – Technical Requirements  
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.16 – Illumination to reflect the Project technical requirements in consultation with the WSDOT Region Traffic Office.

*Deliverable(s):*
- 60%, 90% and Final RFP Chapter 2.16 – Illumination.

2.17 - Vacant

2.18 - Intelligent Transportation Systems (ITS)  
2.18.A Preliminary Engineering and Conceptual Plans - Not Applicable

2.18.B RFP – Technical Requirements  
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.18 – Intelligent Transportation Systems (ITS) to reflect the Project technical requirements in consultation with the WSDOT Region Traffic Office.

*Deliverable(s):*
- 60%, 90% and Final RFP Chapter 2.18 – Intelligent Transportation Systems (ITS).

2.19 - Signing  
2.19.A Preliminary Engineering and Conceptual Plans - Not Applicable

The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.19 – Signing to reflect the Project technical requirements.

*Deliverable(s):*
- 60%, 90% and Final RFP Chapter 2.19 – Signing.
2.20 - Pavement Marking
2.20.A Preliminary Engineering and Conceptual Plans - Not Applicable
2.20.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.20 – Pavement Marking to reflect the Project technical requirements.

Deliverable(s):
- 60%, 90% and Final RFP Chapter 2.20 – Pavement Marking.

2.21 - Traffic Operations

If the Basic Configuration defines I-5 lane or shoulder widths that are narrower than the existing, the WSDOT Region Traffic Office will perform a Safety Analysis; otherwise, an analysis is not required in this phase. The CONSULTANT shall incorporate this report into the RFP Appendices.

The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.21 – Traffic Operations to reflect the Project technical requirements.

Deliverable(s):
- 60%, 90% and Final RFP Chapter 2.21 – Traffic Operations.

2.22 - Maintenance of Traffic (MOT)
2.22.A Preliminary Engineering and Conceptual Plans
The CONSULTANT shall coordinate with the Project Office and the WSDOT Bridge Office to develop any conceptual construction staging drawings, construction access (See Section 2.8 Environmental), and Traffic Control Plans deemed necessary by the Project Team to include in the procurement documents.

Deliverable(s):
- Conceptual Staging Drawings, construction access, and Traffic Control Plans, if needed.

2.22.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.22 – Maintenance of Traffic (MOT) to reflect the Project technical requirements in consultation with the WSDOT Region Traffic Office and Project Office.

Deliverable(s):
- 60%, 90% and Final RFP Chapter 2.22 – Maintenance of Traffic (MOT).

2.23 - Vacant

2.24 - Right-of-Way
2.24.A Preliminary Engineering and Conceptual Plans
The CONSULTANT, in consultation with WSDOT Real Estate Services, shall determine temporary and permanent right-of-way necessary for the Project. This includes, but is not limited to, aquatic or land parcels within the Project limits that will be impacted by any temporary detour access road, construction activities, construction staging areas, and/or environmental mitigation. Currently, permanent right-of-way is not anticipated for this Project.

The CONSULTANT shall obtain deeds and title reports for impacted parcels and provide WSDOT with information, technical data, and assistance needed to obtain any identified TCEs, permits, and acquisitions. WSDOT will be responsible for working with the affected landowners to obtain TCEs, permits, and other property rights. WSDOT Region Engineering Services will develop a Sundry Site Plan, if needed (See Section 2.15 Roadside Restoration).

For identified in-water and upland TCEs), WSDOT Engineering Services will complete the red and green markups to existing Right-of-Way Plans (See Section 2.5 Survey) and coordinate with WSDOT HQ for approval. The CONSULTANT shall create a DNR Land Plat per WSDOT requirements.

Deliverable(s):
- Deeds and title reports for impacted parcels.
- Drawings, information, and technical data needed to obtain temporary easements and permanent right-of-way acquisitions (See Section 2.5 Survey).
- DNR Land Plat.

The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.24 – Right-of-Way to reflect the Project technical requirements.

Deliverable(s):
- 60%, 90% and Final RFP Chapter 2.24 Right-of-Way.

2.25 - Control of Materials
2.25.A Preliminary Engineering and Conceptual Plans - Not Applicable

2.25.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.25 – Control of Materials to reflect the Project technical requirements.

Deliverable(s):
- 60%, 90% and Final RFP Chapter 2.25 Control of Materials.

2.26 - Vacant
2.27 - Vacant

2.28 - Quality Management Plan (QMP)
2.28.A Preliminary Engineering and Conceptual Plans - Not Applicable

2.28.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.28 – Quality Management Plan to reflect the Project technical requirements.

*Deliverable(s):*
- 60%, 90% and Final RFP Chapter 2.28 Quality Management Plan.

2.29 - Maintenance During Construction

2.29.A Preliminary Engineering and Conceptual Plans - Not Applicable

2.29.B RFP – Technical Requirements
The CONSULTANT shall modify the current FHWA-approved Design-Build template for RFP Chapter 2.29 – Maintenance During Construction to reflect the Project technical requirements.

*Deliverable(s):*
- 60%, 90% and Final RFP Chapter 2.29 Maintenance During Construction.