KITTITAS COUNTY
DEPARTMENT OF PUBLIC WORKS
AGENDA STAFF REPORT

AGENDA DATE: August 15, 2017

ACTION REQUESTED: Approve the Chairman's Signature on Formal Task Order Document Number 001 with Jacobs Engineering Group Inc.

BACKGROUND: Public Works has submitted a grant application to the Federal Highway Bridge Program for BRAC funds for the replacement of the Manastash Road Bridge #76131 at approximate MP 10.60.

Results of the Grant application will not be released until October 2017 at the earliest. Public Works is receiving complaints due to the weight restriction impacting commercial logging and other construction activities. Part of the request to secure the grant funds was expressing the ability from Public Works to deliver the project in 2018.

In order to successfully deliver the construction of the bridge replacement in 2018, design, environmental permitting, and right of way actions need to begin by the end of August.

Public Works followed contracting guidelines for second tier competition with the current three civil on call firms selected through the Request for Qualifications (RFQ) process that was finalized in February 2017. Following scoring on the Request for Additional Information received for the Manastash Bridge project Jacobs Engineering Group, Inc. was the successful consultant selected to perform the work.

There is risk that Public Works does no receive award of the BRAC funding grant and is still accumulating charges for the design prior to award results. However, with the current condition of the bridge, load restrictions and potential to worsen under high water events Public Works believes it is in our best interest to proceed. Many complaints are surfacing due to the restrictions to the commercial logging activities and construction needs hindered by the structurally deficient bridge.

The cost for engineering services has been negotiated with Jacobs Engineering Group, Inc. for the structural design of the replacement. Public Works is in agreement that a not to exceed amount of $279,603.00 is a fair cost for delivery

and will keep the project at budget with modifications to the design and ROW requirements.

Currently, the schedule for delivery indicates design will be completed March 2018 with advertisement and award for construction commencing May 2018. It is anticipated that construction for the replacement bridge will occur summer through fall of 2018.

INTERACTION: Public Works

RECOMMENDATION: Move to approve the Chairman's Signature on Formal Task Order Document Number 01 with Jacobs Engineering Group Inc.

HANDLING: Return two (2) copies to Public Works

ATTACHMENTS: Formal Task Order Document Number 01

LEAD STAFF: Lucas Huck, County Engineer

BOARD OF COUNTY COMMISSIONERS
COUNTY OF KITTITAS
STATE OF WASHINGTON

RESOLUTION NO. 2017 -_____

TO AUTHORIZE THE CHAIRMAN'S SIGNATURE ON FORMAL TASK ORDER DOCUMENT NUMBER 01 WITH JACOBS ENGINEERING GROUP INC.

WHEREAS: Public Works has submitted a grant application to the Federal Highway Bridge Program for BRAC funds to replace the Manastash Road Bridge #76131 at approximate MP 10.60; and

WHEREAS: The bridge replacement project over Manastash Creek is expected to have a total cost of $3,011,662; and

WHEREAS: Jacobs Engineering Group Inc. was selected as a civil on call consultant in February 2017 and is under contract with Public Works through agreement number KCPW 2017-19ENG1; and

WHEREAS: Kittitas County Public Works solicited three on call civil engineer firms to participate in the Request For Additional Information (RFAI) second tier competition process in accordance with Federal contracting requirements; and

WHEREAS: Kittitas County Public Works scored the additional information provided by two on call firms who participated and selected Jacobs Engineering Group Inc. as the successful consultant to perform the work; and

WHEREAS: Kittitas County Public Works negotiated Task Order Number 01 with Jacobs Engineering Group Inc. to perform the design of the replacement structure; and

NOW, THEREFORE BE IT RESOLVED that the Board of County Commissioners, in the best interest of the public, does hereby authorize the Chairman's signature on Task Order Document Number 01 with Jacobs Engineering Group Inc., as attached.

DATED on this 15th day of August, 2017, at Ellensburg, Washington.

BOARD OF COUNTY
COMMISSIONERS
KITTITAS COUNTY, WASHINGTON

_____
Paul Jewell, Chairman

Attest:
☐ Clerk of the Board- Julie Kjorsvik

_____
Laura Osiadacz, Vice-Chairman

☐ Deputy Clerk of the Board- Mandy Buchholz

_____
Obie O'Brien, Commissioner

_____

KITTITAS COUNTY
DEPARTMENT OF PUBLIC WORKS

Formal Task Order Document

Jacobs Engineering Group

Agreement KCPW2017-19ENG1

Task Order Number 01

Maximum Amount Payable $279,603 Completion Date 4/30/18

The general provisions and clauses of Local Agency Agreement Number KCPW2017-19ENG1 shall be in full force and effect for this Task Order.

Location of Project: Manastash Road, MP 10.8

Project Title: Manastash Creek Bridge Replacement

Description of Work:

Jacobs will provide management, engineering, and/or support for civil, structures, hydraulics, right-of-way, permitting, documentation, and environmental construction services for the Manastash Creek Bridge Replacement Project. See attached scope for more detail of each Task.

Task 01 - Project Management: This task includes project controls and administrative tasks related to project start-up, safety planning, invoicing, quality reviews, and project close-out for a period of 9 months.

Task 02 – Data Analysis: This task includes review and coordination of existing County-provided data, survey, studies, reports, maps, etc. associated with the project area.

Task 03 – Geotechnical Field Investigation: This task includes mobilization, drilling, and soil lab tests performed on two (2) bore holes from the project site.

Task 04 – Geotechnical Engineering Analysis and Report: This task includes engineering analysis of the data provided from Task 03 and one (1) geotechnical report provided to the County.

Task 05 – NEPA/SEPA Documentation: This task covers communication and coordination with regulatory and resource agencies, permit submittals, follow-up needs, completion of reporting requirements, and environmental support during construction.

Task 06 – Documentation, Permit Application, and Acquisition: This task includes preparation and submittal of all required permit applications and supporting documentation for the project. See list of permits in attached scope.

Task 07 – Hydraulics: This task includes stream data collection and engineering analysis of stream characteristics and interaction with the existing and proposed bridge. The deliverable is one (1) each of Preliminary Basis of Design Technical Memo and Final Basis of Design Report.

Task 08 – Right Of Way: This task includes effort required to complete right-of-way process(es) required to acquire property and/or temporary construction easement(s) – if any are necessary - in order to construct this project.

Task 09 – Project Kickoff Meeting: Select members of the delivery team will attend one (1) project kickoff meeting. WSDOT will also attend the kickoff meeting.

Task 10 – 30% Design: This task includes preliminary effort to document the project execution, bridge type and location, right-of-way need(s), and strategy of incorporating the MOT and upstream bank stabilization.

Task 11 – 60% Over The Shoulder Meeting: This task includes attendance of select members of the delivery team at one (1) over-the-shoulder meeting to review and document comments on current progress to an approximate 60% level.

Task 12 – 90% Design: This task includes delivery of 90% plans, specifications, and estimate for review and comment by the County and stakeholders.

Task 13 – 100% Design: This task includes delivery of 100% (Final) plans, specifications, and estimate, as well as all calculations, to the County for the purpose of advancing the package to Advertisement.

This task order covers time and expenses to support Kittitas County for 8 months, and is estimated at $279,603. This task is anticipated to remain active until April 30, 2018.

Assumptions & Exceptions:

See attached scope

Deliverables:

See attached scope.

Cost Breakdown:

Total - $279,603 (appx. 2,202 hours), allocated as follows:

Task 01 - Project Management (168 hours) - $29,284

Task 02 – Data Analysis (4 hours) - $274

Task 03 – Geotechnical Field Investigation (32 hours) – $3,920

Task 04 – Geotechnical Engineering Analysis and Report (113 hours) - $14,986

Task 05 – NEPA/SEPA Documentation (263 hours) - $32,566

Task 06 – Environmental Permitting (74 hours) - $8.171

Task 07 – Hydraulics (344 hours) - $46,508

Task 08 – Right of Way (130 hours) - $16,170

Task 09 – Project Kickoff Meeting (32 hours) - $4,065

Task 10 – 30% Design (208 hours) - $20,491

Task 11 – 60% Over The Shoulder Meeting (162 hours) - $15,338

Task 12 – 90% Design (472 hours) - $44,111

Task 13 – 100% Design (200 hours) - $20,565

Other direct costs: Third-party services; mileage; Project field supplies - $23,154

Project Schedule:

- Project Kickoff Meeting: 8/22/17
- 30% Design: September 2018
- 60% Over The Shoulder: late October/early November 2017
- 90% Design: January 2018
- 100% Design: March 2018

Agency Signature: _____ **Date:** _____

Consultant Signature: _____ **Date:** 8/7/17

MANASTASH BRIDGE REPLACEMENT

SCOPE OF SERVICES

INTRODUCTION

The Jacobs (CONSULTANT) team will deliver the final design of the Manastash Bridge Replacement in conjunction with Kittitas County (COUNTY) staff. The CONSULTANT final design includes environmental, civil, structural, hydraulics, and geotechnical services, and may also require right-of-way support depending on the type of bridge selected to be built and the construction staging necessary to build it. The COUNTY will be delivering survey and maintenance of traffic (MOT) plan(s), specification(s), and estimate. CONSULTANT will be responsible for assembling the overall final plans, specifications, and estimate (PS&E) package for Advertisement among other deliverables stated in the Scope of Work below.

The COUNTY has submitted for BRAC funding to supplement the cost of designing/constructing this bridge. The COUNTY desires to have the final design completed in order to put this project on Advertisement in March 2018. This allows the COUNTY to have the best chance at receiving the desired BRAC funding. Delay(s) to a March 2018 Ad date will progressively hinder their chances at receiving funding.

The CONSULTANT team is approaching this project to deliver the final design in March 2018, but will be prepared to communicate with the COUNTY in case any of the discipline and/or design processes preclude a March 2018 delivery.

SCOPE OF WORK

TASK 1 PROJECT MANAGEMENT

1. Project planning, team direction and coordination and ongoing client communication; project instructions will be documented in a Project Procedures Manual.
   1.1. Develop Project Execution Plan/Project Procedures Manual;
   1.2. Provide team direction and oversight;
   1.3. Provide updates and reports to the Owner (e.g., weekly, monthly, etc.);
   1.4. Develop and implement Hazard Assessment Safety Action Plan (HASAP);
   1.5. Plan and facilitate internal team project meetings;
   1.6. Plan and facilitate external project meetings with COUNTY and stakeholders: include location and anticipated attendees from both the CONSULTANT team and Owner team; prepare meeting materials; conduct meeting(s); develop meeting minute(s); distribute minute(s); and incorporate edits from comments.
   1.7. Review each submittal and/or deliverable check and verify deliverables compliance with scope, schedule, budget and quality.
2. **Project Controls**
   2.1. Monitor expended and remaining budget, and forecast cost to complete;

2.2. Prepare monthly invoices and back-up, and monthly progress reports.
2.3. Subconsultant management to include subcontract execution, review and incorporation of subconsultant invoices and progress reports and monitoring of subconsultant financial status.
2.4. Monitoring and updating project design schedule.

3. **Quality**
   3.1. Develop and administer Quality Assurance Plan
4. **Deliverables**
   4.1. Project Management Plan (including quality plan and safety plan)
   4.2. Meeting notes (up to 10 meetings);
   4.3. Monthly progress report and invoice;

TASK 2 DATA ANALYSIS

1. Review, evaluate, analyze, and incorporate data provided by Owner:
   1.1. Hydraulic parameters from stream channel survey and analysis performed by COUNTY. (Owner to provide by August 25th, 2017).
   1.2. Topographic survey and base map(s) (Owner to provide by August 25th, 2017)
   1.3. Existing right-of-way plans and legal descriptions of parcel(s) in project area. (Owner to provide by August 25th, 2017)
   1.4. Existing reports and/or studies of the vicinity, if any (Owner to provide by August 25th, 2017)
   1.5. Specifications of COUNTY-owned temporary bridge (Owner to provide by August 25th, 2017)

TASK 3 GEOTECHNICAL FIELD INVESTIGATION & LABORATORY ANALYSIS

1. Review publicly available geologic maps, nearby well logs, and other available geologic/geotechnical information at or near the project site.
2. Participate in one (1) site visit to observe surface conditions, and drill rig access, and mark exploration locations for public utility locate.
3. Coordinate public utility locating for two (2) soil borings locations; one at each end of the proposed bridge abutments.
4. Develop a safety plan for exploration work and coordinate with drilling subcontractor.
5. Direct, observe, and document two (2) soil borings up to 40 feet deep each using air rotary and rock coring (up to 5 feet of rock coring). Standard penetration test (SPT) soil samples will be collected about every 5 feet of depth, or at discretion of the on-site engineer or geologist. Drilling and sampling will be observed by a geotechnical engineer or geologist. Borings will be backfilled in accordance with DOE requirements and patched at the surface with cement.
6. Collect near surface representative soil samples and assess particle size distribution of the Manastash Creek bank and channel material within 25 feet upstream and downstream of the proposed bridge (total of four samples).

7. Review soil and rock samples collected from drilling and bank and channel.
8. Complete geotechnical tests on selected soil and rock samples, including moisture content determination, grain size analysis, unconfined compression of rock, and plasticity characteristics.
9. Facilitate a discussion with the Owner regarding preliminary results of the field investigation.
10. The soil boring locations will be tied to the project layout with a station and offset from the existing bridge and shown on a Site Plan.
11. Provide and adhere to appropriate maintenance of traffic plan while drill rig is at the project site.
12. OPTIONAL: Additional bore holes
    12.1. Complete up to two (2) additional soil boring up to 35 feet deep using air rotary methods and SPT soil sampling to bedrock or refusal at alternate bridge abutment locations, or if subsurface conditions encountered in TASK 3A soil borings indicate additional exploration is warranted. Supplemental explorations would be completed in the same driller mobilization and manner as soil borings completed for TASK 3A. The need for supplemental investigations will be communicated to the COUNTY for authorization prior to proceeding.
    12.2. Complete additional geotechnical tests on selected soil samples, including moisture content determination, grain size analysis, and plasticity characteristics.

TASK 4 GEOTECHNICAL ENGINEERING ANALYSIS & REPORT

1. Analyze collected field investigation data to characterize the geotechnical properties of the subsurface.
2. Determine seismicity, seismic ground motions, and identify seismic hazards. Seismic design parameters will also be provided.
3. Evaluate and provide design/construction recommendations for temporary excavations, and construction dewatering and supporting any necessary bypass structures.
4. Provide lateral earth pressures for design of any wing walls or abutment walls.
5. Qualitatively analyze slope stability of proposed embankments near the bridge ends.
6. Determine suitable bridge foundation type and analyze axial, uplift, lateral resistances and construction considerations for one preferred foundation type.
7. Provide gradation characteristics of bank and channel material for use in scour analysis. Scour analysis to be completed by Hydraulics Engineer.
8. Participate in up to three (3) 90-minute design team meetings by phone to discuss geotechnical design and construction elements of the project.
9. Provide up to 12 hours of Plans and Specifications support throughout the project.
10. Deliverables:
    10.1. One (1) Draft Geotechnical Report

10.2. One (1) Final Geotechnical Report. To be delivered after CONSULTANT receives one (1) set of Owner's comments. Owner shall combine all comments to one (1) document and submit to CONSULTANT.

TASK 5 NEPA/SEPA DOCUMENTATION

1. NHPA Section 106 Evaluation
   1.1. Evaluate cultural and historic resources within the project area of effect as per Section 106 requirements, coordination with SHPO as needed.
2. Weltland Assessment and Report
   2.1. Delineate wetlands within and adjacent to project area
   2.2. Provide one (1) wetland technical memo; GIS files of wetland locations; and one (1) map.
3. Biological Assessment
   3.1. Prepare one (1) Biological Assessment with subsequent formal consultation
   3.2. Provide ongoing coordination with agencies throughout the review/approval process
4. NEPA/SEPA
   4.1. Research and prepare one (1) NEPA Categorical Exclusion (CE) form
   4.2. Research and prepare one (1) SEPA Checklist and Draft DNS
5. Coordination/Construction Monitoring
   5.1. Coordination with COUNTY, stakeholders, and/or agencies.
   5.2. Environmental monitoring activities during construction (i.e. fish isolation).
6. DELIVERABLES:
   6.1. One (1) NEPA CE and ECS Form
   6.2. One (1) Section 106 Compliance Memo
   6.3. One (1) Wetland and Aquatic Resources Technical Memo
   6.4. One (1) Biological Assessment
   6.5. One (1) SEPA Checklist
   6.6. One (1) Local Agency correspondence for each permit/exemption

TASK 6 ENVIRONMENTAL PERMITTING

1. Populate and submit one (1) JARPA application package.
2. Coordination with federal and/or state agencies for the following permits:
   2.1. Corps 404 permit, United States Army Corps of Engineers
   2.2. Hydraulic Permit Approval (HPA), WA State Dept. of Fish & Wildlife
   2.3. Ecology 401 permit, WA State Dept. of Ecology
3. Research and prepare documentation for the following permit(s) and/or exemption(s) and related approvals:
   3.1. Shorelines (coordinate with Community Development Services [CDS])
   3.2. Critical Areas (Coordinate with CDS)
   3.3. Floodplain Development (Coordinate with Public Works)
   3.4. Letters for permits and/or exemptions (Coordinate with CDS)

4. DELIVERABLES
   4.1. One (1) JARPA package for delivery to USACE, WDFW, and WDOE
   4.2. One (1) Local Agency correspondence for each permit/exemption.

TASK 7 HYDRAULICS

1. Data Collection
   1.1. Collect existing data and information needed for the hydrologic, geomorphic, hydraulic and scour analysis of the proposed Manastash Creek Bridge. Request and collect available information such as:
      1.1.1. Existing topography
      1.1.2. Aerial photos
      1.1.3. Bridge inspection records
      1.1.4. Bridge plans
      1.1.5. Previous hydraulic/hydrologic studies
      1.1.6. Anecdotal information on past flood events
2. Field Reconnaisance
   2.1. Conduct a field inspection to examine the characteristics of the creek, bridge, and surrounding riparian corridor with respect to hydraulic, erosion, and scour processes. It will be beneficial to meet with the COUNTY surveyors on site during the site reconnaissance to discuss where additional survey may be needed to support the hydraulic and scour analysis. Field measurements will include:
      2.1.1. Characterizing sediment size
      2.1.2. Estimating channel/floodplain roughness
      2.1.3. Bridge measurements
      2.1.4. Assessment of existing scour protection
      2.1.5. Documenting lateral and longitudinal erosion.
      2.1.6. Identification of high water marks
      2.1.7. Other relevant information to aid in assessment and design of the proposed water crossing.
   2.2. Determine appropriate bridge span and potential scour countermeasures for the proposed crossing.
3. Hydrology
   3.1. Hydrology for Manastash Creek will be determined by reviewing:
      3.1.1. Prior studies
      3.1.2. USGS regression analysis
      3.1.3. Basin comparison with nearby watersheds and anecdotal information provided by COUNTY staff from previous high-flow events.
   3.2. Conduct analyses to determine the discharges for the 2-, 10-, 25-, 50-, 100-, 200-, and 500-year flood events.
4. Geomorphic Reach Assessment

4.1. Conduct a rapid geomorphic analysis using newly obtained survey information, geotechnical reports, aerial photos, and findings from the field reconnaissance. This activity will investigate channel banks and bed and determine potential for future lateral migration and/or channel downcutting which supports justification of the most appropriate bridge span width.

5. Hydraulics
   5.1. Perform hydraulic modeling to ascertain the hydraulic characteristics necessary to support the design of the new bridge crossing and potential scour countermeasures for the protection of the roadway prism.
6. Bank Stability Assessment and Design
   6.1. Examine stability of the existing scour protection and river banks utilizing various design manuals such as, Integrated Streambank Protection Guidelines (ISPG), HEC-18, HEC-23, etc.
   6.2. Coordinate with the COUNTY to identify proposed measures that are acceptable from a channel stability and habitat perspective. If scour/bank projection measures are needed, continued coordination with the COUNTY will occur to develop design concepts.
7. Scour Analysis
   7.1. Compute depth of scour estimates for the proposed bridge waterway and for any necessary scour countermeasures.
8. Team Meetings & Permitting Assistance
   8.1. Participate in bi-weekly (or as needed less frequently) team meetings via conference call.
   8.2. Assist with the team's preparation of permit applications and answer questions that arise during agency review.
9. Temporary Diversion Assistance
   9.1. Conduct a hydrologic analysis using the available data to determine potential flow during the anticipated construction window. Calculated flows will be modeled with the model developed for the project design with the anticipated location of the diversion provided by KCPW.
   9.2. Coordinate with the COUNTY to determine an appropriate flow to put into the construction contract.
10. Documentation
    10.1. Produce the following documents:
       10.1.1. Preliminary Basis of Design Memo
       10.1.2. Draft Basis of Design Report
       10.1.3. Final Basis of Design Report
11. DELIVERABLES
    11.1. One (1) Preliminary BOD Memo.
    11.2. One (1) Draft BOD Report.

11.3. One (1) Final BOD Report. To be delivered after CONSULTANT receives one (1) set of Owner's comments. Owner shall combine all comments to one (1) document and submit to CONSULTANT.

TASK 8 RIGHT-OF-WAY EASEMENT/ACQUISITION

1. Review COUNTY-provided documents to assess easement/acquisition need(s).
2. Prepare a Site Inspection Report for one (1) parcel.
3. Review title exceptions with the COUNTY. Provide the COUNTY with a parcel summary memo that lists ownership, title exceptions, conflicting easements, or other rights of record, and comments or concerns for one (1) parcel.
4. Identify fee interest ownership for one (1) parcel.
5. Appraise properties and coordinate with the COUNTY on determination of just compensation for one (1) parcel.
6. Prepare and set up acquisition files for one (1) parcel.
7. Obtain review appraisal reports.
8. Conduct negotiation with the property owner for the purchase of a strip of land and/or the purchase of a temporary construction easement. Prepare offer package and present offer to property owner. A minimum of three (3) attempts.
9. Prepare a justification report for administrative settlements for one (1) parcel.
10. Maintain diaries for one (1) parcel.
11. Assist in delivering funds to the property owner.
12. Prepare draft and final easement and acquisition documents approved by the COUNTY attorney.
13. Deliver completed files to the COUNTY.
14. DELIVERABLES
    - 14.1. One (1) Site Inspection Report
    - 14.2. One (1) Parcel Summary Memo
    - 14.3. One (1) Draft Easement and Acquisition document
    - 14.4. One (1) Final Easement and Acquisition document
    - 14.5. One (1) complete set of files for COUNTY record

TASK 9 PROJECT KICK-OFF MEETING

1. The CONSULTANT shall schedule, plan, attend, and facilitate a project kick-off meeting. The meeting shall include applicable COUNTY, CONSULTANT, and WSDOT staff. The meeting shall be held at either the COUNTY office in Ellensburg or the WSDOT office in Union Gap. The meeting will be assumed as a 4-hour meeting. CONSULTANT staff assumed to attend are Project Manager, Environmental Lead, Structure Lead, and Right-of-Way Lead.

TASK 10 30% DESIGN

1. ENVIRONMENTAL

1.1. Review conceptual plans for adherence to permits and exemptions.
1.2. Begin project commitment tracking.

2. STRUCTURAL
   2.1. Evaluate Preliminary Bridge Concepts directly with the COUNTY. As a result of this Preliminary Evaluation, up to two (2) Bridge Alternatives will be evaluated with regard to the proposed length, width, orientation, and cost as pertains to:
      2.1.1. Site hydraulics and scour conditions
         2.1.1.1. Use of Curtain Walls supported on piles with Shoring Construction
         2.1.1.2. Extending bridge limits past hydraulic channel width
      2.1.2. Site preliminary geotechnical information
      2.1.3. Design data provided by the COUNTY
         2.1.3.1. Existing roadway data
         2.1.3.2. Survey
         2.1.3.3. Existing Right-of-Way information
   2.2. Perform Quality Control per the Project Specific Quality Plan on the deliverables prior to submission to the COUNTY.
   2.3. The CONSULTANT shall perform a one (1) hour site visit for field reconnaissance. It is assumed that this site visit will occur in conjunction with the project kick-off meeting (Task 9).
3. ROADWAY
   3.1. Develop a preliminary Basis of Design Memo including project criteria, existing and proposed geometrics, project constraints, design speed, clear zone, design elements, design variances, design decisions, environmental permits, right-of-way, hydraulics, maintenance of traffic (MOT), maintenance concerns, and any outstanding issues to be resolved. Some of these elements may not be applicable for this project.
   3.2. Layout and evaluate up to three (3) new horizontal and vertical roadway alignments to accommodate the proposed bridge type and location.
   3.3. Coordination with COUNTY staff for MOT incorporation.
   3.4. Perform Quality Control per the Project Specific Quality Plan on the deliverables prior to submission to the COUNTY.
4. DELIVERABLES
   4.1. STRUCTURAL
      4.1.1. One (1) TS&L Study
   4.2. ROADWAY
      4.2.1. One (1) Draft Basis of Design Memo
      4.2.2. One (1) 30% plan set including horizontal alignment, vertical alignment, staging of construction (including location of temporary bridge) to show right-of-way impact(s) if any

TASK 11 60% OVER-THE-SHOULDER REVIEW MEETING

1. ENVIRONMENTAL

1.1. Review conceptual plans for adherence to permits and exemptions.

2. STRUCTURAL
   2.1. Produce one (1) Progress set of plans.
   2.2. Attend one (1) review meeting with COUNTY, CONSULTANT, and STAKEHOLDER staff.
3. HYDRAULICS
   3.1. Provide design detail(s) for scour/bank protection.
   3.2. Attend one (1) review meeting with COUNTY, CONSULTANT, and STAKEHOLDER staff via conference call.
4. ROADWAY
   4.1. Coordination with COUNTY staff for incorporation of MOT and upstream bank stabilization plans and special provisions provided by the COUNTY ..
   4.2. Produce one (1) Progress set of plans
   4.3. Develop Preliminary Cost Estimate.
   4.4. Assemble run list of Special Provisions
   4.5. Attend one (1) review meeting with COUNTY, CONSULTANT, and STAKEHOLDER staff.
5. DELIVERABLES
   5.1. 60% Progress Set of Design Drawings.
   5.2. Preliminary Cost Estimate
   5.3. Comment Log of comments provided at 60% Over-The-Shoulder review meeting.

TASK 12 90% DESIGN

1. ENVIRONMENTAL
   1.1. Review plans for adherence to permits and exemptions; continue project commitment tracking.
2. STRUCTURAL
   2.1. Prepare contract plans for the Manastash Road Bridge, which shall include the following information:
      2.1.1. General notes on design, construction and materials.
      2.1.2. Bridge layouts, elevations, and typical sections.
      2.1.3. Foundation details
      2.1.4. Plan, elevation and section of each abutment
      2.1.5. Bridge framing and deck framing plans
      2.1.6. Precast concrete girder details
      2.1.7. Traffic barriers and railings
      2.1.8. Approach slabs
      2.1.9. Reinforcing Bar list
      2.1.10. Dimensions and configurations of structural components
      2.1.11. Design details including reinforcing, prestressing, bearings and joints
      2.1.12. Partial Demolition Limits of Existing Bridge
   2.2. Develop Special Provisions for bridge construction
   2.3. Develop 90% Summary of Quantities

2.4. Develop 90% cost estimate for bridge and structure elements
2.5. Perform Quality Control per the Project Specific Quality Plan on the deliverables prior to submission to the COUNTY.
2.6. Provide responses to 60% Over-The-Shoulder review comments

3. HYDRAULICS
3.1. Develop stream grading plan(s), planting plan(s), and detail(s) incorporating comments, if any, from the 60% milestone meeting.
3.2. Develop Special Provision(s) for scour and/or bank protection.
3.3. Develop 90% cost estimate for hydraulic elements.
3.4. Perform Quality Control per the Project Specific Quality Plan on the deliverables prior to submission to the COUNTY.

4. ROADWAY
4.1. Prepare contract plans for the Manastash Road Bridge, which shall include the following information:
4.1.1. Horizontal Alignment
4.1.2. Vertical Alignment
4.1.3. Typical Sections
4.1.4. Traffic Barrier(s) location (outside of bridge limits)
4.1.5. Detail(s)
4.2. Coordination with COUNTY staff for incorporation of MOT and upstream bank stabilization plans and special provisions provided by the COUNTY ..
4.3. Develop Special Provisions for roadway construction
4.4. Produce a compiled set of plans, Special Provisions, and cost estimate from all disciplines
4.5. Develop 90% Summary of Quantities
4.6. Develop 90% cost estimate for roadway elements
4.7. Provide responses to 60% Over-The-Shoulder review comments
4.8. Update the Preliminary Basis of Design document for any outstanding issue resolution, project change(s), new/changed design decisions, etc. This document will be considered the Draft Basis of Design.
4.9. Perform Quality Control per the Project Specific Quality Plan on the deliverables prior to submission to the COUNTY.

5. DELIVERABLES
5.1. STRUCTURAL
5.1.1. Responses to 60% Over-The-Shoulder Review comments
5.1.2. 90% Design Plans (PDF and CAD files)
5.1.3. Special Provisions for bridge and structure elements
5.1.4. 90% Summary of Quantities
5.1.5. 90% Estimate of Cost
5.2. HYDRAULICS
5.2.1. 90% Design Plan
5.2.2. Special Provisions for scour and/or bank protection

5.2.3. 90% Estimate of Cost

5.3. ROADWAY

5.3.1. Response to 60% Over-The-Shoulder Review comments

5.3.2. 90% Design Plans (PDF and CAD files)

5.3.3. Special Provisions for roadway elements

5.3.4. Compiled 90% PS&E set.

5.3.5. 90% Summary of Quantities

5.3.6. 90% Estimate of Cost

5.3.7. One (1) Final Basis of Design Memo

TASK 13 100% PS&E

1. ENVIRONMENTAL
   1.1. Review plans and specifications for adherence to complete permit commitments and exemptions.
   1.2. Development of Environmental Commitment Summary.
   1.3. Development of Permit Appendix.
   1.4. Perform Quality Control per the Project Specific Quality Plan on the deliverables prior to submission to the COUNTY.
2. STRUCTURAL
   2.1. Provide response(s) to 90% PS&E Submittal review comments.
   2.2. Prepare complete structural calculations in accordance with the WSDOT and AASHTO requirements for the final design of the bridge:
      2.2.1. Superstructure (girders, bearing pads, deck, and barrier/railing).
      2.2.2. Substructure (abutment, footing, and shaft foundation), and retaining walls and/or wingwalls.
      2.2.3. Evaluation of partially demolished bridge for traffic during temporary bridge establishment.
   2.3. Provide 100% Design Plans, Special Provisions, and Engineer's Estimate of Probable Construction Cost for advertisement.
   2.4. Provide 100% Summary of Quantities, list of bid items, and calculations for set of signed and reproducible contract documents.
   2.5. Perform Quality Control per the Project Specific Quality Plan on the deliverables prior to submission to the COUNTY.
3. HYDRAULICS
   3.1. Provide details for the 100% Design Plans. Details will be incorporated into either the Roadway or Structural plan set.
   3.2. Provide 100% Special Provisions and Engineer's Estimate of Probable Construction Cost for advertisement.
   3.3. Perform Quality Control per the Project Specific Quality Plan on the deliverables prior to submission to the COUNTY.
4. ROADWAY

4.1. Prepare complete roadway calculations in accordance with the WSDOT and/or AASHTO requirements for any barrier length of need.
4.2. Provide 100% Design Plans, Special Provisions, and Engineer's Estimate of Probable Construction Cost for advertisement of the bridge replacement and upstream bank stabilization.
4.3. Provide 100% Summary of Quantities, and list of bid items for set of signed and reproducible contract documents.
4.4. Provide compiled100% set of Special Provisions for all disciplines
4.5. Perform Quality Control per the Project Specific Quality Plan on the deliverables prior to submission to the COUNTY.

5. DELIVERABLES
   5.1. ENVIRONMENTAL
      5.1.1.One (1) Environmental Commitment Tracking data sheet.
   5.2. STRUCTURAL
      5.2.1. Response(s) to 90% PS&E submittal review comments.
      5.2.2.One (1) set of 100% Design Plans (11" x17" sheets and PDF's)
      5.2.3. One (1) set of Special Provisions pertain to bridge and structural elements
      5.2.4. One (1) set Summary of Quantities pertaining to bridge an structural elements
      5.2.5. One (1) list of bid items and quantities with backup calculations
      5.2.6. One (1) set of Final Structural Calculations sealed by a licensed Professional Engineer
      5.2.7. One (1) Probable Construction Cost for structural elements for advertisement.
   5.3. HYDRAULICS
      5.3.1. Details for the 100% Design Plans. Hydraulics details will be incorporated into either the Roadway or Structural plan sheets.
      5.3.2. One (1) set of Special Provisions pertaining to hydraulic elements.
      5.3.3. One (1) Probably Construction Cost for hydraulic elements for advertisement.
   5.4. ROADWAY
      5.4.1. One (1) set of 100% Design Plans (11" x17" sheets and PDF's)
      5.4.2. One (1) set of Special Provisions pertaining to roadway elements
      5.4.3. One (1) set Summary of Quantities pertaining to roadway elements
      5.4.4. One (1) list of bid items and quantities with backup calculations
      5.4.5. One (1) Probable Construction Cost for roadway elements for advertisement.

ASSUMPTIONS

1. GENERAL
   1.1. AutoCAD and Civil 3D will be the drawing and modeling platform.
   1.2. The Jacobs Project Manager has the ability to move budget/hours between Tasks to meet deliverables.
2. NEPA/SEPA
   2.1. NEPA is Categorically Exempt

2.2. SEPA will require a Determination of Non-Significance (DNS)
2.3. Section 106 will be determined as "No Effect", and will not require SHPO concurrence
2.4. Wetland report technical memo is adequate; full project impact assessment will not be necessary.
2.5. Formal Biological Assessment is facilitated.
2.6. Two (2) site visits

3. ENVIRONMENTAL PERMITTING
   3.1. Up to seven (7) 8.5x11 drawings (including vicinity maps, plan views, and cross sections).
   3.2. No Individual Permit required; Corps 404 Nationwide 14 permit will be satisfactory.
   3.3. Project will maintain applicable State water quality standards, thus a 401 individual permit is not required.
   3.4. Ecology 402 permit is not required.
   3.5. Department of Natural Resources (DNR) Aquatic Lands permit will not be required.
   3.6. Critical Areas Ordinance and Shoreline are exemptions; no Critical Areas report will be required.
4. GEOTECHNICAL
   4.1. Traffic control for drilling process will be provided by County crew.
   4.2. The Optional bore holes are not included in the estimate. Authorization of this work will require an amendment to the task order.
5. RIGHT OF WAY
   5.1. All right-of-way services for the COUNTY will be performed in accordance with applicable codes, regulations, standards, and procedures; state and federal laws, FHWA regulations, Local Agency Guidelines Manual, and Washington State Right of Way Manual (M26-01.17).
   5.2. No acquisition of property will be necessary. Temporary Construction Easement will be needed for construction activities outside right-of-way limits.
   5.3. Easement will affect one (1) parcel.
6. STRUCTURAL
   6.1. Kickoff meeting, site visit, and subsequent travel time estimated at 12 hours total.
   6.2. 60% Over The Shoulder review meeting is 4 hours in duration.
   6.3. The structure for the Project shall be based on the alternative selected by The COUNTY and as determined in collaboration meetings prior to 30% Design Milestone.
   6.4. The final bridge design shall be conformed to the approved environmental and hydraulics permit guidelines.
   6.5. The final Bridge Plans shall be sealed by a registered Professional Engineer in the State of Washington.
   6.6. The Design Plans shall be prepared in the County CADD Standards and title block provided by the COUNTY.
   6.7. The opinion of construction unit costs shall be on a basis of the current WSDOT Unit Bid Analysis and recent CONSULTANT's experience.

6.8. Specifications shall be based on the current edition of the WSDOT Standard Specifications with the current Amendments.

6.9. The number, format, and contents of the 100% plan sheets shall generally remain unchanged from the 90% completion.

6.10. COUNTY's review at the 100% stage is for the purpose of verifying that comments transmitted at 90% completion were incorporated into 100% documents, as mutually agreed. It is assumed that "additional" design comments will not be generated at this stage.

7. HYDRAULICS
   7.1. The proposed bridge will meet County Floodplain Code and therefore a no-rise analysis is not required.
   7.2. COUNTY will provide combined topographic and bathymetric surface (1 foot contours with point and breakline data) with extents discussed at the 7/20/17 site visit.
   7.3. A draft version of the Final Basis of Design Report will be provided for review and one set of comments.
   7.4. Location of the stream diversion will be determined by the Environmental group.
8. ROADWAY
   8.1. Proposed horizontal and vertical alignments will shift in order to accommodate construction of the new bridge within right-of-way limits.
   8.2. Design will follow KCC Chapter 12, WSDOT guidelines, and AASHTO guidelines respectively.
   8.3. Limit of new horizontal and vertical alignments shall be between the roadway alignment curvature on each side of the bridge.
   8.4. Survey effort and deliverables will be provided by the COUNTY.

EXCLUSIONS

1. GENERAL
   1.1. Reproduction of Final PS&E for distribution to proposed bidders.
   1.2. Bid Support Services and Design Services During Construction.
2. ENVIRONMENTAL
   2.1. Full wetland impact assessment.
   2.2. Wetland mitigation and mitigation planning. All impacts can be avoided and/or are short-term temporary with restoration.
3. HYDRAULICS
   3.1. Sediment transport model.
4. RIGHT OF WAY
   4.1. Services relating to obtaining releases of encumbrances from title, which require legal action.
   4.2. Filing of condemnation and subsequent litigation including negotiation and preparation of possession and use agreements.

4.3. Closing costs such as recording fees, title insurance fees, transfer taxes, etc.; penalty costs for pre-payments; costs of a pre-existing mortgage; the prorate share of real property taxes paid subsequent to vesting title to the COUNTY.
4.4. Continuing negotiations for those parcels listed for condemnation.
4.5. Appraisal and review appraisals for condemnation purposes.
4.6. Providing litigation assistance to the COUNTY and legal counsel during appeals, grievances, hearings, and/or court proceedings.
4.7. Legal descriptions.
4.8. Relocation services.

5. STRUCTURAL
   5.1. Structural Evaluation of any/all items pertaining to the COUNTY-provided "Temporary Bridge".
   5.2. Evaluation of change orders and/or Cost Reduction Incentive Proposals (CRIPs) by the Contractor.
   5.3. Site visit(s) for clarification of construction-related issues or review of unusual or unanticipated conditions.
   5.4. Performance of Bridge Load Rating. This work can be included via amendment for post-design activities.

OWNER CLARIFICATIONS OR PROVIDED DATA

1. Existing hydraulic parameters from stream channel survey and analysis
2. Topographic survey and base map(s)
3. Existing right-of-way plans and legal descriptions of parcel(s) in project area.
4. Existing reports and/or studies of the vicinity
5. Specifications of COUNTY-owned temporary bridge
6. Plans and specifications for MOT and upstream bank stabilization.