

Contract for Professional Architectural and Engineering Services

W.O. 23-96

Water Treatment Plant Intake #2 Renovations

In consideration of the mutual promises herein, City of Billings and Advanced Engineering and Environmental Services, LLC (AE2S) agree as follows. This Contract consists of:

Part I, consisting of 15 Sections of Special Provisions;

Part II, consisting of 11 Sections of General Provisions;

Appendix A consisting of 9 pages (Basic Services of Contractor);

Appendix B consisting of 2 pages (Methods and Times of Payment);

Appendix C consisting of 1 page (Additional Services of Contractor);

Appendix D consisting of 1 page (Schedule of Professional Fees);

Appendix E consisting of 1 page (Project Schedule);

Appendix F consisting of 2 pages (Certificate(s) of Insurance); and

PART I SPECIAL PROVISIONS

Section 1. Definitions.

In this Contract:

- A. "Administrator" means the City Engineer of the Engineering Division of the Public Works Department or his designee.
- B. "Billings" means the City of Billings.
- C. "Contractor" means Advanced Engineering and Environmental Services, LLC (AE2S).

Section 2. Scope of Services.

- A. The Contractor shall perform professional services in accordance with Appendix A, which is attached hereto and incorporated in this Section by reference.
- B. Billings shall pay the Contractor in accordance with the Schedule of Professional Fees attached as Appendix D and incorporated herein by reference for services actually performed under this Contract.
- C. Billings shall not allow any claim for services other than those described in this Section. However, the Contractor may provide, at its own expense, any other services that are consistent with this Contract.

- D. The Engineer shall provide as-built drawings as approved by the City of Billings, to the Administrator within 30 days after the project completion date. Final payment will be withheld until the as-built drawings are received by the City of Billings.

Requirements for submitting as constructed documents of completed Private Contracts, Work Orders, Special Improvement Districts and Site plans involving any City of Billings infrastructure: a point file; 1 (*.asc, *.txt, comma delimited; point number, northing, easting, elevation and description) / 2 (*.csv, with headings for; point number, northing, easting, elevation and description), with northings and eastings to the nearest tenth of a foot, elevations to the nearest hundredth of a foot, representing new, updated or relocated City of Billings infrastructure features such as, but not limited to Sanitary Sewer Manholes, Storm Drain Manholes, Water Valves, Water Bends, Signals, Street Light, etc., in the coordinates of Montana State Plane, Zone 2500 using NAD83(2011), Horizontal and NAVD88 Vertical, Horizontal units and Vertical units will be International feet; one half size paper copy to scale; CD, DVD, or flash drive with PDF files being half size to scale and full size to scale and AutoCAD DWG files as-constructed / as-built, Version 2016, or equivalent.

- E. If required, the Contractor shall provide certified construction payrolls to the Administrator stating in writing that the payrolls have been reviewed and are acceptable.

Section 3. Time for Performance.

- A. This Contract becomes effective when signed on behalf of Billings.
- B. The Contractor shall commence performance of the Work described in Section 2 on receipt of written Notice to Proceed and complete that performance in accordance with the schedule set forth in Appendix E.
- C. This Contract shall terminate at midnight on June 30, 2025.

Section 4. Compensation; Method of Payment.

- A. Each month, or at the conclusion of each phase of the Work for which payment is due, as negotiated on a per-task basis, the Contractor shall present a bill to the Administrator describing the Work for which it seeks payment and documenting expenses and fees to the satisfaction of the Administrator. If any payment is withheld because the Contractor's performance is unsatisfactory, the Administrator must, within ten (10) days of the payment denial, notify the Contractor of the payment denial and set forth, with reasonable specificity, what was unsatisfactory and why. Billings will pay Contractor within 30 days of receiving an acceptable invoice.
- B. The Contractor is not entitled to any compensation under this Contract, other than is expressly provided for in this Section.
- C. As a condition of payment, the Contractor shall have paid all City taxes currently due and owing by the Contractor.

Section 5. Termination of the Contractor's Services.

The Contractor's services under Section 2 of this Part may be terminated:

- A. By mutual consent of the parties.
- B. For the convenience of Billings, provided that Billings notifies the Contractor in writing of its intent to terminate under this paragraph at least 10 days prior to the effective date of the termination.
- C. For cause, by either party where the other party fails in any material way to perform its obligations under this Contract. Termination under this Subsection is subject to the condition that the terminating party notifies the other party of its intent to terminate, stating with reasonable specificity the grounds therefor, and the other party fails to cure the default within 30 days after receiving the notice.

Section 6. Duties Upon Termination

- A. If Billings terminates the Contractor's services for convenience, Billings shall pay the Contractor for its actual costs reasonably incurred in performing before termination and Billings shall pay for services rendered prior to termination. Payment under this Subsection shall never exceed the total compensation allowable under Section 4 of this Part. All finished and unfinished documents and materials prepared by the Contractor shall become the property of Billings.
- B. If the Contractor's services are terminated for cause, Billings shall pay the Contractor the reasonable value of the services satisfactorily rendered prior to termination, less any damages suffered by Billings because of the Contractor's failure to perform satisfactorily. The reasonable value of the services rendered shall never exceed ninety percent (90%) of the total compensation allowable under Section 4 of this Part. Any finished or unfinished documents or materials prepared by the Contractor under this Contract shall become the property of Billings at its option.
- C. If the Contractor receives payments exceeding the amount to which it is entitled under Subsections A or B of this Section, he shall remit the excess to the Administrator within 30 days of receiving notice to do so.
- D. The Contractor shall not be entitled to any compensation under this Section until the Contractor has delivered to the Administrator all documents, records, Work product, materials and equipment owned by Billings and requested by the Administrator.
- E. If the Contractor's services are terminated for whatever reason the Contractor shall not claim any compensation under this Contract, other than that allowed under this Section.
- F. If a final audit has not been performed before the Contractor's services are terminated, Billings may recover any payments for costs disallowed as a result of the final audit.
- G. Except as provided in this Section, termination of the Contractor's services under Section 5 of this Part does not affect any other right or obligation of a party under this Contract.

Section 7. Insurance.

- A. The Contractor shall maintain in good standing the insurance described in Subsection B of this Section. Before rendering any services under this Contract, the Contractor shall furnish the Administrator with proof of insurance in accordance with Subsection B of this Section.
- B. The Contractor shall provide the following insurance:
 - 1. Workers' compensation and employer's liability coverage as required by Montana law.
 - 2. Commercial general liability, including contractual and personal injury coverage's -- \$1,500,000 per occurrence.
 - 3. Commercial automobile liability -- \$1,500,000 per accident.
 - 4. Professional liability in the amount of \$1,500,000 per claim.
- C. Each policy of insurance required by this Section shall provide for no less than 30 days' advance notice to Billings prior to cancellation.
- D. Billings SHALL be listed as an additional insured on all policies except Professional Liability and Worker's Compensation Policies. In addition, all policies except Professional Liability and Worker's Compensation shall contain a waiver of subrogation against Billings.

Section 8. Assignments.

Unless otherwise allowed by this Contract or in writing by the Administrator, any assignment by the Contractor of its interest in any part of this Contract or any delegation of duties under this Contract shall be void, and an attempt by the Contractor to assign any part of its interest or delegate duties under this Contract shall give Billings the right immediately to terminate this Contract without any liability for Work performed.

Section 9. Ownership; Publication, Reproduction and Use of Material.

- A. Except as otherwise provided herein, all data, documents and materials produced by the Contractor under this Contract shall be the property of Billings, which shall retain the exclusive right to publish, disclose, distribute and otherwise use, in whole or in part, any such data, documents, or other materials. Exclusive rights shall not be attributed to portions of such materials presently in the public domain or which are not subject to copyright. Contractor shall retain rights to pre-existing proprietary property including but not limited to interactive models. The Contractor shall have the right to include photographic or artistic representations of the design and construction of the Project among the Contractor's promotional and professional materials. The Contractor's materials shall not include Billings' confidential or proprietary information regardless of whether Billings has previously advised the Contractor in writing of the specific information considered by Billings to be confidential and proprietary.
- B. Equipment purchased by the Contractor with Contract funds: See Appendix A, Section 3. Scope of Work.

- C. Should Billings elect to reuse Work products provided under this Contract for other than the original project and/or purpose, Billings will indemnify and hold harmless the Contractor from any and all claims, demands and causes of action of any kind or character arising as a result of reusing the documents developed under this contract. Additionally, any reuse of design drawings or specifications provided under this Contract must be limited to conceptual or preliminary use for adaptation, and the original Contractor's or subcontractor's signature, professional seals and dates removed. Such reuse of drawings and specifications, which require professional seals and dates removed, will be signed, sealed, and dated by the professional who is in direct supervisory control and responsible for adaptation.

Section 10. Notices.

Any notice required pertaining to the subject matter of this Contract shall be either sent via e-mail, facsimile (FAX), or mailed by prepaid first class registered or certified mail, return receipt requested to the following addresses:

Billings: Will Robbins
City of Billings
Public Works/Engineering
2224 Montana Avenue
Billings, Montana 59101
e-mail: robbinsw@billingsmt.gov
FAX: (406) 237-6291

Contractor: David Carlson, PE
AE2S
2624 Minnesota Ave.
Billings, MT 59101
e-mail: David.Carlson@AE2S.com
FAX: (701)-746-8087

Notices are effective upon the earlier of receipt, proof of good transmission (facsimiles only), or 5 days after proof of proper posting.

Section 11. Contract Budget.

In connection with its performance under this Contract, the Contractor shall not make expenditures other than as provided in line items in the Contract budget.

Section 12. Force Majeure.

- A. Any failure to perform by either party due to force majeure shall not be deemed a violation or breach hereof.
- B. As used in this Contract, force majeure is an act or event of substantial magnitude, beyond the control of the delayed party, which delays the completion of this Contract, including without limitation:
1. Any interruption, suspension or interference resulting solely from the act of Billings or neglect of Billings not otherwise governed by the terms of this Contract.
 2. Strikes or Work stoppages.

3. Any interruption, suspension or interference with the project caused by acts of God, or acts of a public enemy, wars, blockades, insurrections, riots, arrests or restraints of governments and people, civil disturbances or similar occurrences.
4. Order of court, administrative agencies or governmental officers other than Billings.

Section 13. Financial Management System.

The Contractor shall establish and maintain a financial management system that:

- A. Provides accurate, current, and complete disclosure of all financial transactions relating to the Contract;
- B. Maintains separate accounts by source of funds for all revenues and expenditures and identifies the source and application of funds for the Contractor's performance under this Contract, including information pertaining to subcontracts, obligations, unobligated balances, assets, liabilities, outlays and income;
- C. Effectively controls and accounts for all municipal funds and Contract property;
- D. Compares actual expenditures with budgeted amounts and relates financial information to performance or productivity data including unit cost information where applicable;
- E. Allocates administrative costs to direct service delivery units;
- F. Minimizes the time between receipt of funds from Billings and their disbursement by the Contractor;
- G. Provides accounting records supported by source documentation; and
- H. Provides a systematic method assuring the timely and appropriate resolution of audit findings and recommendations.

Section 14. Funding Requirements.

In the event that any funding source for this Contract should impose additional requirements upon Billings for the use of those funds, the Contractor agrees to abide by those additional requirements immediately upon receipt of written notice thereof from Billings.

Section 15. Subcontracts.

The Contractor may enter into subcontracts for the purchase of goods and services necessary for the performance of this Contract, provided:

- A. Every subcontract shall be reduced to writing and contain a precise description of the services or goods to be provided and the nature of the consideration paid therefor.
- B. Every subcontract under which the Contractor delegates the provision of services shall be subject to review and approval by the Administrator before it is executed by the Contractor.
- C. Every subcontract in an amount exceeding \$1,000 shall require reasonable access to business records of the subcontractor relating to the purchase of goods or services pursuant to the subcontract.

PART II
GENERAL CONTRACT PROVISIONS

Section 1. Relationship of Parties.

The Contractor shall perform its obligations hereunder as an independent Contractor of Billings. Billings may administer the Contract and monitor the Contractor's compliance with its obligations hereunder. Billings shall not supervise or direct the Contractor other than as provided in this Section.

Section 2. Nondiscrimination.

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, age, sex, or marital status or who is a "qualified individual with a disability" (as that phrase is defined in the Americans With Disabilities Act of 1990). The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, or mental or physical impairment/disability. Such action shall include, without limitation, employment, upgrading, demotion or transfer, recruitment or recruiting advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship. The Contractor agrees to post, in conspicuous places available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination clause.
- B. The Contractor shall state, in all solicitations or advertisements for employees to Work on Contract jobs, that all qualified applicants will receive equal consideration for employment without regard to race, color, religion, national origin, ancestry, age, sex or marital status, or mental or physical impairment/disability.
- C. The Contractor shall comply with any and all reporting requirements that may apply to it which the City of Billings may establish by regulation.
- D. The Contractor shall include the provisions of Subsections A through C of this Section in every subcontract or purchase order under this Contract, so as to be binding upon every such subcontractor or vendor of the Contractor under this Contract.
- E. The Contractor shall comply with all applicable federal, state, and city laws concerning the prohibition of discrimination.
- F. The Contractor and subcontractor shall abide by the requirements of 41 CFR 60-300.5(a) and 41 CFR 60-741.5(a), which prohibit discrimination against qualified protected veterans and/or qualified individuals on the basis of disability, and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans and individuals with disabilities.
- G. The Contractor and subcontractor shall abide by the requirements of 41 CFR 60-1.4, which states employees or applicants may not be discharged or in any other manner discriminated against because they have inquired about, discussed, or disclosed their own pay or the pay of another employee or applicant. However, employees who have access to the compensation information of other employees or applicants as a part of their essential job functions cannot disclose the pay of other employees or applicants to individuals who do not otherwise have access to

compensation information, unless the disclosure is (a) in response to a formal complaint or charge, (b) in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or (c) consistent with the contractor's legal duty to furnish information.

Section 3. Permits, Laws, and Taxes.

The Contractor shall acquire and maintain in good standing all permits, licenses and other entitlements necessary to its performance under this Contract. All actions taken by the Contractor under this Contract shall comply with all applicable statutes, ordinances, rules and regulations. The Contractor shall pay all taxes pertaining to its performance under this Contract.

Section 4. Nonwaiver.

The failure of either party at any time to enforce a provision of this Contract shall in no way constitute a waiver of the provision, nor in any way affect the validity of this Contract or any part hereof, or the right of such party thereafter to enforce each and every provision hereof.

Section 5. Amendment.

- A. This Contract shall only be amended, modified or changed by a writing, executed by authorized representatives of the parties, with the same formality as this Contract was executed.
- B. For the purposes of any amendment modification or change to the terms and conditions of this Contract, the only authorized representatives of the parties are:

Contractor: David Carlson, Operations Manager
(title of position)

Billings: City Council or Authorized Designee

- C. Any attempt to amend, modify, or change this Contract by either an unauthorized representative or unauthorized means shall be void.

Section 6. Jurisdiction; Choice of Law.

Any civil action arising from this Contract shall be brought in the District Court for the Thirteenth Judicial District of the State of Montana, Billings. The law of the State of Montana shall govern the rights and obligations of the parties under this Contract.

Section 7. Severability.

Any provision of this Contract decreed invalid by a court of competent jurisdiction shall not invalidate the remaining provisions of the Contract.

Section 8. Integration.

This instrument and all appendices and amendments hereto embody the entire agreement of the parties. There are no promises, terms, conditions or obligations other than those contained herein; and this Contract shall supersede all previous communications, representations or agreements, either oral or written, between the parties hereto.

Section 9. Liability.

The Contractor shall indemnify, defend, save, and hold Billings harmless from any and all claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses including reasonable attorneys' fees and costs, arising from any wrongful or negligent act, error or omission of the Contractor or any agent, employee or subcontractor as a result of the Contractor's or any subcontractor's performance pursuant to this Contract.

- A. The Contractor shall not indemnify, defend, save and hold Billings harmless from claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses or attorneys' fees and costs arising from wrongful or negligent acts, error or omission solely of Billings occurring during the course of or as a result of the performance of the Contract.
- B. Where claims, lawsuits or liability, including attorneys' fees and costs arise from wrongful or negligent act of both Billings and the Contractor, the Contractor shall indemnify, defend, save, and hold Billings harmless from only that portion of claims, causes of action, lawsuits, damages, judgments, liabilities, and litigation costs and expenses including attorneys' fees and costs, which result from the Contractor's or any subcontractor's wrongful or negligent acts occurring as a result from the Contractor's performance pursuant to this Contract.

Section 10. Inspection and Retention of Records.

The Contractor shall, at any time during normal business hours and as often as Billings may deem necessary, make available to Billings, for examination, all of its records with respect to all matters covered by this Contract for a period ending three years after the date the Contractor is to complete performance in accordance with Section 2 of the Special Provisions. Upon request, and within a reasonable time, the Contractor shall submit such other information and reports relating to its activities under this Contract, to Billings, in such form and at such times as Billings may reasonably require. The Contractor shall permit Billings to audit, examine and make copies of such records, and to make audits of all invoices, materials, payrolls, records of personnel, and other data relating to all matters covered by this Contract. Billings may, at its option, permit the Contractor to submit its records to Billings in lieu of the retention requirements of this Section.

Section 11. Availability of Funds.

Payments under this Contract may require funds from future appropriations. If sufficient funds are not appropriated for payments required under this Contract, this Contract shall terminate without penalty to Billings; and Billings shall not be obligated to make payments under this Contract beyond those which have previously been appropriated.

IN WITNESS WHEREOF, the parties have executed this Contract on the date and at the place shown below.

City of Billings

Advanced Engineering and Environmental Services, LLC

William A. Cole, Mayor

Date: _____

Name: Brian Bergantine

Title: Operations Director

Date: _____

ATTEST:

IRS Tax ID # 45-0422908

City Clerk

APPROVED AS TO FORM:

Date: _____

By _____

City Attorney

Appendix A

Basic Services of Engineer

W.O. 23-96 Water Treatment Plant Intake #2 Catwalk Renovations

Section 1. Engineer's Rights and Duties.

- A. To furnish all labor, materials, equipment, supplies, and incidentals necessary to conduct and complete the Engineer's portion of the project as defined in the scope of work and to prepare and deliver to Billings all plans, specifications, bid documents, and other material as designated herein.
- B. Ascertain such information as may have a bearing on the work from local units of government, utility companies, and private organizations and shall be authorized to procure information from other authorities besides Billings but shall keep Billings advised as to the extent of these contacts and the results thereof.
- C. Prepare and present such information as may be pertinent and necessary in order for Billings to pass critical judgment on the features of the work. The Engineer shall make changes, amendments or revisions in the detail of the work as may be required by Billings. When alternates are being considered, Billings shall have the right of selection.
- D. Engineer's work shall be in accordance with the standards of sound engineering and present City, State, and National standards and policies currently in use.
- E. Conform to the requirements of the Montana Code Annotated Title 18 "Public Contracts" and more particularly Sections 18-2-121 and 18-2-122, and all other codes of the State of Montana applicable to providing professional services including codes and standards nationally recognized.
- F. The Engineer shall certify with the submission of final plans that the plans are in conformance with applicable sections of Title 69, Chapter 4, Part 5, of the Montana Code Annotated as pertaining to existing utilities.
- G. To perform professional services in connection with the project and will serve as Billings' representative in those phases of the project to which this agreement applies.
- H. Where Federal funds are involved, the necessary provisions to meet all requirements will be complied with and documents secured and placed in the bidding documents.
- I. Submit an estimated progress schedule as to time and costs at the beginning of the work, and monthly progress reports thereafter until complete. The reports will include any problems, potential problems, and delays as foreseen by the Engineer. Reports will be submitted in a timely manner to permit prompt resolution of problems.

- J. Name a Task Director who shall be the liaison between Billings and the Engineer. For this project the Task Director designated for the Engineer is David Carlson working under the Operations Director, Brian Bergantine.

Section 2. Billings Rights and Duties.

- A. To furnish all labor, materials, equipment, supplies, and incidentals necessary to conduct and complete Billings' portion of the project as designated in the scope of work.
- B. Name a Task Director who shall be the liaison between the Engineer and Billings. For this project, the Task Director designated is Will Robbins, working under the City Engineer, Mac Fogelsong.

Section 3. Scope of Work.

The City of Billings Water Treatment Plant (WTP) has two intakes to obtain water from the Yellowstone River. Intake #1 is the primary intake. Intake #2, located upstream and more out in the middle of the river, is a redundant intake, but still serves as a critical asset to the City's water treatment process.

Intake #2 includes a catwalk bridge structure that provides a walkway spanning from the Low Service Pump Station (LSPS) to the Intake #2 structure. In addition to providing a walkway surface above the river, the bridge carries conduit and piping for the Intake #2 electrical, gas, and air requirements. The three-span steel bridge structure is composed of a concrete slab supported from steel wide-flange beams. The bridge has intermediate support from two concrete piers and is supported on the ends by the LSPS and the Intake #2 building structure. Along the walking surface, the structure has guard railing constructed from steel angles and flat plate.

The bridge structure has sustained damage multiple times since initial construction, but in the spring of 2022, the Yellowstone River experienced an unprecedented 500-year flood event that caused significant damages to Intake #2. The incident resulted in structural damage to the existing catwalk, building flooding, and impairments to the guard rail, electrical and gas lines, and process air piping. This historical flood event caused the Intake Structure to be unsafe for operations, requiring extensive repairs to re-establish a safe redundant raw water intake system for the WTP.

AE2S completed a comprehensive assessment of the damages sustained by Intake #2. This report detailed some specific damages including cracks and spalling on the support piers; flaking of the exterior coatings on the structural steel members of the catwalk, leading to the formation of rust; spalling in multiple locations on the concrete bridge deck; various sections of the guard rail exhibiting bending, shearing, or other forms of damage; and conduits and process piping being bent, sheared, or otherwise damaged.

The proposed repairs entail elevating the catwalk by four feet and modifying the intake structure accordingly. For one alternative: The existing catwalk deck and building will be removed. The existing piers and building foundation will be extended to the new elevation. A new block building will be constructed at the raised elevation, serving as the replacement for the demolished Intake #2 building. New structural steel and decking will be installed for the elevated catwalk, and galvanized steel stairs will be installed to access the higher catwalk. Other alternatives may also be investigated and/or pursued.

Scope of Services:

Obtaining the requisite permits is of paramount importance to this project, as they serve as the regulatory foundation and provide the necessary approvals and licenses for work to proceed. The tasks identified in the following sections will help form a comprehensive framework that not only facilitates the catwalk repair process but also upholds standards of safety, legality, and compliance with local, state, and federal regulations.

Phase 020: Permitting Assistance

Services

- Project Management
 - o Coordinate with City project manager and project team to provide regular updates on project progress, schedule, and budget for this project phase.
- Permit Applications
 - o Review agency requirements and coordinate with regulatory agencies and City prior to permit application submittals.
 - o Submit necessary regulatory permits and licenses for compliance with various authorities and respond to comments from regulatory agency staff.
 - US COE 404 Section 10: Assist City in securing authorization from the U.S. Army Corps of Engineers (US COE) for activities affecting navigable waters.
 - DNRC Navigable Rivers Land License: Assist City in acquiring a license from the Department of Natural Resources and Conservation (DNRC) for activities along navigable rivers.
 - Yellowstone River Conservation District 310 Permit: Assist City in obtaining a permit from the Yellowstone River Conservation District for activities impacting water resources.
 - County FEMA Floodplain Permit: Prepare County floodplain permit application for work in the floodway
 - City FEMA Floodplain Permit: Prepare City floodplain permit application for work in the floodplain
 - DEQ 401 Water Quality Certification/318 Authorization: Assist City in obtaining certification and authorization from the Department of Environmental Quality (DEQ) for water quality compliance.
 - DNRC Stormwater Construction General Permit: Assist in obtaining a permit from the DNRC for stormwater management during construction.
 - City and/or State Building Division Review Permit: Discuss and review approval requirements for compliance with building codes with the City and/or State Building Division. Assist City in obtaining all applicable building permits.
 - Assist City in obtaining any other permits that may be found to be necessary during the design/bidding process.
 - o Respond to agency comments.

- FEMA No-Rise Analysis
 - o Conduct an analysis to confirm and document that the proposed project alternatives create a “no rise” condition. Three scenarios will be reviewed including:
 - Permanent catwalk replace in-kind design (Base Bid)
 - Permanent resiliency improvements design (Alternate Bid), including freespan option, if selected.
 - Temporary construction works (both Base and Alternate Bids)
- FEMA No-Rise Report
 - o Prepare report documenting no rise analysis to support City/County floodplain permit application(s).
- Reviews & Coordination with City
 - o Collaborate with City of Billings authorities to ensure compliance and address any concerns or requirements.
- Reviews & Coordination with State
 - o Conduct reviews and coordinate with state agencies to meet State regulatory standards.
- Reviews & Coordination with City/County Floodplain
 - o Coordinate with City/County authorities regarding floodplain regulations and compliance.
- Reviews & Coordination with Awarded Contractor
 - o Coordination with the contracted construction team to transfer permits to contractor as needed.

Deliverables

- Listed permit applications
- Informal responses to agency comments

Key Assumptions

- The proposed project creates a “no rise condition”.
- Responding to agency comments will require less than 20 hours total.
- No detailed cost benefit analysis required by FEMA.

Phase 030: Preliminary Design

Services

- Project Management
 - o Coordinate with City project manager and project team to provide regular updates on project progress, schedule, and budget for this project phase.
- Meetings and Workshops
 - o Kickoff Meeting / Site Visit
 - Commence the project with an initial meeting and on-site assessment.

- Operations Resiliency Workshop
 - Address strategies to enhance the system's operational resilience.
- 30% Design Alternatives Workshop
 - Explore design alternatives and options at the 30% completion stage.
- Final Alternate Selection Workshop
 - Discuss and evaluate the alternate final design.
- FEMA/Insurance Review Meeting
 - Evaluate compliance with FEMA standards and insurance requirements.
- Preliminary Design Conceptual Development (15% Design - Base Bid & Alternatives)
 - Base Bid
 - Develop the foundational design at the 15% completion stage.
 - Raised Catwalk Sections
 - Design sections of the catwalk raised to a higher elevation, also at 15% completion.
 - Free Span Option
 - Design sections of the catwalk without supports at 15% completion.
 - Geotechnical evaluation – Pending the results of an underwater evaluation of the structural members.
 - Coordination with underwater dive contractor (contracted separately with City) for sub-surface investigation.
 - Process Improvements - Raw Water Sampling, Air Scour, Valves, Relocate LSPS Air Scour to Intake #2 Building
 - Incorporate improvements related to raw water processes at 15% completion.
 - Building Alternatives (Masonry, Precast, Sunshade)
 - Explore alternative building materials and features at 15% completion.
- Preliminary Design Drawings
 - Create initial design drawings for review and evaluation consistent with a 30% completion design level.
- Recommendations Evaluation (Life Cycle, O&M, Construction Costs, etc.)
 - Assess recommendations based on factors like life cycle, operation and maintenance (O&M), and construction costs.
 - Consider simplified Kepner-Tregoe (KT) problem-solving methodology to help identify, prioritize, and evaluate potential solutions based on their feasibility, desirability, and potential impact.
- Constructability:
 - Evaluate the feasibility and ease of construction for the proposed preliminary designs.
- Cost Estimating:
 - Determine the projected costs associated with the proposed designs.

Deliverables

- Preliminary Design Drawings
- Meeting Workshop Agenda, minutes, slides, action items
- Construction Cost Estimates

Phase 031: Geotechnical

Services

- Geotechnical evaluation, pending the results of underwater inspection of structural members and requirements of clear-span option.

Deliverables

- Geotechnical report, if necessary

Key Assumptions

- A contract amendment may be required if an extensive geotechnical evaluation is required.

Phase 040: Final Design – Base Bid

Services

- Project Management
 - o Coordinate with City project manager and project team to provide regular updates on project progress, schedule, and budget for this project phase.
- Data Collection and Baseline Modeling
 - o Gather comprehensive data on the existing catwalk, intake structure, LSPS #2, and surrounding area.
 - o Coordinate underwater dive inspection of catwalk piers and intake foundation with diving contractor (contracted separately and directly with City).
- Final Design of Structural, Process, Civil, and Electrical installation of improvements needed to restore catwalk to pre-loss condition, including plans and specifications.
 - o Included in the design tasks, including drawings and technical specifications related to:
 - Temporary Construction Works including:
 - Install and removal of a temporary work bridge
 - Minor erosion and sediment/SWPPP requirements
 - Structural Improvements including:
 - Removal of damaged catwalk bridge
 - Rehabilitation of existing piers
 - Replacement of the catwalk bridge (rehabilitated or new)
 - Replacement of catwalk handrails and damaged section around intake building

- Process Improvements including:
 - Replacement of existing air scour lines
 - Electrical Improvements including:
 - Replacement of damaged conduits
 - New electrical conductor wire(s) from Lighting Panels
 - Architectural and HVAC Improvements including:
 - Repairing minor brick spalling and restoring minor façade damage
- Generate One (1) Bid Package
 - Prepare a comprehensive bid package, including all relevant technical information and specifications (EJCDC based technical and front-end specifications with City mods).
- Update Opinions of Probable Project Costs
 - Continuously update and refine opinions of probable cost for entire project (process, structural, electrical, civil, mechanical, etc.).
- Conduct Design Review Milestone Meetings
 - 75% Design Review Meeting
 - Evaluate progress and gather feedback at the 75% design completion milestone
 - 95% Design Review Meeting
 - Assess progress and gather input at the 95% design completion milestone
 - 100% Design Review Meeting
 - Finalize design details and obtain final approvals at the 100% design completion milestone

Deliverables

- 75%, 95%, & 100% design milestone plans and specifications
- Opinion of Probable Costs for entire project, including adjustment to 2022 dollars
- Project Manual

Key Assumptions

- City to provide asbestos testing, no mitigation currently anticipated
- Completed concurrently with alternate design work
- No improvements required to update facility to current building codes (i.e. ADA, insulation/energy conservation)

Phase 041: Final Design – Alternate Bid

Services

- Project Management
 - Coordinate with City project manager and project team to provide regular updates on project progress, schedule, and budget for this project phase.

- Final Design of Structural, Process, Civil, and Electrical installation of improvements needed to improve the catwalk consisting of raised catwalk and new intake building, including plans and specifications.
- Included in the design tasks:
 - Temporary Construction Works including:
 - Install and removal of a temporary work bridge
 - Minor erosion and sediment/SWPPP requirements
 - Structural Improvements including:
 - Removal of damaged catwalk bridge
 - Rehabilitation or removal of existing piers
 - Raised Piers (if that's the chosen alternative) to support new catwalk
 - Replacement of catwalk handrails, staircases, and support structures for utilities
 - Intake building floor addition
 - If clear-span option is chosen, confirm/enhance support capability of end points
 - Process Improvements including:
 - Raw water sampling station improvements
 - Gate actuator modifications (as needed to accommodate new building elevation)
 - Electrical Improvements including:
 - New electrical conductor wire(s) from Lighting Panels
 - New exterior lighting for catwalk & interior lighting inside new building
 - New electric unit heater(s) inside new building
 - Architectural and HVAC Improvements including:
 - Demolition of existing building
 - New precast exterior intake building at new raised elevation with similar features as the existing building
 - Minor building ventilation system
 - Roof drain system as needed, with outspout to river
- Conducted Concurrently with Base Bid
 - Generate one (1) bid package (EJCDC based technical and front end specifications with City mods).
 - Provide project management to monitor budget and schedule and keep Client informed of project progress.
 - Update opinion of probable cost for entire project (process, structural, electrical, civil, mechanical, etc.).
 - Conduct three (3) design review meetings with the City at 75%, 95%, and 100% milestones, meetings held concurrent with Base Bid Meetings.

Deliverables

- 75%, 95%, & 100% design milestone plans and specifications
- Opinion of Probable Costs for entire project
- Project Manual

Key Assumptions

- City to provide asbestos testing, no mitigation currently anticipated.
- Pending results of evaluation to relocate LSPS air scour blower equipment, contract amendment may be pursued.
- Completed concurrently with base bid design work.
- Minor building code updates, but no fire suppression or additional ingress/egress will be required.
- Anticipated two building code variance submittals; egress and roof drain to river.
- If free span option is selected, design amendment may be pursued for additional structural.

Phase 050: Bidding Phase

Services

- Conduct one (1) onsite Pre-Bid Conference.
- Prepare electronic Contractor Bid Set(s).
- Field questions from bidders and prepare Addenda, as needed.
- Review bids submitted, prepare recommendation(s) of award.

Deliverables

- Bidding Sets and addenda (1 hard copy, 1 electronic)
- Bid Tabs, Recommendations of Bid Award
- Construction Contract Document (1 hard copy, 1 electronic)

Key Assumptions

- City to conduct bid opening.
- Base Bid & Alternate Bid are bid together as 1 package.

Construction Phase

Services

- To Be Determined (would be covered by future amendment) depending on bid alternative chosen—Base Bid or Alternate Bid.

Appendix B

Methods and Times of Payment

W.O. 23-96 Water Treatment Plant Intake #2 Catwalk Renovations

Section 1. Payments for Basic Services.

Billings shall authorize payment to the Engineer for services performed under Appendix A of this Agreement.

Partial payment shall be due and made to the Engineer upon receipt of the Engineer's pay estimate, said estimate being proportioned to the work completed by the Engineer. Billings shall deduct five percent (5%) from each monthly pay estimate to be held until the completion of the final scope of work. The final payment shall be made only after acceptance of final documents by Billings, and determination that the scope of work has been satisfactorily completed.

- A. For services rendered prior to construction, Appendix A, the Engineer shall be paid based upon actual time accrued, but not to exceed the total contract amount.

Phase 020 – Permitting Assistance	\$ 48,900
Phase 030 – Preliminary Design	\$116,900
Phase 031 – Geotechnical Services	\$ 20,000
Phase 040 – Final Design (Base Bid)	\$134,600
Phase 041 – Final Design (Alternate Bid)	\$166,100
<u>Phase 050 – Bidding Services</u>	<u>\$ 18,200</u>
TOTAL	\$ 504,700

- B. Final payment shall be the above stated basic fee less all previous payments.

Section 2. Payments for Extra Services when Authorized by Billings.

Requests made or conditions identified by interested groups at the agency or public meetings, which are beyond the scope and intent of this study shall be paid for on an hourly basis at the applicable fees in Appendix D.

Section 3. Corrections.

Costs of Billings work that is required for corrections to the Engineer's work which requires redoing by Billings shall be deducted from any payments due the Engineer, if the Engineer fails to make the required corrections.

Section 4. Fee Increases

For contracts and services that are expected to require more than one (1) year to complete, the above stated basic services payments may be reviewed and adjusted annually by mutual agreement of the parties, based upon documented evidence that the Engineer's costs and hourly rates as shown in Appendix D have increased for all comparable clients.

Appendix C

Additional Services of Engineer

W.O. 23-96

Water Treatment Plant Intake #2 Catwalk Renovations

Extra Services of the Engineer will be paid only with written prior authorization by Billings.

- A. Requests made or conditions identified which are beyond the scope and intent of the services identified under Appendix A.

Appendix D

Schedule of Professional Fees

W.O. 23-96

Water Treatment Plant Intake #2 Catwalk Renovations

Current agreements for engineering services stipulate that the standard hourly rates are subject to review and adjustments. Hourly rates for services effective on the date of this Agreement are included below.

The itemized schedule provided below includes direct labor costs, normal payroll and overhead costs, transportation, furnishing equipment and materials normally required for performance of the work and reasonable profit. Direct project costs not itemized herein shall be paid for at actual cost.

ADVANCED ENGINEERING AND ENVIRONMENTAL SERVICES, LLC **2024 HOURLY FEE AND EXPENSE SCHEDULE**

Labor Rates*

Engineering Assistant 1	\$88.00
Engineering Assistant 2	\$103.00
Engineering Assistant 3	\$130.00
Engineer 1	\$140.00
Engineer 2	\$168.00
Engineer 3	\$197.00
Engineer 4	\$228.00
Engineer 5	\$244.00
Engineering Technician 1	\$87.00
Engineering Technician 2	\$109.00
Engineering Technician 3	\$131.00
Engineering Technician 4	\$146.00
Engineering Technician 5	\$167.00

Reimbursable Expense Rates

Transportation	\$0.75/mile
Outside Services	cost *1.15
Geotechnical Services	cost *1.30
Out of Pocket Expenses	cost*1.15
Project Specific Equipment	Negotiable

* Position titles are for labor rate grade purposes only.

These rates are estimated, and subject to adjustment each year on January 1.

Appendix E
Project Schedule
W.O. 23-96
Water Treatment Plant Intake #2 Catwalk Renovations

Based on a notice to proceed by Billings no later than December 4, 2023, the completion dates for the Engineer's work shall be:

1. Kickoff Workshop – early December, 2023
2. Resiliency Improvements Workshop – late December, 2023
3. 15% Preliminary Alternatives Cost Estimate Reviews – December 31, 2023
4. 75% Design Review – February, 2024
5. 95% Design Review – March, 2024
6. 100% Final Plans and Specification – March 31, 2024
7. Bidding Advertisement – April, 2024
8. Council Award – May, 2024
9. Estimated Construction Period – July, 2024 to April, 2025

Delays affecting the completion of the work within the time specified of more than ninety (90) days, not attributable to or caused by the Parties hereto, may be considered as cause for the renegotiation or termination of this Contract.

If the Engineer is behind on this Contract due to no fault of Billings, then the Engineer hereby acknowledges the right of Billings to withhold future Contracts to the Engineer in addition to any other remedy until this Contract is brought back on schedule or otherwise resolved.

Appendix F

Certificate(s) of Insurance

W.O. 23-96

Water Treatment Plant Intake #2 Catwalk Renovations

Attach Certificate(s) of Insurance

