

INTERNATIONAL BOUNDARY AND WATER COMMISSION  
U.S. SECTION

STATEMENT OF WORK

INDEFINITE DELIVERY, INDEFINITE QUANTITY (IDIQ) A-E SERVICES

- I. **STATEMENT OF WORK:** The Contractor shall furnish, upon receipt of a task order, all labor, materials, supplies, equipment, superintendence, and related services, (except when specified as Government furnished) to complete Task Orders for Architect-Engineer Services for projects located along the U.S./Mexico border in the United States (States of Texas, New Mexico, Arizona, and California) and the Republic of Mexico (States of Tamaulipas, Nuevo Leon, Coahuila, Chihuahua, Sonora, and Baja California). The Contractor shall be required to perform all or part of the following services, which will be more specifically identified in individual Task Orders. **USIBWC reserves the right to offer any design and other services described here to non-IDIQ contractors.**
- I.A. Inventory of facilities, data acquisition, measurement and recording; development of engineering, planning, and feasibility/cost benefit studies; life-cycle-cost-analysis; investigations; evaluations; modeling; operations and maintenance studies; energy studies; risk analysis and vulnerability assessments; space utilization studies; safety plans; security assessments and planning; standard operating procedures; network analysis schedules; conceptual, preliminary, and final designs; and cost estimates.
- I.B. Design services for rehabilitation, renovation, repair, and new construction for civil works associated with surface and subsurface water deliveries and accounting, flood control and hydropower, such as channels, levees, canals, dikes, dams, reservoir embankments, hydro-electric power plants as well as site work, buildings, roads and paving, erosion control, bridges, and security and communication systems. The design of each project shall include consideration of all necessary supporting features to provide a complete and a usable facility. These features in general include, but are not limited to, access and service drives, buildings, including storage, administration/laboratory, and maintenance, off-site roadway improvements, street extensions, utility line extensions, vehicle parking areas, grading, and drainage systems, including off-site discharge of stormwater drainage.
- I.C. Design services to include safety of dam studies, risk analysis for dams, dam modification studies, annual and five (5) year safety of dams inspections, and evaluations concerning dam operations.
- I.D. Design services for rehabilitation, renovation, repair, maintenance, and new construction for civil environmental works, including wastewater (both advanced primary and secondary treatment) plants, wastewater collection, conveyance facilities, water treatment plants, and potable water distribution systems. Design services shall include assessments, master planning, pre-design, conceptual, final designs, and preparation of the estimate of probable construction costs.
- I.E. Design services for vertical and horizontal construction to include buildings that meet the following codes and requirements. All codes and standard requirements shall be based on the latest edition of the codes applicable at the time of the task order is issued. Individual Task Orders will note the versions that must be met as well as any additional requirements
- I.E.1. Current security systems/measures required under the standards set forth in The Risk Management Process: An Interagency Security Committee Standard. Examples of various measures would include: closed-circuit television (CCTV), intrusion detection systems, signage, vehicle barriers, blast resistant windows, cast in place concrete

column construction, tamper proof air intakes, heating, ventilation and air conditioning (HVAC) and secure control panels, emergency generator access control, high security mechanical or electronic locks, and Homeland Security Presidential Directive 12 (HSPD-12) compliant physical access control measures.

- I.E.2. The Leadership in Energy and Environmental Design (LEED) certification criteria as required by the U.S. Green Building Council (USGBC).
- I.E.3. The criteria required by the Telecommunications Industry Association (TIA) specifications on building servers or data center rooms.
- I.E.4. The criteria required by General Services Administration Facilities Standards for the Public Buildings Services (PBS-P100) to be noted in the individual Task Orders.
- I.E.5. The criteria required by National Institute of Standards and Technology (NIST) Special Publication SP 800-53 Rev.5 to include physical and environmental controls for general security systems and criteria required under National Fire Protection Association (NFPA) 7520 for information technology equipment.
- I.E.6. Code compliance in conformance with the International Building Code (IBC), International Fire Code (IFC), International Plumbing Code (IPC), International Mechanical Code (IMC), and the International Energy Conservation Code (IECC).
- I.E.7. The technical egress requirements of NFPA 101, Life Safety Code.
- I.E.8. The technical electrical requirements of NFPA 70, National Electrical Code (NEC).
- I.E.9. The Americans with Disabilities Act (ADA) Standards for Accessible Design.
- I.E.10. The criteria required by local, state, and federal regulatory agencies in areas of historical preservation, documentation, and clearances.
- I.F. Design services and technical support for and related to site remediation; corrective and removal action designs; design of hazardous waste containment systems; underground storage tank (UST) upgrades and remediation; sewage sludge management; wastewater effluent reuse; and designs to handle contaminated groundwater.
- I.G. Permitting support, including performance of additional engineering analyses, studies, computations, and preparation of applications and drawings necessary to obtain all required permits for construction and operation of proposed or constructed facilities.
- I.H. Geotechnical services including concrete core sampling and testing; soil drilling, logging, sampling, and testing; monitoring well drilling and logging; lithologic and geophysical logging; surface geophysical surveys (electromagnetic, seismic and magnetic); cone penetrometer testing; subsurface soil and groundwater investigations for determination of design criteria; contaminated soil and groundwater testing; seepage analysis, slope stability analysis, design of dewatering systems, and design of protective shoring systems.
- I.I. Surveying, aerial photography, photogrammetry, and geographic information system (GIS) database development, including both conventional and Global Positioning System (GPS), land and bathymetric surveys; drone applications; easement and related field data collection; metes and bounds identification for possible property acquisition; topographic mapping, preparation of base maps from aerial photography including Light Detecting and Ranging (LIDAR) surveys; preparation of rectified orthophoto quads; scanning, vectorization, and geo-referencing of historical maps, and documents.

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- I.J. Engineering, hydraulic and hydrologic studies, floodplain mapping and inundation studies, groundwater and surface water studies; flood routing studies; backwater studies; reservoir routing studies; sediment transport modeling; dam break analysis; sedimentation and scour analysis; pump station analysis; aquifer studies, groundwater modeling, development of inundation maps, and reservoir capacity studies.
- I.K. Design and Bidding Services – Preparation of construction plans, specifications, and cost estimates for all phases of design from conceptual to final in the areas of architectural, civil, structural, mechanical, electrical, safety, security, communication, and instrumentation. Review and evaluation of third-party studies, reports, investigations, proposals, conceptual designs, and plans and specifications in both the English and Spanish language and Imperial and International System (SI) units. Design and bidding services may include preparation of contract solicitation documents and bid evaluation of various types of procurement actions including but not limited to: conventional design-bid build, design-build, design-build (construction manager at risk) and alternative delivery methods, design-build operation, and design-build-operate-transfer procurement actions. Services may also include responding to questions during bidding of projects, attending meetings, issuing addendums, preparing schedules, maintaining files and documents, and construction related bidding procedures. Construction documents may be based upon lump sum pricing, unit prices, cost plus, or time and materials as defined in each Task Order.
- I.L. Construction Services as an extension of Design Services – Provide services from the designer of record during construction in clarifying/reviewing documentation. Services include but are not limited to: review and respond to Requests for Information and Requests for Clarifications; review of technical submittals; clarify discrepancies in design documents and provide modified stamped drawings and/or specifications when required; participate in construction meetings and visit job site(s) at least once a month; provide written reports of visits detailing actions items required by any party involved in the construction contract; answer questions during the construction of the project, as needed; review record drawings; and participate in pre-final and final inspections.
- I.M. Construction Management (CM) Services – Provide services to efficiently and effectively manage construction projects on a day to day basis to include but not limited to: review of shop drawings and other construction contractor submittals; review of requests for changes and/or deviations; change order preparation and review of contractor proposals; responding to questions during construction (including Requests for Information/Requests for Clarification); submittal and schedule monitoring; enforce and participate in three-phase inspection meetings; perform onsite construction inspection; conduct quality assurance; participate in and prepare minutes of construction meetings; conduct labor interviews; prepare construction cost estimates; prepare technical analysis for review of cost proposals or contractual/technical issues; provision for training; review of operations and maintenance manuals; review staffing studies and plan of operations; performing value engineering review; utility negotiations support; performance of inspection and field environmental monitoring services; construction claim and expert witness support; enforce all contractual requirements, to include technical, environmental, and safety requirements; review of contractor's pay estimates; review and verification of all construction closeout documents to include record drawings, testing records, survey data, etc.; provide post construction support to monitor revegetation, inspect completion of punch list items or environmental measures; assist with warranty calls, and closeout of construction contract; prepare final recommendation for construction acceptance; coordination support with federal, state, and local agencies, construction contractors, the public, and any other parties involved in construction process; and maintain ongoing communications with construction contract COR about onsite activities, progress, and issues.
- I.N. Start-up services, including preparation of staffing plans, development and implementation of training programs, quality control, and safety programs; monitoring of facility start-up and

operation for a specified period of time after completion of construction, including assistance for resolution of warranty items; revising the operation and maintenance manual, and certifying facility performance.

## II. GENERAL REQUIREMENTS

II.A. Deliverables – Quantities and schedules for deliverables will be set forth in each Task Order. All deliverables shall be provided in the language(s) format specified in the Task Order (English, Spanish) and in the unit specified in the Task Order (SI units, Imperial units). All deliverables shall be provided in electronic native format (Microsoft (MS) Word, MS Excel, JPEG, AutoCAD, etc.) and in PDF format, and provided in hardcopy when required. Reduction shall be such that all printing is legible and reproducible. Electronic format and the required number of copies will be specified in each individual Task Order. All deliverables for design services shall be provided in the following phases of development: 30% Preliminary, 60% Draft, 90% Draft, 100% Pre-Final, and 100% Final.

II.A.1. Reports: All reports shall be 8.5 inch x 11 inch or as specified in Task Order. When hard copies are required, reports shall be printed on white bond paper and provided in binders. All photographs shall be clear, color copies. All drawings in reports shall be 8.5 inch x 11 inch or 11 inch x 17 inch, computer generated, clear and legible or as specified in Task Order. Reduction shall be such that all printing is legible and reproducible. Data or report tables shall be provided in spreadsheet format (MS Excel or as specified in the Task Order). Electronic files shall be produced at a minimum resolution of 400 dpi.

II.A.2. Plans: All final plans shall be computer generated (AutoCAD), submitted as standard black and white paper created per USIBWC's Drawing and CAD Standards (available at <https://www.ibwc.gov/Organization/Engineering/construction.html> under the link Std. Drawings). All preliminary and draft drawings shall be submitted as standard black and white copies. Applicable graphic symbols shall conform to the Architectural Graphic Standards or as described in the individual Task Orders. All plan drawings shall be geospatially referenced as described in the individual Task Orders.

II.A.3. Specifications:

- (a) Specifications shall be prepared per Construction Specification Institute (CSI) Master Format 2020, or as specified in Task Order. Materials shall be described, by recognized national or technical society standards. Specifications shall be provided on 8.5 inch x 11-inch bond paper, and provided with an index of sections. Specifications shall be provided in MS Word or as specified in Task Order.
- (b) Specifications must be prepared using USIBWC boilerplate specification template (available at <https://www.ibwc.gov/Organization/Engineering/construction.html> under the link Specifications). They shall be revised as needed to make them project specific. The Contractor is responsible for all technical specifications; however, the Contractor shall keep the format of the technical specifications the same as that provided in the boilerplate. Instructions for the boilerplate file are provided in the referenced link and shall be followed.
- (c) The Contractor shall include specifications that permit full and open competition and may include restrictive provisions or conditions using brand name or equal descriptions only to the extent necessary to satisfy the needs of the Government when authorized by the Government. Specifications shall not be written to specify a particular brand name, product, or feature of a product, peculiar to one manufacturer unless the particular brand name, product, or feature is essential

to the Government's requirements, and other companies' similar products would not meet the Governments' minimum requirements for the item. Contractor shall provide in the case of brand name or equal specification at least five salient characteristics of the product. Contractor shall identify references by date of issuance.

- II.A.4. Aerial Photography: All general site maps prepared from aerial photography for planning and/or inventory purposed shall be at a scale of 1:2500 or other mutually agreed upon scale, and shall have contour intervals of 0.5 meter or in Imperial units of 2 feet, or as specified by Task Order. All maps shall be provided on electronic media and hard copy if required. Horizontal and vertical scales shall be based upon current geodetic datum for the project area. All aerial maps shall also be provided in digital format and georeferenced when required by Task Order.
- II.A.5. Cost Estimates: Cost estimates shall reflect current prices for labor, materials, and equipment at the proposed location of the work. The estimates shall be itemized by the major items of construction. Lump sum amounts for major items, which cannot be readily analyzed, will not be accepted. All cost estimates shall be provided in U.S. dollars and projected to mid-point of construction using current Engineering News Record Construction Cost Indexes, Consumer Price Index, or other indices appropriate for the location in which the project is to be constructed. Contractor shall provide all sources used for preparing cost estimates such as RSMeans. Cost estimates utilizing Mexican economy may be required. Construction cost estimates will be utilized in preparing Government estimates for evaluating bids and as such will become confidential material for official use only. Such material shall not be divulged to anyone other than the Contracting Officer (CO) or their representative.
- II.A.6. Forecast Costs: Forecast cost estimating, for five year planning or as specified in Task Order, shall be itemized in the same format as Cost Estimates. Forecasts shall include the projected increase or decrease in costs, per year, should construction bidding and contracting be delayed.
- II.A.7. Geographic Information Systems (GIS): Infrastructure data, hydrologic, hydraulic, environmental, geotechnical, terrain and topography, survey data, and other pertinent data shall be entered into a GIS geodatabase in ESRI ArcGIS format or other mutually agreed upon format as described by Task Order. Geospatial data delivered must have complete metadata that meets or exceeds the minimum content required by either the Federal Geographic Data Committee's Content Standard for Digital Spatial Metadata (FGDC CSDSDGM) or the North American Profile of ISO 19115 2003 Standard or as specified in Task Order.
- II.A.8. Photographs:
- (a) Unless otherwise stated, the Contractor shall provide all photographs requested under Task Orders to the Government in digital camera format. Photographs shall be clear, in color and of at least eight (8) megapixel resolution with a minimum pixel array of 3,266 pixels by 2,450 pixels. The Contractor shall submit an electronic copy of all photographs in an electronic native format (jpg or tif), and in PDF in report format (Section II.A.1.). The CD will contain a text file to identify each photograph as described below in Paragraph (b).
  - (b) Each photograph shall be identified by a photo number, name of photographer, project name, date and time of photograph, location of photographer, orientation of photograph, and description of photograph. The above captioned information shall be labeled below each photograph in the report and provided in IBWC Form 148 (Excel format available at

<https://www.ibwc.gov/Organization/Engineering/construction.html> under the link Forms).

- (c) All photographs, aerials, slides, prints, negatives, video recordings, reports, documents, data, or other materials produced pursuant to this Contract shall be considered "work-made-for-hire" within the meaning and purview of Section 101 of the United States Copyright Act, 17 USC §101 and the Government shall be the copyright owner thereof and of all aspects, elements and components thereof in which copyright protection might subsist.

II.B. Standards

II.B.1. All designs, drawings, and specifications shall be prepared in accordance with applicable codes and regulations applicable to the country and state in which the project will be developed and shall conform to sound engineering practices. All criteria, factors, assumptions, and codes upon which the design is based are to be provided in the design report as well as the justification for the selection of these criteria. All specifications must be prepared using USIBWC boilerplate templates. All drawings must be prepared using USIBWC Drawing and CAD Standards.

II.B.2. For this Contract and each Task Order, the Contractor shall use personnel that have competence in that type of work required and abide by professional engineering, architectural, and survey standards and ethics for the state(s) noted in each Task Order. The Contractor shall use the sound judgement that meets or exceeds the standards of care for their profession in carrying out the work requirements.

II.C. Project Manager – The Contractor shall appoint a project coordinator or manager and alternate to serve as a single point of contact and liaison between the Contractor and the CO and/or their representative for the services required under the contract. The Contractor's Project Manager shall be responsible for the complete coordination of all work under this for their task orders. The Contractor's Project Manager shall be responsible for ensuring that adequate internal controls and review procedures are followed in order to eliminate conflicts, errors, and omissions and for ensuring that all technical requirements are met. The Project Manager or the alternate can be changed; however, 48 hours advance notice, in writing, of such change shall be provided to the Contracting Officer for review and approval.

II.D. Meetings – Progress and review meetings shall be held at a mutually agreed upon location for discussion of questions and problems relating to the work under the Task Order. Attendees shall be key players for the Task Order in question. If the assigned expert is not available, then an expert with equal qualifications may be substituted.

II.E. Monthly Updates – The Contractor shall submit a monthly update report for each individual Task Order to include updated schedule. The update will be submitted to the CO and respective Contracting Officer's Representative (COR) and shall address the following per project/Task Order: Major Accomplishments, Significant Problems and Proposed Solutions, Issues with Contractual Requirements, Issues with Meeting the Task Order Deliverable Dates/Delays, and Contractor's Proposed Action to Remediate the Delays, if applicable, and any other items required in the individual Task Order. The report shall be submitted by email.

II.F. Coordination – When directed by the CO, the Contractor shall be required to coordinate with other consultants involved with specific design aspects of projects being developed under separate contracts.

II.G. Value Engineering (VE) – The Contractor shall cooperate with an "outside" (i.e. a third party) VE consultant when directed by the CO. This may require the Contractor to respond to VE recommendations and incorporated recommendations of the VE consultants into the design. If

the Contractor is required to incorporate VE changes into the design documents, this work may be included by a modification to the Task Order if so determined by the CO.

- II.H. Permits – Should it become necessary to secure the right of ingress and egress to perform any of the work on properties not owned or controlled by the Government, all necessary permits, licenses, and approvals from all local, state, and/or federal authorities shall be obtained as necessary for the performance of the services. The Contractor shall secure the consent of the owner prior to entry on such property. In the event the owner requires the payment of a fee for a license to enter upon and/or use of such property, the Contractor, when so directed by the CO, shall pay such fee and obtain a receipt. The Contractor, upon submission of such receipt, shall be reimbursed for the full amount thereof in accordance with the terms and conditions of this Contract.
- II.I. Resubmittal – In the event that documents submitted for review, as described above or in the individual Task Order, are deficient or incomplete as specifically defined in the Task Order for a particular stage of completion, the Contractor shall correct the deficiencies and resubmit the documents. No partial resubmittals will be accepted. The Contractor shall assume all costs due to the resubmittal of documents.
- II.J. Work Plan – When required by a specific Task Order, the Contractor shall submit a Work Plan (WP). The WP shall describe the detailed approach for the performance of the Task Order, based upon the Government's Scope of Work. At minimum, the WP shall contain the following elements:
  - II.J.1. Introduction: A general explanation documenting the task and goals.
  - II.J.2. Work Plan Approach: Explanation of how the activities will satisfy the requirements.
  - II.J.3. Key Personnel: Identification of key personnel to be used on the project and their responsibilities.
  - II.J.4. Quality Control: A description of the quality control organization, including a chart showing lines of authority and acknowledgement that the quality control plan shall be implemented for all aspect of the work specified in the Task Order.
  - II.J.5. Schedule: An overall schedule for the execution of the work required by the Task Order shall be included in the WP. The schedule shall identify major project phases (environmental, planning, design, and construction) and shall be prepared using the Critical Path Method (MS Project 2017, or as specified in Task Order).
- II.K. Participation – During the current Contract year, the Contractor shall submit proposals on 75% of the Requests for Proposals available to them or the USIBWC may consider not exercising the next option year.
- II.L. Copyright - The Government shall have unlimited rights in all data delivered under this Contract and in all data first produced in the performance of this Contract. The Government shall also have the right to limit assertion of copyright in data first produced in the performance of this Contract and to obtain assignment of copyright in that data. The Government has the right to limit the release and use of certain data. Data includes, but is not limited to, photographs, drawings, reports, GIS data, surveys, and any other items provided as deliverables under this Contract.
- II.M. Closeout Activities – Submission of final reports and resolution of any outstanding issues.