

SECTION C

DESCRIPTION/SPECIFICATIONS/WORK STATEMENTS

Architect-Engineer (AE) Services Design and Construction Support Services

1. GENERAL: This Section sets forth the general requirements for the performance of the various services required under the contract. Individual task orders to be assigned under this contract will identify specific requirements.

- a. Perform all or part of the following services as more specifically identified in task orders:

Services will be required for architectural, electrical, mechanical, civil, landscaping, and structural engineering. The A-E shall be able to provide for development of design-bid-build (DBB) packages and develop Requests for Proposal (RFP) packages for design-build (DB) projects; provide multi-disciplined design support and consultant services; provide cost/time estimating, cost control and scheduling services. The AE will be required to prepare plans/drawings, specifications, and design analysis as required. Provide design, CADD, BIM, and planning services for new construction and/or renovation, demolition, repair and alterations to existing facilities; provide engineering, design and related services and support to potentially include, but not limited to, any or all of the following: military construction programming and execution, topographic or boundary services, various engineering studies, site investigations and feasibility assessments, value engineering services, energy audits, force protection, fire protection and life safety systems, security and communication systems, subsurface geotechnical investigation and testing, hydrology/hydraulic assessment, environmental studies/surveys, and abatement design services, landscaping, architectural evaluations, architectural hardware, Third Party Certification, electronic and communications systems, ASHRAE Level I, II & III Energy Audits, NEPA compliance, environmental and EPA regulatory considerations for storm water and site drainage, pollution prevention plans, Section 404 Permits and construction site requirement, and construction phase services as a follow on option for DB or DBB projects. All work must be done by or under the direct supervision of licensed professional Engineers, Architects or Land Surveyors as defined by State Law. The AE may be required to provide construction and management support services and/or various types of services such as verification of existing underground utility locations, inspections, and reports as related to project designs and studies, including hazardous, toxic, and radioactive waste (HTRW) studies. Projects may range from interior and exterior renovations of mission, base and community support facilities to upgrades to utility infrastructure systems. Services may also include preparation of environmental planning documents that outline process, procedural and regulatory responsibilities for FAFB personnel/organizations and contractors. Work shall include (1) obtaining appropriate permits, licenses and regulatory approvals; (2) conducting site investigations and pilot studies; (3) performing soil, air and water sampling/analysis/interpretation; (4) performing environmental assessments; (5) preparing work plans, site-specific health/safety plans and sampling/analysis plans; and, (6) developing plans and specifications for facility/infrastructure installation/ improvement, environmental remediation projects and environmental equipment purchase/installation. Some asbestos, lead paint and other environmental studies may be required.

(1) Utilize Government designs, drawings, functional relationship diagrams, specifications and standards, including any applicable regulations, instructions, engineering technical letters, and design guide criteria for buildings and other structures as necessary to meet the requirements of the approved layout of the proposed project.

(2) Prepare, subject to the approval of the Contracting Officer (CO), preliminary studies, sketches and layout plans, reports and programming documents (DD Form 1391), including estimates of the cost of the proposed project and of all structures, utilities and appurtenances. The number of copies of deliverables to be furnished to the Government will be stated in each task order.

b. Design Policy and Criteria: Project designs shall conform to applicable national codes and regulations for building construction and safety. Modern construction techniques shall be incorporated to obtain quality and economy, and to provide a functionally complete and usable facility. The following master list of Technical References represents a comprehensive listing of Federal Regulations and other Design Criteria which may become an integral part of Task Order execution. This listing is not all-inclusive and may be further specified within each individual Task Order based on the project requirements. Documents are available from the Government.

(1) Fairchild AFB (FAFB) Base Design Guide (BDG), current version, (available digitally) and the references listed within.

(2) FAFB Installation Facility Standards (IFS), Feb 22.

(3) Other Air Force Documents and criteria as applicable.

c. Administration and Conferences: During the course of project preparation, the AE will be called upon to attend conferences pertaining to the project. Prepare written minutes of all conferences, pertinent instructions, and information received verbally or otherwise. Transmit a copy of the memoranda to the CO, along with copies for all attendees, within two working days. Include a dated transmittal letter with all data submittals itemizing components of the submittal. Submittal due dates established in task orders are no-later-than receipt dates in the CO's office. Receipt is NLT 4:30 P.M. of the due date.

d. Government-Furnished Information and Material: The following information and material will be provided to the AE upon request:

(1) Project location.

(2) Utility maps of the project site (electrical, gas, sewer, water and steam) used as reference only.

(3) Limited as-built drawings for the existing facility.

(4) Study, investigation, and analysis reports.

(5) 22" x 34" title sheet.

(6) Drafting standards.

- (7) AF Form 1391, FY_____ Military Construction Project Data.
- (8) AF Form 1391c, FY_____ Military Construction Project Data (Continuation).
- (9) AF Form 332, Base Civil Engineer Work Request

All such materials are not guaranteed to represent actual conditions and shall therefore be field verified by the AE before use or incorporation into the design. Note changes required through the field verification process.

e. Quality Control: The AE shall be directly responsible for the professional and technical accuracy/competency, and the coordination of all designs, drawings, specifications, and other work furnished under this contract. Thoroughly review and correct all documents before each design submission to assure technical accuracy, correct spelling, and coordination between specifications and drawings of all design disciplines. Correct or revise errors and deficiencies in submittal documents without additional cost, time, or fee to the Government.

2. AE SERVICES: Perform all services required to accomplish the intent of the work specified by each task order, and unless otherwise specifically provided therein, perform the required services in accordance with the following requirements.

a. Studies and Reports:

(1) Perform all field and office work as required to accomplish specific studies.

(2) Drawings and Sketches: Format drawings and sketches to clearly convey the information being presented.

(3) Cost Estimates: Prepare required estimates of cost for individual components or features of the project, and for the project as a whole. Break down estimates into items of construction, as approved by the CO. Base estimates on current material and labor costs, supplemented with inflation costs projected to the midpoint of construction, as identified in each task order. Compile a listing of all items included in the project, summarize the cost information, and add project overhead, profit, markups, and any other applicable cost indexes. Detail estimates with unit price cost data to permit analysis of their adequacy and completeness. Do not use lump sum line items.

(4) Reports: Reports shall present the following:

(a) Include a narrative description summarizing the context of the study and investigation.

(b) Describe all plans and schemes considered for obtaining the desired end result of the study.

(c) Furnish drawings and sketches as necessary to present and illustrate the details and results of the study.

(d) Include estimates of construction costs, including comparative costs for indicated alternate plans and schemes.

(e) Include a summary of results, conclusions and recommendations.

b. Preliminary Designs and Site Plans:

(1) General:

(a) Prepare preliminary designs based upon the project criteria and instructions. Preliminary designs are required for all features of the project, including the siting of facilities, except as noted in subparagraph 2.b. (1) (c) below for site adaptation projects.

(b) Submit preliminary designs as scale line drawings prepared at contract plan scale on 24" x 36" sheets. Submit preliminary designs in sufficient detail to show adequacy of design, the utilization of the time involved, and conformance with the intent of the project, as set forth in the instructions herein and in each task order.

(c) For facilities involving site adaptation of available plans, preliminary designs are not required for any construction feature to be incorporated in the project without change from the design shown on the basic plans. Hence, if the plans can be site adapted without changes in the superstructure, preliminary designs are required for the modifications only.

(d) Coordinate preliminary drawings with the Outline Specifications to clearly indicate type and sizes of materials, utilities, etc., and specifically list separately all Contractor-furnished equipment and all Government-furnished equipment to be installed by the Contractor.

(2) Site Plans:

(a) General: Prepare and submit site plans showing the location of each proposed building and facility, critical grades, contours, drainage and relation of buildings and facilities to existing buildings, facilities, street systems, above and underground utilities, entrances, and finished grades. Present grades shall be indicated. Cultural features shall be indicated. At locations where survey control coordinate systems or base lines have been established, tie in buildings and facilities to such control coordinate systems. Prepare site plans on 24" by 36" sheets with all details shown clearly and accurately. Include logs of sub-surface explorations as applicable.

(b) Preliminary Submission: At the earliest practicable date, and in no case later than the limiting dates established in the task order, submit for preliminary approval, one copy of the site plan(s) developed to the extent necessary to show the siting for each building or facility involved in relation with adjacent buildings, facilities and street systems. Number of copies required by the individual task order, may vary on a case-by-case basis.

(c) Final Submission: Upon approval of the preliminary submission of the site plan(s), complete the site plan(s) to include all details indicated in 2.b. (2) (a) above, including any changes directed with the preliminary siting review by the Government.

(3) Preliminary Designs for Buildings and Structures: (See paragraph 2.b.(1)(c) for applicability to site adaptation projects) – Include floor plans showing wall thicknesses, elevations and locations of principal items of installed equipment with preliminary designs as follows:

(a) Clearly indicate all required controlling dimensions.

(b) Dimension floor plans showing functional arrangement of all areas; including corridors, exits, stairs, and utility spaces properly related to exterior access, roads, parking and service areas, etc. Give individual treatment to items involving special design and/or deviations from accepted standards, and to complex designs. Show gross and net floor areas for each floor and for the entire building. Indicate floor and roof framing, and the design live and wind loads. Show built-in, installed, and specialized portable equipment to scale. Show pertinent information regarding fire prevention and safety requirements.

(c) Include story heights on building elevations, along with fenestration and adaptation to finished grades at the site.

(d) Show sections of structures, including framing, partitions, suspended ceilings, (if any), ducts, vertical dimensions, etc. Include material and thicknesses, methods of attachment, and types of windows, with relation thereof to supporting structural columns or walls. Include analysis of existing structures and modify as required to support new work.

(e) For heating, air conditioning, mechanical ventilation and plumbing, and special features such as elevators, hoists, kitchen equipment, etc., indicate the location, capacity and space requirements of all major items of mechanical equipment. Include riser diagrams of ducts, pipes and equipment and their approximate locations. Indicate whether piping and duct work is exposed or concealed. Clearly state approximate operating range or capacity for heating, ventilation, air conditioning, and refrigeration equipment. Include requirements for balancing air handling systems and commissioning of heating, ventilating, air conditioning, and refrigerating systems.

(f) For electrical systems, indicate lighting arrangements, types of fixtures proposed, general light intensities, special electrical requirements of the Using Services, including communications and electronic facilities where applicable, light and power service entrance and distribution arrangement.

(g) Show conduits, including those to be wired by others, indicating whether conduits are concealed or exposed. Include riser diagrams showing service equipment, feeders,

and panels other than branch circuits. Show location, capacity and space requirements of all major items of equipment, including interior substations, service equipment, and panels. Indicate power, communication, and electronic features in sufficient detail to identify requirements clearly and to indicate the means of satisfying the requirements.

(h) Include separate lists of all contractor-furnished equipment, all Government-furnished equipment to be installed by the contractor, and equipment furnished and installed by the Government.

(4) Preliminary Designs for Utilities, Site Improvements and Similar Construction: Show preliminary design layouts of all facilities and appurtenances and location of all facilities served. Show general layouts for this type of construction on site plans described in subparagraph 2.b. (2) above. Prepare detailed preliminary designs as separate drawings if necessary, showing the following:

(a) Clearly indicate all required controlling dimensions.

(b) Include detailed plans, elevations and sections of special features. Indicate types of materials, capacities and sizes of major features and items of equipment.

(c) Include grading and typical sections of all project areas.

(d) Include profiles of pipelines.

(e) Include drainage features.

(5) Preliminary Designs for Roads, Walks, Open Storage, Parking Areas and Similar Construction: Show preliminary design layouts of all facilities and appurtenances, and location of all facilities served. Show general layouts for this type of construction on site plans described in subparagraph 2.b. (2) above. Prepare detailed preliminary designs as separate drawings if necessary, showing the following:

(a) Clearly indicate all required controlling dimensions.

(b) Include transverse cross sections of all roads, walks, and open storage areas, depicting the depth and types of subbase, base and pavement courses.

(c) Include layout and profile of each individual road and street, including drainage systems and structures, together with location and results of all soil investigations. Include buildings and other features, controlling grades and dimension of roads on these plans.

(d) Include layout of existing and finished contours of all parking areas and open storage areas, together with adjacent and contiguous buildings and other structures, including drainage systems and structures, and location and results of all soil investigations.

(e) Include layout of all typical street intersections, culverts, and major drainage structures.

(f) Include necessary plans, elevations, and sections of special features.

(6) Airfield and Heliport Paving and Drainage: Prepare preliminary designs for this type of construction in accordance with the requirements set forth above for site plans and utilities. Include the following data on the drawings:

- (a) Show existing pavement and location of proposed work.
- (b) Show grading and drainage.
- (c) Include results of foundation investigations, including soil profiles.
- (d) Include details of drainage structures.
- (e) Include profiles indicating finished grades of facilities.
- (f) Show clear and approach zones.
- (g) Show lateral clearances from all paved areas to fixed and moveable objects.
- (h) Include all joint details.
- (i) Detail thicknesses and types of pavements to be constructed.
- (j) Include layout and details of tie-down anchors.
- (k) Include pavement-marking plans for traffic and non-traffic areas of airfield pavements.

(7) Steam, Hot Water or Forced Air Heating Systems and Air Conditioning Systems: Prepare preliminary designs for this type of construction in accordance with the requirements set forth above for site plans and utilities, and preliminary designs for buildings and structures. Include the following on the drawings:

(a) Site Plans: Include location of all distribution lines, conflicting utilities, and manholes.

(b) Building and Structure Drawings:

1. Ensure individual treatment is given to itemize all features of complex designs.

2. Show equipment clearances and heights, piping arrangements, support details, etc. on elevations, sections, and details as necessary for proper installation.

3. Include detail drawings showing proper capacities of all major items of equipment and necessary accessories, water flow, temperatures and pressures, flow and control diagrams, fuel-handling and storage equipment, distribution-line and expansion-loop details, manhole details, water-treatment and storage facilities, etc.

(8) Hydrant Refueling Systems: Prepare preliminary designs for this type of construction in accordance with the requirements set forth above for site plans and utilities, and preliminary designs for buildings and structures. Include the following on the drawings:

(a) Mechanical Drawings: Show the complete layout plan, mechanical details of pump houses, control rooms, tanks, and lateral control pits. Show relative elevations of refueling pump discharge, defueling pump, and profiles of laterals with elevations of refueling hydrant outlets.

(b) Electrical Drawings: Show the complete layout plan, electrical details of pump house, control rooms, and hydrant lateral control pits, wiring diagram of complete control system, and sizes of transformers, cables, and circuit breakers.

(9) Bulk Petroleum, Oil, and Lubricant (POL) Facilities: Prepare preliminary designs for POL facilities in accordance with the requirements set forth above for site plans and utilities and preliminary designs for buildings and structures. Include the following on the drawings:

(a) Mechanical Drawings: Show the complete layout plan, details of unloading header, pump and tank manifolds, relative elevations of unloading header, unloading pumps and bulk tanks, and profile of transfer line from bulk to operating storage.

(b) Electrical Drawings: Show the complete layout plan, electrical details of pump houses, wiring diagram of complete control system, and sizes of transformers, cables and circuit breakers.

c. Design Analysis:

(1) General: For each task order, prepare and submit a design analysis of basic parts of the project, including structural, mechanical and electrical features and each utility. Include all load calculations, hydraulic computations, criteria, factors, assumptions and codes/regulations/instructions on which the design is based. Where applicable, include the planned utilization, relocation or removal of existing facilities. Basis-of-Design shall include, but not be limited to, specific features set forth in this paragraph. Design analysis shall be included for each design submittal; subsequent submittals shall include the current pertinent information, not just token resubmitted information for the sake of fulfilling the submittal requirement. Solutions shall follow specific task order SOWs and approved official documentation constraints but also consider alternate recommendations based on AE professional judgment. The recommendations shall be presented for Government approval and incorporation into the project.

(2) Steam, Hot Water or Forced Air Heating Systems and Air Conditioning: In addition to requirements of subparagraph 2.c. (1), show detailed building heating/cooling load calculations, determination of the size and number of boilers/air conditioning units, size and flow calculations, expansion-tank sizing, and all other calculations required to determine the proper operation of the system(s) with provisions for future expansion, if required.

d. Outline Specifications:

(1) Prepare outline specifications covering all contemplated construction materials and equipment to be incorporated in the project as the result of design by the AE.

(2) Coordinate outline specifications with the requirements for Preliminary Design Drawings.

(3) Incorporate the American Institute of Architects (AIA) 50-Division MASTERSPEC FORMAT system, current version.

(4) Include the following in specific outline specifications:

(a) Describe each facility involved in the project.

(b) Approximate capacities of the major mechanical items, with a brief description of their function and operation of the system.

(c) Include all data required for preliminary engineering and architectural analysis of the project that is not shown on the preliminary drawings or included in the Basis-of-Design.

(d) List any Contractor Options to be incorporated in the project design.

(e) For roads, walks, parking areas, open storage areas, airfield and heliport pavement and drainage, include a list of Air Force Guide Specifications to be used in construction of the facilities. When guide specifications include alternates for materials or construction methods, indicate the alternate proposal for use.

e. Cost Estimates: Make cost estimates accurate and realistic, reflecting current prices for work and materials, and taking into account probable labor or material shortages that may occur because of other known work in the area. Where projects involve multiple work classifications, as defined in AFI 32-1032, break cost estimates out by work classification, including all associated general requirement costs. Break cost estimates down into major items of construction, as approved by the CO. Make further break downs of major items into component units of labor and materials, showing the quantity and cost of each unit. Lump sum amounts for major items are not acceptable. Present separate costs for each line item, broken down into costs for individual buildings, facilities and components thereof as directed by the CO. For new buildings and major renovations to existing buildings, include the overall building cost per square foot in the summary of individual line item costs. As cost estimates reveal the project as designed will exceed the project programmed funding amount, the AE shall make recommendations to get the project within budget. This may be accomplished in several ways; the AE shall propose additive price items, alternate designs, optional designs, reduction of scope, etc. to meet the requirements of the project. Estimates shall be done for these proposals to validate the design for base price items are within budget. Submit two copies of cost estimates, unless modified by the task order on a case-by-case basis.

f. Final Design:

(1) Accomplish the final detail design of the project complete with all component parts and appurtenances. Base the final design on the project criteria, and where furnished or required, on the approved preliminary design. Ensure the final design is within the approved cost estimate

or within the target construction cost or initiated within the target construction cost and completed within the approved preliminary cost estimate, as applicable to the project involved.

(2) For structures involving site adaptation of plans, the final design shall be for all modifications, additions and appurtenances required to adapt the design of structures as shown on the plans to local site conditions.

(3) Include a detailed estimate of the anticipated construction time for the project at the 95 percent submittal. Include allowances for mobilization, material purchases, base entry approvals, actual construction time and bad weather.

g. Final Design Analyses: Prepare and submit design analyses for all designs prepared by the AE, comprising statements of all criteria, loads, factors, assumptions and codes used in the final design, diagrams and charts developed in connection with designs, and the computations made thereon. Prepare design analyses for airfield pavements strictly in accordance with the format furnished by the CO. Submit five copies of design analyses, unless modified by the task order on a case-by-case basis.

h. Contract Drawings: Prepare complete detailed drawings for use in the contract construction of the project. Comply with requirements of FAFB BDG, Division 0, Miscellaneous Requirements, Section 00001, Specifications, Drawings and Drafting Requirements, included as Appendix A to this Section. Include coordinates or ties to base lines of at least two adjacent corners of each building and structure, and principal points on utility lines, roads, railroads, pavements and similar construction features. Prepare the contract drawings for the entire project to be designed under each task order, suitable for solicitation and award of a contract to accomplish the work. Modify reproducible tracings as necessary for readability. All reproduction of completed drawings for solicitation/award of the project will be by the Government.

k. Contract Specifications: Prepare complete contract specifications for solicitation of the entire project. Conform to the AIA MASTERSPEC FORMAT for specifications. Prepare contract specifications in a single volume covering all items of work in accordance with applicable regulations and manuals. Include the complete Technical Provisions for the project involved. Comply with requirements of FAFB BDG, Division 0, Miscellaneous Requirements, Section 00001, Specifications, Drawings and Drafting Requirements, included as Appendix A to this Section.

l. Internal Design Review: Internally review incremental and final submittal documents before submission to the CO, and make corrections prior to submittal. Furnish written certification to the CO that all disciplines have reviewed and completed crosschecks of all drawings and specifications for errors and omissions, as part of the transmittal document for the specific submittals. AEs shall incorporate a program to check their drawings for the proper drafting standards and AutoCAD standard layering. AEs shall also use a similar checker for GIS standards.

m. Architect-Engineer Advice during Solicitation and Execution of the Project: Furnish AE advice and deliverables in connection with the design as may be requested by the CO. It is mandatory (deliverable) that the AE attends the solicitation site visit and the pre-award preconstruction conference.

n. Construction Support Services: Perform all services required to accomplish the intent of the work specified by the task order. Construction support services personnel will be required to sign nondisclosure agreements for the purpose of reviewing contractor proposals and participation in negotiations. Unless otherwise specifically provided therein, perform the required services in accordance with the following requirements:

(1) As a general rule, quality control (QC) support during the contract performance period of projects is the responsibility of the contractor. Task orders issued for construction support services typically center on quality assurance (QA) responsibilities, performed on the Government's behalf. Performance of construction support services does not relieve the AE or the construction contractor from completing the project in accordance with the contract documents, and the Government does not relinquish its right for approval and disapproval of project contractual requirements. This service also does not allow the AE to contractually obligate the Government with regards to the construction contract. The CO has sole authority to obligate/de-obligate the Government or to make any changes to the contract. Coordinate such actions with the Government and if any contractual changes are necessary, the Government will administer them. Construction support services typically include:

(a) Administrative requirements for general contract coordination. This includes, but is not limited to, preparing and coordination responses to contractor questions, requests for information (RFIs), scheduling inspections, and keeping the Government apprised of upcoming critical events/phases of work.

(b) Administrative requirements for project meetings. This includes, but is not limited to, taking and disseminating meeting minutes, and taking follow-up actions on tasks that come from meetings.

(c) Administrative requirements for submittal processing. This includes, but is not limited to, obtaining Government coordination for all variances; color selections, progress schedule changes, and other submittals that affect time, cost, or aesthetics.

(d) Administrative requirements for quality assurance.

(e) Administrative requirements and Government coordination for contractor payment. This includes, but is not limited to, keeping the Government up to date on weekly progress, both scheduled and actual.

(f) Administrative requirements and Government coordination for contract changes. This includes, but is not limited to, preparing cost change estimates, and tracking pending, current, and finalized changes. The Government will prepare and process required funding documents. The AE will not participate in any negotiations. The AE providing support as the Construction Manager (CM) under the requirements of the Construction Support Services portions of the SOW, shall participate with the Government in the review of RFIs leading to the construction contractor's submittal of Change Order Proposals (COPs). The AE shall develop or assist in the development of the GE, review the COPs, provide technical and cost analysis of the COPs and the GE and participate in negotiations, as necessary, on changes resulting from differing site conditions or new requirements under the current requirements of the SOW.

(g) Administrative requirements for contract closeout. This includes, but is not

limited to, compiling punchlist items, verifying completion of punchlist items, and reviewing closeout documents submitted by the contractor as called for in their contract.

(2) Construction Criteria: Ensure the contractor's performance conforms to the project documents and including, but not limited to, the following functional and descriptive data:

- (a) International Building Code.
- (b) National Plumbing Code.
- (c) National Electrical Code.
- (d) National Fire Protection Code.
- (e) National Safety Code.
- (f) US Army Corps of Engineers Safety and Health Requirements Manual EM 385-1-1.
- (g) ASHRAE Codes.
- (h) ANSI Building Design Codes.

(3) Schedule of Services: Perform construction support services as follows:

- (a) Part 1, Preconstruction Conference: Attend the preconstruction conference.
- (b) Part 2, General Contract Administration: Upon receipt of the Contractor's safety plan, QC plan, progress schedule, submittals, requests for information/clarification, requests for proposals, progress payment invoicing, and other contractor information, prepare complete documentation consisting of necessary coordination, additional contract drawings, technical specifications, design analysis, and detailed cost estimates for accomplishment of the project in accordance with the requirements of the Contract Documents. Include Government coordination and responses, review comments, annotated with AE responses, and records of telephone conversations with the Government and Contractor regarding specific criteria or directions.
- (c) Contract Changes: AE shall be responsible to prepare changes to the specifications and drawings, cost estimates, and any other memoranda for, but not limited to, differing site conditions, customer changes, and requests for information. The project's designer of record shall be solely responsible for all required changes and costs stemming from design deficiencies. If necessary to administer contract changes for differing site conditions, user requested changes, and requests for information, the construction support service AE shall prepare and furnish the following to the Government:

- 1. Detailed construction specifications.
- 2. Detailed definitive drawings, details, and schedules.

3. Detailed cost estimate. Furnish detailed cost estimate, prepared by computing quantities and applying prevailing local material, labor, and contractor overhead and profit prices. Ensure the estimate is in sufficient detail for practical comparison with the Contractor's cost proposal.

(d) Part 3, Construction Closeout:

1. Receive from the contractor and review all closeout documents for the project. Have the contractor make corrections as necessary and forward each final document to the CO as soon as it's completed/acceptable. Documents include, but are not limited to, the following:

- a. As-built drawings.
- b. O&M manuals.
- c. Warranties.
- d. Punchlists.
- e. Project memorandum.

2. Attend and conduct all pre-final and final inspections for the Government. Prepare punchlist(s) of all contractor deficiencies found during pre-final and final inspections and certify to the CO in writing when all punchlist items have been corrected.

(4) Government Furnished Information: The Government, through the CO, will either furnish or will have available for the AE one copy of the contract documents and forms necessary for the execution of contract support services.

(5) Contract Phases: Construction support services shall be phased as follows:

(a) Pre-Construction: This phase represents initial construction contract implementation and processing of prescribed contract requirements.

(b) Main Line Construction: This represents administration of the contract and the associated processing of paperwork for duration of the project.

(c) Final Construction (100%): This is the completed pre-final(s) and completed final for the project. Receipt of all administrative items is the last task of work.

(6) Paperwork: Prepare paperwork in accordance with the following requirements:

(a) Prepare correspondence to the Government by formal transmittal. Ongoing observance, processing of paperwork and the general CM for the project shall utilize applicable Government forms. Forms will be provided to the AE for reproduction and use on the project.

(b) Responses to RFIs, issued by the AE, shall be complete and sufficiently clear so that any competent manufacturer, supplier, construction firm, or engineer can readily discern the information provided.

(7) Cost Estimates: Any cost estimates necessary for the project shall be prepared in accordance with Part I, Section C of the contract and AFI 32-1032, "Planning and Programming Real Property Maintenance Projects Using Appropriated Funds (APF)".

(8) Drawings: Any drawings necessary for the project shall be prepared in accordance with Part I, Section C of contract, except as modified and/or clarified by this Statement of Work. Additions to the contract drawings stemming from amendments/modifications once the project is advertised/awarded shall be completed as page supplements and annotated accordingly. Provide additional drawings in electronic format on disc, plus one full-size copy and four half-size paper copies, to the CO.

(a) All original drawings required shall be CADD prepared. Also furnish an electronic file copy of required drawings to the CO. All drawings shall be prepared to permit clear and legible reproduction, including reproduction at 50% reduction.

(b) FAFB Civil Engineering will provide a sample drawing format for the AEs incorporation.

(9) CM Administration: The CM requirements shall be prepared in accordance with the contract. All word processing information shall be assembled with printed, front and back, card stock covers, spiral bound. Specifically, the cover copy shall include the project number and title, the contract number, date, and the AEs name. Written correspondence shall be format compatible with Microsoft® Word for Windows™, current version software. Calculation spreadsheets shall be compatible with Microsoft® Excel for Windows™, current version software.

(10) Special Conditions:

(a) Project Manager (PM) and/or Coordinator: The AE shall appoint a PM and/or Coordinator to serve as a single point of contact and liaison between the AE and the CO and/or his authorized representative for all work required in this contract. Upon award of the contract, the AE shall submit in writing, for CO approval, the name and qualifications of the individual requested to be designated. The PM and/or Coordinator shall be responsible for the complete coordination of the work under the contract. The CO reserves the right to have the AE replace the PM and/or Coordinator when requested. The AE shall then submit a replacement and the individual's qualifications for CO approval.

(b) Meetings and Conferences:

1. Meetings: Periodic meetings shall be held whenever requested by the CO

or the AE for discussion of questions and problems relating to the work required under the contract.

2. Conferences: The AE and/or his designated representative shall be required to attend and participate in all design conferences, including orientation and/or other conferences pertinent to the work under this contract as directed by the CO.

(c) Confirmation Notices: The AE shall be required to provide a record of all conferences, meetings, discussions, verbal directions, telephone conversations, etc., participated in by the A-E and/or his designated representative on matters relative to the contract and the work. These records, entitled "Confirmation Notices", shall be numbered sequentially and shall fully identify all participating personnel, subject discussed and any conclusions reached. The AE shall forward to the CO reproducible copies of the conference minutes. Forwarding shall be done as soon as possible, but not later than five working days after the conference. Distribution of these minutes will be made by the Government.

(d) Site Visits, Inspections and Investigations: The AE and/or his designated representative shall visit and inspect/investigate the site of the project as necessary and as required by each task order during construction and accomplishment of the work. All travel costs and expenses incurred by the AE and/or his designated representative, including consultants, for such visits, inspections, investigations and conferences shall be included in the lump sum price of the basic contract.

(e) Weekly/Monthly Logs: AE to submit weekly/monthly log/report of the PM's hours expended on the task order to include, but not limited to, site visits, modifications and conferences, etc. This will include verification of Contractor QC activity. The intent is for the AE to submit activity reports to include AE and subcontractor/consultant activities during the reporting period for all disciplines for the appropriate reporting phase on-going/completed (35, 65, 95, 100%) and should be consistent with their proposal (hours/costs) and task order schedule (submittal development time, Government review time, etc.) The activity report is to be submitted and approved prior to submission of monthly invoicing in WAWF.

o. Additional Design Support Services: Generally, the preceding paragraphs outline necessary requirements for Design-Bid-Build procurements. The Government will have Design- Build project requirements as well. As provided in specific Task Orders, the AE shall develop and submit Request for Proposal (RFP) project documents. The required documents necessary to support a Design-Build RFP project are different than a partial or complete AE Design-Bid- Build effort. Specific RFP requirements/details will be provided in the Task Order SOW.

1. GENERAL TECHNICAL DEFINITIONS AND INSTRUCTIONS: The following technical definitions and instructions are applicable to individual task orders involving delineated work unless otherwise provided in specific work orders.

a. Utilities:

(1) Definition: The term "utilities" shall be construed to mean all interior and exterior

utilities, such as water, gas, sewer, drainage, steam, high-temperature hot water, electricity, telephone, and other similar systems.

(2) Work Under This Contract: Under each task order, work shall include the design (preliminary and/or final as required) of all interior and exterior utilities required to support the project, the design (preliminary and/or final) of any required protection of any existing utilities which will be affected by construction of other work designed under this contract, and of any required relocation or modification of any federally owned existing utilities which will be affected.

(3) Limitations:

(a) Pipe Lines: Design of utility pipe lines shall include all portions within structures and between structures and the principal mains, including any necessary extensions of the principal mains to the vicinity of the structure served, except that of central heat distribution systems. The design shall include the interior heating system of the structure to be heated and such connection to the heat distribution system as described in the specific work order involved.

(b) Electrical Systems: Design of electrical system shall include all portions within structures, including service entrance and weatherhead, or the source of power for each structure involved, as provided in specific project criteria.

(c) Equipment and Appurtenances: Design of all utility systems shall include all equipment, accessories and appurtenances required for the proper functioning of the system involved.

(d) Connections to Existing Utility Systems: The CO will designate the points at which connections are to be made to any existing utility system. Where alternate sources are designated for any single utility, the AE shall make an engineering determination of the most feasible and economical source to be utilized, and design the connection thereto.

(4) Field Reconnaissance: The CO will furnish all available data pertaining to all utility lines known to exist at and in the immediate vicinity of the project site. The AE shall verify by field reconnaissance the current location of all such utility lines and of any additional utility lines. In the event that field reconnaissance reveals any conditions differing from the Government-furnished data, the AE shall advise the CO in writing at the earliest practical date. The CO will review reported differences for possible changes in the construction contract and/or task order.

b. Site Improvements:

(1) Definition: The term "site improvements" shall be construed to mean all grading, topsoiling, seeding, planting, roads, walks, access drives, parking areas, hardstands, fencing and similar features.

(2) Work Under This Contract:

(a) Work under each task order shall include the design (preliminary and/or final as required) of all site improvements required to develop the site or sites for the intended use thereof. Site improvements shall blend with and properly join with existing improvements in adjacent areas.

(b) In the event that construction designed under a task order will affect any existing site improvements, design under that task order shall also provide for any required protection, repair or replacement of such existing improvements that will result from the construction.

c. Submittals/Deliverables: The following documents shall be required for the respective design submission.

(1) Project Definition/Concept Design (15%-35%):

(a) Design Analysis: Include basic structural analysis (including floor/roof loading and design live/wind loads), analysis of existing utilities systems and basic design computations for structural, electrical and mechanical systems. Present basic interior, architectural design, and mechanical and electrical systems. Include submission of Green Procurement analysis for all projects. The AE is to identify Green Procurement requirements and make recommendations throughout the design phases.

(b) Cost Estimate: Include an initial cost estimate for the total scope of work described in each task order, prepared in sufficient detail to quantify major items and their unit costs (no lump sum line items). Estimate format shall utilize AF Form 3052. Specific information shall be included with regard to development of line items for Contractor overhead and profit. Estimate breakdown to include state sales tax, bonding, and insurance and include professional overhead fees that are relative to Spokane and related disciplines in lieu of generic pricing guides. Also include first and second tier markups, mobilization and demobilization. Cost should be broken out based on the three separate task order construction phases (Phase One- Material Gathering/Submittals, Phase Two- Physical Work, and Phase Three- Closeout). Note that the Government shall pay state sales tax on materials used in the project. Contingency percentage may be included at this design phase as deemed necessary by the AE.

(c) Outline Specifications: Develop outline specifications based on CSI format with an index listing all probable sections intended for use in each task order. Include first cut development of the General/Products/Execution paragraphs and subparagraphs for each section. An index of the applicable divisions and sections does not constitute "outline specifications". Cover the total proposed construction including all contractor installed and furnished equipment.

(d) Product Literature: Include catalog cuts and descriptive data for major components proposed in the design solution.

(e) Color Boards: Include actual material samples for architectural finish materials, for color, size and texture. Submittal shall consist of such materials mounted on illustration/foam board in 8 1/2" x 11" format.

(f) Confirmation Notices: Include any confirmation notices as described in paragraph 2.n. (10) (d) of this Statement of Work.

(g) Drawings:

1. Site Plan (Scale: 1" = 50'): Show location of existing and proposed streets, walks, parking, service drives; existing and proposed utility service lines, the proposed building location and configuration; existing topographic conditions and proposed drainage plan.

2. Key Plan (Scale: 1/16" - 1'0"): Give general layout and surrounding features and key all other plans.

3. Detail Floor Plan (Scale: 1/8" = 1'0"): Show location of walls, partitions, interior/exterior doors, windows, layout and identification of equipment, etc., in sufficient detail to permit comprehensive review.

4. Elevations (Scale: 1/8" = 1'0"): Show exterior elevations, including planned materials, in sufficient detail to portray the intended exterior appearance. Provide a minimum of two building cross-sections to include type of fenestration/windows and relation to supporting structural columns and walls.

5. Sections, Details and Schedules: Include sections, details and schedules as necessary to clearly describe the proposed design solution(s).

(2) Design Development (65%): Comments from the Government's review of project definition/concept design submittal(s) will be furnished to the AE. Government imposed major changes in the design after approval of the concept design will be subject to negotiations for any increase in fee. Changes due to error by the AE shall be corrected at no additional cost. The following documents shall be provided as deemed necessary to convey the design intention in a construction contract.

(a) Design Analysis: Include any updates to previously submitted information (e.g., description of work, computations, evaluations, analyses). Include Government review comments, annotated with AE responses, and records of telephone conversations with the Government regarding specific criteria or design directions (confirmation notices).

(b) Cost Estimate: A detailed cost estimate for all major work disciplines shall be provided. Contractor's overhead, profit, insurance and taxes, and escalation shall be expressed as separate line items on a summary with unit rates shown for both material and labor (if applicable). Contingency percentage may be included at this design phase as deemed necessary by the AE.

(c) Specifications: Further developed specifications (AIA format), for the General/Products/Execution paragraphs and subparagraphs for each section applicable to the project.

(d) Product Literature: Include catalog cuts and descriptive data for major components proposed in the design solution, updated from previous submittal(s) if changed.

(e) Color Boards: Include actual material samples for architectural finish materials, for color, size and texture, updated from previous submittal(s) if changed. Submittal shall consist of such materials mounted on illustration/foam board in 8 1/2" x 11" format.

(f) Drawings- Including but not limited to:

1. Index.

2. Site Plan (Scale: 1" = 50').
3. Building Location and Orientation.
4. Existing Topographical Conditions Plan.
5. Grading and Drainage Plan Including Subsurface.
6. Soil Borings, Investigation, Plan and Logs.
7. Streets, Roads, Walks and Parking (existing and proposed).
8. Exterior Utilities.
9. Existing and Proposed Water Distribution.
10. Existing and Proposed Sanitary Sewer Distribution.
11. Existing and Proposed Mechanical Distribution.
12. Existing and Proposed Exterior Electrical Distribution.
13. Landscaping to Include Seeding, Planting, Fencing, Etc.
14. Architectural Drawings:
 - a. Overall Key Floor Plan (Scale: 1/16" = 1'0") with Room Legend.
 - b. Foundation Plan (Scale: 1/8" = 1'0").
 - c. Floor Plan (Scale: 1/8" = 1'0").
 - d. Roof Framing Plan (Scale: 1/8" = 1'0").
 - e. Roof Plan (Scale: 1/8" - 1'0").
 - f. Interior Elevations as Required.
 - g. Interior Details.
 - h. Architectural Sections and Details.
 - i. Room Finish Schedule.
 - j. Door Schedules.
 - k. Exterior Building Elevations.
 - l. Architectural Features.

- m. Equipment Schedule.
- n. Proposed Color Schedules for All Surface Finishes.
- o. Design/Decor: Provide Interior/Exterior Design Decor Package.

15. Mechanical Heating, Ventilation, Air Conditioning, Refrigeration and Plumbing Floor Plan (Scale: 1/8" = 1'0"): With systems layout complete with:

- a. Mechanical Details (larger scale required): Indicating exposed/concealed distribution.
- b. Riser Diagrams (isometric).
- c. Fixture and Equipment Schedules.
- d. Fire Protection Systems: To include class of construction, occupancy, type and scope of system, fire ratings, verification of supporting hydrant pressure, etc.
- e. Special Features such as Elevators, Hoists and Kitchen Equipment.

16. Electrical Drawings:

- a. Floor Plan (Scale: 1/8" = 1'0"): Fixture location, type of fixtures proposed and intensities, circuiting, switching, convenience outlets and electrical service to equipment.
- b. Panel Board Schedules.
- c. Electrical Details.
- d. Partial Developed Single Line Electrical Riser Diagrams.
- e. Fixture and Equipment Schedules.
- f. Symbol List.
- g. Alarm Systems (fire and intrusion).

(3) Construction Documents (95%): Submit the 95% final design completely incorporating all previous review comments, in final form ready for advertisement. Resubmit any items from previous submittal that may have been changed and/or modified by previous review comments.

(a) Design Analysis: Include any updates to previously submitted information (e.g., description of work, computations, evaluations, analyses, and any other pertinent information, and/or materials). Include Government review comments, annotated with AE responses, and records of telephone conversations with the Government regarding specific criteria or design

directions (confirmation notices). Also include analysis/recommendation for contract performance period, and phasing if applicable. Include any limitations for the contractor to accomplish work.

(b) Detailed Cost Estimate: A detailed cost estimate prepared by computing quantities and applying prevailing local material, labor, and contractor overhead and profit prices, shall be provided. The 95% estimate shall be in sufficient detail that it may be utilized for advertisement. No contingency percentage may be included at this design phase. By now the design shall be sufficiently decided that contingency is not necessary.

(c) Detailed Construction Specifications: Specifications shall be in final form ready for advertisement.

(d) Detailed definitive drawings, details, and schedules in final form ready for advertisement.

(e) Price Schedule: The AE shall develop a price schedule for the advertisement/solicitation of the project, including the pertinent details and descriptions of the solicitation. This includes, but is not limited to, base price items, options, alternates, price items, etc. The Government shall provide the format to the AE. The submittal shall include a blank format for the actual solicitation, and a format filled out, delineating the project estimate, for Government use.

(f) Color Boards: Include actual material samples for architectural finish materials, for color, size and texture, updated from previous submittal(s) if changed. Submittal shall consist of such materials mounted on illustration/foam board in 8 1/2" x 11" format.

(4) Construction Documents (100%): The corrected final design documents shall include all of the review comments with all final corrections completed. The AE shall submit the following:

(a) Two hard copies of final design analysis, cost estimate, specifications, price schedule, and other written items (bound), plus one copy (unbound). The AE shall provide an estimated performance period for the construction of the project. The AE shall also include any information pertinent to the project such as; long lead material deliveries, special construction and anticipated difficulty of obtaining materials or subcontracts. Include Government review comments, annotated with AE responses, any updates to pertinent information, and all memos and confirmation notices/records of meetings, conferences, verbal directions, telephone conversations, etc., participated in by the AE and the Government concerning this project.

NOTE: All written information shall be produced on a computer system. Submit all files electronically. All files shall be format compatible with Microsoft® Word for Windows™, current version software. Calculation spreadsheets shall be compatible with Microsoft® Excel for

Windows™, current version software. Designer shall submit all media electronically. Ensure asbestos, lead, and other hazardous material surveys accomplished for the project are also submitted in electronic format. Scan pages as required, as the complete report shall be included as part of the specifications, which will normally be advertised electronically on the Internet.

(b) Corrected Final Drawings: Original drawings (full size, mylar cover page) with AE stamp and signature, plus two half size copies (XEROX-type copies).

NOTE: Computer-Aided Design and Drafting (CADD) shall be used to produce drawings. Submit all of all computer drawings, prototype drawings, blocks, details, linetypes, fonts, LISP routines and custom menus used in the design which are essential for future Government reproduction and alteration in accordance with federal copyright laws. Submit all media compatible with AutoDesk, AutoCAD Release 2020 (min) electronically. The A-E shall also format and submit final drawings electronically to allow Internet solicitation of the project using ADOBE™ computer software.

d. Review Comments: The Government will make written review comments to the AE firm at each review stage specified in the statement of work. Comments must be resolved. Any conflict with the AE's design intent shall be resolved within seven days of AE receipt of the Government's comments. Telephonic resolution of review comments is acceptable with paperwork follow-up by mail.

e. Septic Tanks and Leaching Fields: The AE shall consult with local, state and federal authorities to determine all requirements and conditions relating to sewage disposal systems utilizing septic tanks and leaching fields. A letter report shall be submitted setting forth all determinations of conditions and requirements of the authorities consulted. Design shall be accomplished in conformance with such determined conditions and requirements as approved by the Contracting Office.

f. Equipment Installation Layouts: Contract drawings shall include scaled, line plans showing the layout and arrangement of all mechanical equipment rooms and spaces in which building service equipment (heating, ventilating, plumbing, electrical, air conditioning, etc.) is to be installed. Plans shall be drawn at scales of 1/4 or 3/8 inch equals 1 foot, and shall show all equipment at true size and location together with all utility lines and connections, and the relationship of such equipment and utility lines and connections with walls, ceilings, floors, doors and windows. Sections shall also be included as necessary to properly delineate the equipment arrangement and the accessibility thereof for operation and maintenance.

g. Design of Additions and Modifications to Existing Facilities:

(1) General: The design of additions and/or modifications to existing facilities shall include all changes to the existing construction, utility systems and site improvements as required

to provide for the proper connection between existing and new construction and to make the modified or altered facility completely operable for its intended use. Where necessary, existing interior and exterior utility systems and services shall be resized as required to provide for loads imposed by the new work. New construction, within limitations of current criteria, shall match existing construction. Contract drawings and specifications shall provide for all required modifications and extensions to existing construction, utilities and site improvements.

(2) Verification of Existing Site Conditions: The Government will furnish available “as-built” or construction drawings pertinent to the facilities involved, if such drawings are available. Such drawings, however, are not warranted to show presently existing conditions at the site. The A-E shall verify in the field all data shown on such drawings as necessary for accomplishment of his/her work, and shall obtain all other data as required to ensure complete and proper design of the project.

h. Fire Protection: Provide fire protection features conforming to requirements contained in applicable portions of NFPA. The information furnished shall include, but not necessarily be limited to, the following:

(1) Class of construction as defined by IBC and NFPA, i.e., protected noncombustible, unprotected noncombustible, etc.

(2) Identification of occupancy of rooms or areas to be used for storage of materials either combustible or noncombustible or for hazardous operations.

(3) Type and scope of automatic sprinklers, special extinguishing system and fire alarm or evacuation alarm systems, when required.

(4) Location, size and fire rating of required stair or shaft enclosures, door classification and type of operation.

(5) Location and fire resistance rating of firewalls, partitions, fire doors and type of door operation.

(6) Schedule of fire resistance rating of major elements.

(7) For operations involving use or storage of flammable liquids, gases or dusts, the type of electrical equipment including fixtures, ventilation and other related fire protection features.

(8) Statement or notation concerning outside fire protection hydrant systems.

(9) Statement or notation concerning special water storage and pumping facilities for deluge systems when required.

2. COORDINATION AND PROSECUTION OF WORK:

a. During the prosecution of the work, under each task order, the AE shall keep in close liaison with the Base Engineering Office and the Contracting Office who will coordinate the work with the using service and other agencies. The CO will refer all requests made by the using service and other agencies to the project engineer/architect for action.

b. All official correspondence with regard to the contract shall be routed through the Contracting Office.

(1) Contract Documents: The originals of all documents shall be delivered to and remain the property of the Government. All drawings, cost estimates, and design analyses shall be stamped and signed by a legally registered professional architect/engineer representative of the AE.

(2) Delivery of Materials: Deliver all materials and submittals in accordance with the procedures prescribed under each task order. Submit typed matter on 8-1/2" x 11" white bond paper with at least a one-inch margin at the top and left side of the paper. Stamp all materials submitted prior to the 100 percent submission "CHECK SET ONLY, NOT FOR CONSTRUCTION" in 1/2" letters. Delivery shall be to the CO prior to 4:30 p.m., on the specific delivery date prescribed for each task order.

c. All work shall be in accordance with the engineering instructions, directives, guide specifications, drawings, technical manuals and other instructions furnished by the CO.

d. The design of each project shall be the most economical with necessary consideration being given to the most efficient utilization of all materials consistent with the design criteria. Design shall incorporate current sustainable building design and construction standards.

e. The use of critical and strategic materials not otherwise restricted shall be limited to the minimum amounts required consistent with Air Force Conservation of Materials Policies and full consideration shall be given to the use of substitute materials as permitted by the Engineering Manual and the Air Force Guide Specifications. Any such substitutions shall be reported.

f. Where not expressly specified, drawing scales shall be as approved by the CO.

g. All engineering manuals, guide specifications and other data furnished by the Government as designated by the CO shall be returned to the CO within 30 calendar days after the date of acceptance of the work to be accomplished under the applicable task order.

h. After submission of the contract plans and specifications and cost estimate, the AE shall make any corrections thereto as may be necessary because of errors or omissions, including the

preparation of documents during the advertisement/solicitation period that may be required for response to such deficiencies.

i. The AE's fee shall include the cost of all engineering special studies, and consultant services and laboratory work required to accomplish the work under the task order, except as may be otherwise specifically provided in the task orders. The AE shall execute AF 103 to ensure the project is reviewed/coordinated for existing utilities. This shall require the AE to not only fill out the form, but also bring the form to a specific Government review meeting with Government shop foremen for signature coordination and subsequent offices located on base for their required signature coordination.

j. The Government will furnish the general siting of all facilities to be designed.

k. The target construction cost set forth in a task order is the amount of funds estimated for the construction of the project involved.

(1) Every effort is to be exerted to develop a design with the project criteria and instructions so that the project may be constructed within the target cost.

(2) If, as the work progresses, it is determined that the project cannot be constructed within the target construction cost or subsequently approved preliminary cost estimates, the CO shall be so advised, and the AE will be instructed as to the action to be taken. The AE shall propose "additive/alternate" design solutions, for Government approval, to get the project within the programmed funding amounts.

l. Estimates of construction costs shall be prepared in accordance with proposed price proposal schedules, except as otherwise noted in the applicable task order.

m. The CO shall advise the AE of any discrepancies, ambiguities, and lack of clarity noted in plans and specifications furnished for use in connection with this project.

n. All buildings and facilities to be designed under this contract shall be tied-in, as directed by the CO, to the coordinate system or to the base lines established at the sites of work.

o. All estimates of cost shall be transmitted to the CO stamped "FOR OFFICIAL USE ONLY". It is imperative the AE understands that the cost estimates done for the project are for Government use only, and are not for any public disclosure.

p. All letters, reports, plans, sketches, specifications, estimates, computation sheets, and other documents prepared by the AE and marked to identify the project under a task order classified "FOR OFFICIAL USE ONLY" shall also be plainly marked "FOR OFFICIAL USE ONLY", until otherwise directed by the CO.

q. Payment for AE Design Services: I am not sure what should be in this section if not what was there.

r. Payment for A-E Construction Support Services: Contractor payment will be in accordance with FAR Clause 52.231-10, Payments Under Fixed-Price Architect-Engineer Contracts.

3. RENDERINGS: Renderings on occasion may be called for in specific task orders. If required, provide for approval as part of design submittals a single line perspective sketch showing the three dimensional aspects of the facility with emphasis on the building features. The perspective sketch must be a minimum of 8"x10", and illustrate the view planned for the final color rendering. Include a sample indicating the type of rendering technique proposed for the final perspective. Select the horizon line and viewing point to best present the facility's character. Generally, a normal eye level view is preferred. Rendering shall be prepared by a professional architectural illustrator, or provided as a computer generated product, showing the view approved from the single line perspective. Details shall be appropriate for the military installation (e.g., correct portrayal of personnel and uniforms).

a. Provide one original, the required number of full size, color prints of the final color renderings and the digital files. The original and prints shall be framed and matted and submitted with the 95% design submittal. The rendering shall be double matted as follows: upper matte sheet shall be a neutral color with a lower sheet of contrasting and complementary color. Frame shall be a standard, dark bronze or black color, aluminum type frame. Matte, frame, and rendering shall be color coordinated.

b. Rendering size shall be appropriately apportioned to illustrate the facility shape, color, patterns of exterior materials, and site development features. The minimum size, as determined by adding the vertical and horizontal dimensions of the rendering (without matte), shall be 44". Non-glare glass or plastic glazing is required. A title shall be scaled appropriately and included as part of the matte design. Title shall identify only the project name, installation, and A-E.

c. Distribution. At the acceptance of the 95% design phase, provide reproduction and direct mailing of the rendering, along with the 100% final design submittal, as follows:

<u>Agency</u>	<u>Framed Original Rendering</u>	<u>Framed Color Print</u>	<u>Digital Files</u>
92 CES/CENM 100 W. Ent Street, Suite 110 Fairchild AFB, WA 99011	1	1	1
To Be Determined (Individual and address to be called out in the Task Order)		1	1
TOTAL	1	2	2

END STATEMENT OF WORK