STATEMENT OF WORK

ARCHITECT AND ENGINEER (A-E) SERVICES

For

Joint Base Langley-Eustis A-E IDIQ

DRAFT - 12 June 2026

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PART 1 – GENERAL INFO

1. **GENERAL INFO:** This Statement of Work supplements Block 6 of Standard Form 252, Architect-Engineer Fixed-Price Contract and sets forth the general requirements for the performance of the various services required under the contract. The Architect-Engineer shall perform the following services as specifically identified in the individual work orders (DD Form 1155) and as more specifically described herein.

   1.1. GENERAL SCOPE OF WORK: The Architect-Engineer (A-E) shall perform Title I, *DESIGN SERVICES*, and/or Title II, *CONSTRUCTION SUPPORT SERVICES*, as may be ordered by the Contracting Officer. Such services shall consist of architectural, civil, structural, mechanical, electrical, environmental, landscape, fire protection, communications, and topographical cadastral and geotechnical surveys of existing conditions. Facilities and field surveys for topographic or locative purposes shall be provided. Development of documentation and reports for conceptual solutions, design criteria, environmental assessments, and impact analysis; producing economic analysis, detailed cost estimates, construction drawings and specifications, bid schedules, color boards and renderings, and any other documentation necessary to execute a maintenance, repair, alteration, and/or construction project shall be provided. The area of work shall include, but not be limited to Joint Base Langley-Eustis with separate geographic locations to include Fort Eustis, VA; Langley Air Force Base, VA; Virginia Beach, VA (203 Red Horse Squadron); and Sandston, VA (200 Weather Squadron).

   1.2. QUALIFICATIONS: The A-E shall be an individual or firm, or any duly authorized representative thereof, professionally engaged/licensed in the practice of architecture and/or engineering, qualified by registration and experience to perform all professional engineering work necessary to provide the requirements of the services hereinafter specified.

   1.3. CONTRACT ADMINISTRATION: The contract will be administered by the Contracting Officer. All instructions to the A-E will be made by the Contracting Officer who is the only individual authorized to direct work or make any changes.

   1.4. TASK ORDERS: Specific work requirements will be provided to the A-E by the Contracting Officer in the form of written Task Orders issued from the Indefinite Delivery Indefinite Quantity (IDIQ). The CENMP, through the Contracting Officer, will provide technical control and surveillance of each Task Order placed against this Contract. All requests for necessary technical information will be made to the CENMP through the Contracting Officer.

PART 2 – SERVICES REQUIRED

2. **TITLE I & TITLE II SERVICES**

   2.1. TITLE I - DESIGN SERVICES: The A-E shall perform all services required to investigate, design and furnish complete construction documents consisting of contract drawings, technical specifications, design analysis, cost estimate breakdown, material submittals, and addenda as required, for the accomplishment of each project in accordance with requirements of this contract. Services of one or more disciplines may be required by individual Task Orders.

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Disciplines may include architectural, civil, structural, mechanical, electrical, environmental, landscape, fire protection and communications.

2.1.1. Any topographic surveys, excavations, verifications of existing underground utility locations, soil borings, soil analysis, hazardous material tests, laboratory tests, pressure tests, electrical tests, corrosion and cathodic protection tests, and any other tests required for a complete design of each project will be the responsibility of the A-E. A-E shall obtain required permits for these tests/surveys and provide information to the Base Civil Engineer Project Manager (CENMP) through the Contracting Officer.

2.1.2. The A-E shall perform other A-E services that are not Title I Services as ordered by the Contracting Officer. Such services may include, but not be limited to, fact-finding studies, surveys, investigations, developing design criteria, interior design, and preparing base comprehensive plans (BCP), and other professional A-E services not necessarily connected with a specific construction project. Environmental work may include remediation projects and hazardous, toxic, and radioactive waste (HTRW) studies.

2.1.3. Design Charrette – The A-E shall perform a design charrette. The attendees shall include, A-E project design team, Joint Base Langley-Eustis team and facility end users. The charrette workshop is typically two to three working days depending on complexity of the project scope. The charrette shall include formal value engineering analysis and documentation. Use value engineering techniques to examine project functions and requirements, analyze alternate design concepts, expose, resolve or plan for project issues and develop the final conceptual design. After a workshop, designers shall be able to complete the 35% design submission expeditiously and within budget.

a) Facilitator - The A-E shall provide a charrette facilitator. The facilitator shall guide the workshop team (the A-E Design Team, Joint Base Langley-Eustis team and facility user representatives) through the workshop process. The facilitator shall be responsible for leading the team, making sure that issues are pursued and resolved to the maximum extent possible, documenting meetings, organizing the design concept documents for on-site approval, and assembling a report summarizing the workshop results. The facilitator shall not be reluctant to task Government participants with resolution of issues, especially when those issues lie strictly within the purview of the Government and are critical to the beneficial outcome of the workshop.

b) Charrette Workshop Location – The A-E shall make arrangements for and provide an appropriate conference room for use by the A-E Design Team and government participants during the workshop.

c) Preliminary Charrette Tasks – The A-E shall review the requirements cited in the scope of work for each Task Order any other documents provided by the Government explaining the current project scope and history. The A-E shall coordinate a site visit to evaluate the existing conditions in advance of the workshop. Accurate site conditions information is essential to the success of the workshop. The A-E shall plan to meet with the facility user during the site visit to briefly discuss what they do, how they do it, what they like and dislike about existing facilities and provide any information possible to aid in understanding of user functional requirements. The A-E shall identify and obtain site data which may include: topographic and hydrographic data, geo-technical information developed for nearby sites, utility drawings, fire hydrant flow tests, environmental plans

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and reports, hazard areas, master plans and other planning documents, base exterior architectural requirements, definitive design drawings, etc., required to complete the workshop and design.

d) Charrette Design Concepts Presentation – Prepare three preliminary concept designs. Each concept shall include an abbreviated basis of design, drawings, sketches, and any other documentation necessary to clearly demonstrate the intent of the concept. Each concept design shall also include a cost estimate summary based on the scope of work identified in the task order and the design team's understanding of user requirements. The facilitator and design team shall present the three concepts to the JBLE team members and facility end users during the workshop. The facilitator shall encourage participation of all attendees to evaluate these concepts, eliminating those which have a low probability of acceptance, and shall task A-E Design Team members to pursue the ones which endure evaluation. This process shall be iterative during the workshop until the final design concept is selected and mutually agreed upon by the charrette attendees. The facilitator shall obtain user signatures on a conceptual design endorsement sheet, signifying approval of the final concept design. The signatures are required from the attendees to prior to the completion and dismissal of the charrette workshop.

e) Charrette Report – The A-E shall provide a final charrette report within 14 calendar days upon completion of the charrette workshop. For the report, the A-E shall provide to all text, drawings and other documents generated by the A-E Design Team during the process of the workshop. The report shall summarize the initial three design concepts and process of selection for the final conceptual design during workshop activities. The report shall include a copy of the conceptual design endorsement sheet. The report will be used by the Government to validate the scope, criteria, and cost for the project and will become the basis for the remaining project design.

f) Cost Estimating - For the workshop effort, any relevant cost estimating method may be used in which the Design Team has confidence. Only the estimate summaries are required for presentation during the workshop. Compare each workshop estimate summary of the total project construction cost to the design target Construction Cost Limit (CCL) as established in each Task Order. Present summaries in tabular form and include the summaries from previous presentations for comparison.

2.1.4. Furniture Accountability

a) Site Visit - The A-E shall attend site visit conducted on [date: TBD by Contracting Officer (KO)] at [time: TBD by Contracting Officer]. The CES PM, Facility FMS and the A-E shall meet at the building renovation site. The purpose of the site visit is to identify furniture which shall be disassembled, moved, stored, and re-installed. The facility FMS shall identify the furniture to be removed and stored and shall provide direction if any or all of the furniture shall be disassembled and moved to the Defense Logistics Agency Disposition Services (DLADS) facility. A storage plan and location shall also be determined at this meeting. The FMS shall also provide direction on whether or not the furniture is required to be stored in a conditioned facility. This information shall be included in the furniture accountability report. The A-E shall make reference to the furniture accountability report in the design drawings.

b) Furniture Accountability Report – The A-E shall develop a furniture accountability report. The purpose of the report is to document the existing type, quantities and

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conditions of the furniture. The report shall include the following items in a tabbed binder:

I. Initial Furniture List - Shall include type and quantities (chairs, desks, tables, file storage, cubicle furniture, etc...) of the furniture which is to be disassembled, removed, stored, and re-installed or moved to DRMO. The list shall also include original space numbers from where the furniture is being removed. If the renovation to the building includes space re-numbering and/or modifications, the Government shall provide the requirements for the reassigning furniture to the spaces.

II. Existing Conditions Description – Shall include a description of the conditions of the existing furniture to include damaged furnishings, missing components, etc.

III. Photographs – Shall include photographs as required to document existing damage to furniture prior to disassembly and removal.

IV. Storage Plan – This section shall include the plan for furniture storage. The A-E shall include meeting minutes from the site meeting above for furniture storage. This section shall include:

a) Storage location on base. (The government will provide direction for locations)
b) Construction contractor provided on-site storage.
c) Requirements to store the furniture in a temperature and humidity controlled environment.
d) If the furniture is scheduled for scrap; this section is not required.

2.1.5. Design services shall also include means for online project review. This internet access does not negate the requirement for the normal submittal and reviews at 35%, 65%, 90% and 100%. Documents to which reviewers shall have access are (but not limited to) the following: Basis of design (design analysis), calculations, drawings, specifications, submittal register, performance time breakout and any data for equipment that is associated with the project. The A-E shall at no time post the project cost estimate or any document(s) that contains costs associated with the project on the internet site. The A-E shall provide means for instant internet access to all active project designs that have been assigned.

2.2. TITLE II - CONSTUCTION SUPPORT SERVICES: Title II services shall include review of contractor submittals and shop drawings, review and respond to design and construction RFI's, review of as-built drawings as well as prepare change order documents. The primary responsibility of the A-E is to furnish Contracting Officer or designated representative with construction support and documentation whether or not the construction conforms to design drawings and specifications.

2.2.1. PRE -CONSTUCTION BID-INQUIRIES – The A-E shall provide responses to construction contractor pre-proposal bid inquiries. The Government will provide the bid-inquiries to the A-E. The A-E shall respond to the bid inquiries no later than three business days upon receipt.

2.2.2. PRE -CONSTRUCTION MEETING - The A-E shall attend pre-construction conferences. Attendance shall be by the lead Project Engineer or Project Manager. Additional meetings may be required during the construction period. The A-E shall plan to attend construction site meetings as needed.

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2.2.3. CHANGE ORDER DOCUMENTATION: The A-E shall prepare change order documents for all latent deficiencies and using agency changes. (Note: Any design deficiency changes shall be prepared at no cost to the Government.) The A-E shall use the standard government statement of requirements, specifications, and *Construction Cost Estimate Breakdown*, in preparing all change orders. The completed change order shall be submitted to the Base Contracting office for processing. The A-E shall provide a professional response and position on the Contractor's change order proposals.

2.2.4. CONSTUCTION CONTRACTOR: The A-E cannot in any way obligate the Government or direct the Contractor. The A-E will contact the Contracting Officer immediately if the situation warrants. The A-E is advised not to perform any extra services under this contract requested by any person, orally or in writing, which the A-E considers to be a change in work or services required and which necessitates an adjustment in the contract fee. A-E will receive all requests for services from the Contracting Officer.

2.2.5. A-E CONSTUCTION SUPPORT SERVICES:

a) Review construction contractor submittals for accuracy and completeness and conformance to contract.
b) Review construction contractor shop drawings and other submittals and provide written comments for Project Engineer action.
c) Review fire protection system drawings and provide written comments for Project Engineer action.
d) Review Requests for Information (RFI), research answers and draft replies for signature by the Project Engineer.
e) Draft Requests for Proposals or Scope of Work for potential change orders.
f) Perform a cost analysis of the construction contractor's proposal or a detailed government estimate to determine a reasonable cost for construction contract change orders.
g) Prepare technical analysis of contractor's proposals and requests for information as required.
h) Prepare pre and post construction modification when required and final change order packages, including price negotiation memorandum.

PART 3 – DESIGN REQUIREMENTS/SCHEDULE

3. DESIGN REQUIREMENTS/SCHEDULE

3.1. BASIS of DESIGN (DESIGN ANALYSIS) REQUIREMENTS: The A-E shall provide a sound Basis of Design (BOD) with the 35%, 65%, 90% and 100% submittals. The design analysis (to include all engineering decisions, conclusions and commissioning requirements) shall include a narrative description discussing solutions to the scope for all disciplines in scope.

3.2. HAZARDOUS WASTE TESTING: Asbestos, lead based paint, and other hazardous wastes shall be assessed and tested at the facility in accordance with Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), and state and local regulations. Abatement plans as related to the demolition and removal of applicable existing materials and equipment shall be incorporated in BOD and cost estimates.

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3.2.1. HAZARDOUS MATERIAL REPORT: Prepare drawings and specifications to indicate the location of the environmentally significant materials and specify the procedure to be followed during construction and/or demolition to prevent unauthorized release or other mishandling of the materials. The A&E shall be responsible for incorporating the applicable requirements into the specifications.

3.3. DESTRUCTIVE TESTING: The A/E shall employ the use of destructive testing, where necessary, to accurately identify problems in hidden areas that would require corrective actions. This will allow for further development of an effective scope of work coupled with pertinent information for construction plans and specifications. The goal is to eliminate unforeseen site condition change orders during construction. This includes but not limited to, walls (including finishes), ceilings (hard and acoustical), floors, roof decks, and insulation materials, etc. When tenants occupy the facility during destructive testing procedures, the A/E shall take all necessary measures to minimize work disruption to those tenants. Once destructive testing is complete and data obtained, the A/E shall repair the disturbed areas, returning them to the original condition.

3.4. CIVIL ENGINEERING DESIGN: To include the analysis of the impact of the renovation on the existing utilities, sidewalks, roadways and parking lots.

3.5. ARCHITECTURAL DESIGN: To include analysis of the architectural design and colors consistent with Air Combat Command (ACC) and JBLE–Langley Architectural Design Compatibility Standards.

3.5.1. LOCKSETS: All doors shall be equipped with locksets that are compatible with the JBLE–Langley "Best Lock Corporation Premium" master key locking system. Cylinders and cores shall have seven pin tumblers using the **A2 system** and **WB keyway**. All cylinders shall be from a single manufacturer. All cores will be stamped with a key control symbol in a concealed place on the core.

3.6. STRUCTURAL DESIGN: To include the analysis of the impact of the renovation on the existing building structure and existing equipment support structures.

3.7. FIRE PROTECTION DESIGN: To include the analysis of the impact of the renovation on the existing fire protection system and the fire alarm system.

3.8. MECHANICAL DESIGN: To include analysis of the impact of the renovation on the existing mechanical and plumbing systems where changes to existing systems are made by contractor.

3.9. ELECTRICAL DESIGN: All electrical work shall be in accordance with the most recent National Electrical Code. Investigate electrical circuits including power, lighting, communication and fire alarm to determine which circuits will be affected. Require the upgrading and labeling of all panels. Determine and design for the necessary electrical support required to accommodate the new power requirements. Provide a new power plan, lighting plant, etc.

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3.9.1. EMERGENCY LIGHTS: The emergency lights shall be incorporated into the overhead fluorescent light system and shall be equipped with self-contained battery packs.

3.10. INTERIOR DESIGN: To include analysis of the architectural design and colors consistent with Air Combat Command (ACC) and JBLE–Langley Architectural Design Compatibility Standards.

3.11. COMMUNICATION DESIGN: To include the analysis of the impact of the renovation on the existing telecommunication system. When affected by work associated with removal and replacement of existing partitions, the design scope shall include analysis of the affected communications and repaired work in accordance with standards consistent with JBLE–Langley.

ENERGY MONITORING AND CONTROL SYSTEM (EMCS): Project drawings, specifications, cost estimates, and design submittals shall provide for maintaining the EMCS to support the building in the renovated areas. The control system shall be compatible with and connected to the existing JBLE–Langley, VA EMCS system located in Facility 328 (37 Sweeney Boulevard, JBLE–Langley, VA). Transmission between the new building and the EMCS Control Room (facility 328) shall be by telephone lines supplied by the Government. Communications connectivity from the EMCS system to the telecommunications room shall be provided by the contractor via the Premise Wiring Distribution System. The existing EMCS system is Direct Digital Control (DDC) type and is compatible with Siemens Controls. All network telecommunications rooms shall have temperature monitoring capabilities on the Environmental Management Control System (EMCS).

3.12. CALCULATIONS: The A-E shall provide calculations for all disciplines with the 35%, 65%, 90% and 100% design submittals. Provide calculations complete, and in sufficient detail to substantiate the design level in the Basis of Design and as indicated on the drawings, and any updated from the previous design phase.

3.13. MANUFACTURE PRODUCT CUT SHEETS BOOK REQUIREMENTS: A-E shall submit electronic copies of manufacturer product cut sheets for all material specified. Books are required with the Pre-Final 90% Design submittal. A-E shall specify at least three options in the project specifications and mark the one that the product submittal sheet has been provide

3.14. 35% SUBMITTAL: The A-E shall prepare and submit for approval basis of design (design analysis), calculations, concept design drawings, outline specifications, concept cost estimate, and other related and supporting documents as are more fully specified herein. The A-E shall incorporate information provided by the Air Force as part of completing the 35% design submittal. The design may not proceed beyond 35% without written authorization from the Contracting Officer. The 35% design submittal shall be provided per the Submittal Matrix. If this submittal is not complete, it shall be rejected and the A-E shall resubmit at no cost to the Government.

3.15. DESIGN SUBMITTAL (35%) – Required submittal documents: The 35% submittal must be a complete concept showing the clear intent of the project's scope and design. All submittal documents must be fully coordinated. The A-E shall provide a written response to all

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Government comments within five working days of receipt of review comments from the Government.

3.15.1. Construction Drawings - A-E prepared drawings shall be well-arranged and placed for ready reference, so they present complete information. Drawings shall be complete so that the work can be constructed without any additional assistance from the A-E or the necessity to issue modifications to correct design deficiencies. Drawings shall be detailed to the extent that an accurate estimate can be prepared and shop drawings can be checked.

3.15.2. Calculations – Provide calculations complete for all disciplines in the design. The calculations shall be in sufficient detail to substantiate the design level in the Basis of Design and as indicated on the drawings.

3.15.3. Technical Specifications – An outlined of proposed specifications to be used in this project is acceptable for this submittal.

3.15.4. Construction Cost Estimate **(in AF Form 3052 format)**.

3.15.5. Basis of design (design analysis) – Include any emails, comments, meeting notes, etc. that acted as design guidance prior to this submittal.

3.15.6. Technical Specifications – mechanical & electrical. The specifications shall be edited to be project specific. Hardcopy specifications can be hand-edited for this submittal only. The A-E shall specify at least three products manufacture options in order of preference for all Contractor Furnished items that the Contractor will require to provide product submittal.

3.15.7. AF Form 66, Submittal Register.

3.15.8. Warranty Schedule.

3.16. 35% DESIGN REVIEW MEETING: The A-E shall coordinate and schedule for a 1-day review conference with the design team. The purpose is to examine each design team comment and determine an appropriate resolution to each functional, technical, cost, and other comments. The 633 CES/CENMP may provide comments in advance of the meeting to familiarize the A-E with the comments. Copies of minutes and annotated responses to the review comments shall be distributed to the design team within seven (7) calendar days after the design review meeting.

3.17. 65% SUBMITTAL: The A-E shall prepare and submit for approval basis of design (design analysis), calculations, design drawings, outline specifications, cost estimate, and other related and supporting documents as are more fully specified herein. The A-E shall incorporate information provided by the Air Force as part of completing the 65% design submittal. The design may not proceed beyond 65% without written authorization from the Contracting Officer. The 65% design submittal shall be provided per the Submittal Matrix. If this submittal is not complete, it shall be rejected and the A-E shall resubmit at no cost to the Government.

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3.18. DESIGN SUBMITTAL (65%) – Required submittal documents: The 65% submittal must be a complete concept showing the clear intent of the project's scope and design. All submittal documents must be fully coordinated. The A-E shall provide a written response to all Government comments within five working days of receipt of review comments from the Government.

3.18.1. Construction Drawings - A-E prepared drawings shall be well-arranged and placed for ready reference, so they present complete information. Drawings shall be complete so that the work can be constructed without any additional assistance from the A-E or the necessity to issue modifications to correct design deficiencies. Drawings shall be detailed to the extent that an accurate estimate can be prepared and shop drawings can be checked.

3.18.2. Calculations - Provide calculations complete for all disciplines in the design. The calculations shall be in sufficient detail to substantiate the design level in the Basis of Design and as indicated on the drawings.

3.18.3. Technical Specifications - An outlined of proposed specifications to be used in this project is acceptable for this submittal.

3.18.4. Construction Cost Estimate - **(in AF Form 3052 format)**.

3.18.5. Basis of Design - Include any emails, comments, meeting notes, etc. that acted as design guidance prior to this submittal. Also include annotated 35% design review comments.

3.18.6. Technical Specs

3.18.7. AF Form 66, Submittal Register

3.18.8. Warranty Schedule

3.19. 65% DESIGN REVIEW MEETING: The A-E shall coordinate and schedule for a 1-day review conference with the design team. The purpose is to examine each design team comment and determine an appropriate resolution to each functional, technical, cost, and other comments. The 633 CES/CENMP may provide comments in advance of the meeting to familiarize the A-E with the comments. Copies of minutes and annotated responses to the review comments shall be distributed to the design team within seven (7) calendar days after the design review meeting.

3.20. 90% DESIGN SUBMITTAL: The A-E shall prepare and submit for approval basis of design (design analysis), calculations, design drawings, specifications, color boards for interior and exterior finishes (if applicable), quantity take-off cost estimate and other related and supporting documents as are more fully specified herein. The design may not proceed beyond 90% without written authorization from the Contracting Officer. The 90% design submittal shall be provided per the Submittal Matrix. If this submittal is not complete, it shall be rejected and the A-E shall resubmit at no cost to the Government.

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3.21. PRE-FINAL DESIGN (90%) – Required submittal documents: The 90% submittal must be essentially complete, requiring only overview to ensure incorporation of all submittal review comments. All construction documents must be fully coordinated, dimensioned, detailed, noted and cross-referenced. The A-E shall provide a written response to all Government comments within five working days of receipt of review comments from the Government.

3.21.1. Construction Drawings - A-E prepared drawings shall be well-arranged and placed for ready reference, so they present complete information. Drawings shall be complete so that the work can be constructed without any additional assistance from the A-E or the necessity to issue modifications to correct design deficiencies. Drawings shall be detailed to the extent that an accurate estimate can be prepared and shop drawings can be checked.

3.21.2. Calculations - Provide calculations complete for all disciplines in the design. The calculations shall be in sufficient detail to substantiate the design level in the Basis of Design and as indicated on the drawings.

3.21.3. Technical Specifications – The specifications shall be edited to be project specific. A-E shall specify at least three products manufacture options in order of preference for all Contractor Furnished items that the Contractor will require to provide product submittal.

3.21.4. Construction Cost Estimate **(in AF Form 3052 format).**

3.21.5. Basis of design (design analysis) – Include any emails, comments, meeting notes, etc. that acted as design guidance prior to this submittal. Also include annotated 65% design review comments.

3.21.6. Manufacture Product Cut Sheets (MPCS): Provide bound copy of manufacturer's cut sheets for preferred (listed first in specifications) product manufacture for all Contractor Furnished items that the Contractor will require to provide product submittal, major equipment and Government furnished items.

3.21.7. AF Form 66, Submittal Register

3.21.8. Bid Schedule.

3.21.9. Warranty Schedule.

3.21.10. Color Boards for interior and exterior finishes.

3.21.11. Construction Schedule

3.22. 90% DESIGN REVIEW MEETING: The A-E shall coordinate and schedule for a 1-day review conference with the design team. The purpose is to examine each design team comment and determine an appropriate resolution to each functional, technical, cost, and other comments. The 633 CES/CENMP may provide comments in advance of the meeting to familiarize the A-E with the comments. Copies of minutes and annotated responses to the review comments shall

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be distributed to the design team within seven (7) calendar days after the design review meeting.

3.23. FINAL DESIGN SUBMITTAL (100%): The A-E shall prepare and submit for approval basis of design (design analysis), calculations, design drawings, specifications, color boards for interior and exterior finishes (if applicable), quantity take-off cost estimate and other related and supporting documents as are more fully specified herein. The 100% design submittal shall be provided per the Submittal Matrix. If this submittal is not complete, it shall be rejected and the A-E shall resubmit at no cost to the Government.

3.24. FINAL DESIGN (100%) – Required Submittal Documents: The 100% submittal must be essentially complete, requiring only overview to ensure incorporation of all submittal review comments. All construction documents must be fully coordinated, dimensioned, detailed, noted and cross-referenced. The A-E shall provide a written response to all Government comments within five working days of receipt of review comments from the Government.

3.24.1. Construction Drawings - A-E prepared drawings shall be well-arranged and placed for ready reference, so they present complete information. Drawings shall be complete so that the work can be constructed without any additional assistance from the A-E or the necessity to issue modifications to correct design deficiencies. Drawings shall be detailed to the extent that an accurate estimate can be prepared and shop drawings can be checked.

3.24.2. Calculations - Provide calculations complete for all disciplines in the design. The calculations shall be in sufficient detail to substantiate the design level in the Basis of Design and as indicated on the drawings.

3.24.3. Technical Specifications – The specifications shall be edited to be project specific. A-E shall specify at least three products manufacture options in order of preference for all Contractor Furnished items that the Contractor will require to provide product submittal.

3.24.4. Construction Cost Estimate (in AF Form 3052 format).

3.24.5. Basis of design (design analysis) – As requested in Paragraph 3.1 above. Include any emails, comments, meeting notes, etc. that acted as design guidance prior to this submittal. Also include annotated 90% design review comments.

3.24.6. Manufacture Product Cut Sheets (MPCS): Provide bound copy of manufacturer's cut sheets for preferred (listed first in specifications) product manufacture for all Contractor Furnished items that the Contractor will require to provide product submittal, major equipment and Government furnished items.

3.24.7. AF Form 66, Submittal Register

3.24.8. Bid Schedule.

3.24.9. Warranty Schedule.

3.24.10. Color Boards for interior and exterior finishes.

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3.24.11. Construction Schedule.

3.25. FINAL DESIGN 100% REVIEW MEETING: The A-E shall coordinate and schedule for a 1-day review conference with the design team. The purpose is to examine each design team comment and determine an appropriate resolution to each functional, technical, cost, and other comments. The 633 CES/CENMP may provide comments in advance of the meeting to familiarize the A-E with the comments. Copies of minutes and annotated responses to the review comments shall be distributed to the design team within seven (7) calendar days after the design review meeting.

3.25.1. CONSTRUCTABILITY MEETING: The A-E shall schedule a visit to the construction site with plans and specifications in hand and accomplish a design constructability review accompanied by the design team [633 CES internal POCs (Using Agency, CEA, CEO, CEF & CEP), 633 CONS, 633 CS, 633 SF, et cetera] before all design documents are finalized and forwarded to the Contracting Officer or his/her designated representative. The 1-day design review conference and site visit with design documents in hand shall occur on the same day.

3.26. FINAL DESIGN/RTA (100%): Ready to Advertise Contract Submittal. The A-E shall prepare, in accordance with Government standards, the detailed construction drawings and specifications necessary for the effective coordination and efficient execution of the construction work together with quantity take-off cost estimate, unit price bid schedules and other related and supporting documents. This includes incorporation of all comments agreed to from the 100% design review. Re-submittals may be required if construction documents have unresolved quality and/or constructability issues.

3.27. FINAL DESIGN / RTA (100%) – Required Submittal Documents: The corrected final submittal must be a 100% complete update to the 100% submittal documents. The 100% submittal shall be Ready to Advertise (RTA), requiring only overview to ensure full coordination and completeness. All construction documents shall be fully coordinated, dimensioned, detailed, noted and cross-referenced. Update revisions in manufacturer's cut sheets. The A-E shall provide a written response to all Government comments within five working days of receipt of review comments from the Government.

3.27.1. Construction Drawings - A-E prepared drawings shall be well-arranged and placed for ready reference, so they present complete information. Drawings shall be complete so that the work can be constructed without any additional assistance from the A-E or the necessity to issue modifications to correct design deficiencies. Drawings shall be detailed to the extent that an accurate estimate can be prepared and shop drawings can be checked.

3.27.2. Calculations - Provide calculations complete for all disciplines in the design. The calculations shall be in sufficient detail to substantiate the design level in the Basis of Design and as indicated on the drawings.

3.27.3. Technical Specifications – the specifications shall be edited to be project specific. A-E shall specify at least three products manufacture options in order of preference for all Contractor Furnished items that the Contractor will require to provide product submittal.

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3.27.4. Construction Cost Estimate (in AF Form 3052 format) with performance time breakout.

3.27.5. Basis of design (design analysis) – As requested in Paragraph 3.1 above. Include any emails, comments, meeting notes, etc. that acted as design guidance prior to this submittal. Also include annotated 35%, 65%, 90% and 100% design review comments.

3.27.6. Manufacture Product Cut Sheets (MPCS): Provide bound copy of manufacturer's cut sheets for preferred (listed first in specifications) product manufacture for all Contractor Furnished items that the Contractor will require to provide product submittal, major equipment and Government furnished items.

3.27.7. AF Form 66, Submittal Register

3.27.8. Bid Schedule.

3.27.9. Warranty Schedule.

3.27.10. Construction Schedule.

3.28. DESIGN STANDARDS: Design shall be in accordance with current Engineering Technical Letters (ETLs), Unified Facilities Criteria (UFCs) and ACC Standards. All designs and specifications shall comply with the latest International Building Code (IBC), National Fire Codes and all applicable Federal, State and local regulations/codes. All exterior civil designs that involve parking lots and/or paved surfaces shall comply with Virginia DEQ Storm water Design Specification No. 7, Permeable Pavement, latest version requirements. The following information and criteria are made a part of this contract by reference:

A. International Building Code
B. International Mechanical Code
C. International Fire Code
D. International Code Council (ICC) International Plumbing Code
E. International Fuel Gas Code
F. National Electrical Code (NEC)
G. ANSI C-2, National Electrical Safety Code (QIESC)
H. Life Safety Code, NFPA 101
I. National Fire Protection NFPA
J. Mil Handbook 1190
K. Unified Facilities Criteria (UFC) 3-600-01
L. Applicable Unified Facilities Guide Specifications
M. Supervisory Control and Data Acquisition (SCADA)
N. American National Standards Institute (ANSI)
O. American Standards for Testing Materials (ASTM)
P. Institute of Electrical and Electronics Engineers (IEEE)
Q. International Society of Automation (ISA)
R. National Electrical Manufacturers Association (NEMA)

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S. Underwriters Laboratories, Inc. (UL)

T. National Fire Protection Association Codes (NFPA) – latest edition

U. JBLE–Langley Electrical, Fire, and Communications Design Standards – latest edition
Air Force Engineering Technical Letter ETL 01-1, Reliability and Maintainability (R&M) Design Checklist

3.29. ELECTRONIC DOCUMENT REQUIREMENTS: The A-E is required to submit documents in electronic format to the 633 CONS/PKB. These documents shall be prepared, organized and submitted on compact disk (CD). This is in addition to the hard copy requirements listed in this SOW.

3.30. SPECIFICATIONS: For all submittals, provide all specification sections in separate files in the current release of Microsoft Word (.DOCX) format. The Cover Sheet and Table of Contents shall also be provided as separate (.DOCX) files. Specifications for this submittal shall be based on the Unified Facilities Guide Specifications found at http://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs. The .DOCX and .PDF versions shall be submitted on a Compact Disc (CD) as three separate set of files and documents. **Each version of the specifications (.DOCX and .PDF) shall be listed on the CD submittals under its own clearly identified subdirectory.** In addition, all WordSpec and ".PDF" sections shall be submitted as a single document. All approved 100% specifications (".SEC", ".PDF" and ".DOCX") shall be submitted on (CDs) that are compatible with Microsoft Windows 10.

3.30.1. Develop the following JBLE – Langley specifications sections as typical parts of the contract document:
Section 01 11 00 Special Conditions
Section 01 12 00 Environmental Management Special Conditions.

Develop the following JBLE–Langley specifications sections as parts of the contract document (as each delivery order requires):
Section 01 91 00.15 Total Building Commissioning
Section 27 10 10 JBLE-Langley Telecommunications Building Cabling Systems Standards;
Section 28 31 65 Fire Detection and Alarm System, Addressable;
Section 28 31 66 Fire Detection and Alarm System

The Government shall provide to the A-E an electronic copy of each of the JBLE–Langley special sections upon request to the 633 CES PM. Modify the Special Conditions to meet the project scope. **The use or specification of materials not made in the United States is prohibited.** Only American made products shall be used in this project.

3.31. DRAWINGS: Drawings shall be prepared in the DWG format using AutoCAD 2013 or later and shall be arranged to plot at ANSI D (34x22) size. For all design submittals, the Contractor shall provide AutoCAD drawings, which incorporate all mutually agreed upon comments and changes from previous design submittals, in both full size (34x22) and half size (17x11) plots in PDF format. One-hundred 100% design DWG drawing files shall also be delivered with the final project deliverables. All linkages of non-graphical data with graphic elements, relationships between data objects and attributes, and report formats shall be maintained. The

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Contractor shall use the **A/E/C CAD Standards version 6.0** (or latest version) when creating or revising any CAD data deliverables. These standards can be found and reviewed at: https://www.wbdg.org/FFC/AECCAD/ERDCITL_TR12-1_r2.pdf. No deviations from the Government's established standards will be permitted unless prior written approval of such deviation has been issued by the Government. Reference Specification Section 01 11 00, *Special Conditions*; subsections 1.23 – 1.24, for further instruction. In addition to drawing requirements above, the A-E shall also provide the drawings on at least one CD with building and survey information in Metric Dimensions which are in the GeoBase deliverables data format.

3.32. GOVERNMENT REVIEW: The Government shall review the submitted data and documentation upon completion of all stated work. Missing or incomplete items shall be documented and forwarded to the Contractor for completion. Upon receipt of a complete submittal, the Government shall conduct a quality review and notify the Contractor (within a number of days to be determined for each task order) of acceptance (along with any stipulations) this includes or rejection of the deliverables described herein. Failure to adhere to any of the stated delivery specifications could result in rejection of deliverables and nonpayment.

3.33. SCHEDULING OF MEETINGS: The A-E shall coordinate the design review meetings and any other meetings required for the completion of this contract. All meetings shall be held at JBLE–Langley or JBLE–Ft. Eustis and schedule coordinated a minimum of two weeks in advance with the schedules of 633 CES representatives.

3.34. DESIGN SCHEDULE/SUBMITTAL MATRIX: The A-E shall be required to complete design submittals according to the design schedule. The schedule shall be determined by the 633 CES Project Manager and will vary depending on the complexity of the design. The complete design schedule will be published in each project SOW.

3.34.1. DESIGN SCHEDULE

Task	Duration (Calendar Days)
35% Design Submittal	#*
Government Review	#
35% Design Review Meeting (1 day)	#
65% Design Submittal	#*
Government Review	#
65% Design Review Meeting (1 day)	#
90% Design Submittal	#*
Government Review	#
90% Design Review Meeting (1 day)	#
100% Design Submittal	#
Government Review	#
100% Design Review Meeting (1 day)	#
100% Corrected Final Design Submittal/RTA	#*
Government Review	#
100% RTA Design Review Meeting (1 day)	#

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3.34.2. SUBMITTAL MATRIX:

633 CONS/PKB	3 sets & 1 CD	3 sets & 1 CD	3 sets & 1 CD, 1 MPCS	3 sets & final documents, 1 CD in English dimensions and 1 CD in Metric dimensions, 1 MPCS

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3.34.3. SUBMITTAL DELIVERIES:

Office	Submittal
633d Contracting Squadron/PKB **14 Burrell Street** **JBLE–Langley, VA 23665-2107** **(Attn:** Contract Administrator Name**)**	-1 AF Form 3000 -1 CD containing all design documents including charrette report -2 half-size drawings -1 24" x 36" full size drawings based on Tri-Lateral Services Standard -1 printed/bounded sets of specifications, cost estimates, design analysis, and review meeting minutes. -In addition, provide on CD the **Corrected 100% Final Documents** along with all submitted hardcopy documents.

3.34.4. PAYMENT MONITORING PLAN: Payments shall only be authorized once a design submittal has been approved on the AF Form 3000, Material Submittal Form. The maximum A-E payment shall be the amount equal to the completed design milestone percentage of the contract price. If alternate amounts for each milestone are approved in a Payment Monitoring Plan, the A-E will be paid those amounts for each milestone. The A-E shall develop a payment plan to be submitted with each delivery order PROPOSAL that the contractor anticipates costs for performance are not equal to the percentage. If the A-E's payment plan is not acceptable to the Government, a final payment plan will be negotiated.

PART 4 – PRE-DESIGN/PROPOSAL PREP RESPONSIBILITIES

4. PRE-DESIGN/PROPOSAL PREP RESPONSIBILITIES: A Proposal shall be submitted with a design cost summary for each of the items described in the individual work orders. The basis of design (design analysis), calculations, design drawings, cost estimates, specifications, AF Form 66, construction schedule, bid schedule, and warranty schedule shall be developed as separate contract documents.

4.1. HAZARDOUS MATERIALS SURVEY: Before submittal of proposal for the design of particular project, the A-E and their hazardous materials consultants and Government representatives shall make an initial site visit to determine the possible presence of environmentally significant materials, including (but not limited to) asbestos, lead-based paint, polychlorinated biphenyls (PCBs), and hazardous waste. At the completion of initial site survey

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the A-E and Government representatives will decide if special environmental consideration required for that particular project. The Government will assist by providing previous inspection and survey information (if available). The A-E may then negotiate the fee for the services of a qualified consultant or certified industrial hygienist (CIH) to conduct surveys of the facility, including sample collection/analysis and field consultation. Asbestos and lead-based paint survey shall be conducted in accordance with MDNR, OSHA, EPA. The A-E shall attempt to identify and assess previously identified materials. Results of these surveys shall be included in the first submittal, usually 35%.

PART 5 – POST DESIGN RESPONSIBILITIES

5. POST DESIGN RESPONSIBILITIES

5.1. The Government may contact the A-E for the purpose of answering queries of prospective bidders concerning interpretation of the plans and specifications, conflicts and/or discrepancies in the plans and specifications, and other materials of this nature which may arise. Should the need for interpretation require an addendum to the IFB/RFP, the A-E shall prepare the addendum at no additional cost to the Government within three business days of notification.

5.2. In the event that design discrepancies/deficiencies become apparent during construction, the A-E shall be responsible for correction of the design at no additional cost to the Government and shall furnish the Contracting Officer the necessary drawings, specifications, cost estimates, etc., within three (3) business days of notification to enable prompt modification of the construction contract. Site visits shall be conducted as necessary at no additional cost to the Government to correct design deficiencies. Design changes shall be reviewed by and approved by architects or engineers registered to practice in the particular field involved. Such approval shall be indicated by stamping the specific drawing.

PART 6 – COMMISSIONING REQUIREMENTS

6. COMMISSIONING

6.1. In order to verify design and performance, and ensure that the Government requirements are met, employ commissioning practices appropriate to the size and complexity of the building and its system components. The commissioning process must include an experienced commissioning provider, who shall be independent of the project design and construction team, and the operations team. For buildings that exceed 5000 ft2 (500 m2) of gross floor area, provide commissioning in accordance with ASHRAE 189; Building Project Commissioning. For buildings and systems that are less complex, commissioning may be tailored as determined by the JBLE authority having jurisdiction. Construction phase commissioning requirements shall be incorporated into project specifications and other construction documents developed by the design team for all projects.

PART 7 – MISCELLANEOUS

7. MISCELLANEOUS

7.1. SUBMITTAL REGISTER: The Submittal Register (AF) Form 66 shall be provided as separate excel (.xls) and (.pdf) files. An electronic copy of an <u>example</u> AF 66 shall be sent to the

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A-E upon request to the 633 CES PM. Required submittals shall be listed on the form in the format noted on the examples. Provide a separate line item number for each required submittal (e.g., samples, shop drawings, catalog data, or other descriptive elements would be line numbers 1, 2, 3 & 4, respectively). A rough draft of the AF Form 66 shall be submitted with the 90% submittal. Ensure all items requiring submittals are annotated on the AF Form 66. At the top of Description column, type "SECT" (Section) and "PARA" (Paragraph) on the left and right sides, respectively. Enter Section and Paragraph numbers in each block. In specific terms, indicate the submittal desired just beneath this information in the same block (See example). Using "Other" in the blanks under "No. Of Copies Required" is permissible if this is done. Consecutively number each page of the submittal (e.g. "Page 1 of 1"). Use all line number rows on one page before starting another. Number submittals consecutively.

7.2. BID SCHEDULE: A Bid Schedule for this project shall be furnished. An electronic copy of an example bid schedule will be sent to the A-E upon request to 633 CES/CENMP.

7.3. CONSTRUCTION SCHEDULE: A Construction Schedule for this project shall be furnished. An electronic copy of an example construction schedule will be sent to the A-E upon request to 633 CES/CENMP.

7.4. WARRANTY SCHEDULE: Furnish a Warranty Schedule of all warranties, which are identified throughout the project specifications, as a separate and independent Microsoft Excel spreadsheet. Develop a Warranty Schedule which provides the following information for all warranty items: the warranty item, manufacturer, period or length of warranty and specification section and paragraph where the particular warranty requirement is identified. **In addition, ensure that Section 01 11 00 SPECIAL CONDITIONS contains a requirement, under the warranty section which instructs the Contractor to provide to the Contracting Officer, or his/her designated representative, three separate bound documents which contain a copy of any and all warranties or Equipment Warranty Certificates which he/she is subject to provide under the requirements of the project specifications. Note this submittal requirement (the three separate bound documents) on the AF Form 66 as well.**

7.5. DESIGN FOR USE OF RECYCLED-CONTENT PRODUCTS (Green Procurement): During the design of the project, the A-E shall incorporate in this project, as a substitute to non-recycled content products, recycled-content products that are listed and identified in the Environmental Protection Agency (EPA) Comprehensive Procurement Guidelines (CPG) for recycled-content products. See also Specification Section 01 12 00 ENVIRONMENTAL MANAGEMENT SPECIAL CONDITIONS. The Contractor shall use recycled-content products as required by EPA and other Governmental agencies and Federal Acquisition Regulation (FAR) clauses.

Executive Order 13693 (Planning for Federal Sustainability in the next Decade) and Section 6002 of the Resource Conservation and Recovery Act (RCRA) requires that the Federal Government use recycled-content products in the construction and/or renovation of facilities. The A-E shall consider this a standard requirement for all aspects of the project design.

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The recycled-content products listed in the CPG can be found in the EPA website at www.epa.gov/cpg/products.htm. This list is subject to change at any time so it is the Contractor's responsibility to be aware of any updates or additions.

Such products shall also comply with the requirements of the EPA Recovered Materials Advisory Notice (RMAN). The RMANs recommend recycled-content ranges for CPG products based on current information on commercially available recycled-content products. The recommended recovered materials content percentage can be obtained by clicking on the product on the website.

Any exemption from the Green Procurement Program for Recovered Materials requires approval in writing from the Contracting Officer. Exemptions can only be taken if;

(1) The item is not available within a reasonable period of time.
(2) The item fails to meet a performance standard in the specifications.
(3) The item is only available at an unreasonable price i.e., the recycled-content product costs more than the non-recycled content product.
(4) The item is not available from two or more sources.

Specific reasons why an exemption is taken will be specified and documentation supporting this reason will be provided and attached. These forms will be kept in the project folder indefinitely.

7.6. GEODETIC CONTROL SURVEYS: Reference Specification Section 01 11 00, Special conditions

7.7. GOVERNMENT FURNISHED MATERIALS: The Government will provide the contractor with data and information concerning all necessary and pertinent functions and principal features of the identified project. These items will include:

- The installation's latest georeferenced digital planimetric data and/or base map in ESRI Arc/Info 10.x format, or best format available, with associated data files.
- The installation's latest orthorectified imagery and specified geospatial parameters (coordinate system, datum, projection, distance units).
- Any pertinent and necessary prototype or seed files.
- Frequency settings for the Real-Time Kinematic (RTK) GPS Base Station and the preferred GPS receiver specifications.
- Any other data or schematics deemed necessary for project completion, pending approval from the Government.

7.8. TESTING: All contaminated soil analysis must be performed by an accredited or certified laboratory approved by the EPA and the State of Virginia (i.e., Environmental Laboratory Accreditation Program (ELAP) or the Virginia Environmental Laboratory Accreditation Program (VELAP). Total Petroleum Hydrocarbons (TPH) to include Gasoline Range Organics (GRO) and Diesel Range Organics (DRO) (EPA Method SW846; EPA Method 8015C). Volatile Organic Compounds (VOCs) (EPA Method 8260B) to include Benzene, Toluene, Ethylbenzene, and Xylene (BTEX).

***** End of Statement of Work *****

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Performance Time Breakout for Project MUHJ __-___, _____

The following are estimated requirements for this project from the Notice to Proceed:

Actual Construction _____ calendar days

Additional calendar days required for:

1. Initial Submittal Approval _____ days
2. Mobilization/Demobilization _____ days
3. Erection of Barriers/Safety Equip _____ days
4. Surveying/Site Layout _____ days
5. Long Delivery Impacts _____ days

   (List/source company names, POC and phone number)

   _____

   _____

   _____

6. Material Availability _____ days

   (List/source company names, POC and phone number)

   _____

   _____

   _____

7. Weather Impacts _____ days
8. Phasing Impacts _____ days
9. Security Delays (Secure area access) _____ days
10. Cleanup/Turf Establishment _____ days
11. Final Inspection _____ days

Subtotal _____ days

Reduction in days due to required Contractor overtime/multiple crews: _____ days

Total _____ days

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PROPOSAL SCHEDULE

MUHJ XX-XXXX, YYYYYY, F. YYYY

LANGLEY AFB JBLE, VIRGINIA

PROPOSAL ITEM NO.	**DESCRIPTION**	**LOT**
Base Proposal 0001		$_____
Base Proposal 0002		$_____
Base Proposal 0003		$_____
	Aggregate of Proposal Line Items 0001, 0002 and 0003.	$_____

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