DESIGN/BUILD STATEMENT OF WORK

FOR

RENOVATE SECURE FACILITY, B1049

MHMV 250002

29 JULY 2026

KIRTLAND AIR FORCE BASE
NEW MEXICO

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1. GENERAL PROJECT INFORMATION

1.1. Design/Build (D/B) Purpose and Objective

1.1.1. This Statement of Work (SOW) outlines the design/build services necessary to Renovate Secure Facility, B1049 at Kirtland Air Force Base (KAFB). The primary objective of this project is to construct a newly enclosed storage space 25 feet x 25 feet, featuring a mezzanine above. Prior to the start, contractor shall remove existing Space Saver storage system in its entirety. Access to the Mezzanine will be provided by a metal staircase. The lower storage is designated for miscellaneous equipment storage, while the mezzanine will accommodate small to medium electronic devices. Additionally, four (4) opaque skylights will be installed. Modify and relocate utilities as necessary. The contractor shall encompass, without limitation, the following responsibilities: performing field verifications; supplying all necessary labor, tools, equipment, permits, and licenses; and executing the project construction in full compliance with the specifications detailed in this SOW.

1.1.2. The design shall include, but is not limited to, the following: provide the services of all the licensed design professionals in the disciplines required to produce the design analysis, estimate, schedule, drawings, and specifications which shall describe the facility in strict accordance with the requirements outlined in this SOW. The build includes, but is not limited to, the following: conducting field verifications, providing all labor, tools, equipment, permits, and licenses required to construct the project in strict accordance with the requirements outlined in this SOW.

1.1.3. Phasing is not necessary. Construction will occur while the building is unoccupied.

1.1.4. Escorts are mandatory, always. Weekend work is prohibited. Work hours are scheduled from 0700 to 1600, Monday through Friday.

1.1.5. Access to the facility is available through the existing east and west entrances. The east entrance features a roll-up door that provides direct access to the warehouse, accommodating large equipment entry. The west entrance offers controlled access into the warehouse area via a narrow hallway, which houses the facility's fire alarm panel.

1.2. Attachments and Reference Documents

1.2.1. The following documents and attachments are applicable to this SOW to the extent specified herein. These documents are provided with this SOW to assist the contractor in completing the SOW requirements. It is the contractor’s responsibility to field verify the accuracy of any information that has been provided by the Government.

1.2.1.1. Attachment A – Example Layout Diagram

1.2.1.2. Attachment B – Building 1049 Location

2. PROJECT SCOPE REQUIREMENTS

The following requirements apply to the contractor throughout design and construction, and turnover of a turn-key project.

2.1. General D/B Scope Requirements:

2.1.1. Contractor shall provide all installation services required for the completion of this SOW. The installation shall be in accordance with all applicable codes as listed in this SOW.

2.1.2. Contractor shall request approval from User prior to use of radios, Bluetooth, Radio Frequency (RF), or any transmission devices.

2.1.3. Prior to construction a survey of all on site utilities is required.

2.1.4. Contractor shall perform a new code, occupancy, and life safety analysis.

2.1.5. Building Criteria

2.1.5.1. Soil Site Class CD

2.1.5.2. Risk Category II

2.2. Civil:

2.2.1. The current facility is enclosed by a perimeter fence, featuring controlled access at the western entrance and a pedestrian gate at the northern end. The northern section of the facility includes an open parking lot, ideal for use as a staging and lay-down yard.

2.3. Structural:

2.3.1. The steel structure is a pre-engineered metal building (PEMB) featuring portal frames and a purlin roof system. The concrete slab is a 4-inch thick monolithic pour, integrated with the turndown perimeter footings.

2.3.2. Demolition Work

2.3.2.1. If determined by analysis, that slab removal is necessary to support the vertical and lateral loads of the new structure, overlapping saw cuts shall be avoided. To prevent this, provide a core or alternative method at the slab's corner. The existing slab should be integrated/tied to the foundation system to prevent differential settlement.

2.3.2.2. The current building features framed skylight openings. The new construction will necessitate the installation of four (4) additional skylights positioned above the new light frame structure. Remove the existing roof deck as necessary and provide additional structural support as needed.

2.3.3. New Renovation Work

2.3.3.1. Structural Analysis

2.3.3.1.1. Provide structural design analysis for the new office space constructed with light frame construction as required by the latest edition of the

UFC 3-301-01. UFC3-301-01 adopts the structural design provisions in the following building codes IBC 24, IEBC 24, ASCE 7-22. Where the UFC implements Additions, Replacements, and Supplements to the adopted codes the UFC shall supersede those specific sections and exceptions. The structural analysis and design must also adhere to other current applicable material codes.

2.3.3.2. Structural Design Criteria

2.3.3.2.1. The light frame structure shall be designed as a self-supported structure within the PEMB and is to not rely on the PEMB for lateral or vertical stability.

2.3.3.2.2. The site-specific seismic design requirements are to be obtained by the ASCE 7 hazard tool. Non-seismic lateral pressures are to be determined by ASCE 7-22 Chapter 4.

2.3.3.2.3. The mezzanine shall be designed for a light storage live load of 125 psf as indicated in ASCE 7-22 Table 4.3-1. Provide decking and/or a finish as required by the Architect to achieve a flat surface and to eliminate tripping and slip hazards.

2.3.3.2.4. Indicate the superimposed deadloads in the structural design criteria and construction drawings that are applicable to the design.

2.3.3.2.5. Provide a guard rail system around the mezzanine designed in accordance with ASCE 7-22 Chapter 4.

2.3.3.2.6. The stairs shall be designed for the dead load of the material weight and 100 pounds per square foot (psf.) live load in accordance with ASCE 7-22 Table 4.3-1. The light frame structure shall be designed for the required bearing loads of the stairs.

2.3.3.2.7. All interior partition walls shall be supported at the wall base and top of wall.

2.3.3.2.8. Install the new skylights on the existing roof above the new light framed structure. If applicable, locate the new skylights in the approximate location of the existing skylight openings.

2.3.3.2.9. The skylights will need to be raised above the roof to allow for a 360-degree view over the roof ridge. Provide a curb system capable of supporting the skylight and required live loading on the sky light to distribute the load to the existing roof purlins and provide any additional support framing as required. Coordinate this exact height of the curb system required with the user and architectural requirements.

2.3.3.2.10. Special loads that are greater than the specified live loads that are applicable to the design of the building shall be listed, described, and located. Provide this load criteria in the structural design criteria, structural plans, and/or details.

2.3.3.2.11. The primary lateral system that supports the new light frame structure must be identified and labeled on the construction documents. Identify length of Shear wall required.

2.3.3.2.12. Secondary elements, if required, that directly affect the performance of the lateral system must be identified and labeled on the construction documents. These items are included but not limited to collectors, diaphragm continuous cross ties and struts, drag struts, etc.

2.3.3.2.13. Non-structural components, i.e. architectural, mechanical, electrical and plumbing components, will need to be supported by the structure per the requirements of ASCE 7-22 Chapter 13.

2.3.3.2.14. A geotechnical analysis is not required for this project; however the contractor is responsible for providing the adequate subgrade preparation, compaction, and this method shall be approved by the Designer of Record (DOR). Utilization of the IBC presumptive load bearing values of soil is permissible.

2.4. Architectural:

2.4.1. Existing Conditions

2.4.1.1. There are four (4) existing skylight collars centered above the mezzanine storage area ceiling where existing openings have been concealed.

2.4.2. Demolition Work

2.4.2.1. Remove existing Space Saver storage system in its entirety.

2.4.2.2. Remove the ceiling insulation and roofing material to uncover and expose the four (4) existing openings and prepare the area to receive four (4) new skylights.

2.4.3. New Renovation

2.4.3.1. Construct a new enclosed storage space in accordance with new occupancy that is approximately 25 feet x 25 feet, featuring a mezzanine above. The lower storage area is an enclosed storage space that will be designated for miscellaneous equipment storage. New storage space shall have VCT flooring to withstand equipment and storage with a rubber base. Ceiling shall be a fire rated hard lid ceiling. All walls shall be textured and painted with an epoxy finish that is suitable for a storage area. Provide a new hollow metal (HM) double door and HM frame from existing open bay storage area into the new storage space. Doors shall be louvered and receive a passage door hardware set. See electrical for new lighting requirements.

2.4.3.2. Provide and install a metal staircase for access to the mezzanine.

2.4.3.3. Provide and install four (4) new skylights. Skylights shall be opaque, uncoated, and non-metallic. Dimensions of each skylight shall be the same length and width (2’-0” x 4’-0”) of the existing opening.

2.4.3.4. Install a personnel barrier around the perimeter of the mezzanine that is code compliant.

2.4.3.5. Mezzanine flooring shall be a non-slip, fire-rated epoxy flooring.

2.4.3.6. Interior space planning and layout design.

2.5. Mechanical:

2.5.1. Existing Conditions

2.5.1.1. A single air handler serves the building. The spaces served are the restrooms, existing office, and work area.

2.5.2. Demolition Work

2.5.2.1. No mechanical or Heating, Ventilation, and Air Conditioning (HVAC) demolition is anticipated.

2.5.3. New Renovation Work

2.5.3.1. ASHRAE 62.1 ventilation calculations will be performed based on new occupancies and square footages. If ventilation is required for new spaces, ductwork and diffusers will need to be provided.

2.5.3.2. Load calculations will be required based on the new electrical heating loads from electronic equipment. If heating loads exceed existing infrastructure capabilities a split system shall be installed to mitigate the heating load.

2.5.3.3. Direct Digital Control (DDC) compatibility is not anticipated as the existing air handler will presumably be used to control temperature setpoints. If a split system is used, a local thermostat is acceptable.

2.6. Electrical:

2.6.1. Existing Conditions

2.6.1.1. No electrical drawings are available of the interior of the existing infrastructure. Power to the building is from T1049 consisting of 3 single phase 50kVA transformers arranged in a Wye Primary, 240Y/120V Secondary configuration with a total capacity of 150kVA. Observed panelboards on site lack sufficient breaker spaces for additional branch circuits. It is possible that some of the branch circuits are no longer in use and were abandoned in the shut position. Spare ampacity on existing panels requires field measurements to be determined.

2.6.1.2. An existing panelboard was used to distribute power to a bank of shredders for paper shredding capability. This capability is no longer required.

2.6.2. Demolition Work.

2.6.2.1. No electrical demolition work is anticipated. Contractor to field verify area of new work as applicable.

2.6.3. New Renovation Work.

2.6.3.1. Assessment must be made of the facility electrical system to ensure adequate ampacity is available for the additional loads. Assessment should consider any load removed from previous abandoned branch circuits that leave space and ampacity available. It is anticipated that loads will be determined by logging meter over a 30-day period. If the existing panel is not serviceable for reuse and space and ampacity is not identified from abandoned branch circuits new panelboard must be purchased and installed. New panelboards must accommodate 25% spare breaker spaces and 25% spare ampacity beyond presently known load to accommodate modifications for future changes in mission requirements.

2.6.3.2. Install new conduits and conductors to existing panels at existing location. At a minimum, the panel shall accommodate single phase branch circuits at 20A for each of the following:

2.6.3.2.1. Enclosed space lighting.

2.6.3.2.2. Mezzanine lighting.

2.6.3.2.3. Four branch circuits of receptacle load for enclosed space and mezzanine.

2.6.3.2.4. Balance loads in the panelboards between circuits and phases.

2.6.3.2.5. Provide Surge Protection Device (SPD) for all phase and neutral conductors.

2.6.3.3. Install new LED light fixtures in enclosed space. Install new LED lighting above mezzanine. Install new conduit and conductors to feed new lighting fixtures.

2.6.3.4. Install new conduit and conductors from panel to enclosed space. Place a minimum of one (1) duplex receptacle on each wall (confirm with user for location).

2.6.3.5. Install new conduit and conductors from panel to mezzanine. Install eight (8) quadruplex receptacles (confirm with user for location).

2.7. Meeting and Conference Requirements

2.7.1. Meeting/Teleconference Support: Contractor shall with the coordination of the Project Manager (PM) to lead, conduct, and support weekly meetings and/or teleconferences through the construction phase of the contract. Weekly meetings are subject to change throughout the life of the project by approval of the Contracting Officer (CO). Contractor shall prepare and maintain the weekly meeting agenda report which shall include the record of new and old discussion of technical issues, percent complete actual versus planned, and tabular reports for Requests for Information (RFIs) and submittals (open and upcoming). Contractor shall submit the meeting agenda in writing to the CO, PM, and Civil Engineering (CE) prior to the weekly meeting. Contractor shall also prepare, update, and submit in writing to the CO, PM, and CE on a weekly basis, a three-week look ahead schedule to demonstrate construction progression from start to completion.

2.7.2. Contractor shall prepare minutes for meetings attended, including teleconferences, weekly meetings, Red Zone meetings, and any other meeting required for completion of project, and distribute minutes to attendees within three working days.

2.7.3. Red Zone Meeting: Contractor shall support red zone meetings as part of the closeout process of the project. The Red Zone shall commence at 80-percent of construction completion. At these meetings, Contractor and the project stakeholders shall discuss, define, and achieve consensus on actions necessary to complete construction and support user occupancy. Meetings at the beginning of the red zone period will be held every two weeks then increase to weekly towards the final month of the project.

2.8. Produce Complete Project: Contractor shall furnish all parts, material, equipment, all labor, supervision, and method and means as required to install and produce a complete turnkey project to the Government.

2.9. Contractor shall identify and comply with all applicable federal, state, and local laws; statutes; Executive Orders; Department of Defense/Air Force manuals, handbooks, regulations, guidance, and policies.

2.10. Contractor shall comply with the National Institute of Building Sciences' Whole Building Design Guide Construction Criteria Base (CCB), Unified Facility Criteria (UFC), and all related libraries. The primary criteria are the Air Force Criteria from the Documents Library. The Unified Facilities Guide Specifications (UFGS) is the mandatory starting point for all specifications, and shall not be deleted, materially modified, or made less stringent without Government approval.

2.11. It is the Contractor's responsibility to identify and comply with all applicable requirements.

2.12. The Government has not sampled Building 1049 for asbestos containing materials (ACM) because the building was constructed after 1990. At present, the Government is unaware of any additional hazardous materials (HAZMAT) conditions for this project. However, in the event asbestos, lead, or Polychlorinated Biphenyls (PCB) is suspected, Contractor is to immediately notify the CO by phone and follow-up with a written notification within 48 hours. A formal, funded modification may be necessary to define the necessary contract action. If sampling and testing are added to this contract, Contractor shall be responsible for sampling and testing of suspected materials. Any finishes damaged as a result of sampling shall be repaired by the Contractor.

2.13. Air Force Secure Facility Restrictions: Building 1049 is a secure facility. Access is limited to U.S. Citizens. Personnel entering the restricted area must possess proof of U.S. citizenship in order to gain installation access, and a valid Government-issued picture identification for daily building access. For access to/from and during work inside all buildings, the Government will provide escorts. Contractor shall schedule all site visits and coordinate with end user, CE, and CO to be escorted to the work areas. Request 30-day notice to gain access to the facilities.

2.14. Phasing the Work: All work shall be planned to minimize interference and interruption with the user's mission. Contractor shall develop a phasing and outage plan with input from the facility users to minimize outage duration and impact on the user's mission. Contractor shall be flexible in coordinating work near any scheduled outages, missions, or other construction activities that may disrupt or interfere with the user's mission. This flexibility is essential to ensure minimal disruption to ongoing operations and to maintain a productive working environment for all stakeholders involved.

2.15. Fire Watch: Contractor shall coordinate fire watch with CE, users, fire department, and stakeholders before any type of outage that will affect the fire alarm system. The facility user organizations shall provide fire watches for all pertinent dates and times of outages. Fire watch shall be coordinated 30 calendar days prior to need.

2.16. Contractor shall prepare and submit submittals and deliverables on an AF3000 to the CO for approval in-writing by CE and the CO. Any resubmittals shall be submitted on an AF3000 to the CO, for approval in-writing by CE and the CO within seven calendar days or as indicated on the AF3000. Contractor shall submit RFIs as needed. Contractor shall submit RFIs as needed. All documents must be completed and submitted to the CO for submission and review by the engineering department within seven (7) calendar days.

2.17. On-Site Field Verification: Contractor is responsible for visiting the site and conducting all field investigations throughout the life of the project that will allow for accurate materials and equipment needed for a complete project. Contractor is responsible for providing all field investigations needed to confirm existing conditions and current field conditions. Contractor shall verify in the field any site survey information, as-builts, geotechnical, and all other information that may have been provided by the Government. Contractor shall coordinate all site visits in advance with the CO, CE, and user.

2.18. Refer to section 5 (Table 5.1 and 5.2) for criteria and requirements for all deliverables.

3. REGULATORY COMPLIANCE AND STANDARDS

3.1. Compliance with Codes, References, and Standards: All work shall be in strict compliance with all applicable codes as adopted and modified by the State of New Mexico, Department of Defense, current NFPA, NEC, IMC, IPC, applicable UFCs, AFIs, and all local building codes and ordinances. Governing code is the current IBC. Contractor shall follow the most current edition at the time of NTP, apply to all codes, references, and standards. They included the following, but not limited to:

3.1.1. All applicable Unified Facilities Criteria (UFC) and applicable UFGS. This are posted at: https://www.wbdg.org/dod.

3.1.2. Air Force Corporate Facilities Standards (AFCFS) located at: https://afcfs.wbdg.org. This document is an interactive online tool.

3.1.3. KAFB Installation Facilities Standards (IFS) located at https://www.wbdg.org/airforce/ifs/kirtland-afb-ifs. It is necessary to download the IFS for the PDF tools to function properly.

3.1.4. AFMAN 32-1084

3.1.5. Environmental Protection Agency, EPA 841-B-09-001, EISA-Section 438, Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the "Energy Independence and Security Act".

3.1.6. UFC 1-200-01 DoD Building Code (General Building Requirements)

3.1.7. UFC 1-200-02 High Performance and Sustainable Building Requirements.

3.1.8. UFC 3-201-01, Civil Engineering

3.1.9. UFC 3-401-01, Mechanical Engineering

3.1.10. UFC 3-501-01 Electrical Engineering

3.1.11. UFC 3-520-01 Interior Electrical Systems

3.1.12. UFC 3-550-01 Exterior Electrical Power Distribution

3.1.13. UFC 3-560-01 Electrical Safety, O&M

3.1.14. UFC 3-530-01 Interior and Exterior Lighting Systems and Controls

3.1.15. UFC 3-575-01 Lightning and Static Electricity Protection Systems

3.1.16. UFC-3-430-01FA Heating and Cooling Distribution Systems

3.1.17. Unified Facility Guide Specifications as applicable to proposed design solution

3.1.18. International Building Code (IBC)

3.1.19. International Mechanical Code (IMC)

3.1.20. International Energy Conservation Code (IECC)

3.1.21. NFPA 70 National Electrical Code

3.1.22. NFPA 101 Life Safety Code

3.1.23. Air Force Instruction 32-1064 Electrical Safe Practices

3.1.24. Air Force Instruction 32-1065 Grounding Systems

3.1.25. American Society of Civil Engineers (ASCE) 7-16

3.1.26. ANSI C84.1 Electric Power Systems and Equipment - Voltage Ratings

3.1.27. ANSI/IEEE Std. 142 Recommended Practice for Grounding of Industrial and Commercial Power Systems

3.1.28. ANSI/IEEE Std. 242 Recommended Practice for Protection and Coordination of Industrial and Commercial Power Systems

3.1.29. IEEE C62.41 Surge Voltage in Low Voltage AC Power Circuits

3.1.30. ASHRAE Standard 90.1 Energy Standard for Buildings except Low-Rise Residential Buildings

3.2. Operational Security (OPSEC): OPSEC Training and Briefing requirements due to location of work.

3.2.1. Contractor's management shall ensure that all employees, to include sub-contractor employees performing work on this effort receive an Operations Security (OPSEC) Awareness Briefing/Training prior to starting work and the briefing/training must be accomplished prior to entering the work site on day one of the work effort. The Government (i.e., Contracting Officer, Unit Security Assistant, Unit OPSEC Coordinator, or 377 Air Base Wing OPSEC/Signature Manager (377 ABW/SMO)), can provide a tailored lesson plan for use by the Contractor's management to ensure training requirements are met. It is critical that Contractor employees fully understand the importance of not discussing work details associated with this work effort, such as: actions or activities observed, the SoW, as-built or other drawings in public or outside of the worksite. Contractor's management will track all training by employee name and date the training was provided using a spreadsheet or similar document, such as a sign-in roster, and provide a copy to the assigned CO.

4. DESIGN AND ENGINEERING SERVICES

4.1. Contractor shall perform and provide detailed design and be responsible for a complete set of design documents. The design shall be completed by registered and licensed engineers and architects. The developer of the design shall be identified as the Designer of Record (DoR).

4.2. Contract Drawings

4.2.1. Produce drawings using Computer Aided Design and Drafting (CADD) and Building Information Modeling (BIM) software as described in the project. Provide Adobe Acrobat Portable Document Format (PDF) files for design review and record drawing submittals as required by the Government. Drawings will comply with the Department of Defense (DoD) CADD Standard latest version and customer specific guidance. The CADD standard is available at (https://www.wbdg.org/airforce/bim) and BIM guideline.

4.2.2. The location plan(s), drawing index, drawing legend, abbreviations, and project title shall be located on the first sheet of the drawings; on a subsequent sheet all Life/Safety data shall be clearly compiled including, but not necessarily limited to, International Building Code (IBC) reference pertaining to the specific project and a building/site plan clearly indicating appropriate pertinent information such as fire separation walls, path of egress, etc. All drawings shall include a graphic scale. Lettering shall be no less than 1/8" high. The Government will provide the templates for the cover sheet, index sheet, etc. Drawings shall be accurate, professional, and in sufficient detail, including all required schedules, tables, details, sections, plans, elevations, and general notes, to enable proper and satisfactory construction of the entire project.

4.2.3. Conceptual Design (35%): Contractor shall submit a conceptual design package that will include, as applicable, deliverables described in deliverable requirements in Section 5.

4.2.3.1. Drawings include basic floor plans, rough architectural and structural sections and details, preliminary mechanical and electrical equipment and distribution system layouts, developed elevations, schedules and tables, completed Life/Safety data sheet, and IBC and UFC code analysis, and any other information required to clearly illustrate and describe the design.

4.2.4. Preliminary Design (65%): Contractor shall submit a preliminary design package that shall include, as applicable, deliverables described in deliverable requirements in Section 5 incorporating responses to all Government review comments and backcheck comments from previous submittals.

4.2.4.1. Drawings to include final basic floor plans, developed architectural and structural sections and details, detailed mechanical and electrical equipment and distribution system layouts, detailed elevations, schedules, tables, completed Life/Safety data sheet, and IBC and UFC code analysis, and any other information required to clearly illustrate and describe the design.

4.2.5. Pre-Final Design (95%): Contractor shall submit a pre-final design package that will include applicable deliverables described in deliverable requirements in Section 5 incorporating responses to all Government review comments and backcheck comments from previous submittals.

4.2.5.1. Contract drawings include all floor plans, sections, details, elevations, completed schedules and tables, Life/Safety data sheet, and general notes as required to include the basis for design clearly defined on the first sheet of each discipline.

4.2.6. Final Design (100%): Final design shall include all drawings, specifications, Design Analysis Report (DAR) with all comments and corrections incorporated.

4.2.6.1. The design by the DoR at this level shall be complete, back checked, and fully corrected set of construction documents. All final drawings shall be sealed, stamped, signed, and dated by a project architect/engineer/principal of the firm registered in architecture and/or engineering as appropriate.

4.2.6.2. Files must be fully editable and match the drawings submitted for the final design submittal.

4.2.6.3. Drawings shall be prepared in AutoCAD, provided in both full-size drawings (24” x 36”) and reduced drawings (11” x 17”).

4.3. Specifications Standards

4.3.1. Specifications shall be delivered at each design submittal stage in accordance with the deliverable requirements in Section 5.

4.3.2. Provide technical specifications that are project specific, definitive, and free of ambiguities. Use of the UFGS system is mandatory in preparing specifications for Design/Build projects. UFGS are available at the Whole Building Design Guide website (https://www.wbdg.org/dod).

4.3.3. The UFGS are published only in electronic format and are intended to be used with SpecsIntact software. The UFGS Master complies with UFC 1-300-02. Updated UFGS are posted quarterly in February, May, August, and November.

4.3.4. Technical specifications shall be written according to UFGS format made available at Whole Building Design Guide website (https://www.wbdg.org/dod) coordinated with the required disciplines. Note: Contractor shall follow the Front-end specifications and be added to the design / build project specifications. Front-end specifications are provided with this SOW.

4.3.5. Contractor shall avoid the use of "proprietary type" specifications. When necessary to use a manufacturer's name to describe a type of product, at least three manufacturers shall be named, if possible, and shall include the words "or approved equal". Brand name or "or equal" descriptions may be used when there are no specifications available covering the items or when it otherwise is not feasible to describe the requirement.

4.4. Design Analysis Report (DAR)

4.4.1. Design Analysis Report shall be provided bound on 8-1/2” x 11” paper and on approved electronic media as approved by CE. It shall be arranged by discipline, meet all division specific UFC requirements, and support design decisions made throughout the design. The DAR shall provide a narrative description of the key elements and features of the design. It shall include calculations, material cut sheets, and explanations of options considered. The DAR shall also contain as a separate section, all previous design review comments annotated with action taken, cost estimate, and a listing of any outstanding issues requiring resolution. Drawings shall be submitted under a separate cover.

4.4.2. The information provided in the paragraphs that follow shall be used at every submittal point to produce the various elements of a complete DAR.

4.4.3. Purpose: The DAR contents shall be used 1) to provide a narrative description of the key elements and features of the design; 2) to provide a basis for design, including assumptions and design criteria such as temperature, humidity, and loads; 3) to provide the information, justification, and calculations of the design; and 4) to provide the designer’s thought process in the development of the design.

4.4.4. Specific Content: The format and organization within the outline are at the discretion of the Contractor. Include catalog cuts of proposed products where applicable. Update the contents of the DAR at each required submittal point to account for changes and corrections since the last submittal. Calculations need not be resubmitted at each point if the previously submitted calculations were complete and no corrections or changes were required. However, if calculations are not included with a subsequent submittal, the contents shall reference the

submittal date, submittal title, volume number, and pages where the calculations may be reviewed. All calculations shall be included in the final submittal.

4.4.5. Criteria: List all Air Force Manuals, regulations, instructions, military handbooks, UFC, codes, AFI, design guides, Comprehensive Plans (CPs), and CP bulletins used by the contractor for guidance in the project design.

4.4.6. Analysis Summary:

4.4.6.1. Describe the scope of work.

4.4.6.2. Identify any violations of criteria that would occur if the project is constructed as described in the design documents.

4.4.6.3. Recommend phasing of construction if required to meet user needs.

4.5. Verify Information Needed: Contractor shall be responsible for obtaining additional information and any other information needed to develop accurate design drawings for a complete project. This may include creation of as-builts, site measurements, surveys, tests, and other material necessary to provide the Contractor with an adequate basis for design.

4.6. DoR Requirements During Construction: The DoR shall perform the following requirements during construction:

4.6.1. The DoR shall review ALL submittals, whether generated by the Contractor or a sub-contractor, for correctness, completeness, code compliance, safety requirements, design intent, and legal sufficiency prior to submission of each submittal to the Government. The DoR shall provide a recommendation to approve or disapprove the submittal, with a complete and detailed description of the reasoning for disapprovals, and the recommendation shall be signed by the DoR on the cover page.

4.6.2. The DoR shall review ALL Requests for Information (RFI) by the Contractor for correctness, completeness, code compliance, safety requirements, design intent, and legal sufficiency prior to submission of each submittal to the Government. The DoR shall provide a recommended response to the RFI, with a complete and detailed description of the reasoning for the recommended response, and the recommended response shall be signed by the DoR.

4.6.3. Not less than once per calendar month, the DoR shall visit the site and review the red line drawings being maintained by the construction Contractor. Within seven calendar days of the inspection the DoR shall issue a report to the Government evaluating the accuracy and currency of the red line drawings. The report shall be signed by the DoR.

4.6.4. The DoR shall attend and take minutes of any meeting with the Government during construction called by the Contractor or called by another party and the Contractor agrees to attend. Depending on the target agenda for the meeting the CO may waive this requirement on a case-by-case basis.

4.6.5. The DoR is responsible for all design/engineering aspects of the project through project close-out. The following sections describe the requirements that apply to the Contractor throughout the design and construction phases of the project.

5. DELIVERABLE REQUIREMENTS

5.1. Period of Performance

5.1.1. The start of design and construction phase shall be approved by the CO in writing as two separate NTP. Calendar days provided in table 5.1 below are timeframes to accomplish submittals and final inspection/acceptance which should be considered when developing the overall schedule for Government approval.

5.1.2. Contractor shall provide 1) an overall schedule to meet the period of performance date/completion date; and 2) a three-week look ahead with the existing week to show how work is progressing from start to completion. The days provided in table 5.1 below are timeframes to accomplish plans review, submittal reviews and final inspection/acceptance which should be considered when developing the overall schedule.

5.1.3. The Government requires completion of the project within 427 days of contract award. The following Table 5.1 shows the timeframe of each Government response requirement.

5.1.4. Contractor shall provide 35%, 65%, 95%, and 100% design submittals in accordance with Table 5.2. The design analysis should include investigative and research information. Allow 21 calendar days for Government review and Contractor response following each submittal.

5.1.5. Schedule 35%, 65% and 95% review conferences to be held at KAFB after Government comments have been provided to the Contractor and the Contractor has prepared all responses.

5.1.6. Upon Government approval of the 35%, 65%, and 95% design, Contractor shall provide the 100% design submittal.

5.1.7. Upon Government approval of the 100% design, Contractor shall provide the final 100% design submittal.

5.1.8. The 100% final design shall be manually signed, dated, and sealed by the licensed design professionals responsible for the design. Final Supplemental instructions (SI), drawing and specification set submitted shall be an original signed set and marked “Issued for Construction”; copies will not be accepted.

Table 5.1

REQUIREMENT	No. of Calendar Days
Contract Award – Design NTP	10 Days
Contractor Design Submittal 35%, 65%, 95% and 100%	(30 days each) 120 Days
Government Review: 35%, 65%, and 95% - Includes Government review and comments (14 days) and Contractor responses time (7 days) for each submittal.	(21 days each) 63 Days
Review Meetings – After Contractor responses are provided	1 Day each
Government – 100% Back check	7 Days
Preconstruction Conference NTP Meeting	1 Day
Submit Permits & Waivers as required	14 Days
Contractor – Construction Submittals	21 Days
Demolition and Construction	180 Days
Pre-Final Inspection and Punch-list	7 Days
Final Inspection and Acceptance	1 Day
Total Days	427

5.2. Submittal Quantities (See Table 5.2)

Table 5.2

SUBMITTAL DESCRIPTION	NUMBER OF COPIES
35% DESIGN	
Full-Size (D) Drawings in DWG and PDF format (AutoCAD & Acrobat)	DoD SAFE
Reduced Size Drawings (11 X 17) PDF format	DoD SAFE
Specifications in PDF format	DoD SAFE
Design Analysis Report in PDF format	DoD SAFE
Estimated Const. Sched. (MS Project, PDF)	DoD SAFE
65% DESIGN	
Full-Size (D) Drawings in DWG and PDF format (AutoCAD & Acrobat)	DoD SAFE
Reduced Size Drawings (11 X 17) PDF format	DoD SAFE
Specifications in PDF format	DoD SAFE
Design Analysis Report in PDF format	DoD SAFE
Estimated Const. Sched. (MS Project, PDF)	DoD SAFE
Construction AF66 (MS Excel & PDF)	DoD SAFE
95% DESIGN	
Full Size (D) Drawings in DWG and PDF format (AutoCAD & Acrobat)	DoD SAFE
Reduced Size Drawings (11 X 17) PDF format	DoD SAFE
Specifications in PDF format	DoD SAFE
Design Analysis Report in PDF format	DoD SAFE
Estimated Const. Sched. (MS Project, PDF)	DoD SAFE
Construction AF66 (MS Excel & PDF)	DoD SAFE
100% DESIGN (Issued for Construction)	
Full-Size (D) Drawings (Sealed Original w/1 Copy)	1 Set
Reduced Size Drawings (11 X 17) PDF format	DoD SAFE
Full Size (D) Drawings in DWG and PDF format (AutoCAD & Acrobat)	DoD SAFE
Specifications (Sealed Original w/1 Copy)	1 Sets
Specifications in PDF and Word format	DoD SAFE
Design Analysis Report (8-1/2 X 11 Bound, 2 Sided) PDF format	1 Ea.
Design Analysis Report (PDF and Word)	DoD SAFE
Estimated Const. Schedule (MS Project, PDF, Hard Copy)	1 Ea.
Construction AF66 (MS Excel & PDF)	DoD SAFE

6. CONSTRUCTION SERVICES

6.1. The Contractor shall be responsible for providing a complete and useable product/system and shall be responsible for accomplishing all tasks outline herein, drawings, and specifications.

6.2. Facility/User Coordination

6.2.1. Project Coordination: All work shall be coordinated with the CO in conjunction with the PM and CE. The PM shall coordinate with the facility user.

6.2.2. Minimize Interference with regular KAFB activities: The Contractor shall plan construction activities to minimize interference with the normal activities of KAFB occupants in the remaining areas of the facility and the neighboring facilities, surrounding streets, and parking areas.

6.2.3. Contractor will not have access to the facilities restrooms. Contractor shall provide alternate facilities to accommodate the construction workforce.

6.2.4. Owner Occupancy: The project shall be scheduled and executed to minimize conflict and to facilitate user's operations. Changes to the approved schedule shall be vetted through the CO to support minimal operation impact.

6.2.5. Contractor shall be flexible when coordinating work near active missions, outages, and construction activities that may interrupt or interfere with the user's mission.

6.2.6. Contractor shall phase construction activities to least affect the active mission identified above. Any construction activates that will affect or interfere with the active mission shall be coordinated with the user four weeks prior to the start of those activities.

6.2.7. Fire Suppression outages shall require coordination and Contractor flexibility with the user and fire department, due to user's requirements that shall be followed during the outage.

6.3. Staging, Storage, and Parking

6.3.1. The Government will designate an area for construction staging and storage. The exact location will be discussed and determined in the pre-construction meeting. The location shall not impede access for emergency response vehicles and personnel.

6.3.2. Parking shall be in designated parking spaces and in designated parking areas. Exact areas designations to be discussed during the pre-construction meeting. Parking will not be allowed on sidewalks or grass areas.

6.3.3. Construction shall not commence without prior coordination with CO, CE, and user.

6.4. Availability of Site

6.4.1. Workdays are normally defined as eight-hour duty days Monday through Friday, excluding federal holidays and family days. Normal hours of operation are 7:00 AM to 4:00 PM. Major outages to the facility or mission shall be kept to a

minimum, confined to the weekends, and scheduled 30 days in advance. Due to this facility being secured, there will be delays to in-process and out-process.

6.4.2. Holidays: All federal holidays are observed and are not considered duty days.

6.4.3. Family Days: There will be limited Government staffing on family days. If the Contractor's schedule overlaps any of these holidays, the Government will accommodate work if possible.

6.4.4. There will be no work after business hours, on weekends, or federal holidays

6.4.5. Due to sensitive location of the site, the Contractor may encounter delays to accommodate the Air Force's mission and exercise activity. If such delays occur, it is the responsibility of the Contractor to document such delays and notify the CO within 14 calendar days.

6.5. Schedule and Planning Requirements

6.5.1. The Contractor shall provide, with each progress payment, a Critical Path Method (CPM) schedule for tracking work progress for the entire project from NTP to closeout documents. The CPM shall detail the project schedule and status using Gantt charts, which shall depict percent complete for each task. The Contractor shall prepare and submit an AF Form 3064 and AF3065 for approval.

6.5.2. Contractor shall submit three-week look ahead schedule to show how work is to progress from start to completion, if warranted, Contractor shall also submit a drawing to visually to depict areas work during the same period. 3-week look-ahead schedule shall be submitted every two weeks unless major changes happen between the two weeks that can affect coordination with KAFB.

6.6. Notification Requirements

6.6.1. The Contractor is required to notify the CO and PM of anything they believe is outside their scope of work and/or beyond their control that could impact cost, schedule, or quality. Additionally, the Contractor and its team is required to notify the CO and PM of critical issues that may affect the contract performance and/or human health and the environment. The types of issues that require notification include but are not limited to health risks, spills, changes in critical or key personnel. If encountered, immediately stop working, report the discovery to the CO, and PM, and implement the appropriate safety precautions. Field activities shall not resume until clearance is received from the CO. On critical issues, verbal notification shall be made immediately, followed by written notification as soon as practical within the succeeding 48 hours.

6.6.2. Utility outages: Outages require 30-day notice to schedule and major outages to the facility or mission shall be scheduled on the weekends or after business hours. After business hours and weekend work requests are dependent on the user's escort ability to support the request.

6.7. Permits/ Environmental Requirements

6.7.1. The Contractor shall comply with all guidance provided by KAFB on the Form 103 Digging Permit Request and/or the AF Form 813 Request for Environmental

Impact Analysis. For projects with ground disturbance, failure to comply with the Albuquerque Environmental Health Department (AEHD) Fugitive Dust Control regulation at 20.11.20 New Mexico Administrative Code (NMAC) may result in a notice of violation and financial penalty to the Contractor.

6.7.2. The following permits are required on the subject project:

6.7.2.1. Welding/Burn Permit

6.7.2.2. KAFB Landfill Permit

6.7.3. All permits and waivers shall be approved prior to any on-site work can begin.

6.7.4. Other permits may be required on this project. Attention shall be paid by the Contractor to the requirements specified in the KAFB AF813 Checklist of Environmental Requirements for this project, which detail regulations with which those executing the work of the contract shall comply.

6.7.5. If changes are made to the project, or new laws/policies enacted by the local agencies, there may be additional permits required for construction. Prior to starting work, it is recommended that the contractor verify current permit requirements are being met at the time of construction.

6.8. The contractor shall comply with all AF, state, local, and federal environmental regulations. All applicable permits and approvals required by Air Force, Bernalillo County, City of Albuquerque, and the State of New Mexico shall be obtained prior to construction start.

6.9. Photo Documentation

6.9.1. Due to the site being a secured location, Government will have to take photos on the Contractor's behalf. Once the photos have been reviewed, the Government will distribute them out to the Contractor for their use and documentation. Contractor shall submit a request for photos to be taken on their behalf when submitting escort request.

6.9.2. During construction, prepare digital photo documentation of weekly field activities and progress in conjunction with the Government inspector. Digital photos shall be submitted using a minimum five mega pixel photograph in JPEG format. Provide an index for each set of photographs submitted, identifying the project number, the Contractor, and a brief description. Photography of any kind shall be coordinated through the CO, PM, and CE. The PM shall coordinate with facility Point of Contact (POC).

6.10. Accident Prevention Plan (APP) and Checklist – Provide an APP and checklist in accordance with EM 385-1-1 for review and approval by the Government.

6.11. Site Protection, Cleanup, Repair or Replace, and Differing Site Conditions

6.11.1. Ensure that all adjacent property, buildings, and contents are protected from dust, dirt, runoff, debris, and other damage resulting from project activities. Contractor shall provide plastic sheeting, covering of ventilation, and the use of sticky mats to minimize the transfer of construction dust and debris to the occupied areas of

the building during construction. Contractor shall ensure that all trash and debris shall be disposed of on a regular basis.

6.11.2. Blockages or obstructions of any doorway or building egress shall be coordinated with the CO.

6.11.3. No food shall be prepared on the facility premises. Contractor shall coordinate with the user to designate the location outside of the work area where breaks will be taken.

6.11.4. Replace or Repair: Contractor shall replace or repair to match original existing conditions, all existing adjacent finished surfaces, utilities, equipment, products, vegetation, and structures or parts thereof that have been damaged or removed to perform the work. Contractor shall inform the CO, PM, and CE in sufficient time to permit scheduling of all work prior to being enclosed.

6.11.5. Contractor shall ensure that all unfinished work is secured and protected from weather at the end of each workday. Contractor is responsible for any material and equipment loss incurred due to inadequate weather or security protection for the duration of this project.

6.11.6. Contractor shall review all contract documents prior to initial site visit to examine all reasonably foreseeable issues. Items not brought up during the request for proposal phase shall be considered as part of the scope. Upon discovering issues during construction that could not be foreseen, or differing site conditions do not match documentation, the contractor shall stop work and immediately contact the CO and PM. Proceeding without notifying the CO and PM shall be taken as acceptance of conditions.

6.11.7. Daily Cleanup: Contractor shall ensure that all non-recyclable trash, debris, refuse, and garbage is disposed of in a safe and legal manner. The KAFB landfill will be available for disposal of non-hazardous construction and demolition waste.

6.11.8. Final Cleanup: Contractor shall ensure that the project site is completely clean before the project final walk-through. All new materials shall be properly cleaned and shall be free of scuffs, dirt, and dust. Areas surrounding the construction site shall also be cleaned of any dirt or dust.

6.11.9. Protect Temporary Openings from Weather

6.11.9.1. If inclement weather is imminent at any time Contractor shall take precautions to safeguard the building (including equipment, finish materials and furnishings) from damage. Contractor shall monitor weather conditions and make the building temporarily weather tight prior to the onset of precipitation and at the end of each workday.

6.12. Warranty

6.12.1. Contractor shall at minimum furnish an overall one-year warranty on services/workmanship performed and any equipment/items the Contractor purchases/installs for this effort. The warranty shall take effect upon the Beneficial Occupancy Date (BOD) by the Government after construction is

completed. Contractor shall coordinate with any/all manufacturers' extended warranties for special components and systems. Extended warranties shall identify exactly what component or system is being warrantied and the duration of the warranty. The specifications prepared by the Contractor shall include all specific extended warranty requirements for special components and systems.

6.13. As-Built Drawings and O&M

6.13.1. Contractor shall provide electronic copy of all O&M documents.

6.13.2. The Contractor shall provide electronic CAD and PDF as-built drawings that clearly identify the renovated space, encompassing all modifications, among other details of the project. Contractor is accountable for integrating Government feedback and making essential revisions to the as-built drawings in response to Government comments and any alterations made to the project, ensuring alignment with on-site installation changes. As-built documents shall follow the guidelines outlined in Attachment X - As-Built Guidance.

6.14. Transfer and Acceptance of DoD Real Property: DD Form 1354 (Draft, Interim, and Final)

6.14.1. Contractor is required to fill out a DD Form 1354 for real property records and a component and subcomponent list for new and previous equipment, to include, but not limited to model, serial numbers, and manufacture specification, locations, and before and after pictures. Contractor shall contact real property department for any questions and concerns. DD Form 1354 and component list are to be completed, submitted, and accepted before any pre-finals and finals are scheduled.

6.14.2. There can be only one final version of a DD Form 1354 for a single construction project. Contractor is to update a draft version on a daily or semi-daily time frame. Contractor may simply have an adjusted draft version with a later date prepared (block 2) and the same serial number (block 4). However, Contractor may have multiple valid interim DD Form 1354s for a phased turnover of facilities, each with its own serial number (block 4). This shall be reviewed by the Government at the 65% design phase of the construction project.

6.14.3. Final draft DD Form 1354 to include approved final invoice with checklist including key supporting documents shall be submitted with approval of final invoice.

End of SOW