BASIC CONTRACT

STATEMENT OF WORK

for

COMPREHENSIVE CONSTRUCTION & ENGINEERING (C2E)

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# PART A - INTRODUCTION

# A.1 SCOPE OF SERVICES

This Statement of Work (SOW) defines the scope of a full range of design, construction, and engineering activities necessary to meet Air Force and other customer requirements. This SOW will be tailored to identify specific project requirements at the task order (TO) level. Projects will be located at various locations, worldwide. The contractor functions as an integral team member in support of the Air Force and other customer missions, to include sharing information with other contractors and cooperation with communities and other Government entities. TOs will be issued for either (1) Design-Build (DB) Construction or (2) Design-Bid-Build (DBB) Construction.

The services solicited under this SOW encompass the full range of methods, technologies and supporting activities necessary to conduct a DB or DBB construction requirement in accordance with technical and regulatory requirements at Air Force installation and other installations worldwide. Such services include construction-phase design services where necessary to accomplish a project requirement, including DB construction design requirements and DBB construction delegated design requirements. However, standalone design services without accompanying construction services are excluded from the services to be provided in this contract.

Contractors conduct efficient management of TOs, including but not limited to the submission of accurate and technically sufficient contract deliverables with timely identification and solution of impediments to successful project completion. Technical requirements include, but are not limited to, the development of the most cost-effective and technically sound approach or solution. The Government will rely on the contractor’s expertise in recognizing and addressing problematic issues and successful execution of each TO.

The primary construction areas associated with this SOW include:

1. General facility construction and renovation. This includes general administrative office buildings, daycare facilities, training buildings which do not have heavy industrial components to the building,
2. Construction or renovation of highly secure facilities complying with Intelligence Community Directive (ICD) 705,
3. Industrial facility construction and renovation to include but not limited to hangars, aircraft/vehicle maintenance facilities, water treatment plants, fuel systems, and high expansion foam fire protection systems,
4. Airfield paving to include but not limited to full runway replacement, repair and/or replacement of shoulders, aprons, taxiways and runways,
5. Non-airfield paving to include but not limited to roadways and parking lots,
6. Utilities to include but not limited to water, electrical, sewer, storm water, and airfield electrical systems,
7. Historic facility renovations,
8. General civil works to include but not limited to airfield and general grading, drainage, and culverts,
9. General infrastructure to include but not limited to fencing, vehicle barriers, awnings, and signage.

# A.2 CONSTRUCTION PROJECT REQUIREMENT

Prior to soliciting or issuing each TO, the Government will document project requirements to define performance, aesthetic, scope, and criteria requirements for the construction required in each TO. For DB Construction TOs, the Government will provide conceptual project requirements, stipulating the conceptual scope and performance requirements for both the Construction Phase Design services and Construction Services. Such DB conceptual requirements will be referred to as a Concept Design, DB solicitation, or 35% design. For DBB Construction TOs, the Government will provide Issued For Construction (IFC) 100% Design Documents, including complete construction drawings and specifications. For both DB and DBB construction requirements, the Government will create sufficient detail to permit a Contractor to quantify construction scope, cost, and risk sufficient to provide a proposal. Such requirements will be appended, along with any other additional references or information necessary for full identification of the Government’s TO requirement.

TO construction phase design services and construction services will be executed in full compliance with all applicable federal, state, and local laws; statutes; Executive Orders; Department of Defense/Air Force/host nation instructions, Status of Forces Agreements, manuals, handbooks, regulations, guidance, and policies. Safe Design and construct in compliance with all international agreement requirements where applicable. Host Nation, Country and installation-specific design and construction criteria, where applicable, will be identified in each TO. Design and construction will comply with the National Institute of Building Sciences’ Whole Building Design Guide (WBDG) Construction Criteria Base (CCB); Unified Facility Criteria (UFC) and all related libraries. The primary criteria are the Air Force Criteria from the WBDG Documents Library, but other agency criteria may be directed for use, depending on the customer agency for a particular TO.

Identify and comply with all applicable safety and health requirements for engineering, testing, and construction activities. Comply with the current edition of the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, including all Occupational Safety and Health Administration (OSHA) regulations as specified therein. No separate payment will be made for compliance with EM 385-1-1 or any safety and health regulations adopted therein, including OSHA.

TOs awarded under this SOW will include design and construction in the following work classifications:

* Sustainment Maintenance
* Sustainment Repair
* Restoration
* Modernization
* Minor Construction
* MILCON Construction
* Other Procurement Construction
* Demolition

## A.2.1 Remote and/or Austere Sites

TOs may require construction services at specified remote and/or austere locations. The contractors provide all labor resources; provide security; procure and transport supplies and equipment; and procure and provide all required logistics and infrastructure (including, but not limited to, communications, potable water, utility systems, housing, dining, transportation, and medical care) when these facilities and services are not otherwise commercially available. This includes providing these facilities and services to a limited number of Government personnel or other contractor personnel (such as personnel under contract to perform Title II A-E construction inspection and oversight services) present throughout the duration of the construction and/or temporarily on site to oversee or assess the work.

## A.2.2 High Risk/Contingency Sites (Hostile Environments)

Typically, when construction is taking place in High Risk/Contingency or Hostile Environments, security and logistical support will be provided by the US Military or host nation forces. However, should this support not be available, the contractor performs work as specified at high risk and/or contingency sites (hostile environments). The contractor is responsible for all logistical/life support requirements including furnishing supplies, equipment, and infrastructure (including, but not limited to, potable water, utility systems, housing, dining, transportation, medical care, and security) when there are no facilities and services available. The contractor ensures that contractor personnel are prohibited from possession of personally owned firearms on the worksite, jobsite, parking areas, contractor temporary facilities and federal installation during, before, or after performance of their contractual duties. Firearms are prohibited from being in vehicles entering these areas. Firearm possession is limited to those procured under the contract and TO specifically. The contractor ensures that its contractor personnel adhere to all guidance and orders issued by the combatant commander or his/her representative regarding possession, use, safety, and accountability of contract procured protective equipment, weapons, and ammunition, and complies with all related Department of Defense (DoD) and/or Department of State (DoS) regulations. Upon redeployment or notification by the combatant commander, the contractor ensures that all contractor-issued, TO-procured protective equipment, weapons, and ammunition are returned to Government control. The contractor screens contractor personnel to ensure the personnel may be issued a weapon in accordance with applicable U.S. and host nation laws and presents the screening results to the CO for approval before a weapon is issued. Detailed information on what support will be required from the C2E contractor will be provided in the TO requirements document.

# PART B – MANAGEMENT, PLANNING AND REPORTING REQUIREMENTS

Implement a full range of design, construction and engineering activities as specified in each TO and in accordance with all applicable compliance documents. The contractor supplies all labor, equipment, and materials necessary to accomplish the work assigned unless otherwise specified in each TO. The contractor performs management and planning functions, including performance measurement and status reporting to effectively secure and monitor prime and sub-contract work, as required in each TO.

# B.1 WORK BREAKDOWN STRUCTURE (WBS)

Prepare for CO review and approval a WBS in a logical sequence in which the contractor proposes to perform the work and dates on which the contractor contemplates starting and completing all schedules activities. All tasks required under this TO are to be included in the WBS and be identified by unique Construction Activity Identification Number (CAIN). All activities in the entire project schedule are to be reflected in the WBS, to include design and construction activities. Develop the WBS utilizing the Construction Specifications Institute (CSI) current format for construction activities, utilizing the CSI divisions from the Unified Facility Guide Specification (UFGS) format, which contains 48 Divisions for construction activities. Following CO acceptance and approval of the submitted WBS, the WBS is used to report the earned value and schedule status for this project.

# B.2 SCHEDULE AND PLANNING REQUIREMENTS

Following CO approval of the WBS, provide schedules for tracking work progress. The SOW for each TO will identify which of the following schedules is required. Generally, the Government will require Project Planning Charts (PPCs) and/or Construction Planning Charts (CPCs) for less complex projects and Integrated Master Schedules (IMS) for more complex projects.

## B.2.1 Project Planning Chart (PPC) and/or Construction Planning Chart (CPC)

Submit the PPC and or CPC, in addition to the AF Form 3064, for CO approval. The PPC/CPC details the project schedule and status through use of Gantt charts which depicts percent completion for each task. PPC/CPC reports the project schedule using the CO approved WBS.

## B.2.2 Integrated Master Schedules (IMS)

Submit the Initial IMS and AF Forms 3064/3065 for CO approval within 30 calendar days after award or as otherwise directed by the CO for Government review, evaluation, and CO approval on an AF Form 3000. The Initial IMS is prepared and submitted in Primavera P6 and .pdf formats and is based on the schedule presented in the contractor’s accepted proposal. Compliance with SECTION 01 32 01.00 10 PROJECT SCHEDULE is required. The Initial IMS is cost loaded according to Construction Specification Institute (CSI) Divisions and include major cost/schedule drivers such as, major material submittals and/or long lead-time items, work plans, and project close-out. The Initial IMS includes an advanced level of detail and includes all necessary activities, tasks, and subtasks to reflect all remaining construction activities. The schedule provides 10 business days for review and CO approval of construction material submittals. The Initial IMS is provided by the contractor and approved by the CO before a full Notice to Proceed (NTP) will be issued by the CO. The CO approved IMS is prohibited from being re-baselined by the contractor without approval by the CO. In the event of a contract change the contractor shall provide a re-baselined schedule, showing any new activities created by the change. Also, with the new schedule provide a narrative, detailing how any tasks in the previous schedule were altered in the new, updated schedule.

The Government will use the IMS to measure the progress of the work based on earned value and aid in evaluating all progress payments. The project schedule must be cost loaded with relationships to CSI divisions. The contractor progresses the schedule monthly unless otherwise directed by the CO. At a minimum, the AF Form 3064/3065 is derived from the IMS and is structured by major CSI divisions and assigned appropriate value in relationship to overall work and contract value. The contractor submits the updated progressed IMS (in native format and .pdf), and AF Forms 3064/3065 every month as part of the Contractor Progress Status Management Report (CPSMR). Provide a narrative report with the Initial and each Periodic Update of the project schedule. The narrative report includes: a description of activities along the two (02) most critical paths where the total float is less than or equal to 20 workdays, a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken or required to be taken. The narrative report is expected to communicate to the Government, the contractor’s thorough analysis of the schedule output and its plans to compensate for any problems, either current or potential, which are revealed through that analysis. Identify and explain why any activities that, based on their calculated late dates, should have either started or finished during the update period but did not. Upon acknowledgement of the NTP and continuing throughout the contract, record in the daily report, the occurrence of adverse weather and resulting impact to normally scheduled work. Weather delays are by definition only considered for activities on the critical path of the IMS and for 8-hours, i.e., one workday, at a time and is not considered for delays of less than 8-hour increments.

# B.3 COST AND STATUS REPORTING

Provide cost and status reports for all Price-Based (Firm-Fixed-Price TOs) and Cost-Based (Cost reimbursable) TOs. Firm-Fixed-Price (Price-Based) TOs are usually limited to Contractor Progress Status Management Report (CPSMR). For Cost-Based TOs, the Government will specify one of the following reporting mechanisms, listed below in order of increasing complexity.

* Contractor’s Progress, Status, and Management Report (CPSMR)

Prepare and submit a CPSMR, submitted monthly with a progress-updated project IMS, invoices derived from the CO approved cost loaded project schedule, the current completed Submittal Register, a rework log, and AF Forms 3064 and 3065. Include a summary of the events that occurred during the reporting period, discussion of performance, identification of problems, proposed solutions, corrective actions taken, and outstanding issues. Prepare in a format coordinated with the Government prior to first submission. The Government will use the CPSMR to review and evaluate the overall progress of the project, along with any existing or potential problem areas, approve expenditures requested to be invoiced.

* Funds and Man-Hour Expenditure Report (FMER)

Implement and maintain a cost accounting system and prepare a FMER to correlate the status of expensed funds and man-hours against the progress of the work completed and the negotiated budget. The FMER and associated graphics shall detail the current project status and identify funds and man-hours required to complete the assigned tasks.

* Performance and Cost Report (PCR)

Prepare and submit a PCR. The PCR provides the current status and projected requirements for funds, man-hours, and work completion relative to the negotiated budget.

* Contract Funds Status Report (CFSR)

Prepare CFSRs as specified in individual TOs where a cost-reimbursement pricing arrangement is involved. The purpose of the CFSR is to update and forecast funding requirements, funding changes and budget estimates, identify funds in excess under the TO which may be available for de-obligation, and provide estimates of termination costs, if applicable.

* Cost Performance Report (CPR)

Implement and maintain a performance measurement system to support the gathering of cost and schedule data for the purpose of determining program status under TOs where a cost reimbursement pricing arrangement is involved. The WBS or equivalent task breakdown shall be used for reporting cost. The CPR presents the performance measurement baseline and actual cost and schedule performance against that baseline. Submittals shall include appropriate figures containing cost and related data for measuring project cost and schedule status.

# B.4 MEETINGS

Plan, coordinate attendance, schedule, and facilitate all meetings necessary to conduct the services in this TO. Conduct meetings to support design coordination, design review, construction activities, issues resolution, regular progress or status updates, and other requirements as identified in the specifications. The contractor facilitates and attends periodic meetings and/or teleconferences through the design (for D-B) and construction (for D-B and D-B-B) phases of the TO. Frequency of periodic meetings will be specified in the TO for both design (D-B) and construction (D-B and D-B-B). For every meeting, either virtual or in-person, the contractor is responsible for developing and submitting a meeting agenda and meeting minutes as specified in the SOW. Where not otherwise specified in the TO SOW, meeting agendas are submitted no less than three (3) business days prior to the meeting and minutes within seven (7) business days after the meeting.

Facilitate both virtual and in-person meetings as specified in the SOW. For virtual meetings, coordinate the digital platform with the Government to ensure Government system compatibility with the software.

In a SOW where meetings not otherwise specified as Virtual Only, the meetings are to be facilitated both In-Person and Virtually, to ensure access for all Government project stakeholders.

Support Senior Advisory Group (SAG) and Senior Executive Review Group (SERG) program management reviews as specified in the TO requirements. Standard SAG requires monthly briefings, and SERG requires quarterly briefings.

## B.4.1 Kick-Off Meeting

Conduct a Kickoff meeting within a timeframe after award, as specified by the TO SOW. The purpose of the Kickoff meeting is to allow the TO Contracting Officer, Contracting Officer Representative, and Government stakeholders to outline requirements for the TO, facilitate processes for completion of pre-construction submittals, discuss site access procedures, and answer questions. For D-B projects, the contractor will plan the agenda, potential dates, attendees, and access/permits required to conduct the Post Award Design Workshop.

## B.4.2 Airfield Workshops [Airfield Paving Projects only]

Attend an on-site Concrete Airfield Pavements Workshop, an Asphalt Pavements Workshop, and/or an Airfield Lighting Workshops as applicable to the project scope. Workshop(s) are to be conducted on the project Installation/Location in advance of the start of airfield paving and/or airfield lighting construction activities. The workshop(s) will be scheduled jointly by the Government stakeholders, the contractor and USACE personnel conducting the workshop. The Contractor's QC Manager, Paving Superintendents, Paving Foremen and Testing Laboratory Key Personnel, Aggregate Supplier Representatives, and Electrical Superintendent (where applicable) are required to attend the workshop(s). Duration of the workshop(s) are to be defined in the TO SOW.

## B.4.3 Post Award Design Workshop (PADW) [D-B Projects Only]

Conduct a Post-Award Design Workshop, as required in the TO requirements. Perform site investigations, conduct an in-brief, and conduct an out-brief. As specified in the TO SOW or generally no less than two (2) weeks in advance of the PADW, coordinate dates of the PADW to ensure full Government, Contractor, and Designer Of Record (DOR) participation on-site and/or virtually as required by the TO SOW.

## B.4.4 Partnering Meetings

Conduct Government-Contractor informal or formal partnering meetings as required by the SOW and/or specifications.

For D-B projects, conduct the initial partnering meeting no later than the PADW conclusion. At a minimum, include the prime contractor personnel, Designers of Record (DORs), and Government stakeholders. Prior to construction NTP, conduct a follow-up partnering meeting including the prime contractor personnel, major subcontractor representatives, DORs, Government project stakeholders, and Government construction inspectors (contracted Title II, Government personnel, Resident-Engineers, or others). Perform follow-up partnering meetings at the frequency specified in the TO.

For D-B-B projects, conduct the initial partnering meeting within the timeframe specified in the TO or not later than twenty-five (25) business days after award when not specified in the TO. Partnering meetings are to include the prime contractor personnel, major subcontractor representatives, Government project stakeholders, and Government construction inspectors (contracted Title II, Government personnel, Resident-Engineers, or others). Perform follow-up partnering meetings at the frequency specified in the TO.

## B.4.5 Design Progress Meetings [Design-Build Only]

Conduct meetings with the contractor, DOR, and Government stakeholders on a schedule directed in the TO SOW, but no greater than every three (3) weeks. Discuss design progress, impediments to on-time completion, RFI’s (open and upcoming), design decisions, and planned delivery strategies/timeline.

## B.4.6 Design Review Meetings [Design-Build Only]

Conduct meetings with the contractor, DOR, and Government stakeholders following receipt of Government design review comments on design submittals, and government’s receipt of the contractor’s plan to address them, within the timeframe stipulated in the TO but generally no more than five (5) business days after receipt of Government review comments.

## B.4.7 Construction Progress Meetings

Conduct weekly progress meetings both on-site and virtually, with the contractor, Government stakeholders, and Government construction inspectors (Title II contractors, Government personnel, Resident Engineer, or others). Discuss prepared meeting reports (which serves as the agenda) which shall include: the record of new and old discussion of technical issues, periodic earned value progress showing percent complete actual versus plan, tabular report of late tasks derived from the progress updated IMS, a three week look ahead, and a tabular report for RFIs and submittals (open and upcoming) in the submittal register.

## B.4.8 Red Zone Meetings

Conduct “Red Zone Meetings” as part of the closeout of the project. The “Red Zone” shall commence at 80-percent of construction completion and be conducted weekly until project completion. At the meeting, the contractor and the Government project stakeholders discuss, define, and achieve consensus on actions necessary to complete construction and support user occupancy.

# B.5 PROJECT DATA MANAGEMENT

Compile, store, safeguard, and provide access to all contract data for the duration of the TO.

## B.5.1 Data Collaboration Website

Establish a Data Collaboration Site with real-time worldwide access available to persons authorized by the CO. Data stored on the site may include, but not be limited to, the submittal register, submittals, a Request for Information (RFI) tracker, a change order tracker, a photo log, project IMS record, quality control reports, daily reports with complete record of activities and on-site personnel, and other relevant project correspondence. The Government will direct the Collaboration Site approach as either a platform selected by the Contractor or a Government-managed and selected site as specified in the SOW.

* Contractor-Selected Site - The site must be demonstrated to the Government and approved by the CO prior to any submittals being submitted. The site shall be tailored to the individual projects and close-out documentation shall include an electronic copy of the site documentation, provided in electronic format – digital video disc (DVD) for historical information. Data Collaboration Site data shall be in accordance with SOW Section B.5.2, Protecting DoD Data.
* Government-Selected Site –Utilize a Government-maintained and specified site, as directed in the TO SOW.

## B.5.2 Protecting DoD Data

Protect against release or loss of all DoD and Government data that is shared, stored or created on non-DoD information systems. Report any breach or loss of data in the timeline and reporting methods specified in applicable standards for the data type that was breached, following requirements of DODI 8582.01 and the terms and conditions of the contract.

### B.5.2.1 Protecting Unclassified Non-Public DoD Data

Comply with DoD Instruction 8582.01, SECURITY OF NON-DOD INFORMATION SYSTEMS PROCESSING UNCLASSIFIED NONPUBLIC DOD INFORMATION, for all contractor and subcontractor systems that process, store, receive or transmit unclassified nonpublic DoD information, including unclassified non-DoD information systems operated by mission partners. Provide the basic information system safeguards required therein. To be awarded under this contract, all contractors must demonstrate that these non-DoD information systems are compliant with DoDI 8582.01 at time of contract award. At the TO level, every proposal must submit validation of compliance with DoDI 8582.01 basic safeguarding requirements, as required by FAR 52.204-21. Should DoDI 8582.01 be replaced with a more updated guidance during the period of performance of this contract, demonstrated compliance with the most updated policy guidance will be mandatory for all contractors.

### B.5.2.2 Protecting Controlled Unclassified (CUI) Data

Comply with DoD Instruction 8582.01 for all contractor and subcontractor systems that process, store, receive or transmit CUI, including unclassified non-DoD information systems operated by mission partners. Provide the information system safeguards required therein.

* Contract Requirements - To be awarded under this contract, all contractors at time of award must demonstrate that the contractor’s non-DoD information systems (to include any cloud server systems utilized) have implemented the information systems safeguards required by DFARS 252.204-7012 and achieved the Basic Security Requirements of the National Institute of Standards and Technology Special Publication (NIST SP) 800-171 compliance. Such compliance must also be documented in the Supplier Performance Risk System (SPARs), where it will be verified by the CO. Per DFARS 252.204-7012, all contractors must further validate that subcontractors, teaming partners or contracted entities/suppliers required to protect CUI have active NISP SP 800-171 assessment standards required by the Contract. Consult the CO for further information, as allowed by DFARS 252.204-7012.
* TO Requirements –The SOW will identify the requirement to handle, store, create, transmit, or process CUI. If the TO requirement requires contractor safeguard of CUI, the CO will require the prime contractor(s) to confirm in the written proposal current compliance with DoDI 8582.01 CUI safeguarding requirements for the prime contractor(s), as required by FAR 52.204.21, DFARS 252.204-7008 and 252.204-7012. Such compliance will require:
  + Confirmation in a written TO proposal a current Basic, Medium, and High assessment level, as required by the SOW. The majority of TOs awarded under this contract are anticipated to have only Basic NIST SP 800-171 assessment confidence requirements; however, CUI requirements on some TOs may exceed Basic assessment requirements.
  + Basic, Medium or High NIST SP 800-171 assessment data in the Supplier Performance Risk System (SPRS) for Contractors, subcontractors, teaming partners or contracted entities/suppliers.
  + Confirmation in the written TO proposal that the Contractor has validated subcontractors, teaming partners or contracted entities/suppliers required to protect CUI have active NISP SP 800-171 assessment standards required by the Contract. Consult the CO for further information, per DFARS 252.204-7012.

### B.5.2.3 Security Breach Notification

Comply with DODI 8582.01 and DFARS 252.204-7009 for disclosure of cyber incidents.

# B.6 WORKSITE ACTIVITIES AND COORDINATION

Protect the lives and health of employees and other persons on the work site, preventing damage to property, materials, supplies, and equipment, avoiding work interruptions, and complying with Occupational Safety and Health Administration (OSHA) safety and local safety office requirements. Perform all operations in a prudent, conscientious, safe, and professional manner and conform to the safety requirements contained in the contract for all activities related to the accomplishment of the work. Maintain documentation supporting training records on-site and have written Work Plans on-site and available for workers and/or regulatory review. Provide the CO copies of any OSHA report(s) regarding a project site submitted during the duration of the TO. For areas not covered by OSHA, comply with regulations regarding safety and health and the current edition of the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1.

The project Superintendent must always maintain a physical presence at the site construction is taking place and is responsible for all construction and related activities at the site. The project Superintendent must be employed by the Prime Contractor(s), unless otherwise directed at the TO level. The Site Superintendent must have the authority to commit and bind the Prime Contractor in exercising his superintendence. It is not acceptable for the Site Superintendent to have to request approval to make decisions on site.

For every TO awarded under this contract, contractor agrees that all personnel and equipment are subject to safety inspections by Government personnel while on federal property. The contractor will facilitate all Government inspections, both planned and unplanned.

## B.6.1 Installation/Site Access Badges

Obtain and monitor assigned security badges (used by both prime contractor and subcontractor personnel) for the duration of this contract. All security badges or passes shall be returned to the base point of contact (POC) upon expiration of the badge, upon completion of the project, or when possession of the badge is no longer necessary (e.g., upon removal of contractor personnel from specific projects). All source documents used to obtain access badges, such as passports and other identification documents, shall remain valid for the entire period that access badges are required. Lead times for site access badges at overseas locations will be discussed in the TO documents.

## B.6.2 Validation of Existing Conditions

Conduct a thorough investigation of existing conditions, documenting in photographs and narrative the entire extent of the project site and impacted surroundings prior to commencement of the work. Investigation results shall be documented through a site survey as required by the individual TO.

## B.6.3 Secure Facility Construction Requirements

For secure areas constructed to ICD/ICS 705 or DODI 5200.01V3 or other secure space technical criteria, construction is subject to additional physical security requirements. The TO SOW will specify these additional secure requirements, to include as applicable but not be limited to escorts during construction, labor pool qualifications and nationalities, prohibitions of cellular devices on worksites, secure storage of materials, etc. The TO SOW append a Construction Security Plan (CSP) to fully identify the additional requirements of secure facility construction.

## B.6.4 Controlled Site Access/ Free Zone Access

In addition to the requirements necessary to gain base/installation access and obtain site access badges, some construction sites may be in areas of additional security within an installation or site, to include but not limited to Secure Zones, Airfields, Areas impacting existing installation traffic, or sites requiring pedestrian access. The TO SOW will describe the additional labor pool qualifications and other procedures to access these sites for contractor labor and for non-Contractor personnel. The TO SOW will identify further restrictions on access.

## B.6.5 Occupied/Operation Facilities Considerations

Projects executed under this contract may require construction in occupied facilities or operational airfields, roadways, or pedestrian pathways. Notify the Government prior to any planned interruptions in utilities or airfield/roadway/pedestrian path access and identify the duration of any such interruptions. For construction in occupied facilities, provide temporary utilities, protect occupant safety, provide code-compliant life safety egress and fire protection, and ensure minimal interruption. For airfields, roadways, and pedestrian pathways, manage construction and maintain site boundaries as directed by the Government, to ensure ongoing operations avoid interruptions to the Air Force mission. TO SOWs will define the scope of access, utilities for which interruption is not allowed, and/or duration of interruption(s) allowed during construction.

Apply for utility (e.g. power, water, sewer, communications, backup power generation, gas, etc.) outages no more than 14 calendar days in advance or as specified in the TO SOW. Provide a written request noting the location of outages, utilities being affected, duration of outage, any necessary sketches, and a description of the means of compliance with EM 385-1-1. After the utility outage request is coordinated and authorized by base level personnel and prior to beginning work on the utility system requiring shut-down, the contractor shall conduct a pre-outage coordination meeting in accordance with EM 385-1-1, to include the contractor, subcontractors performing the work, Government project stakeholders, Government construction inspectors (e.g. Title II contractors, installation/base personnel, Resident Engineers, etc.) and Installation representatives.

## B.6.6 Notification Requirements

Notify the CO and PM of anything assessed to be outside the TO scope of work and/or beyond your control that could impact cost, schedule, or quality. Additionally, notify the CO and PM of critical issues that may affect the contract performance and/or human health and the environment. Issues that require notification include, but are not limited to, health risks, spills, changes in critical or key personnel (as listed in B.7.4.) and finding unexploded ordnance (UXO). As an example, if unanticipated UXO were discovered during field activities, the contractor must immediately stop work, report the discovery to the facility Point of Contact (POC) (designated at the TO level), CO, and PM, and implement the appropriate safety precautions. Field activities must not continue until clearance is received from the CO. On critical issues, verbal notification must be made immediately, followed by written notification as soon as practical, but no later than 48 hours after discovery of a critical issue(s).

## B.6.7 Permits

Develop, coordinate, and apply for and obtain all applicable permits, access (including off-base easements and leases), agreements, licenses, and certificates required to perform and complete effort. as specified under each TO. Maintain a library of these documents at the contractor’s site office as well as the corporate facility handling each TO. Comply with all applicable permit conditions and maintain all permits current until construction is 100% complete. Provide the permits to the Government upon request or as required.

## B.6.8 Daily Reports

Provide daily progress reports. During construction activities, daily reports are mandatory. Daily reports comply with UFGS 01 45 00, QUALITY CONTROL and identifies work performed each day by the unique construction activity identification number, consistent with the CO approved project schedule, the description of the activity, and the planned and actual percentage completed.

## B.6.9 Construction Submittals

Provide construction submittals required to complete the work, including but not limited to all of those identified in the TO submittal register. Construction submittals must comply with UFGS 01 33 00, SUBMITTAL PROCEDURES and document the qualifications, means, methods, and materials of constructing the work as defined therein. Obtain CO approval for submittals before acquiring the material and equipment covered thereby. In DBB TOs, all constructions submittals must be fully reviewed and approved by the DOR, with all corrections made and no outstanding comments, prior to submission to the Government.

## B.6.10 Requests for Information (RFIs)

Provide RFIs required to obtain clarification, gather information, request changes to project requirements, advise on challenges, or confirm technical requirements. RFIs must identify a strategy/strategies for resolution, to include confirmation of cost and or schedule impact as a result of adoption of the recommended strategies. Cost impact RFIs must provide a Rough Order of Magnitude (ROM) cost. Submit any requests for Variations from contract documents as an RFI and be clearly marked “VARIATION” in the RFI title, comply with UFGS 01 33 00, SUBMITTAL PROCEDURES, and clearly identify the contract requirements for which variation is requested.

## B.6.11 Photo Documentation

Prepare digital photo documentation, including site(s) and building(s) under construction, field activities, and sample locations if applicable. Submit digital photos using a minimum five (5) mega pixel photograph in JPEG format. Provide an index for each set of photographs submitted, identifying the base or facility, project number, contractor, and a brief description. Coordinate photography of any kind through the installation, customer, or facility POC. Load photo documentation to the Data Collaboration Site as specified at the TO level, as requested by the Base POC or directed by the CO and/or PM. Photographs may be prohibited in secure facility construction, as directed in the TO SOW.

# B.7 QUALITY SYSTEM PLANS (QSP)

The QSP may consist of the following four (4) plans as defined in the TO SOW: Health and Safety Plan, Construction Work Plan, Design Quality Control Plan for D-B TOs, and Construction Quality Control Plan. Each TO SOW requires a site-specific QSP for Government review and acceptance that consists of plans, procedures, and organization necessary to construct in compliance with the contract requirements. Address all definable features of work (construction operations, both onsite and offsite), keyed to the construction sequence, where specified in the TO.

## B.7.1 Health and Safety Plan (HSP)

Prepare a HSP as required by 29 Code of Federal Regulations [CFR] 1910.120 and EM 385-1-1. Comply with Air Force, OSHA, USACE, United States Environmental Protection Agency (USEPA), state, and local health and safety regulations regarding the proposed work effort. Use USEPA guidelines for designating the appropriate levels of protection needed at the study site(s) as applicable. Maintain written certification that the CO approved HSP has been reviewed with all personnel that work at the project site prior to their mobilization.

## B.7.2 Construction Work Plan (CWP)

Prepare a CWP in accordance with UFGS 01 33 00, SUBMITTAL PROCEDURES. In D-B fast-track TOs, prior to submission of Issued for Construction (IFC) 100% design submittal(s), prepare a construction work plan limited to the scope of work for which the contractor may initiate prior to Partial or Full Construction Notice To Proceed (NTP).

A CWP may include, but is not limited to, any or all the following subsections as identified in each TO.

1. Work Sequencing
2. Site Security
3. Site Preparation
4. Excavation
5. Spill and Discharge Control
6. Explosive Safety
7. Hazardous Materials Management
8. Asbestos Abatement
9. Surface Water Management
10. Ground Water Management
11. Erosion Control
12. Emissions Control
13. Material and Equipment Control and Storage
14. Transportation
15. Startup Testing and Commissioning Plans
16. Warranty Call-Out Program
17. Draft DD Form(s) 1354s
18. Demobilization
19. Final DD Form(s) 1354
20. O&M Training Manuals

## B.7.3 Design Quality Control Plan (DQCP) [Design-Build Only]

Prepare a DQCP to include three (3) elements: a quality control narrative, Design Quality Control Checklists, and resumes of both TO key personnel and Independent Technical Reviewers (ITRs) as defined in the TO SOW. The DQCP must be submitted within the timeframe specified in the TO SOW or fourteen (14) calendar days after award if not specified in the TO SOW. CO approval of the DQCP must be obtained prior to conducting the Post Award Design Workshop. Conduct the on-site Post Award Design Workshop and all subsequent design activities utilizing the CO approved personnel submitted in the DQCP. Notify the CO immediately with any changes to key personnel.

### B.7.3.1 Design Quality Control Narrative

Prepare a DQCP a narrative describing the process for coordination, finalization, and quality control of all design deliverables in this TO. Provide a detailed plan to effectively maintain a quality control program to assure that all designs, drawings, specifications, and other documents required by this contract are developed and provided in a manner that meets professional architectural and engineering quality standards. Include the design configuration management addressing authorities, symbols/abbreviations, legends, naming, drawing revision controls and process, record file maintenance, and completion of Design Quality Control checklists per Section B.7.3.2 of this SOW. Where required by the TO SOW, address Building Information Modeling (BIM) management standards and coordination approach. Identify lines of authority and a communication plan for any contributors employed by different teaming member companies, including those for technical investigations. Describe the mandatory quality control reviews to be provided, utilizing Independent Technical Reviewers (ITRs).

### B.7.3.2 Design Quality Control Checklists

Prepare discipline-specific QC checklists to be completed and submitted with each design submittal development. For each design deliverable, describe the level of development for each of the components of the submission including as applicable calculations, drawings, narratives, cost estimates, schedule, DD1391 and Sustainability Scoresheets. Each checklist must uniquely describe the level of completion and effort planned for that submittal in each design discipline, addressing all the scope areas of a TO in Part A of the basic contract SOW as applicable. Checklist must address each discipline of the design (i.e. architectural, interior design, structural, cybersecurity, cost estimating, sustainability, mechanical, electrical, plumbing, civil, communications, scheduling, etc.). Checklists must be signed by each lead designer in the discipline prior to submission to the Government. The checklists approved in the DQCP must be signed and submitted with each corresponding design deliverable.

### B.7.3.3 TO Key Personnel

The TO SOW will identify all the TO Key Personnel and Independent Technical Reviewers (ITRs) required on the TO, along with the minimum credentials required for these individuals. In the DQCP, submit demonstration that the proposed DORs and ITOs meet the minimum requirements for professional qualifications identified in the TO SOW for all design disciplines. One designer may be responsible for no more than two (2) disciplines. Each designer must be a Prime Contractor employee, be contracted directly by the Prime Contractor, or be an employee of a design firm that is contracted directly by the Prime Contractor.

The Government reserves the right to reject key personnel or proposed substitutes that are deemed not to meet position requirements defined within the UFGS.

## B.7.4 Construction Quality Control Plan (CQCP)

Submit a site-specific CQCP compliant with the requirements in the UFGS 01 45 00, QUALITY CONTROL, and include plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. Define the key features of work, as submitted for the TO, required for construction activities for both onsite and offsite work.

CO approval of the CQCP will be required prior to partial or full construction Notice to Proceed (NTP) but not prior to design initiation for a D-B TO. Within the CQCP, submit the professional qualifications of the contractor’s CQC staff to show that each possesses qualifications found in the UFGS 01 45 00, QUALITY CONTROL. Provide an organization chart, illustrating lines of authority for all design and construction key personnel (for D-B TOs). The CQC staff will be subject to acceptance by the Contracting Officer. The TO SOW will identify the key CQC personnel to be submitted in the CQCP, including but not limited to the following:

* Project Manager as defined in UFGS 01 30 00
* Site Superintendent as defined in UFGS 01 30 00
* Contractor Quality Control (CQC) Manager as defined in UFGS 01 45 00
* Site Safety and Health Officer (SSHO) as defined in UFGS 01 35 26
* Scheduler demonstrating a minimum of five (5) years’ experience to include two (2) years working in Primavera and two years in construction scheduling OR as otherwise specified in the TO SOW.

## B.7.5 Technical Reports

Provide submittals in accordance with the project specifications. Reports may include, but are not limited to:

1. Miscellaneous Technical Report
2. Construction Cost Estimates
3. Site/Project Summary
4. Daily Technical/Field Reports
5. Hazardous Material Survey Report
6. Hazardous Material/Waste Disposal Report
7. Design Drawings
8. Shop Drawings and/or As-Built Drawings
9. Design Specifications
10. Geographical Information Systems Updates
11. Computer Aided Design Drawings
12. Survey Reports
13. Quality Assurance/Quality Control Surveillance Plan
14. O&M Training Manuals
15. Startup and Commissioning Reports
16. Warranties
17. Call-out Procedures
18. Pre-final Inspection Report
19. Final Inspections Report
20. DD 1354 Real Property Form (Draft/Final)

# B.8 PROPOSAL AND MANAGEMENT OF VARIATIONS

In DB TOs, completion of technically adequate final design is the responsibility of the DB Contractor as DOR managing design within proposed construction cost, including any variations to the level of effort depicted in the Government’s DB concept design. The DB contractor has the responsibility to conduct prudent due diligence in development of all technical aspects of the design. Notify the Government of any missing information or needed verification to complete engineering analyses prior to design finalization. Variations from the Government’s concept design require coordination through the RFI process, as detailed in Specification 01 33 00. If applicable, provide justification to demonstrate the overall Issued For Construction (IFC) final design solution is an increased level of construction effort based on a variation in level of effort from the conceptual basis of the bid.

In DBB TOs, proposal of, and CO approval of Variations from the CO’s Issued For Construction 100% design require coordination through the RFI process, as required in Specification 01 33 00. If applicable, provide sufficient justification to demonstrate the overall Issued For Construction (IFC) final design solution is an increased level of construction effort based on a variation in level of effort from the basis of the bid.

# B.9 GOVERNMENT PROPERTY, INCLUDING GOVERNMENT FURNISHED INFORMATION, EQUIPMENT, AND PROPERTY (GFI, GFE, GFP)

GFI, GFP, and GFE requirements will be specified in each TO, to include delivery, management, accountability, and disposition. FAR 52.245-1 defines Government Property and the procedures for accounting and disposition of property. Defense Contract Management Agency (DCMA) Instructions for reporting of and including in the Plant Clearance Automated Reutilization Screening System (PCARSS) will be followed for any Government Property remaining at the end of the project.

To the extent it is available, the Government will provide information in the form of available plans, reports, maps, drawings, and as-built drawings as necessary to facilitate accomplishment of the work required in the task order SOW. However, these GFIs may only show conditions as they exist at the start of the project. The Contractor shall verify (by field investigation) information shown on all GFIs (relevant to the project) for accuracy to ensure a quality project. The Contractor shall document findings of the site survey in a Site Survey Report (SSR). The Contractor shall identify any discrepancies between conditions described by the contract and actual on-site conditions.

# PART C – CONSTRUCTION PHASE DESIGN SERVICES [DESIGN-BUILD ONLY]

# C.1 DESIGN DELIVERABLES

Prepare 100% Design Issued For Construction (IFC) deliverables, obtaining CO approval for each deliverable. Develop the necessary components of the design, including but not limited to: drawings, design analyses, calculations, and specifications. Designers of Record (DORs) are to sign and apply their seal of current professional licensure to all IFC deliverables, including, all design drawings, specifications cover page, and calculations cover page.

Identify and comply with all applicable design criteria, including: federal, state, and local statutes; Unified Facility Criteria (UFC); Unified Facilities Guide Specifications (UFGS); International Building Code (IBC); Air Force Instructions (AFIs); DoD DoD/Air Force, manuals, handbooks, regulations, guidance, and policy letters; Executive Orders (EOs) in effect on the date of issuance of a TO; Air Force Sustainable Design and Development (SDD) Implementing Guidance, and applicable Air Force corporate facility standards. Identify and comply with all applicable criteria as required by UFC 1-200-02, DoD Building Code. Government review of submittals does not alleviate the Contractor’s role to identify and comply with all applicable criteria; immediately notify the CO if any Government direction or comment conflicts with applicable criteria.

# C.1.1 Fast-Track Design Deliverables

Designs may be Fast-Tracked through the submission and CO approval of multiple design packages, if allowed and stipulated in the TO SOW. To achieve Partial Notice To Proceed (NTP) for a fast-track package, the design package must be complete. A design package is considered complete, and the Government may elect to approve Partial NTP, when the following is complete:

* the Final design package is approved by the CO.
* all Government comments for that design package are closed.
* the Government has been provided signed and sealed Issued for Construction drawings, specifications, and design analysis for the scopes of work to be constructed under the Partial NTP
* any other stipulations regarding completion of other design packages, as identified in the TO or by the CO
* the Government has received and the CO has approved a partial submittal register to encompass submittals for those elements of work in the fast-track package.

For Fast-Track of lower complexity construction scope (i.e. Demolition, Temporary Construction Facilities Controls (Specification 01 50 00), Abatement, Utilities Installation, etc.) only Pre-Final and Final design package submission may be required, as allowed by the CO and/or TO SOW; submission of an Intermediate Design package for these scope may not be required by the Government.

## C.1.2 Post-Award Design Workshop Report

Submit a PADW Report for government review and approval. Include the meeting In-Brief, with comments identifying technical approaches, requests for confirmation or clarification of project requirements, and comments refine/improve the proposed concept design consistent with the parameters of the solicitation, meeting minutes, and design drawings including floor plans demonstrating the scope of work and incorporating feedback from the workshop. Demonstrate that applicable compliance documents and all design criteria have been identified and include discussion of the application of these to the project for each technical discipline. Following the in-brief presentation, meet with facility users, project stakeholders, and Government representatives as necessary to validate that the proposed design refinements and progression meet Government and facility user requirements and objectives. Gather site, base, and facility specific information necessary to perform the design. Provide an Out-Brief of the workshop, documenting the outcome of the workshop meetings, changes and information gathered from the workshop, and a list of any further information that must be confirmed through RFIs.

The Post Award Design Workshop Report must advance the design from the solicitation; reporting of the information in the concept design will not be sufficient. Include in the drawings and narrative a presentation of facts sufficiently complete to demonstrate that the project concept is fully understood and that subsequent design details and their ultimate presentation in the final submittal will be based on sound architectural and engineering decisions. Include an outline of specifications. Identify to the CO any critical issues anticipated to be an impediment to successful completion of the design meeting including, but not limited to, the requirements of the applicable compliance documents. Identify to the CO any direction provided by Government representatives, adoption of which would necessitate non-compliance with any of the applicable compliance documents.

## C.1.3 Technical Investigations Reports

Perform all technical investigations and field investigations necessary to complete the design services of the TO. Provide all labor and equipment necessary to do so. Coordinate site and/or facility access with the Government, providing adequate notice to obtain site access and allow Government coordination of required oversight or escorting, if necessary. Obtain all necessary permits, including when necessary, an excavation permit (AF Form 103) prior to any excavation or drilling. Investigations conducted on airfields require a temporary airfield construction waiver. Airfield waivers typically require thirty (30) days to obtain approval after submission of the Work Plan; however, other durations may be specified in the TO SOW. Follow all local installation/site rules and coordination requirements necessary to obtain permits. Coordinate with Government project stakeholders to identify any known site hazardous that will impact investigation efforts.

Submit an investigation report for each investigation conducted. If the TO requirement does not specify investigations necessary to conduct the design services, identify and include all necessary technical investigations as a part of the proposal process. Investigations that may be required include but are not limited to the following:

* Hazardous Materials Assessment – required for every project in which hazardous materials abatement is included in the scope of work or as otherwise specified in the SOW.
* Topographic Survey with Utilities Locating and Capacity Analysis
* Fire Water Flow Test
* Geotechnical Investigation
* Electrical Wiring Study
* Building Envelope Survey
* Structural Materials Investigation
* Concrete Recycling Risk Assessment
* Airfield Pavement Aggregate Source Evaluation
* Storm Water Investigation

## C.1.4 Intermediate Design Deliverable (65% Design)

Incorporate the comment resolution from the PADW Report review and develop a deliverable that addresses all technical disciplines of the design scope. Provide a design analysis, drawings, specifications, and calculations. Depict a full concept for all technical disciplines applicable to the scope of the project. Coordinate requirements between disciplines to prevent internal conflicts within the design documents. Complete the Design Analysis and include all final calculations. Demonstrate that sufficient due diligence has been performed to validate the existing conditions. Submit drawings for all design disciplines, documenting a complete concept in all applicable design disciplines. Provide red-lined UFGS Specifications and designer-prepared project specification drafts that have been fully edited for the project. Unedited or partially edited specifications will not be accepted.

## C.1.5 Pre-Final Design Deliverable (95% Design)

Incorporate the comment resolution from the intermediate design review and provide sufficient detail to demonstrate the entire scope of the project in all technical disciplines has been fully coordinated between disciplines. Portray the design requirements in sufficient detail to issue for construction. This submittal must be substantially complete and require completion of only minor outstanding items. Include a design analysis, drawings, specifications, and cost estimate.

## C.1.6 Final Design Deliverable (100% Design)

Incorporate the comment resolution from the Pre-Final submittal and provide a complete, corrected and final set of contract documents ready to issue for construction. All previous Government review comments must have been addressed, incorporating the changes and recommendations from the pre-final design review. Any edits that have been made that were not a direct result of a comment must be identified.

## C.1.7 IFC Design Deliverable (Signed and Sealed)

At the satisfactory completion of the final design submittal design review, including closure of all comments and Government acceptance of the final submittal, mark the final submittal drawings and specifications documents “Issued for Construction”. Each DOR must electronically sign, seal, and date the “Issued for Construction” documents, including each drawing sheet and the cover sheets of the calculations, specifications, and design analysis. Provide Specifications with tags off, red-lined deletions off, and under-lined additions off. Once the Government has reviewed and accepted the contractor's Issued For Construction design, make no further changes to the accepted design without the written approval of CO or without a CO approved Variation, as described in UFGS 01 33 00, SUBMITTAL PROCEDURES.

# C.2 DESIGN DELIVERABLES CONTENT AND FORMAT

Following CO approval of the Final Design Deliverable and confirmed closure of all Government design review comments, submit signed and sealed IFC Design Deliverable, to include drawings, specifications, design analysis and calculations.

## C.2.1 DOR and Independent Technical Review (ITR) Licensure

All architects and engineers must possess current licensure in compliance with FAR 52.236-25, Requirements for Registration of Designers. Other certifications are required as identified within the requirements in the TO SOW for task order key design personnel, including in-state licensure where required. In-state licensure will always be required for Geotechnical Engineers.

Each ITR must possess current licensure in compliance with FAR 52.236-25, with additional credentials as required by the TO SOW. In-state licensure is typically not required for any ITR reviewer unless otherwise stated in the TO SOW.

## C.2.2 Drawings

Prepare drawings as described under each phase of the design and submit in sizes as stipulated in the TO SOW. Produce drawings using both Computer Aided Design and Drafting (CADD) software and/or a Building Information Model (BIM), as required by the TO SOW Adobe Acrobat Portable Document Format (PDF) files for design and record drawing submittals. Drawings will comply with the DoD CADD Standard latest version. The CADD standard is available at (<http://www.wbdg.org/ccb/browse_org.php?o=65>). Use Architectural Graphic Standards for building material indications, equipment, and symbols.

## C.2.3 Specifications

Provide specifications on 8-1/2”x11” paper and electronic media as required by the TO SOW. Provide project specifications in CSI format to cover all aspects of the project. Where applicable Unified Facilities Guide Specifications (UFGS) are available, use of the UFGS is mandatory. UFGS are available at the Whole Building Design Guide website (<http://www.wbdg.org/>). Edit and expand the appropriate specifications to describe the various items of work and to describe the quality of the proposed structure and its equipment. Ensure that all project design requirements, current code requirements, and regulatory requirements are met. Use the project specification sections from the website that are current at issuance of the solicitation. Process specifications using the SpecsIntact software package; submit to the Government as PDFs and SpecsIntact files. Issued for Construction specifications must utilize the UFGS current at the time of conceptual design submission, per UFC 1-200-01, DoD Building Code. CO approval of a Variation request is required to allow deletion, material modification, or reduction in stringency of template UFGS language. Where an applicable UFGS is not available, develop non-proprietary specifications in compliance with UFC 1-300-02, using the UFGS format and numbered in accordance with CSI current format for construction activities.

Prepare a Submittal Register identifying all construction submittals. The Contractor’s Designer of Record (DOR) must develop a complete list of submittals during design, identify required submittals in the specifications, and use the list to prepare the Submittal Register. The list may not be all inclusive and additional submittals may be required by other parts of the contract. A completed Submittal Register, approved by the CO, will be required prior to issuance of construction NTP. The CO approved submittal register serves as a scheduling document for submittals and will be used to control submittal actions throughout the contract period. Coordinate the submittal dates and need dates with dates in the Contractor’s integrated master schedule. Updates to the submittal register showing the Contractor action codes and actual dates with Government action codes shall be provided weekly with the progress meeting agenda. Revise the submittal register when the progress schedule is revised and submit both for Contracting Officer approval.

## C.2.4 Design Analysis

Provide design analyses on 8-1/2" x 11" paper and on electronic media as required by the TO SOW. Provide a cover sheet identifying the documents including the submittal stage, project title, location, A-E Contract, firm or Contractor name, and date. The design analyses shall include three parts, a basis of design, design calculations, and design decision documentation.

The basis of design is a narrative description of the key elements and features of the design. The narrative outlines facts sufficiently complete to demonstrate that the project concept is fully understood and that subsequent design details and their ultimate presentation in the final drawings and specifications will be based on sound architectural and engineering decisions. Provide a discussion and description of the design in each of the technical disciplines relevant to the project.

The design calculations are information, justification, and calculations necessary to verify the design in each of the technical disciplines relevant to the project. Include catalog cuts of proposed products, where applicable. Computer outputs shall be properly identified and appropriately referenced as to the program name, version, and source.

## C.2.5 Independent Technical Review (ITR)

For all design submittals provided to the Government, perform a quality control ITR of every technical design discipline. Reviews are to be of the scope necessary to ensure quality of design and substantiate that all services conform to the contract. ITRs must review every design submittal prior to submission to the Government, generating written comments to be appended to each design submission. Correct errors and deficiencies in the design documents identified by ITRs prior to submission to the Government. All ITR comments must be appended to each design deliverable, validating closure of each review comment, and demonstrating completion of the ITR.

## C.2.6 Government Design Submittal Reviews

Submission of every design deliverable will be reviewed by the Government, after which an approval or disapproval will be provided to the contractor by the CO. The TO SOW will state the maximum duration of these reviews. At the conclusion of the review period, the Government will provide review comments that must be responded to prior to the design review meeting. Respond with planned action to all design comments confirming concurrence, conditional concurrence, or non-concurrence. Identify impacts to cost and critical path at time of response. Exercise design-build flexibility to incorporate all appropriate comments. Design reviews do not constitute approval and do not relieve the Contractor's responsibility for compliance with the solicitation or any applicable criteria, codes, or regulations. The Contractor is responsible for the professional quality, constructability, technical accuracy and coordination of all designs, drawings, specifications and other documents or publications upon which construction is based.

For all requested design changes, submit complete submittals to the CO for additional review, in accordance with the procedures for original submittals stated above. The Government reserves the right to require resubmission of any deliverable if comments are significant and require further design development prior to Government concurrence. All comments will be provided by the Government in an editable digital format. Contractor shall return all Comment responses in the same editable format. Submission as a PDF is acceptable when accompanied by the editable digital source file.

For every design submittal including the Post Award Design Workshop Report, schedule and conduct design review meetings following receipt and response to design review comments. Provide written responses to all design review comments no later than the business day prior to the design review meeting. DORs from relevant technical disciplines must be available during the design review meeting to discuss open issues and non-concur comments. Record the minutes of the meetings and forward the minutes and annotated comments to all Government reviewers. The annotations will be detailed enough to indicate exactly what the Contractor will do to comply with the comments. Following the design review meeting, assemble the comments received into a complete package and submit to the Government.

# PART D – SUPPLEMENTAL FACTORS FOR CONSTRUCTION TASKS

# D.1 SITE PREPARATION

Perform site work as necessary to prepare sites for construction activities. Implement security and access controls to prevent unauthorized entry to sites and to protect wildlife. Survey existing utilities to determine adequacy and need for modifications to support site activities. Obtain appropriate approvals and construct connections for new systems for electrical power, water, sewer, gas distribution, network, telephone, and other utilities, as required, to accomplish the activities specified in each TO.

# D.2 GOVERNMENT’S ON-SITE INSPECTOR’S FACILITIES

Provide, install, and maintain office/ temporary construction field office for the Government’ Quality Assurance/Inspector (e.g. Title II inspector, base personnel, Resident Engineer, etc.), compliant with Specification 01 50 00 Section 3.6.1. Provide utilities distribution with connections to the temporary facilities.

# D.3 PROTECTION OF EXISTING FEATURES

Plan and implement construction protecting existing site utilities, structures, surface features, service operations, monitoring and other types of wells, and the general site environment. This includes the protection of trees, shrubs, and other vegetation not in the affected zone from dust damage, soil compaction, and physical contact with machines and equipment. If appropriate, conserve uncontaminated topsoil by removal, storage, or redistribution. All reasonable measures must be taken to minimize and suppress fugitive emissions of dust, vapors, and other site materials during site work. All fill materials must be non-contaminated. Conduct all operations and activities with the intent of reducing the amount of pollution generated. Specific areas to be focused on are generation of solid waste, use of hazardous materials, use of ozone depleting chemicals, generation of hazardous waste, and use of energy and water. During site work, plan, construct, operate, maintain, optimize, and decommission systems necessary to control storm water run-on and run-off; and transport surface water drainage to a treatment plant, discharge location, or any other appropriate destination for discharge in accordance with local environmental regulations. Comply with base guidance on protection of existing features, as well as expanded requirements when operating on Airfields as specified in the TO SOW.

# D.4 HAZARDOUS MATERIALS ABATEMENT

Sample and dispose of all radiological waste, hazardous materials and waste that is a requirement for construction of the project in accordance with applicable host nation, federal, state, and local requirements. Provide all radiological waste, hazardous materials use and hazardous waste disposal documentation to the Base Environmental Office or Installation Hazardous Waste Program Manager, and register with the Hazardous Materials Pharmacy program (if available) at the installation to ensure appropriate and efficient tracking of the contractor’s hazardous material purchases, inventories, use, and releases such as required by the Emergency Planning and Community Right-to-Know Act (EPCRA), Executive Orders, or any installation reporting requirements.

Comply with host nation, federal, state, and local requirements for any task involving the transportation of radiological waste, hazardous wastes and/or contaminated materials to off-site treatment, storage and/or disposal facilities. The contractor is responsible for the disposition of all Radiological, Hazardous Material and Waste produced by activities directly involved in the construction related construction operations. This includes 40 CFR 260, 49 CFR 172, 173, 178, 179 and all other applicable local, state, federal, and host nation transportation regulations.

Ensure that all personnel involved in handling and packaging the hazardous waste be trained for the level of expertise required for the proper performance of the task and in the areas of chemical incompatibility, general first aid procedures and spills. The contractor shall provide handling and personnel protective equipment to ensure safe handling of the hazardous/asbestos waste. The contractor’s personnel and equipment are subject to safety inspections by Government personnel while on Federal property.

# D.5 MAINTENANCE AND REPAIR

Perform construction-type maintenance and repair of facilities, systems, and utilities. Construction type maintenance and repair can be performed incidental to other requirements or as a stand-alone project. Service type maintenance and repair is not included in this contract.

# D.6 ORDNANCE REMOVAL AND SUPPORT

Any Unexploded Ordnance (UXO) removal under this contract is incidental to other construction work. Typically, Ordnance identification and removal will be accomplished by US Military personnel. However, should this support not be available, the TO requirements document will contain direction for the contractor. Within the context of the Military Munitions Response Program (MMRP) or the Environmental Restoration Program, the contractor identifies, removes, renders inert, destroys, recycles, and disposes of used or fired munitions, UXO, and other explosive devices and materials; perform associated investigative work. Ordnance may contain or be within the proximity of chemical, biological, and radiological materials, and wastes. Prepare an Explosive Safety Plan and obtain Air Force Safety Center and DoD Explosive Safety Board approval before any response actions are taken. Coordination with the Base/Installation’s Explosive Ordnance Disposal (EOD) office or nearest DoD Explosive Ordnance Disposal (EOD) office is required. Perform investigations and plan response actions to remove, transport, and dispose of UXO or munitions residue from exploded ordnance. Detection must be performed prior to using equipment. Detection and identification may require applying innovative and proven technologies. Documentation includes generation of a digital geophysical record and data inputs to Geographic Information System (GIS), and well as written reports of activities. Removal of UXO, other ordnance, and contamination associated with small arms, skeet, and practice ranges may be necessary to further remedial action at some sites.

# D.7 DEMOLITION

Demolish facilities, systems, and other improvements as necessary to prepare sites for future construction activities. Demolition activities may be ancillary to other requirements or a stand-alone project, as defined by the TO SOW. Conduct demolition efforts in conjunction with such activities as new construction or renovation, removal of outdated facilities, and site clearing from natural disasters. Perform surveys as part of demolition efforts to identify conditions and hazardous materials or Asbestos related hazards for mitigation. Demolition efforts include validation of existing utilities for active conditions, evaluation of potential environmental concerns, and support of AF Real Property considerations at the TO Level. Provide all necessary documentation to the Government for preparation of DD Forms 1354.

# D.8 CONSTRUCTION

Upon approval by the CO of Partial or Full NTP, commence on-site construction activities. Where Partial NTP has been given, only the CO approved work subject to the Partial NTP may be conducted, fabricated, procured, or demolished. Provide manpower, equipment, material, services, and transportation necessary to review, plan, develop and implement quality control and oversight services during the construction phase of each TO. Key personnel for the prime contractor, to include the Site Superintendent, Health & Safety Manager, and Quality Control Manager or their CO approved designated replacement must be on-site 100% of the time during all construction activities for the performance period of the contract. Employ a Project Manager responsible for ensuring that practical and effective systems are developed to complete the task order and maintain a frequent on-site presence unless otherwise specified at task order level. In the event of brief absences by the primary, the contractor’s management plan shall include provisions for coverage of key positions by equally qualified personnel for the duration of those brief absences. Such individuals must be submitted to the Government in an updated Construction Quality Control Plan and approved by the CO prior to mobilization of the substituted of key personnel. Details regarding construction management requirements, inspection and testing, construction facilities and temporary controls, environmental protection, quality control system, construction quality control, and project closeout will be provided in each TO SOW.

# D.9 INSPECTIONS

Comply with the standard three phase Contractor Quality Control (CQC) inspection process, referring to the standard UFGS 01 45 00. Perform proper Quality Control (QC) inspections throughout the project to ensure a quality product. The Government inspector is responsible for Quality Assurance (QA) for the work accomplished but does not work as part of the Contractor’s QC team or perform QC inspections. The Government’s construction inspector does not perform the contractor’s QC for the project, especially during inspections.

## D.9.1 Pre-Final Inspections

Conduct a punch-out inspection as per Specification Section 01 45 00, COMPLETION INSPECTION. Prepare and include in the CQC documentation a punch list of items which do not conform to CO approved drawing and specifications. Once all punch list deficiencies have been corrected, notify the Government that the facility is ready for the pre-final inspection. The Government will perform the pre-final inspection; a pre-final punch list may be developed because of this inspection. Ensure that all items on this list have been corrected before notifying the Government that a final inspection can be scheduled. Complete all commissioning activities in UFGS 01 45 00 prior to the pre-final inspection taking place. Pre-final inspection report must include a list of contractor warranty and manufacturer warranty books/certificates from newly installed equipment and materials. At the pre-final inspection, provide a draft DD Form 1354, Transfer and Acceptance of Real Property to the Government project stakeholders for review, as directed in each TO.

## D.9.2 Final Inspections

Conduct a final acceptance inspection as per Specification Section 01 45 00, COMPLETION INSPECTION. The inspection must concentrate on the items identified at the punch-out inspection and recorded in the punch-out Inspection report. The final inspection report must: (1) certify that all items of the design have been implemented and that the construction is complete, and (2) include a record of “signed and sealed” as-built drawings and specifications verifying that all development standards have been met. A minimum of 60 days prior to the final acceptance inspection, provide the Interim DD Form 1354 for the transfer and acceptance of Real Property. At the final acceptance inspection present a completed DD Form 1354 for signature and acceptance. Refer to UFC 1-300-08 for instruction on completing the DD Form 1354. For information purposes, a blank fillable PDF DD Form 1354 may be obtained at the following: http://www.dtic.mil/whs/directives/forms/eforms/dd1354.pdf. Submit the completed Checklist for DD Form1354 of Installed Building Equipment items. Attach this list to the updated DD Form 1354.

# D.10 RED ZONE

Facilitate Red Zone Meetings as part of the closeout of the project. Commence initiation of Red Zone meetings at 80-percent of construction completion. At the Red Zone meetings, the Contractor and the project stakeholders discuss, define, and achieve consensus on actions necessary to complete construction, support user occupancy, perform financial closeout, and document the fiscal closeout of the project in the Real Property Records.

# D.11 DELIVERY AND WARRANTY

Issue the warranty in accordance with FAR 52.246-21 or as supplemented by the TO SOW or design. Extended warranties offered by the contractor and its subcontractors or suppliers may be accepted at the Government’s discretion. Provide system O&M manuals and parts list to the Government, and train maintenance personnel in system operations prior to delivery and Government acceptance, as well as manufacturers’ point of contacts (POCs) for troubleshooting, repair, and consulting questions.

# D.12 DEMOBILIZATION

Decontaminate equipment and facilities, decommission facilities as necessary, and restore the site back to its pre-project condition or as directed in the TO. Remove any temporary facilities and implement erosion control measures such as seeding, mulch, sodding, and erosion control fabrics; restore roads, structures, and utilities; and plant trees, shrubbery, grasses and other vegetation as directed in the TO. Document and report on activities and train Government personnel to perform required maintenance, as requested in each TO.

Comply with FAR 52.245-1 Government Property and Defense Contract Management Agency (DCMA) instructions pertaining to disposal of Government Property and reporting through the Plant Clearance Automated Reutilization Screening System (PCARSS) in the removal and disposition of any Government Property during the Demobilization from the project site.

# D.13 EMERGENCY RESPONSE

The contractor may be required to perform emergency response services. The contractor may be required to perform emergency repairs to facilities, systems, improvements, or utilities in the course of executing TO requirements or as stand-alone activities. The contractor may be required to perform emergency response to situations arising from natural disasters, project activities or actions from others.

# D.14 AS-BUILT DOCUMENTATION / RECORD DRAWINGS

For the duration of construction, maintain as-built drawings, marked-up Issued For Construction drawings maintained by the Contractor on-site, depicting actual conditions and deviations from the Issued For Construction 100% design drawings. Changes reflected in the As-Built drawing markups may result from coordination required by but not limited to: contract modifications; official responses to submitted RFIs, direction from the Government, design that is the responsibility of the Contractor, and differing site conditions.

At the conclusion of the project, produce the Record Drawings, the final CAD or BIM drawings/model reflecting all red-line changes marked in the as-built drawings maintained during the construction contract. Clearly identify all deviations or variations from the Issued For Construction documents. Should substantive deviations have been made to the documents, it may be required at the Government’s sole discretion that the revised documents be signed and sealed by the responsible DOR(s). Delivery of Record Drawings documentation must occur prior to final payment.