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UNIFIED FACILITIES CRITERIA (UFC)

Design, Construct, Commissioning (DCCx) Pilot Program

DRAFT

FOREWORD

- 1.0 INTRODUCTION
 - 1.1 PURPOSE AND SCOPE
 - 1.2 BACKGROUND
 - 1.3 APPLICABILITY
 - 1.4 REFERENCES
 - 1.5 CONTENT AND FORMAT
 - 1.6 GOAL
 - 1.7 BASIC REQUIREMENT OR ADDITIONAL SERVICE

- 2.0 REQUIREMENTS
 - 2.1 PILOT PROJECT SELECTION
 - 2.2 PLANNING AND PROGRAMMING
 - 2.3 PROJECT ACQUISITION STRATEGY
 - 2.4 DESIGN
 - 2.5 CONTRACT LANGUAGE
 - 2.6 CONSTRUCTION PHASE

- 3.0 PROJECT CONSTRUCTION
 - 3.1 PERFORMANCE OF PREVENTIVE/CORRECTIVE
MAINTENANCE/COMMISSIONING
 - 3.2 COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM
(CMMS)
 - 3.3 O&M SUCCESSOR

- 4.0 MONITORING
 - 4.1 MONITORING OF PROJECT MAINTENANCE DATA
 - 4.2 LESSONS LEARNED

APPENDIX A - Glossary

APPENDIX B - Sample Bid Schedule

APPENDIX C - Sample Section 01785 for Five Year Maintenance w/Commissioning

APPENDIX D - Sample Specification for Preventive and Corrective Maintenance

APPENDIX E - Sample Proposal Submission Requirements

APPENDIX F - Sample Proposal Evaluation Criteria

DRAFT

FOREWORD

The Unified Facilities Criteria (UFC) system provides planning, design, construction, operations and maintenance criteria for all service commands having military construction responsibilities. This UFC will be used for all service projects and work for other customers where appropriate.

UFC are living documents and will be periodically reviewed, updated, and made available to users as part of the Services' responsibility for providing technical criteria for military construction. Headquarters, United States Army Corps of Engineers (HQUSACE), Naval Facilities Engineering Command (NAVFAC), and Air Force Civil Engineer Support Agency (AFCESA) are responsible for administration of the UFC system. Technical content of UFC is the responsibility of the preparing tri-service committee. Recommended changes with supporting rationale should be sent to the respective service proponent office, as follows:

- HQUSACE, ATTN: CECW-E, 20 Massachusetts Ave., NW, Washington, DC 20314-1000 or the [Recommended Changes To Engineering Documents](#) page on the TECHINFO site listed below.
- Commander, Atlantic Division, Naval Facilities Engineering Command, 1510 Gilbert Street (ATTN: NAVFAC Criteria Office), Norfolk, Virginia 23511-2699 or crit_innov_07@navfac.navy.mil, by commercial telephone (757)322-4200 or DSN 262-4200, or by facsimile machine to (757) 322-4416
- Air Force Civil Engineer Support Agency, 139 Barnes Drive, Tyndall Air Force Base, Florida 32403-5319 or <mailto:larry.spangler@afcesa.af.mil>. UFC are effective upon issuance.

UFC are distributed only in electronic media from the following sources:

- USACE TECHINFO Internet site <http://www.hnd.usace.army.mil/techinfo/index.htm>.
- NAVFAC Criteria Office Internet site <http://criteria.navfac.navy.mil/>
- Construction Criteria Base (CCB) system maintained by the National Institute of Building Sciences at Internet site <http://www.nibs.org/ccb/>.

Hard copies of UFC printed from electronic media should be checked against the current electronic version prior to use to ensure that they are current.

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DRAFT

CHAPTER 1

INTRODUCTION

1.1 PURPOSE AND SCOPE. The Design, Construct, Commissioning (DCCx) Pilot Program initiative is the Demonstration Program on Reduction in Long-Term Facility Maintenance Cost or Reduction in Long Term Maintenance Initiative authorized by Congress. This document provides guidance, direction and sample documents for the Project Delivery Teams (PDT) in the preparation of solicitation documents, during design and construction phases of a project selected to be in the program. This Demonstration Program on Reduction in Long-Term Facility Operating, Maintenance and Energy Costs was authorized under the National Defense Authorization Act For Fiscal Year 2002, Section 2813 as modified by Section 2813 in the 2003 Act. The purpose of the pilot program is to determine if there is a benefit to having the construction contractor responsible for maintenance after construction and achieve maximum service life. The pilot program will document if this new business approach will preserve Government's capital investment longer and reduce the long-term facility maintenance costs. The pilot program will explore where and how the most value can be achieved for the MILCON dollars invested in O&M during the first years of occupancy.

1.1.1 The Design, Construct, Commission Program consists of a more comprehensive approach to facility construction and upkeep. In the design phase we always try to keep the maintenance of equipment as a consideration. During construction, the Contractor selects and installs the equipment and then maintains it for five years. This program streamlines the transition from construction into the operating phase of the building by including the requirement in one contract. On a design-build project, continuity will be enhanced with participation from the design team, construction contractor and the user in the critical initial phases of occupancy. Then through the warranty periods of systems and equipment and into the first five years of occupancy the contractor will still be engaged. Further enhancement is achieved by insuring continuity of knowledge and professionalism remains consistent during the first 5 years of operation at the facility. Preventive and corrective/unscheduled maintenance will be provided under this program. The building systems will be monitored and benchmarked throughout the five-year period. Emergency response will be provided using a priority matrix. The goal is that during the construction phase the contractor will select better equipment and subcontractor for installation since they will be responsible for the maintenance after beneficial occupancy. After construction the contractor will begin the five years of operation and maintenance of the facility. The intention of the pilot program is to maintain the facility such that all building systems and equipment perform within the performance guidelines throughout the life cycle of the facility. This comprehensive approach will create seamless O&M support service from construction, move-in and through the first five years of occupancy.

1.1.2 This program is not intending to cover the following:

- Landscape Maintenance
- Grass Cutting and Snow Removal

DRAFT

- Normal custodial work (cleaning services, restocking consumable supplies, office and shop routine trash removal, etc)
- Repair or maintenance of non-contractor supplied materials and equipment (furniture, PE equipment, shop equipment, military equipment, etc)
- Routine emptying of oil water separator and grease traps.
- [Government security systems maintenance] This could be included with prior approval from the Provost Marshal. Edit the specification accordingly.
- Modifications to the facility after construction completion.

These tasks will be contracted in the routine manner.

The program is also not intended to cover unplanned User requested changes. However a line item on the bid schedule of all projects is suggested with zero dollars as the bid amount for the incorporation of installation O&M funds for the contract. Otherwise introduction of O&M funds into the contract would be considered out of scope changes.

1.2 BACKGROUND.

Maintenance funding fails to reflect the increased complexity of buildings, as well as the need and cost for education and ongoing re-training of the O&M staff. An ever-widening gap has come about between what a contractor installs and what O&M staff members are ready to accept. System components can be correctly sized, specified, and supplied, but not installed, adjusted, and integrated to work optimally on the job. The consequence is that buildings that are not properly commissioned will not work correctly when they are built and the O&M staff does not have the time to figure out why. In fact, the O&M staff may be unaware that a building is operating incorrectly until the occupants complain. Unfortunately, by this time, the building occupants' productivity has been reduced and they have come to expect no better than the poor building environment given them. Already, this new building is in an operations death spiral in which the building staff spends all their time attacking the symptoms of installation and design problems but have no training or time to attack the root causes. Evidence of such a situation may be seen in the bypassing and disconnecting of automatic controls, whether because of a lack of operational and maintenance training or because of equipment that has not been tested and adjusted to work smoothly as part of the overall installation. The result is steadily deteriorating environmental quality in the workspace, reduced energy efficiency, and building performance that falls short of the Owner's expectations. The cost of such consequences can be huge.

1.3 APPLICABILITY. This UFC applies to all Tri-Service elements responsible for design of military construction that are authorized the operations and maintenance services after construction completion as a line item on the project funding documents.

1.4 REFERENCES. References used in this UFC are as follows:

National Defense Authorization Act For Fiscal Year 2002, Section 2813 and as modified by Section 2813 in the 2003 Act.

DRAFT

ETL 1110-3-491 Sustainable Design for Military Facilities

SPiRiT 1.4.1 Sustainable Project Rating Tool

1.5 CONTENT AND FORMAT. This document is not a design manual, but rather a guide for procurement of operations and maintenance (O&M) services for standard MILCON projects where authorized. This document provides guidance on various topics associated with the program and documentation for reporting results of pilot projects. Topics have been coordinated with professionals in contracting, legal, engineering and construction. Attached documents have been reviewed for completeness and relevance.

1.6 GOAL

The goal of DCCx pilot program is to demonstrate that there is a savings in operations and maintenance costs in performing preventive maintenance, routine maintenance and continuous commissioning on critical systems. "Critical" systems are unique and will differ for various projects. To reach this goal it will be necessary for the construction contractor to keep accurate records of costs and to provide documentation on equipment selected and to conduct User surveys. For the demonstration to be successfully it is important to have good communications between all participants or stakeholders (building user, contractor, the commissioning agent, and COE district administering the contract). It is also important to keep all parties involved and informed of progress as time passes.

1.7 BASIC REQUIREMENT OR ADDITIONAL SERVICE

1.7.1 For MILCON projects, building commissioning should no longer be considered an additional service but a basic requirement of all contracts. The criteria requirement is under the SPiRiT guideline item 3R1, Fundamental Building Systems Commissioning. This requires a verification to ensure that fundamental building elements and systems are designed, installed and calibrated to operate as intended. (Documenting design intent — the expectations for building performance — is a critical component of commissioning.) Commissioning provides a means of linking the traditionally fragmented phases of the design and construction process, because it encourages the project team to view the process holistically. The commissioning process encourages parties to communicate and solve problems earlier in the construction process. Beginning proper commissioning during the design phase can help identify and solve problems that later may turn into performance problems, occupant comfort complaints, indoor air quality issues, and decreased equipment life. The following fundamental best practice commissioning process is required:

- Engage a commissioning authority
- Develop design intent and basis of design documentation (design analysis)
- Include commissioning requirements in the construction documents
- Develop and utilize a commissioning plan
- Verify installation, functional performance, training and documentation
- Complete a commissioning report

DRAFT

1.7.2 Criteria requirement: "Sustainable principles will be integrated into the design, development, and construction of the project in accordance with Executive Order 13123 and other applicable laws and Executive Orders." Building commissioning is one of these sustainable design principles.

1.7.3 Commissioning is occasionally confused with testing, adjusting, and balancing of HVAC systems. Testing, adjusting, and balancing measures building air and water flows, but commissioning encompasses a much broader scope of work. Commissioning typically involves four distinct "phases" in which specific tasks are performed by the various team members throughout the process. The four phases are pre-design, design, construction, and warranty. As part of the construction phase, commissioning involves functional testing to determine how well mechanical and electrical systems meet the operational goals established during the design process. Although commissioning can begin during the construction phase, owners receive the most cost-effective benefits when the process begins during the pre-design phase at the time the project team is assembled. A properly commissioned building can result in fewer modifications or change orders during the construction process, fewer callbacks, long-term occupant satisfaction, lower energy bills, and avoided equipment replacement costs. Commissioning also assures that the building's operational staff is properly trained, with correctly compiled operation and maintenance manuals delivered at project turnover. All these services should be included in the basic requirements of the solicitation.

1.7.4 The Demonstration Program on Reduction in Long-Term Facility Maintenance Cost or a.k.a. Design, Construct, Commissioning Program is a five-year maintenance and continuous commissioning program following beneficial occupancy and incorporates the best work practices to extend the life expectancy of the building. Consideration of the program must be included in all the project development phases.

1. Predesign/Planning
2. The Design Stage
3. The Bidding Stage
4. Early Construction (Equipment selection)
5. Static Inspection (Field Verification)
6. Startup (Functional Verification)
7. O&M Staff Training and Documentation
8. Warranty Review and Yearly Testing/Reporting (Performance Verification)
9. Turnover to follow on maintenance provider

1.7.5 Design, Construct, Commissioning (DCCx) is an additional service to traditional MILCON project(s). After receiving a completed building, the next challenge for owners and operators is to ensure efficient performance of the facility over time. That is where this program comes in for five years after occupancy, although segments of the process were already happening during construction. It started with the Contractor equipment and subcontractor selection and then the commissioning process to document the baseline operating conditions.

DRAFT

1.7.6 A preventive maintenance (PM) plan is a vital part of any preventive operations and maintenance program (PO&M Program) that can be expected to lead to energy efficient building operation. It has always been known that installations can benefit by implementing a PM plan to help prevent performance degradation and by tracking the performance of every piece of major equipment. For the pilot projects this will be included in the construction solicitations to include continuous commissioning requirements for critical systems and preventive maintenance for five years after building occupancy. These services will be included as line items on base bid schedules or options items so that yearly cost breakouts can be obtained easily for budgeting purposes.

1.7.6 Expansion of the DCCx Program. If the pilot program proves successful and economically beneficial to the Army, a proposal to expand the program may be submitted to Congress. The program could be expanded to continue the DCCx program for select projects greater than fifty thousand square feet, if an optimal size building can be determined. Or a recommendation to include unique buildings costing more than two million dollars may be in order.

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CHAPTER 2

REQUIREMENTS

2.1 PILOT PROJECT SELECTION.

2.1.1 Pilot projects for this program are selected by team collaboration of the Corps of Engineers, Installation and ACSIM and with HQDA concurrence. Once a project is selected it is the responsibility of the installation project manager to program funding for the Demonstration Program on Reduction in Long-Term Facility Maintenance Cost or Design Construct Commissioning (DCCx) as a line item in the project funding documents 1391.

2.1.2 Pilot projects for the Navy. (Need input from the Navy)

2.1.3 The Air Force has chosen not to participate in this pilot program.

2.2 PLANNING AND PROGRAMMING

2.2.1 Project Programming. For initial budget estimate 7-10% of building cost for the five-year maintenance and continuous commissioning effort, higher percentage for smaller programmed amount projects. Also higher percentage for facilities with critical missions that will require swift repairs of failed systems, i.e. fast response from the Contractor.

2.2.2 Ideally, during the programming charrette the question will be asked if this program is a DCCx candidate. If it is a candidate, and rapid response is required for repair of any critical systems then additional space will have to be programmed for maintenance staff office and spare parts equipment storage space.

2.2.3 Form 3086 verification. Contact Savannah District for information on historical results of recently awarded projects. E-mail Mr. Panu at veijo.t.panu@sas02.usace.army.mil with request for latest information on awarded pilot project awards and pricing of the maintenance activity or check the web page <http://en.sas.usace.army.mil/dccx/index.html>

2.3 PROJECT ACQUISITION STRATEGY

2.3.1 Acquisition Strategy

2.3.1.1 The requirements of the DCCx program can be used in either Design-Bid-Build or Design-Build RFP solicitations. Both methods have distinct advantages for the Government but for this program is not a significant factor. The scope of work for the maintenance phase can be as specific as you want it. In a design-build RFP solicitation you could permit contractor to

DRAFT

propose innovative maintenance practices such as reliability centered maintenance for some systems. We could establish a baseline cost for maintenance of the facility and provide an incentive for the O&M contractor to hold cost below the baseline while maintaining the systems desired performance parameters with minimal downtime. This would encourage the contractor to minimize staffing by making thoughtful repairs or replacement decisions. If using Design-Build process, recommend the use of Two-Phase Design-Build Selection Procedure as outlined in the Federal Acquisition Regulation (FAR) Subpart 36.3.

2.3.1.2 Design-Bid-Build process would have the Project Delivery Team (PDT) making all the decisions on critical systems in consultations with the customer and providing a detailed scope of work for the maintenance phase. The PDT could dictate requirements more directly and be engaged in the process more. The guide specifications provided as appendix can be tailored for either type of solicitation. For RFP solicitation where the systems are not fully defined the scope of work requirements will have to be more performance oriented and require the Contractor to abide by manufacturers recommendations on preventive maintenance. It is intended to give the Government the most control to get the desired outcome.

2.3.1.3 Even if the project is fully designed, it is recommended that the solicitation be advertised as Request For Proposal (RFP) with clear language for source selection by **price performance tradeoff (PPT)** or best value determination. The solicitation would include language something like:

"In order to determine which proposal represents the best overall value, the Government will compare proposals to one another. Award will be made to that offeror whose submittal and price proposal contain the combination of those criteria described in this document offering the best overall value to the Government. Best value will be determined by a comparative assessment of proposals against all source selection criteria in this RFP."

This will give the Government source selection team the best chance of selecting the Contractor best suited to fulfill the contract and provide the best value. In reality the monetary weight of the five-year maintenance and continuous commissioning portion will only play a small part in the evaluation scoring as compared to the overall construction of the facility but it will be considered. But this method allows the PDT to place a higher priority on this factor if they so state in the solicitation.

2.3.1.4 In the Design-Build (D-B) process the facility would be designed and built by a single firm or team of firms (the Contractor) that has registered architects and engineers employed by or subcontracted to their organization. The Contractor will be responsible for both design and construction, whether the Contractor uses architects and engineers from within its organization or subcontractors from external architect/engineer firm(s) for design services. Either the One Step or the Two Phase Selection process could be utilized. The D-B RFP process has the advantage that if errors are found during the commissioning process it will be the responsibility of the Contractor to correct them in concert with his design team.

DRAFT

2.4 DESIGN

2.4.1 Document the Pre-Design Phase

The most important components of this early phase of the project are the Design Intent and the Basis of Design documents. We call these documents minutes of pre-design or submittal review meetings and design analysis. The Design Intent is the user's *intention and expectation* of the *design and operations* of the building. It is the user's requirements for a successful building. In order for the project to be successful, the project team must achieve these requirements and document the achievement. The components and systems tested must meet the user's project requirements and needs in order for the overall building to be considered as operating correctly. As the criterion for correct building operation, the Design Intent may include only major Building Systems, or it may include a description of correct operation for everything in the building from communications requirements to accessories in the restrooms. The document is performance based and concentrates on what the occupants *need* instead of focusing on how the Design Team will provide it. This does not mean that architectural considerations are foremost in the document. If only mechanical and electrical systems are being commissioned, then a sufficient Design Intent may be 90% those disciplines and 10% architectural issues (such as building code requirements, occupancy, etc.). The Design Intent, once complete, is then turned over to the Design Team; they have the responsibility to develop the design intent into building components such as occupancy type, room size, population, air quality, etc. The Design Team will produce design documents based on the design intent and Army criteria. Review of these pre-design documents should be conducted at subsequent review stages to insure the team will meet all the needs.

2.4.2 Project Delivery Team Decisions

The project delivery team(s) starting at the planning charrette, design charrette and rest of the PDT have several decisions to make regarding the DCCx initiative based on what directives they are given.

- Is the program funded on the 1391 and does the working estimate of the facility have sufficient funds for the program?
- Are there sufficient funds to include continuous commissioning and preventive maintenance and routine maintenance for five years?
- Will the scope of work have to be downgraded to only include routine and preventive maintenance because it is authorized on the design directive but not funded on the 1391? This is not the intent of the program, but it is reality. The PDT must deal with it.
- How critical are the functions or activities within the facility, what response time is required by a maintenance contractor to bring systems back on line. If, for example, a one-hour repair of HVAC systems is necessary, the requirements may have to be written to require on-site maintenance person(s) to perform all the maintenance duties. Thus the contract will be paying for two permanent party persons to be present at the facility for five years. For less critical situations, 24 hour response to trouble calls may be satisfactory.

DRAFT

- What are the critical systems for the facility? This can vary by geographical location and occupants mission.
- Does the 1391 allow sufficient square footage for office space of maintenance staff and storage space for spare parts equipment?
- Will there be a requirement for unplanned maintenance activities? If so, this will require the setting up of contingency funds for each year, and the solicitation will have to be structured to include this item.
- Understand that the program is not intended to include housekeeping, trash pickup, and grounds keeping and snow removal as a DCCx project requirements. These will be handled in traditional manner.
- What to include as cash penalty damages if the Contractor fails to perform the preventive and corrective maintenance or commissioning functions.

2.4.3 Facility Systems to Include In Contract.

When we think of maintenance, we generally think of routine preventive maintenance such as changing filters, replacing fan belts, or oiling bearings, etc. This program not only includes preventive and corrective maintenance but also continuous commissioning of critical systems and a contractual means of addressing unscheduled maintenance or catastrophic failures.

2.4.3.1 What is Continuous Commissioning. Continuous commissioning is a concept of maintaining critical systems and critical facility components to assure that a system reaches its expected life expectancy and that efficiency of operations is maintained throughout a system's life. Continuous commissioning not only assures that the equipment is operating at peak efficiency at start-up, but that adjustment, for environmental and operational conditions, would keep the equipment and systems performing at maximum efficiency.

2.4.3.2 What are Critical Systems. Critical system identification can vary from facility to facility depending on the geographic location and the mission of the facility occupant. It can be any system that will hamper the execution of the unit mission or adversely affect productivity of the workforce. The easiest method of identifying the critical systems is simply listing the specification chapters that cover the equipment. The initial building commissioning establishes the baseline of condition or operation. Here is an example provided in Appendix C of Section 01785:

Division 7 - Roofing Systems
[Section 07412 - Standing Seam Metal Roofing System (SSMRS)]

Division 11 - Equipment
[Section 11331 - Package Wash Water Recycle System]
[Section 11400 - Food Service Equipment]

Division 13 - Special Construction
[Section 13121 - Metal Building Systems (Minor Requirements)]

DRAFT

[Section 13851 - Fire Detection and Alarm System]
[Section 13930 - Wet Pipe Sprinkler System, Fire Protection]

Division 14 - Mechanical
[Section 14240- Elevators, Hydraulic]

Division 15 - Mechanical
[Section 15569 - Water Heating, Gas and Propane Air Mixture]
[Section 15620 - Liquid Chillers]
[Section 15700 - Unitary Heating and Cooling Equipment]
[Section 15768 - Electric Unit Heaters]
[Section 15895 - Air Supply, Distribution, Ventilation and Exhaust
System Custom Air Handling Equipment]
[Section 15940 - Overhead Vehicle Tailpipe Exhaust Removal System]
[Section 15950 - HVAC Testing/Adjusting/Balancing]
[Section 15951 - Direct Digital Control for HVAC]

Division 16 - Electrical
[Section 16415 - Electrical]
[Section 16528 - Exterior Lighting Including Security and Closed-
Circuit TV (CCTV) Application]

Naturally this list will be tailored for each project and some sections added and some deleted.

2.4.3.3 This program ideally will require full building commissioning for the establishment of baseline criteria and then yearly checkups. But if funds are tight, and some cost cutting measures are necessary, do not cut out the building-commissioning requirement totally. Find other work items to include as options if at all possible. Commissioning is recommended for at least the mechanical, life safety, and electrical portions of new buildings. The PDT team has flexibility in Commissioning different systems to provide the best value for the Commissioning dollar. This also provides the baseline data for later verifications that systems are working optimally. Commercial practice use of Commissioning Authority (CxA) shows that fees of 1.25 percent to 2.25 percent of the new building construction cost are typical for payment to the CxA for total building Commissioning. If you choose to commission only select systems, then the recommendation is to budget an average of 2.5 percent of the system component construction cost for Commissioning of that system for each occurrence. These fees are exclusive of travel, videotaping, testing-adjusting, and balancing (TAB) work, and extra certifications beyond occupancy.

2.5 CONTRACT LANGUAGE

2.5.1 Appendix B, gives a sample bid schedule for a typical project where the five O&M phase had to be treated as an option to the base contract because of funding. Appendix D, Sample Specification for Preventive and Corrective Maintenance gives an example maintenance requirements for five years when insufficient funds are programmed to handle the continuous commissioning on other features as described in Appendix C, specification 01785.

2.5.2 In the design phase of the building be sure to include office space for the Contractor maintenance staff work stations and storage and bin space for spare parts. This is traditionally

DRAFT

housed at the DPW warehouse but provisions will have to be made to accommodate the areas in the pilot projects. An alternative might be to require a contractor trailer off site but nearby.

2.5.3 Contracting Clauses. Be sure to include on the contracting cover sheet, Standard Form 1442 of the IFB or RFP solicitation a statement of work or synopsis of the project and clearly state that this contract includes 5 year maintenance after construction to alert proposers that this is a unique contract. Here is a sample:

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS: Construction and maintenance of a new U.S. Army Reserve Training Center Complex, Rochester, New Hampshire. The project will consist of: (1) two-story Training Building (USARC) (2) OMS facility, (3) unheated storage building, (4) Support facilities to include light duty POV parking area, heavy duty MEP parking area, concrete pavement area and bi-level concrete loading ramp. The site shall be completely developed for utilities, water, sanitary sewer, gas, communications, underground electrical, CATV, storm drainage, paving, walks, curbs & gutters, parking, access drives, fencing, exterior lighting, site improvements, grading & general landscaping. The buildings will be complete with architectural, electrical, communications, fire protection and detection, plumbing, HVAC, Energy Management, lighting, CATV, security, and CCTV systems. **During the Operations & Maintenance phase, the Contractor will maintain the facility systems, perform preventive maintenance, provide continuous commissioning of critical systems & perform scheduled & unscheduled maintenance for 5 years.**

The estimated cost range is between \$10M and \$25M.

NAICS Code is _____.

This contract is being issued pursuant to the Small Business Competitiveness Demonstration Program.

This is an Unrestricted Procurement

2.5.4 Sample proposal submission requirements for RFP (Section 00110 or 00115) are shown in Appendix E and the proposal evaluation criteria (Section 00120 or 00130) are included in Appendix F.

2.5.5 Wage Rates. The contract specialist must remember to include not only construction wage rates but also the Service wage rates for the area of construction to cover the maintenance activities.

2.6 CONSTRUCTION PHASE

2.6.1 Who will perform the Quality Assurance (QA). It is anticipated that the same organization that provided the quality assurance during construction will provide it for the five-year maintenance phase. For the Army, this would be the Corps of Engineers.

2.6.2 Training for the QA staff. In order to better serve our customers the QA staff must be trained in maintenance and operations procedures. On the job training typically takes longer. Commercially available training classes are available on building commissioning. There is also a prospect course called HVAC Control Systems Operations and Maintenance, PROSPECT Course Number 246 that would be beneficial. The next available course is 19-28 April 2004 in Champlain Illinois. The point of contact is Genie Wright (256) 895-7455.

DRAFT

2.6.3 Final Critical Systems Identification and Master Equipment List

The submittal requirements of the sample specification 01785 require the contractor to provide several submittals during construction. One of the important submittals is the final list of critical systems that will be included in the continuous commissioning phase of execution and the master equipment list. The Government's interpretation is that all components of the critical systems list are the Contractor's responsibility. Leave no room for question and later claims. It is important that all parties come to an agreement early. The Government QA must be proactive and insure the best interest of the Government are maintained and scrutinize the lists closely.

2.6.4 System O&M Manuals (SOMMs)

The guide specification requires the preparation of the SOMM by an individual or organization that has demonstrated expertise in the preparation of comprehensive and complete O&M instructions for similarly complex systems. The final SOMM shall be submitted for Contracting Officer review and approval. The Government-approved SOMM shall be in place no later than 30 days prior to building commissioning. The Preventive Maintenance plan shall be in editable Microsoft Word format and the SOMM will be furnished on electronic media in a searchable .pdf format, and four hard copies will be delivered. The SOMM must include all warranties, spare parts lists, with vendors names and addresses, etc.) Following setup of the O&M manual list, this master listing shall be updated monthly to reflect equipment additions, deletions, changes and alterations. This is best done as part of the computerized maintenance management system. (CMMS). Redundancy is not required if the CMMS is maintained and monthly printouts are provided. The SOMM's will be updated annually, for each of the building systems that serve as guidance documents for the various journeyman-level tradespersons.

DRAFT

3.0 PROJECT CONSTRUCTION

3.1 PERFORMANCE OF PREVENTIVE/CORRECTIVE MAINTENANCE/ COMMISSIONING.

At the outset the Contractor shall prepare a Comprehensive Facilities Management Plan (CFMP) that integrates all the management activities required for the O&M phase of the contract. The CFMP shall be submitted in conjunction with the Systems Operation and Maintenance Manual. The following are the minimum components of the comprehensive management plan:

- Organization and Staffing Plan
- Security Plan
- Safety Program Plan
- Training Plan
- Warranty Plan
- Contract Maintenance Plan
- Continuous Commissioning Plan
- Preventive Maintenance Plan
- Quality Control Plan

The requirements of the various plans are explained in the sample Five Year Maintenance and Organization Specification 01785, Appendix C.

3.2 COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM (CMMS)

A computer based facility management system should be a defined CMMS that would assure the ability to extract the data necessary to perform the program evaluation. The system would have to be accessed to provide data for the evaluation (this program will have to be transparent). It is important to develop a system that provides continuity in the development, storage and retrieval of all data related to the operational and maintenance aspect of this project. Contractor's intended CMMS software would have to be approved by the Government, to assure the correct data can be retrieved. It has been suggested that a specific program be required to provide consistency in the information for all the pilot projects. A waiver for proprietary software would have to be submitted with the above justification.

The Contractor shall provide and utilize MAXIMO software as the Computerized Maintenance Management System (CMMS) or approved equal with appropriate hardware to support the system. The Contractor shall operate and input all data required to establish records for the facilities, systems, and equipment.

DRAFT

3.3 O&M SUCCESSOR

3.3.1 Turnover Requirements.

1. The last three months of the contract execution period shall be used for an orderly transition of responsibility to the successor that will execute the follow-on O&M program.
2. An initial meeting between the COR and the Contract Facility Manager (CFM) for both outgoing and incoming Contractors, shall be held to address phase-out requirements and responsibilities no later than 3 months prior to the end of the current O&M phase. Subsequent meetings will be held as determined by the Contracting Officer, but not less than weekly thereafter.
3. When the incumbent Contractor is also the successor Contractor, these required meetings shall not be waived; since orderly transition from one work specification to another will also require significant management involvement in the transition process.
4. The successor Contractor shall perform all start-up procedures.
5. The successor for the follow-on O&M program may be Government personnel.
6. During the final three months of this contract, if the incumbent Contractor is not awarded the subsequent contract, the Contractor shall permit his successor and the successor's key personnel to observe and become familiar with any and all operations under this contract.

3.3.2 Successor Training.

1. The Contractor shall schedule and provide training for the new personnel that will be assuming the operation and maintenance of the facility.
2. The Contractor shall provide on-the-job training (OJT) to each of the O&M successor personnel to ensure sufficient familiarity to take over the O&M responsibilities of the facility.
3. Using skill levels defined by the training templates, the training objective is to enhance technical skills so that transfer of O&M responsibility for building's unique systems/equipment will be efficient.
4. Certification of training shall be provided to the CO within 3 days after the completion of training. Certification shall include information such as name of

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craftsperson trained, system trained on, type of training, number of hours trained, etc.

5. Training shall cover features unique to complex electrical and mechanical systems installed at facility and FMS features such as hardware and software, form and file formats, CADD, database and file management systems, and LAN functions.

4. MONITORING

4.1 MONITORING OF PROJECT MAINTENANCE DATA

{To be determined}

4.2 LESSONS LEARNED.

All lessons learned during the acquisition phase, construction and O&M phase will be entered into Projnet/DrChecks. Each item should have a keyword DCCx or “commissioning” in the title to facilitate searches. A sample format follows:

The screenshot shows a Microsoft Internet Explorer browser window titled "PROJNET > DQLL - Microsoft Internet Explorer". The address bar contains the URL: https://65.204.17.188/projnet/cll/version2/index.cfm?WORKFLOW=CLL_SubmitLesson&PKeyLesson=1472. The browser's navigation bar includes buttons for "ProjNet", "DQLL", "Submit", "Evaluate", and "Search". The main content area displays a breadcrumb trail: "ProjNet > DQLL > Submit > 1.Category > 2.Value > 3. Enter Lesson". Below the breadcrumb, a message reads: "Use the form below to describe your Lesson for the broadest possible understanding and reuse of the lesson. If you want to compose your problem and solution, use MS Word, then cut and paste into the text boxes." The form is divided into three sections: 1. Categories: "Cat Code: Milcon: Any"; 2. Effects: "Reason: (opt.)" with checkboxes for Error, Omission (checked), and Coordination; "Topic: (opt.)" with checkboxes for Functional Design (checked), Technical Design, Construction, and Operations; "Effects: (opt.)" with checkboxes for Cost, Time, Quality (checked), and Scope; 3. Description: "Title: (reqd.)" with the text "Wage Rates for Maintenance Work DCCx"; "Problem: (reqd.)" with a text box containing "DCCx Commissioning, Camp Swampy, Clauses The project included the wage rates for construction but neglected to include the wage rates for Service work for the five year maintenance work after construction."; and "Solution: (reqd.)" with a text box containing "Include the Service wage rates for all maintenance activities for each contract having DCCx." The browser's status bar at the bottom shows "Internet".

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APPENDIX A

GLOSSARY

Definitions and Abbreviations:

Beneficial Occupancy Date (BOD)

Date of final acceptance of facility by the Government.

Breakdown

The stoppage or collapse of equipment or a facility, or a component thereof, that requires corrective action to restore to an operation condition.

Building Exterior

The exterior surface of a building, including all walks, roofs, attached patios, overhangs, and entranceways.

Deficiency Report (DR)

Formal, written documentation of Contractor non-performance or lack of performance for contract work.

Commissioning

Commissioning is the quality management process applied to design and building construction. It builds quality into the project and confirms correct operation through testing. Commissioning is a systematic process of ensuring that all building systems perform interactively according to the contract documents, the design intent, and the occupant's operational needs. Ideally, this is achieved by beginning in the pre-design phase with design intent development and documentation, and continuing through design, construction, and the warranty period with actual verification through review, testing, and performance documentation. The commissioning process integrates and enhances the traditionally separate functions of design peer review, equipment startup, control system calibration, testing, adjusting and balancing, equipment documentation, and facility staff training, as well as adds the activities of documented functional testing and verification.

Contracting Officer (CO).

A person duly appointed with the authority to enter into and administer contracts on behalf of the Government.

Contracting Officer Representative (COR).

An individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the Contracting Officer to perform specific technical or administrative functions.

Defective Service

Poor performance or nonperformance as specified by contract requirements.

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End Item

The individual component part listed in the manufacturer's parts listing. End item, component part, and /or individual item are used interchangeably.

Government Property

All property owned or leased to the Government or acquired by the Government under terms of the contract. Government property includes both Government furnished property and Contractor acquired property as defined in FAR 45.101.

Government Property Administrator

An authorized representative of the Contracting Officer appointed in writing to administer contract requirements and obligations relative to Government property (FAR 45.101.)

Maintenance Backlog

Equipment repair that has not been completed in the specified time.

Maintenance

The routine recurring work required to keep the facility and its systems in such a condition that it can be used continuously at its designated capacity and efficiency. Maintenance includes work done to prevent damage which would be more costly to restore than prevent. Maintenance includes work to sustain components.

Mandatory (M) Documents

Directives with which the Contractor is obliged to comply.

Materials

Materials, parts, and supplies necessary for the maintenance and repair of facilities and equipment.

National Fire Protection Association (NFPA)

An organization that published pamphlets on fire protection and safety, which are accepted by local, State and Federal Governments and considered directive in nature for this statement of work.

O&M Equipment and Facilities

Equipment and construction normally used to maintain general building environment and services (heating, ventilating, and air-conditioning (HVAC); electrical distribution systems; lighting; plumbing; building hardware and furnishings; etc.), except those items intended to perform a specific function not related to maintaining the building environment.

Preventive Maintenance (PM)

The systematic planned care, servicing, and inspection of equipment, utility plants and systems, buildings and structures, and ground facilities for the purpose of detecting and correcting incipient failures, preventing failures, and making minor repairs. Manufacturer's product literature/data sheets are to be used as principal guidance for determining minimal/recommended periodic maintenance missions.

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Quality Assurance (QA)

Those actions taken by the Government to assure services meet the requirements of the Statement of Work (SOW) and all other service outputs.

Quality Assurance Review

Periodic examinations to ensure compliance with the Contractor's procedures, plans, schedules, and contract requirements (includes the recording of narrative audit results).

Quality Assurance Representative

A Government person responsible for surveillance of Contractor performance.

Quality Assurance Surveillance Plan (QASP)

An organized written document used for quality assurance surveillance. The document contains specific methods to perform surveillance of the Contractor.

Quality Control

Those actions taken by a Contractor to control the performance of services so that they meet the requirements of the SOW.

Random Sampling

A sampling method in which each service output in a lot has an equal chance of being selected.

Repair

The restoration of a real property asset to its originally constructed or installed condition, or if that restoration is not practical, to a condition that satisfactorily meets the intended purpose. Repair means the application of maintenance services in order to restore serviceability of an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system. Repair may be overhaul, reprocessing, or replacement of deteriorated components, parts, or materials.

Sample

A sample consists of one or more service outputs drawn from a lot. The number of outputs in the sample is the sample size.

Sampling Guide

The part of the surveillance plan, which contains all the information, needed to perform surveillance of the service output(s) by the random sampling method of surveillance.

Scheduled Maintenance

Systematic and periodic servicing and inspection of equipment and components to maintain operational efficiency and replace worn or failed parts.

Service Order (SO)

Used to authorize and manage scheduled and unscheduled repair jobs.

Shall

This word is used in conjunction with the contract and specifies that a provision is binding.

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Unscheduled Maintenance

Corrective Maintenance that involves repair or replacement for any building system or equipment not included in the Continuous Commissioning Program.

Work Order (WO)

Used to authorize and manage new construction or modification jobs.

1.2 Abbreviations

CO	Contracting Officer
COR	Contracting Officer Representative
HVAC	Heating, Ventilating and Air Conditioning
QA	Quality Assurance
QAE	Quality Assurance Evaluator
QC	Quality Control
O&M	Operations and Maintenance
PM	Preventive Maintenance
A.....	Advisory
ADP.....	Automated Data Processing
AHU.....	Air Handling Unit
ASHRAE.....	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
BAS.....	Building Automation System
BOD	Beneficial Occupancy Date
CADD	Computer-Aided Drafting and Design
CCP.....	Continuous Commissioning Program
CCTV	Closed-Circuit TV
CFM	Contract Facility Manager
CFMP.....	Comprehensive Facilities Management Plan
CFR.....	Code of Federal Regulations
CLIN	Contract Line Item Numbers
CMMS.....	Computerized Maintenance Management System
CO	Contracting Officer
COR	Contracting Officer's Representatives
DoD.....	Department of Defense
DR.....	Deficiency Report
FAR.....	Federal Acquisition Regulation
FMS.....	Facilities Management System
FTE.....	Full-Time Employees
HVAC	Heating, Ventilation, and Air Conditioning
IAW.....	In accordance with
LAN	Local Area Network
M.....	Mandatory
MP&SOMM ..	Management Plan & Systems Operation Maintenance Manual

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MELMaster Equipment List
MEP.....Military Equipment Parking
NFPANational Fire Protection Association
NTPNotice to Proceed
O&M.....Operation and Maintenance
O&M SOWOperation and Maintenance Statement of Work
OJT.....On-the-Job Training
OMS..... Organizational Maintenance Shop
OSHA.....Occupational Safety and Health Administration
PCSPermanent Change of Station
PE.....Professional Engineer
PL.....Public Law
PM.....Preventive Maintenance
PMP.....Preventive Maintenance Plan
QA.....Quality Assurance
QARQuality Assurance Representative
QC.....Quality Control
SOService Order
SOMMSystem Operation and Maintenance Manual
SOW.....Statement Of Work
SSMRS.....Standing-Seam Metal Roofing System
TATrouble Analysis
USARC.....United States Army Reserve Center
WO Work Order

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ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY UNDEFINED	UNIT PRICE	MAX AMOUNT
---------	-------------------	------------------------------	------------	------------

0005 OPTION 1
 FFP
 Operations and Maintenance (O&M) of the Project Name
 for 5 years

MAX
NET AMT

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0005AA		1	Lump Sum	\$_____	\$_____

FFP
 1st Year of Facility Operations and Maintenance (O&M) of Project Name

MAX
NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0005AB		1	Lump Sum	XXXX	\$_____

FFP
 2nd Year of Facility Operations and Maintenance (O&M) of Project Name

MAX
NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0005AC		1	Lump Sum	XXXX	\$_____

FFP
 3rd Year of Facility Operations and Maintenance (O&M) of Project Name

MAX
NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0005AD		1	Lump Sum	XXXX	\$ _____

FFP
4th Year of Facility Operations and Maintenance (O&M) of Project Name

MAX
NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0005AE		1	Lump Sum	XXXX	\$ _____

FFP
5th Year of Facility Operations and Maintenance (O&M) of Project Name

MAX
NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0005AF		1	Lump Sum	XXXX	\$ 750,000

FFP
Unscheduled Maintenance of the years of Project Name for 5 years

MAX
NET AMT

FOB: Destination

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY UNDEFINED	UNIT	UNIT PRICE	MAX AMOUNT
0006	OPTION 2	1	Lump Sum	XXXX	\$ _____

FFP
Alterations, modifications, and new construction in the Criminal Investigation Laboratory during the Five-Year Operations and Maintenance of the Facility

MAX
NET AMT

FOB: Destination

NOTES TO BIDDERS

1. BID ITEM 0005: Operation and Maintenance of the Project Name is specified in the Operations and Maintenance Statement of Work and includes:

a. All scheduled and preventive maintenance to all facility systems and equipment identified in the Operation and Maintenance Statement of Work including those systems and equipment identified as critical building systems.

The unscheduled maintenance and repair in the case of critical systems is not limited to any dollar amount and may include complete replacement of a failed system or item of equipment at no cost to the Government as required.

b. All unscheduled maintenance and repair actions to all facility systems and equipment identified in the Operations and Maintenance Statement of Work, that cost \$750 or less (labor and materials) per occurrence, except those systems and equipment identified as critical.

c. Continuous Commissioning of all critical systems and equipment as defined in the Operations and Maintenance Statement of Work.

d. Basis for payment is monthly based on the yearly bid price divided by 12 months.

2. BID ITEM 0005AF: Unscheduled maintenance is specified in Chapter 1, paragraph 1.7 of the Operation and Maintenance Statement of Work. This line item will be funded to the amount shown on the schedule when option 1 is awarded and is for the life of the contract. The payment for each task accomplished by the Contractor under this bid item will be negotiated and issued by service orders. Work includes all unscheduled maintenance and repair actions to all facility systems and equipment [except those systems and items of equipment identified as critical] that exceed \$750 (labor and material) per occurrence.

3. BID ITEM 0006: This is an optional item of work that may be exercised when the Government identifies a requirement for additions, alterations, modifications or other new construction in the Project Name during the five-year Operations and Maintenance of the facility. See the clause "**Option for Alterations, Modifications and New Work**, for implementation of this line item. The payment for each task accomplished by the Contractor under this bid item will be negotiated and issued by service orders.

USACE / NAVFAC / AFCEA UFGS-01785 (June 2003)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01785

FIVE-YEAR MAINTENANCE REQUIREMENTS

04/03

PART 1 GENERAL

- 1.1 OVERVIEW
 - 1.1.1 Operations and Maintenance
 - 1.1.2 Driving Features
 - 1.1.3 Fixed Cost Environment
 - 1.1.3.1 Items Included as Contractor's Responsibility
 - 1.1.3.2 Items Not Included as Contractors Responsibility
 - 1.1.4 Facility Operations
- 1.2 CONTRACT SCOPE
- 1.3 PERFORMANCE PERIOD
- 1.4 SPECIFIC REQUIREMENTS
- 1.5 SUBMITTALS
- 1.6 OPERATION AND PM
- 1.7 CONTINUOUS COMMISSIONING OF CRITICAL SYSTEMS
 - 1.7.1 Continuous Commissioning
 - 1.7.2 Critical
 - 1.7.3 Critical Systems
 - 1.7.4 Continuous Commissioning Program
 - 1.7.5 Formal Assessments
 - 1.7.6 Required Actions
 - 1.7.7 Substitution
- 1.8 UNSCHEDULED MAINTENANCE AND GENERAL SERVICES
 - 1.8.1 General
 - 1.8.2 Cost and Time
 - 1.8.3 Service Orders to Document Work Performed
 - 1.8.3.1 Service Order Time and Cost
 - 1.8.3.2 Service Order Reporting
 - 1.8.4 Emergency or Urgent Requirements
 - 1.8.4.1 Necessary Actions
 - 1.8.4.2 Response
- 1.9 ALTERATIONS AND NEW CONSTRUCTION
- 1.10 HOURS OF OPERATION
 - 1.10.1 Normal Hours
 - 1.10.2 Priority One Response
- 1.11 CONTRACTOR PERSONNEL QUALIFICATIONS, DUTIES, AND TRAINING
 - 1.11.1 Contractor Staffing
 - 1.11.2 Construction Facility Manager (CFM)
 - 1.11.2.1 Performance of O&M Work

Cx Pilot Project

- 1.11.2.2 Contacts
- 1.11.2.3 Alternative
- 1.11.3 Qualifications of the CFM
 - 1.11.3.1 Experience
 - 1.11.3.2 Alternate
 - 1.11.3.3 Knowledge of English
- 1.11.4 Duties of the CFM
 - 1.11.4.1 Management Coordination
 - 1.11.4.2 Monitor Systems
 - 1.11.4.3 Maintain Manuals
 - 1.11.4.4 Operate Terminals
 - 1.11.4.5 Prepare Reports
 - 1.11.4.6 Implement Subcontracts
 - 1.11.4.7 Training
 - 1.11.4.8 Monthly Reports
- 1.11.5 Professional Qualifications
- 1.11.6 Contract Maintenance Personnel
- 1.11.7 Approvals of Personnel
 - 1.11.7.1 Restrictions
 - 1.11.7.2 Government Employees
 - 1.11.7.3 Off Duty Active Military Personnel
 - 1.11.7.4 Appearance of Personnel
 - 1.11.7.5 Personnel Identification

PART 2 PRODUCTS

- 2.1 COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM (CMMS)
 - 2.1.1 Software and Hardware Requirements
 - 2.1.2 Property
 - 2.1.3 Protection of Data
 - 2.1.4 Unauthorized Copies
 - 2.1.5 Housing CMMS and CFM
- 2.2 MANAGEMENT SYSTEMS AND RECORD KEEPING
 - 2.2.1 Management
 - 2.2.2 Management Plan
 - 2.2.3 Forecasting of Requirements
 - 2.2.4 Basic Accounting
 - 2.2.5 Historical Records
 - 2.2.6 Inventory
- 2.3 MAINTAINING THE FACILITY SYSTEM/EQUIPMENT OPERATING LOGS
- 2.4 INSPECTION REPORTS
- 2.5 GENERATION OF STANDARD CMMS REPORTS
- 2.6 RECORDS AND DATA
- 2.7 CONTRACTOR PERSONNEL
- 2.8 Equipment Maintenance and Operation.

PART 3 EXECUTION

- 3.1 SYSTEMS OPERATION AND MAINTENANCE MANUALS (SOMM)
 - 3.1.1 Prepare Final SOMM
 - 3.1.2 Organization of SOMM
 - 3.1.3 Organize
 - 3.1.4 Guidance
 - 3.1.5 Final SOMM
 - 3.1.6 Government-Approved SOMM
 - 3.1.7 Editable Copy
- 3.2 COMPREHENSIVE FACILITY MANAGEMENT PLAN FOR END USER
 - 3.2.1 General
 - 3.2.2 Submittal

Cx Pilot Project

- 3.2.3 Minimum Requirements
- 3.3 ORGANIZATION AND STAFFING PLAN
 - 3.3.1 Organizational Plan
 - 3.3.2 Post Plan
 - 3.3.3 Manpower
- 3.4 SECURITY PLAN
 - 3.4.1 Comprehensive Security Plan
 - 3.4.2 Security Control Operations
 - 3.4.3 Government Property
 - 3.4.4 Key Control
- 3.5 SAFETY PROGRAM PLAN
 - 3.5.1 Comprehensive Safety Program
 - 3.5.2 Safety Program
 - 3.5.3 Instructions
 - 3.5.4 Hazardous Material/Waste
- 3.6 TRAINING PLAN.
 - 3.6.1 Orientation
- 3.7 WARRANTY PLAN
 - 3.7.1 Warranty Plan
 - 3.7.2 Schedule
 - 3.7.3 Maintenance Work
 - 3.7.4 Warranties
- 3.8 SUB-CONTRACT MAINTENANCE PLAN
 - 3.8.1 Procedures
 - 3.8.2 Maintenance Plan
 - 3.8.3 Contracting Methods
- 3.9 ANTI-TERRORISM FORCE PROTECTION
- 3.10 PREVENTIVE MAINTENANCE PLAN
 - 3.10.1 Tasks and Frequencies
 - 3.10.2 Facility Systems/Equipment Assessments
- 3.11 QUALITY CONTROL PLAN
 - 3.11.1 Establish and Maintain
 - 3.11.2 Inspection System
 - 3.11.3 Benchmarking
 - 3.11.4 Performance
- 3.12 O&M SUCCESSOR
 - 3.12.1 Last Three Months
 - 3.12.2 Initial Meeting
 - 3.12.3 Transition Period
 - 3.12.4 Start-Up Procedures
 - 3.12.5 Follow On Successor
 - 3.12.6 Final Three Months
 - 3.12.7 Successor Training
 - 3.12.7.1 Training
 - 3.12.7.2 On-Job Training
 - 3.12.7.3 Training Objective
 - 3.12.7.4 Verification of Training
 - 3.12.7.5 Features
- 3.13 GOVERNMENT PROVIDED FACILITIES AND SERVICES
 - 3.13.1 Government-Furnished Facilities
 - 3.13.2 Government-Furnished Services
 - 3.13.2.1 Services
 - 3.13.2.2 Telephone Service
 - 3.13.2.3 Failure to Furnish Utilities
- 3.14 GOVERNMENT QUALITY ASSURANCE (QA)
 - 3.14.1 Evaluate
 - 3.14.2 Record Results
 - 3.14.3 Inspections
 - 3.14.4 Deficiency Reports

Cx Pilot Project

- 3.14.4.1 Performance
- 3.14.4.2 Acknowledgement
- 3.14.4 Meetings
- 3.14.5 Monthly Reviews
- 3.14.6 Monthly Review Meetings
- 3.14.7 Additional Meetings
- 3.14.8 Minutes
- 3.15 CONTRACTOR CLEAN-UP

-- End of Section Table of Contents --

USACE / NAVFAC / AFCEA UFGS-01785 (June 2003)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

SECTION 01785

FIVE-YEAR MAINTENANCE REQUIREMENTS

04/03

NOTE: This guide specification covers the requirements for the operation and maintenance of the project after construction phase for 5 years after beneficial occupancy.

Comments and suggestions on this guide specification are welcome and should be directed to the technical proponent of the specification. A listing of the technical proponents, including their organization designation and telephone number, is on the Internet.

Recommended changes to this specification should be submitted as a Criteria Change Request under Projnet.org. Use of electronic communication is encouraged.

PART 1 GENERAL

1.1 OVERVIEW

Reference National Defense Authorization Act for Fiscal year 2002, Section 2813 and as modified by Section 2813 in the 2003 Act for "Demonstration Program on Reduction in Long Term Facility Operating, Maintenance and Energy Costs. The [Project Name, brief description] under the referenced DoD pilot program investigating extending the life cycle of Government facilities due to historically poor and under budgeted maintenance programs by having the construction contractor responsible for maintaining the facilities for a 5-year period immediately following construction. During and at conclusion of the pilot initiatives, the DoD construction agencies are to report back to Congress regarding lessons learned that could be applied in the future.

1.1.1 Operations and Maintenance

During the Operations and Maintenance (O&M) phase of the contract, the Contractor shall maintain the facilities systems of the project; perform systematic preventive maintenance (PM); provide for continuous commissioning of critical systems; and perform unscheduled maintenance as necessary to:

Assure continuous facility operations and prevent disruptions that could adversely affect the mission of the facility or complex and,

Prevent premature failure or deterioration of the facility, facility systems, and equipment constructed or installed under the construction phase of the contract.

Be responsible for the repair or replace on all aspects of the building NOT defined under paragraph Items Not Included as Contractors Responsibility,

1.1.2 Driving Features

One of the driving features on this pilot program is the notion that the construction contractor will place greater emphasis during construction on equipment selection, installation, and overall craftsmanship knowing that they will be responsible for maintaining the facilities for 5 years' after the Beneficial Occupancy Date (BOD).

1.1.3 Fixed Cost Environment

In order for the contract to be bid in a fixed cost environment, important aspects must be delineated with regard to what is, and what is not, covered by the Contractor during the 5-year maintenance period. In an attempt to provide a general direction, the following items outlined in paragraphs Items Included as Contractor's Responsibility and Items Not Included as Contractors Responsibility, although not totally inclusive, represents suitable information for pricing a fixed cost contract over the 5-year pilot period. In addition to information outlined within paragraph OVERVIEW, the Contractor is expected to draw on and consider the normal routine maintenance expectations for a building of similar size and function in determining the fixed maintenance cost over the life of the 5-year pilot program in order to adequately define associated risks and costs in preparing a firm fixed price contract.

1.1.3.1 Items Included as Contractor's Responsibility

To clarify, the contractor, in addition to the Preventive Maintenance and repairs or replacement of all contractor supplied and installed materials, systems, and equipment, the following is additional clarification of what will be included as contractor responsibilities:

Architectural: Repair or placement of Doors/Hardware/Windows resulting from normal wear and tear and accidental damage.

Patch and paint damaged wall surfaces during normal usage.

Repair or replacement of damaged floor or ceiling tiles

Plumbing: Unclogging stopped up drains (interior and exterior)

Repair and/or replacement of leaking pipes, valves, drains (interior and exterior)

Electrical: Replacement of burned out light bulbs (interior and exterior)

Replacement of defective switches and receptacles

Site Work: Pavement patch and repair

Cx Pilot Project

1.1.3.2 Items Not Included as Contractors Responsibility

Landscape Maintenance

Grass Cutting and Snow Removal

Normal custodial work (cleaning services, restocking consumable supplies, office and shop routine trash removal, etc)

Repair or maintenance of non-contractor supplied materials and equipment (furniture, PE equipment, shop equipment, military equipment, etc)

Routine emptying of oil water separator and grease traps

Government security systems

1.1.4 Facility Operations

In order for the Contractor to assemble a fixed price proposal, it is important to delineate how the facility will function and operate. The purpose of the facility is to [_____] [train solders] in their mission and unit specialties. The majority of the training will be conducted indoor in a classroom type environment and also at the [vehicle maintenance shop][_____].

Number of Full Time Weekday Personnel: [10][_____]

Number of Weekend Personnel: [_____] [There will be three drill weekends/mo with a max of 250/wk end}

Hours of Operation: Weekday - 7:30 am - 4:00 pm

Weekend - [7:30 am - 5:00 pm

(3 weekends/month)][None]

1.2 CONTRACT SCOPE

The Contractor shall furnish, or arrange for the providing of all labor, tools, equipment, staff and management required to perform the duties included in the Statement of Work (SOW) for the maintenance phase of this contract to be accomplished at the facility/complex.

1.3 PERFORMANCE PERIOD

The Contractor shall operate the facilities systems of this project for a 5-year period beginning at the Beneficial Occupancy Data (BOD). **Insure the project schedule as required by Section 01320 PROJECT SCHEDULE reflects this work item.**

1.4 SPECIFIC REQUIREMENTS

The Contractor shall provide the following:

Operation and Preventive Maintenance (paragraph 1.5).

Continuous Commissioning of Critical Systems (paragraph 1.6).

Unscheduled Maintenance (paragraph 1.8).

Alterations and New work (paragraph 1.9).

Cx Pilot Project

A Contract Facility Manager (CFM) and appropriate supporting maintenance staff. (paragraph 1.11.2).

A computer-based Computerized Maintenance Management System (CMMS).
Systems O&M Manuals.

Comprehensive Facility Management Plan (CFMP)(paragraph 5).

A plan for and implementation of a transition to another organization for O&M of the facility after the initial 5-year O&M phase (O&M Successor).

1.5 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Continuous Commissioning Program (CCP); G, ED

See paragraph 1.7.4.

Security screening plan for employees

See paragraph 1.11.6.

Personnel Identification List

See paragraph 1.11.7.5.

Comprehensive Facility Management Plan

See paragraph 3.2.

Organization and Staffing Plan

See paragraph 3.3.

Comprehensive Security Plan

See paragraph 3.4.1.

Safety Plan

See paragraph 3.5.

Training Plan

See paragraph 3.6.

Warranty Plan

See paragraph 3.7.

Cx Pilot Project

Sub-Contract Maintenance Plan

See paragraph 3.8.

Quality Control Plan

See paragraph 3.11.

SD-03 Product Data

Monthly report on records and service work orders

See paragraph 1.11.4.5 and 1.11.4.8,

SD-05 Design Data

Contractor's intended Computerized Maintenance Management System (CMMS) software

See paragraph 2.1.1.

SD-10 Operation and Maintenance Data

Final Systems Operation and Maintenance Manuals (SOMM)

See paragraph 3.1.

Preventive Maintenance Plan; G, ED

See paragraph 3.11.

1.6 OPERATION AND PM

Operate the Facility

Operate the facility systems of the [Project Name] to ensure optimal efficiency.

Manage the operation of the facility maintenance program, including the implementation and maintenance of a Computerized Maintenance Management System (CMMS) (See Section 3).

Perform or provide systematic PM and unscheduled/corrective maintenance as necessary in order to assure continuous facility operation and to prevent disruptions that could adversely affect the mission of the facility/complex.

Manage or Perform necessary actions to preserve warranties (during warranty periods).

Take all reasonable measures to prevent premature failure/deterioration of facilities and facility systems/equipment constructed/installed under the construction portion of this contract.

The Contractor shall furnish and install storage bins and cabinets with the minimum emergency stock of replacement equipment, supplies and spare parts in a place designated by the Government. At the conclusion of the contract period, the Contractor shall provide a complete inventory list along with projected stock to last 1 full year from the

point of termination.

1.7 CONTINUOUS COMMISSIONING OF CRITICAL SYSTEMS

1.7.1 Continuous Commissioning

Continuous commissioning is a concept of maintaining critical systems and critical facility components to assure that a system reaches its expected life expectancy and that efficiency of operations is maintained throughout a system's life. Continuous commissioning not only assures that the equipment is operating at peak efficiency at start-up, but that adjustment, for environmental and operational conditions, would keep the equipment and systems performing at maximum efficiency.

1.7.2 Critical

The following have been identified as critical systems for the [Project Name]:

The Project Delivery team shall determine what are the critical systems for this project with User input. For example, 'pavement' would not normally be considered a critical item, but where severe freezing is a problem it may be. Do not select items that are Government responsibilities such as Intrusion Detection Systems, card access or other security systems.

[Division 7 - Roofing Systems]
[Section 07412 - Standing Seam Metal Roofing System (SSMRS)]

[Division 11 - Equipment]
[Section 11331 - Package Wash Water Recycle System]
[Section 11400 - Food Service Equipment]

[Division 13 - Special Construction]
[Section 13121 - Metal Building Systems (Minor Requirements)]
[Section 13851 - Fire Detection and Alarm System]
[Section 13930 - Wet Pipe Sprinkler System, Fire Protection]

[Division 14 - Mechanical]
[Section 14240- Elevators, Hydraulic]

[Division 15 - Mechanical]
[Section 15569 - Water Heating, Gas and Propane Air Mixture]
[Section 15620 - Liquid Chillers]
[Section 15700 - Unitary Heating and Cooling Equipment]
[Section 15768 - Electric Unit Heaters]
[Section 15895 - Air Supply, Distribution, Ventilation and Exhaust System Custom Air Handling Equipment]
[Section 15940 - Overhead Vehicle Tailpipe Exhaust Removal System]
[Section 15950 - HVAC Testing/Adjusting/Balancing]
[Section 15951 - Direct Digital Control for HVAC]

[Division 16 - Electrical]
[Section 16415 - Electrical]
[Section 16528 - Exterior Lighting Including Security and Closed-Circuit TV (CCTV) Application]

1.7.3 Critical Systems

Critical systems are outlined in an effort by the Government to highlight

Cx Pilot Project

those areas of the facility that are perceived as a high threat to the overall facility short and long term operations and/or overall the life cycle of the facility. As such, the Contractor is encouraged to take extreme care in equipment selection, installation, and craftsmanship related to these items during construction as well as preventive maintenance during the 5-year maintenance pilot period.

1.7.4 Continuous Commissioning Program

The Contractor shall implement a Continuous Commissioning Program (CCxP) that measures and compares the condition and performance of each of the critical systems against the condition and performance at the time of the BOD. The Contractor shall submit for the Contracting Officer's approval the conditions to be evaluated and the performance criteria to be measured 30 days after acceptance of the facility. Following agreement between the Contracting Officer and the Contractor as the CCxP parameters involved, no other conditions or criteria shall apply to the CCxP. Upon acceptance of the facility the conditions and performance data shall be documented and will serve as the baseline criteria for future comparison.

1.7.5 Formal Assessments

Formal assessments will be conducted during the 6th month of the O&M phase of this contract, after the 10th month, and thereafter annually.

1.7.6 Required Actions

As a part of the CCxP, the Contractor shall take whatever actions are necessary to bring the critical systems back into the conditions and within the operating performance parameters that were identified in the baseline criteria.

1.7.7 Substitution

The CCxP shall not be construed to be a substitute for PM and unscheduled maintenance specified elsewhere in the O&M Statement of Work.

1.8 UNSCHEDULED MAINTENANCE AND GENERAL SERVICES

1.8.1 General

Unscheduled maintenance is corrective maintenance that involves repair or replacement for any building system or equipment. The Contractor shall be required to perform unscheduled maintenance within the site boundaries of the facility. All unscheduled maintenance events will be carried out by the Contractor and documented in the CMMS.

1.8.2 Cost and Time

The cost and time for repairs for unscheduled maintenance includes all elements of expense to the Contractor including labor, materials, overhead, and profit to complete the specific maintenance event and the time it took to accomplish.

1.8.3 Service Orders to Document Work Performed

The Contractor will issue a Service Order (SO) to the government for all scheduled and unscheduled maintenance activities. The purpose of the SO's is to provide direct feedback and data for the CMMS for future reference

Cx Pilot Project

and to establish a baseline for follow-on maintenance at the conclusion of this pilot maintenance contract.

1.8.3.1 Service Order Time and Cost

The service orders are to include the time to complete the action, a schedule of cost to include labor categories and labor hours, and materials necessary to complete the work. If the work is within the scope of the contract, the Contractor shall proceed.

1.8.3.2 Service Order Reporting

Monthly management reports shall include the status of all SO's to include total expenditures and pending work. Service orders will be reviewed for accuracy and equitability of the data.

1.8.4 Emergency or Urgent Requirements

Unscheduled maintenance requirements may be of an emergency, or urgent nature on critical and non-critical systems. Services may be required outside normal duty hours and must be performed immediately to prevent loss of life, injury, loss or damage to property, or serious damage. Emergency services may also be required to eliminate or deal with hazardous conditions such as floods or power outages and sub-freezing building temperatures.

1.8.4.1 Necessary Actions

The Contractor shall take the necessary actions to protect life, safety, health and property based on the following priorities:

Priority 1 - Emergency response is required to correct conditions that impact life, safety and health of personnel or destruction of Government property. The order is received during normal working hours and requires a response within 1 hour and continuous effort until completion.

Priority 2 - Emergency response is required to correct conditions that impact life, safety and health of personnel or destruction of Government property. The order is received after normal working hours and requires a response within 2 hours, and continuous effort until completion.

Priority 3 - Urgent response is required to correct conditions that do not constitute an emergency but are essential. Response is required within 8 working hours and will be completed within 5 working days or as agreed to by the Contracting Officers' Representative.

Priority 4 - Routine response, as addressed in Section 1.7.3, is required to correct conditions that do not constitute an emergency or urgent need. Response is required within 5 working days and completed within 15 working days or as agreed to by the Contracting Officers' Representative.

1.8.4.2 Response

The Contractor shall respond as per the priority timing requirement when the Government or the Contractor identifies a requirement for unscheduled emergency or urgent or routine maintenance. The Contractor shall respond independently for priority 1 and 2 level responses. For priority 3 level responses, the Contractor and the Government will define an expedited SOW. The Contractor shall prepare a proposal to include the expected time to

Cx Pilot Project

complete the action, a schedule of cost to include labor categories and labor hours, and materials necessary to complete the work and regardless of priority.

1.9 ALTERATIONS AND NEW CONSTRUCTION

The Government reserves the right to alter the buildings without affecting the intent of the work under this contract, to include Contractor and manufacturer warranties.

1.10 HOURS OF OPERATION

1.10.1 Normal Hours

The Contractor shall perform routine repairs and maintenance between the hours of 0730 - 1600, Monday through Friday, except for observed Federal holidays.

1.10.2 Priority One Response

The Contractor shall respond to Priority One SO on a 24 hours per day, 7 days per week basis. The CFM or a designated alternate should be on site during normal duty hours, and available to respond to emergencies as needed during non-duty hours. The CFM and any resources that need to be dispatched as required to meet the situation shall answer the call. In accordance with the Staffing Plan, the Contractor shall provide the Contracting Officers with the names and telephone numbers (home and cell phone) of the individual.

1.11 CONTRACTOR PERSONNEL QUALIFICATIONS, DUTIES, AND TRAINING

1.11.1 Contractor Staffing

The Contractor shall employ adequate manpower in order to satisfy all requirements of this contract.

1.11.2 Construction Facility Manager (CFM)

1.11.2.1 Performance of O&M Work

The Contractor shall provide two employees who shall be responsible for the performance of the O&M work. One will be the CFM and the other as the alternate CFM. The name of the person and an alternate who shall act for the Contractor when the CFM is absent shall be designated in writing to the Contracting Officer.

1.11.2.2 Contacts

The Contractor, shall provide to the Government before commencing work, the names, addresses, business, home and/or cell phone numbers of the CFM and the alternate CFM.

1.11.2.3 Alternative

The CFM and/or any alternative designated to act for the CFM, shall have full authority (through the contract execution period) to commit the Contractor to action on matters pertaining to Contractor's administration of this contract.

Cx Pilot Project

1.11.3 Qualifications of the CFM

1.11.3.1 Experience

Personnel designated as the CFM must have experience in operation and maintenance or closely related field, including the supervision of a subcontracted work-force responsible for maintenance and repair of electrical, plumbing, mechanical, structural, heating, cooling, power generation and energy monitoring control systems.

1.11.3.2 Alternate

The alternate CFM shall have comparable experience.

1.11.3.3 Knowledge of English

The CFM and alternate must be able to read, write, speak and understand English, fluently.

1.11.4 Duties of the CFM

1.11.4.1 Management Coordination

The CFM shall conduct overall management coordination and shall be the central point of contact with the Contracting Officer or the Contracting Officers' Representative for performance of all work under this contract.

1.11.4.2 Monitor Systems

Monitor systems performance against desired benchmarks and proactively identify corrective actions as required.

1.11.4.3 Maintain Manuals

Maintain manuals and publications as part of a reference library and maintain maintenance records and files.

1.11.4.4 Operate Terminals

Operate designated terminals of the CMMS and input data into that system.

1.11.4.5 Prepare Reports

Prepare and submit to the Contracting Officer the reports, records and service work orders as specified herein. In addition, an annual report is required of the Contractor to provide a formal assessment pertaining to this pilot O&M program. This report may include strong and weak points of the procedures and processes, lessons learned, cost efficiencies, suggested improvements, etc.

1.11.4.6 Implement Subcontracts

Implement subcontracts, if required, and maintain records of those subcontracts.

1.11.4.7 Training

Provide training to successor Contractor and/or Government personnel on the O&M of the facilities and the facilities' systems/equipment.

1.11.4.8 Monthly Reports

The Contractor shall submit monthly reports that reports all activities completed for the preceding month and projected for the upcoming month. The following will be addressed at a minimum:

For the month completed:

- Operational Issues.
- PM completed.
- Continuous Commissioning of Critical Systems completed.
- Unscheduled Maintenance completed by task and service order including cost.
- Alterations and New Work completed including cost.
- Any changes to the CFM or supporting maintenance staff.
- DR issued.

For the month ahead:

- PM scheduled.
- Continuous Commissioning of Critical Systems scheduled.
- Any other issues that require Government action to assure efficient operation of the facility or complex.

The report shall be presented written in an executive summary format and provided in three hard copies and one electronic copy three days prior to the scheduled monthly review.

1.11.5 Professional Qualifications

The Contractor shall ensure that employees and subcontractors have all applicable current and valid professional certifications (i.e. welding certificates, electrician licenses, etc.) before starting work.

1.11.6 Contract Maintenance Personnel

All planned contract/subcontractor maintenance personnel will have the same security and screening requirements as personnel employed directly by the Contractor. A plan with the following information shall be submitted to the Contracting Officer: Full identification information for each individual and resumes of companies and personnel.

1.11.7 Approvals of Personnel

Employees of the Contractor/subcontractor shall be approved prior to occupancy of the facility.

1.11.7.1 Restrictions

The Government has the right to restrict the employment under the contract of any Contractor employee or prospective Contractor employee who is identified as a threat to the health, safety, security, general well being or operational mission of the installation and its population. No convicted felons will be allowed to work at the site.

1.11.7.2 Government Employees

The Contractor shall not employ any person who is an employee of the United States Government if the employment of that person would create a conflict of interest nor shall the Contractor employ any person who is an employee

Cx Pilot Project

of the Department of the Army, either military or civilian, unless such person seeks and receives approval in accordance with Department of Defense (DoD) Directive 5500.7-R (Standards of Conduct).

1.11.7.3 Off Duty Active Military Personnel

The Contractor is cautioned that off duty active military personnel hired under this contract may be subject to permanent change of station (PCS), change in duty hours or deployment. Military reservists and National Guard members may be subject to recall to active duty. Their absence at any time shall not constitute an excuse for nonperformance under this contract.

1.11.7.4 Appearance of Personnel

Contractor personnel shall maintain a neat appearance and be easily recognized. This may be accomplished by wearing distinctive clothing.

1.11.7.5 Personnel Identification

The Contractor shall furnish and wear identification badges displayed at all times with a current picture, company name, employee name and description. Badges shall be numbered consecutively and each badge shall be accounted for. A list of issued badge numbers and the corresponding names shall be submitted to the Contracting Officer at contract start date and shall be updated as changes occur.

PART 2 PRODUCTS

2.1 COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM (CMMS)

2.1.1 Software and Hardware Requirements

[The Contractor's intended CMMS software shall be nonproprietary and be submitted to the Contracting Officer for joint review and Government approval prior to receipt of Notice to Proceed with this work item. The Contractor shall purchase, install, and enter into the CMMS all data required to establish records for the facilities, systems, and equipment. Some data will be available in electronic format from the Government's RISER (RISER is a USAR facility management software/data system used to track various maintenance components) software program. The Contractor will be supplied access and responsible for monitoring data in RISER and maintain (update) that data throughout the duration of the O&M phase of the contract. The Contractor will be trained in RISER by the Government and shall be required to track service orders.]

[The Contractor shall provide and utilize MAXIMO software as the Computerized Maintenance Management System (CMMS) or approved equal with appropriate hardware to support the system. The Contractor shall operate and input all data required to establish records for the facilities, systems, and equipment.]

2.1.2 Property

All computer hardware, software, historical data and systems under this section shall become the property of the Government at the conclusion of the contract period.

2.1.3 Protection of Data

Cx Pilot Project

The Contractor shall protect the CMMS data from loss and shall routinely back up all data to a storage medium protected against smoke, fire and water damage.

2.1.4 Unauthorized Copies

The Contractor shall not install any unauthorized copies of the CMMS software.

2.1.5 Housing CMMS and CFM

The Contractor may be required to house the CMMS and CFM in the Contractor's construction trailer until the facility is ready for occupancy. Upon BOD, the CMMS shall be relocated in the facility.

2.2 MANAGEMENT SYSTEMS AND RECORD KEEPING

2.2.1 Management

Management of all PM shall be incorporated into the database, including all PM tasks with appropriate frequencies for each item listed in the Master Equipment List (MEL).

2.2.2 Management Plan

Management plans, schedules, reports and other data deriving from the development of the management plan shall be developed and recorded in the database.

2.2.3 Forecasting of Requirements

To enhance forecasting of requirements, all unscheduled maintenance, including proposal and service order management provisions, shall be incorporated into the database.

2.2.4 Basic Accounting

All basic accounting shall be performed in the system, e.g. budget versus actual, purchase order tracking, etc.

2.2.5 Historical Records

All cumulative historical records shall be maintained in the system.

2.2.6 Inventory

All parts, supplies, and inventories used for PM and unscheduled maintenance shall be included in the database so as to allow inventory accounting, forecasting, and procurement efficiency.

2.3 MAINTAINING THE FACILITY SYSTEM/EQUIPMENT OPERATING LOGS

All critical and non-critical system data not readily captured and manipulated within the CMMS computer program shall be maintained by a separate system by the Contractor for use in fulfillment of this contract.

2.4 INSPECTION REPORTS

Cx Pilot Project

Maintaining records of past and current building inspections for needed repairs of unscheduled maintenance to include:

- The dates of such inspections
- Results of inspections
- Corrections required
- Corrections made

If corrections have not been made, the file shall include

- A schedule for completion of required work
- A note explaining why corrections have not been made
- A backlog of unscheduled and unscheduled maintenance requirements.

2.5 GENERATION OF STANDARD CMMS REPORTS

Generation of standard CMMS reports shall be provided upon request to the Contracting Officers' Representative.

2.6 RECORDS AND DATA

All records and data maintained in the CMMS are the property of the Government and shall be made available to the Contracting Officers' Representative upon request. A complete copy of all records and data shall be provided to the Contracting Officers' Representative (in electronic format) upon completion or termination of this contract.

2.7 CONTRACTOR PERSONNEL

Contractor personnel who will operate the CMMS shall have appropriate computer skills to operate the system. The Contractor shall assure that building occupants have access to the system for data query purposes only. The Contractor shall conduct training of key Government and Contractor personnel to assure proficiency in the CMMS.

2.8 Equipment Maintenance and Operation.

The Contractor shall provide routine maintenance and shall provide all manufacturer software upgrades as made available by the manufacturer for the duration of the contract and ensures data integrity after upgrade is made. If CMMS equipment is damaged by Contractor abuse or misuse, the Contractor shall be responsible for the resulting repair and/or replacement costs. The Contractor shall operate the system in accordance with the manufacturer's instructions and shall make data backups to assure continuing operations. The failure of the computer system shall not be a basis for work stoppages or claims by the Contractor.

PART 3 EXECUTION

3.1 SYSTEMS OPERATION AND MAINTENANCE MANUALS (SOMM)

3.1.1 Prepare Final SOMM

Using the Management Plan and System Operation and Maintenance Manual (MP & SOMM) templates as a guide, the Contractor shall prepare the final SOMM. See Exhibit SOW-2 for the format of the SOMM.

3.1.2 Organization of SOMM

The SOMM shall be organized by building systems as defined in Exhibit

Cx Pilot Project

SOW-3, Index of Volumes.

3.1.3 Organize

The Contractor shall organize each volume's contents using the O&M SOW for guidance. The Contractor shall revise all volumes, sections, chapters, etc. to provide a comprehensive and up-to-date manual incorporating as-built conditions, as-maintained and current manufacturer's data. OPERATIONS AND MAINTENANCE DATA requirements are covered in Section 01781.

3.1.4 Guidance

Each volume is designed to 'stand alone' - providing sufficient guidance and supporting material to allow a properly trained, journeyman technician to perform proper services.

3.1.5 Final SOMM

Preparation of the SOMM shall be under the direction of an individual or organization that has demonstrated expertise in the preparation of comprehensive and complete O&M instructions for similarly complex systems. The final SOMM shall be submitted for Contracting Officer review and approval.

3.1.6 Government-Approved SOMM

The Government-approved SOMM shall be in place no later than 30 days prior to building commissioning.

3.1.7 Editable Copy

One copy of the Comprehensive Facilities MP shall be in editable Microsoft Word format and the SOMM will be furnished on electronic media in a searchable .pdf format, and four hard copies will be delivered.

3.2 COMPREHENSIVE FACILITY MANAGEMENT PLAN FOR END USER

3.2.1 General

The Contractor shall prepare a CFMP that integrates all the management activities required for the O&M phase of the contract.

3.2.2 Submittal

The CFMP shall be submitted in conjunction with the SOMM, in accordance with submittal requirements of the construction contract.

3.2.3 Minimum Requirements

The following are the minimum components of the comprehensive management plan:

- Organization and Staffing Plan
- Security Plan
- Safety Program Plan
- Training Plan
- Warranty Plan
- Contract Maintenance Plan
- Continuous Commissioning Plan

Cx Pilot Project

Preventive Maintenance Plan
Quality Control (QC) Plan

3.3 ORGANIZATION AND STAFFING PLAN

3.3.1 Organizational Plan

The Contractor shall prepare and maintain a written, current organizational plan. The plan shall indicate all categories of personnel employed by the Contractor and subcontractors as listed by system and the reporting relationships established therein.

3.3.2 Post Plan

This plan shall be posted in an accessible location in the Government-furnished space provided to the Contractor.

3.3.3 Manpower

The manpower and staff needed to satisfy the specified O&M requirements will vary during the contract execution period. The Contractor shall employ adequate manpower in order to satisfy all requirements of this work description. Craft persons, such as painters, carpenters, masons, and sheet metal workers, will be needed periodically for unscheduled maintenance.

3.4 SECURITY PLAN

3.4.1 Comprehensive Security Plan

The Contractor shall develop and submit to the Contracting Officer for review, a comprehensive Security Plan based on the Department of Defense Industrial Security Program (reference DOD 5220.22-R).

3.4.2 Security Control Operations

Security and fire alarm for the facility is monitored by a centralized security system monitored by [____][Fort McCoy, Wisconsin]. The Government Security Manager and Safety Officer will screen and train personnel to familiarize them with the Security Control Operations.

3.4.3 Government Property

The Contractor shall be responsible for safeguarding all Government property provided for Contractor use. At the close of each work period, Government facilities equipment and materials shall be secured.

3.4.4 Key Control

The CFM shall maintain key control of keys issued to the Contractor work force.

The Contractor shall establish and implement methods of ensuring that all keys issued to the Contractor by the Government are not lost or misplaced and are not used by unauthorized persons. No keys issued the Contractor by the Government shall be duplicated.

The Contractor shall immediately report the occurrences of a lost or duplicated key to the Contracting Officer and the Government Security

Manager and Safety Officer.

In the event keys, other than master keys, are lost or duplicated, the Contractor shall be required, upon direction of the Contracting Officer, to re-key or replace the affected lock or locks. The Contractor, at its option, may replace the affected lock or locks or perform re-keying at no cost to the Government. In the event a master key is lost or duplicated, the Government shall replace all locks and keys for that system, and new keys issued to the Contractor. The total replacement cost shall be deducted from the monthly payment due to the Contractor.

The Contractor shall prohibit the use of keys issued by the Government by any persons other than the Contractor's employees engaged in the performance of assigned work. The Contractor shall prohibit the opening of locked areas by the Contractor's employees to permit entrance of persons other than the Contractor's employees engaged in the performance of assigned work in those areas.

The Contractor shall establish and implement methods of ensuring that all lock combinations are not revealed to unauthorized persons. These procedures shall be included in the Contractor's Security Plan.

The Contractor will not be allocated any keys to the facility exterior entrances. The Contractor must coordinate with the building personnel for access to the facility or any secured room or area. Once duties are complete, the Contractor shall ensure the space is secure and notify building owner they have completed the work within the secured area.

3.5 SAFETY PROGRAM PLAN

3.5.1 Comprehensive Safety Program

The Contractor shall develop and submit to the Contracting Officer for review and approval a comprehensive safety program describing procedures and plans for preventing accidents and for preserving the life and health of Contractor and Government personnel in any way involved with the performance of this contract. The safety program, upon beneficial occupancy, shall comply with regulations as specified by the Occupational Safety and Health Administration (OSHA).

3.5.2 Safety Program

The safety program section of the management plan shall, as a minimum, address responsibilities and procedures that all Contractor personnel must follow. The safety program shall address, as a minimum:

Fire safety (hazard prevention, reporting, evacuation layouts, and extinguishers)

Maintenance shop safety (protective clothing, protective equipment, storage of oils and lubricants, disposal of waste and contaminated oil, and use of acetylene torches, electric welders, and power equipment)

All other devices and procedures necessary to protect the employee and occupants.

3.5.3 Instructions

The Contractor shall ensure that all employees and occupants know, receive

instruction on, and comply with all appropriate safety requirements.

3.5.4 Hazardous Material/Waste

The Contractor shall prepare a plan to ensure that all hazardous material/waste used or generated by any Contractor personnel is properly inventoried, stored, handled, packaged, and disposed of in an appropriate manner. The Contractor's planned procedures for hazardous material and waste disposal shall be submitted to the Contracting Officer for review and approval 10 days prior to the assumption of the maintenance mission. The Contractor's responsibilities include:

Inspecting all shops, maintenance facilities, storage areas, and other facilities under Contractor control where hazardous substances, materials, and/or wastes are either generated or stored, thereby ensuring adequate handling, generation, and storage procedures and identifying any violations of the fire code ,National Fire Protection Association (NFPA), (NFPA 30, Flammable and Combustible Liquid) hazardous material/waste laws and/or regulations.

Recording all violations and corrective actions taken; transporting, storing, and handling hazardous substances in a safe and environmentally acceptable manner; and instituting a responsive alert and reporting procedure for use when a spill occurs.

Cooperating with Government agencies in order to ensure that the public health and welfare is adequately protected from discharge of oils and hazardous materials/waste.

The general guidance for disposal of waste is as follows:

Hazardous waste - Turned in to the installation designated points of reception.

Non-hazardous waste - Properly placed in the dumpster provided.

3.6 TRAINING PLAN.

The Contractor shall develop a written Training Plan for approval of the Contracting Officer 60 days prior to acceptance of the facility. Training Plan shall include lesson plans/lesson outlines, expected duration of each session, who will receive the training, and frequency of instruction if training is of a recurring nature or identified as refresher training. The following types of training shall be provided to all Contractor O&M personnel performing under this contract. The O&M maintenance supervisor or his alternate shall be present for all training sessions with the building operating staff for the equipment being installed by the general contractor.

3.6.1 Orientation

The Contractor shall conduct an orientation session for the Contracting Officers Representative and QA staff explaining in detail their CFMP and all components. This can be in the form of a presentation or meeting with the Government staff and Contractor for discussion of the CFMP and what the Government can expect during the term of the contract.

The Contractor shall provide sufficient training for all employees performing duties under this contract. The training shall be provided as soon as practical after employees begin work. As a minimum, however, the

Cx Pilot Project

initial orientation training shall be completed prior to the date an employee begins work. Orientation training shall include the following topics:

- Appropriate interactions with staff.
- Familiarization with applicable local base regulations and policies (including fire prevention, ground safety, and natural disaster plan).
- Familiarization with technical manuals.
- The duties of each employee.
- The proper collection, handling, storage, transportation, and disposal of Contractor-generated waste.
- Employee personal hygiene and appearance (Proper dress and work attire).
- Adherence to work schedules.
- Documentation or completion of scheduled work assignments.
- Safety orientation briefing

3.7 WARRANTY PLAN

3.7.1 Warranty Plan

Warranty plan identifies any existing and/or replacement equipment warranties, specifying the vendor offering the warranty, the length of the warranty and any special O&M requirements that must be met in order to preserve the warranty.

3.7.2 Schedule

A schedule shall be prepared for each system and summarized in a comprehensive schedule and located in the Comprehensive Management Plan Volume.

3.7.3 Maintenance Work

All maintenance work during the first year shall be done by or coordinated with the Contractor and manufacturer holding the warranty. The personnel shall meet the minimum service requirements and/or certifications recommended for that system or piece of equipment.

3.7.4 Warranties

Any warranties that have effective durations that extend beyond the combination of the construction period and the period of O&M shall be accrued to the Government.

3.8 SUB-CONTRACT MAINTENANCE PLAN

3.8.1 Procedures

The sub-contract maintenance plan outlines procedures and methodologies for accomplishing the maintenance of various systems and items of equipment by maintenance contracts.

3.8.2 Maintenance Plan

The sub-contract maintenance plan also includes technical specifications/statements of work for those systems and equipment to be maintained by the Contractor, and a detailed cost estimate for the work

described in the technical specifications.

3.8.3 Contracting Methods

If required, just-in-time or on-call contracting methods may be utilized with respect to complex systems and equipment that require special skills or certifications to maintain i.e. (paved areas, fire alarm systems, etc.).

3.9 ANTI-TERRORISM FORCE PROTECTION

The Contractor shall become familiar with and follow all requirements of the Department of Defense Minimum Antiterrorism Standards for Buildings while at the facility.

At no time shall exterior equipment have panels or louvers removed and left without personnel working on the unit so that something could be hidden out of view inside the equipment.

At no time shall trash containers be moved closer to the building than 10M.

At no time shall locked exterior doors be held open, while personnel are not present.

Parking of Contractor vehicles shall only be in the designated parking area, Contractor shall not leave any vehicles unattended out of parking area.

3.10 PREVENTIVE MAINTENANCE PLAN

The Preventive Maintenance Plan (PMP) identifies the various types/levels of preventive maintenance that will be accomplished by the maintenance staff. The plan must reflect response times/categories for the various items of equipment and identify a generic procedure for the management of service orders.

3.10.1 Tasks and Frequencies

The PMP shall identify the PM tasks and frequencies for each item listed in the Master Equipment List (MEL). This plan also identifies the skills (trades) required and man-hour estimates for performing the PM tasks.

3.10.2 Facility Systems/Equipment Assessments

Facility Systems/Equipment Assessments requirements shall be incorporated within the PMP. These shall include at a minimum:

Life Safety Assessments and Tabulation - This assessment identifies life safety/fire protection code issues and stipulates corrective actions needed to meet NFPA where applicable.

Continuous assessments will be used to compare actual building systems performance against design parameters.

O&M Equipment Operational Assessment - This assessment identifies systems and equipment issues, identifies corrective actions (replacement, upgrade, or renovation), and provides cost estimates.

The Contractor shall prepare, submit and comply with a written yearly

master PM schedule. The Contractor shall research equipment manufacturer's and industry recommendations for preventive maintenance requirements and ensure these requirements are included in the Master PM Schedule.

3.11 QUALITY CONTROL PLAN

3.11.1 Establish and Maintain

The Contractor shall establish and maintain a complete QC Plan to ensure the requirements of the contract are provided as specified. The QC Plan shall outline the process that the Contractor will use to manage the level of performance.

3.11.2 Inspection System

The QC Plan shall include an inspection system covering all the services listed on the O&M SOW. It must specify the areas to be inspected, and the individual(s) who will perform the inspection.

3.11.3 Benchmarking

System performance benchmarking shall define methods for identifying and preventing deficiencies in the quality of service before the level of performance becomes unacceptable.

3.11.4 Performance

The Contractor shall review systems performance annually by analyzing on-site records of all inspections conducted by the Contractor and necessary corrective action taken. This documentation shall be made available to the Contracting Officers' Representative during the term of the contract and used to benchmark the productivity of the maintenance effort.

3.12 O&M SUCCESSOR

3.12.1 Last Three Months

The last 3 months of the contract execution period shall be used for an orderly transition of responsibility to the successor that will execute the follow-on O&M program.

3.12.2 Initial Meeting

An initial meeting between the Contracting Officers' Representative and the CFM for both outgoing and incoming Contractors, shall be held to address phase-out requirements and responsibilities no later than three to six months prior to the end of the current O&M phase. Subsequent meetings will be held as determined by the Contracting Officer, but not less than weekly thereafter.

3.12.3 Transition Period

When the incumbent Contractor is also the successor Contractor, these required meetings shall not be waived; since orderly transition from one work specification to another will also require significant management involvement in the transition process.

Cx Pilot Project

3.12.4 Start-Up Procedures

The successor Contractor shall perform all start-up procedures.

3.12.5 Follow On Successor

The successor for the follow-on O&M program may be Government personnel.

3.12.6 Final Three Months

During the final 3 months of this contract, if the incumbent Contractor is not awarded the subsequent contract, the Contractor shall permit his successor and the successor's key personnel to observe and become familiar with any and all operations under this contract.

3.12.7 Successor Training

3.12.7.1 Training

The Contractor shall schedule and provide training for the new personnel that will be assuming the operation and maintenance of the facility. All training will be videotaped by the Contractor giving the training.

3.12.7.2 On-Job Training

The Contractor shall provide on-the-job training (OJT) to each of the O&M successor personnel to ensure sufficient familiarity to take over the O&M responsibilities.

3.12.7.3 Training Objective

The training objective is to enhance technical skills so that transfer of O&M responsibility for facilities unique systems/equipment will be efficient.

3.12.7.4 Verification of Training

Verification of training shall be provided to the Contracting Officer within 3 days after the completion of training. Verification shall include information such as name of craftsperson trained, system trained on, type of training, number of hours trained, etc.

3.12.7.5 Features

Training shall cover features unique to complex electrical and mechanical systems installed at the facility and CMMS features such as hardware and software.

**NOTE: The facility to be provided will be unique
and Government services are unique to Installations.
Edit the following paragraphs to match conditions
at site.**

3.13 GOVERNMENT PROVIDED FACILITIES AND SERVICES

The Government shall provide without cost to the Contractor, during the

Cx Pilot Project

performance of the O&M portion of the contract, the facilities and services listed below:

3.13.1 Government-Furnished Facilities

Maintenance support space furnished to the Contractor by the Government shall be in the following designated areas:

The Government shall furnish the Contractor with a designated area for office, equipment and storage. (ROOM [_____] for office, [_____] for storage and cage area 9' x 12' area)

The Government shall provide office furnishings (desk, chair, file storage, etc). All other Contractor supplied furnishings and shop equipment (except specialized equipment necessary for the operation of the facility) will remain the property of the Contractor at the expiration or termination of this contract. All storage bins and cabinets with the minimum emergency stock of replacement equipment, supplies and spare parts inventory, to last 1 year, shall become the property of the Government at the conclusion of this contract.

3.13.2 Government-Furnished Services

3.13.2.1 Services

The Government will provide to the Contractor all water, sewage, custodial, electrical and data services required for the performance of this contract.

3.13.2.2 Telephone Service

Commercial telephone service acquired by the Contractor for Contractor use shall be paid for by the Contractor.

3.13.2.3 Failure to Furnish Utilities

Failure of the Government to furnish utilities at any time during the performance of the contract because of outages or other interruptions in service shall not be considered by the Contractor as a basis for a claim against the Government.

3.14 GOVERNMENT QUALITY ASSURANCE (QA)

3.14.1 Evaluate

The Government will evaluate the Contractor's performance under this contract in accordance with the Federal Acquisition Regulation (FAR) Inspection of Services clause.

3.14.2 Record Results

The Government will record all surveillance observations and inspection results. When an observation or inspection indicates deficient performance, the Contracting Officers' Representative will prepare a Deficiency Report (DR).

3.14.3 Inspections

The Contractor will accompany the Government and User on walk-through

Cx Pilot Project

inspections of the facility. The Contractor will document all observations and prepare a final report of the observations organized by facility system. This report will be provided to the Contracting Officer in three hard copies and one electronic copy within 10 days after completion of the walk-through.

3.14.4 Deficiency Reports

3.14.4.1 Performance

If the Contractor's performance is found to be unsatisfactory and not in compliance with the requirements specified in this contract, the Government will issue a DR within 3 days.

3.14.4.2 Acknowledgement

Upon presentation of a DR by the Government, the Contractor shall immediately sign the DR, acknowledging its receipt. Within 3 working days of receipt of a DR, the Contractor shall explain in writing to the Government either:

How performance does conform to the requirements of the contract;
How performance will be returned to conformity;
How reoccurrence of the problem will be prevented in the future.

3.14.4 Meetings

3.14.5 Monthly Reviews

The CFM will be required to attend monthly reviews with the Contracting Officers' Representative and User.

3.14.6 Monthly Review Meetings

Additionally, the Contractor will also be required to attend the monthly review meetings until the Contracting Officers' Representative deems that satisfactory performance of the O&M phase of the contract and full and acceptable implementation is achieved.

3.14.7 Additional Meetings

The Contracting Officer may require additional meetings whenever a DR is issued.

3.14.8 Minutes

The minutes of all meetings will be prepared by the Contractor and shall be signed by the CFM, Contracting Officers' Representative, and the Contracting Officer if in attendance.

3.15 CONTRACTOR CLEAN-UP

The Contractor shall, at all times, keep the work areas free from accumulation of waste material, rubbish, tools, scaffolding, equipment, and materials. Upon completion of the task, or nightly, the Contractor shall leave the work area and premises in a clean, neat, safe and workmanlike condition. The Contractor is responsible for disposing of both hazardous and non-hazardous job-related waste material in accordance with the local installation procedures.

Exhibit SOW-1

Definitions and Abbreviations

A Advisory

ADP Automated Data Processing
AHU Air Handling Unit
ASHRAE American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASME American Society of Mechanical Engineers
BAS Building Automation System
BOD Beneficial Occupancy Date
CADD Computer-Aided Drafting and Design
CCP Continuous Commissioning Program
CCTV Closed-Circuit TV
CFM Contract Facility Manager
CFMP Comprehensive Facilities Management Plan
CFR Code of Federal Regulations
CLIN Contract Line Item Numbers
CMMS Computerized Maintenance Management System
CO Contracting Officer
COR Contracting Officer's Representatives
DoD Department of Defense
DR Deficiency Report
FAR Federal Acquisition Regulation
FTE Full-Time Employees
HVAC Heating, Ventilation, and Air Conditioning
IAW In accordance with
LAN Local Area Network

M Mandatory

MP&SOMM Management Plan & Systems Operation Maintenance Manual
MEL Master Equipment List
MEP Military Equipment Parking
NFPA National Fire Protection Association
NTP Notice to Proceed
O&M Operation and Maintenance
O&M SOW Operation and Maintenance Statement of Work
OJT On-the-Job Training
OMS Organizational Maintenance Shop
OSHA Occupational Safety and Health Administration
PCS Permanent Change of Station
PE Professional Engineer
PL Public Law
PM Preventive Maintenance
PMP. .Preventive Maintenance Plan
QA Quality Assurance
QAR Quality Assurance Representative
QC Quality Control
SO Service Order
SOMM System Operation and Maintenance Manual
SOW Statement Of Work
SSMRS Standing-Seam Metal Roofing System
TA Trouble Analysis
USARC...United States Army Reserve Center
WO Work Order

Beneficial Occupancy Date (BOD)
Date of final acceptance of facility by the Government.

Cx Pilot Project

Exhibit SOW-1

Breakdown

The stoppage or collapse of equipment or a facility, or a component thereof, that requires corrective action to restore to an operation condition.

Building Exterior

The exterior surface of a building, including all walks, roofs, attached patios, overhangs, and entranceways.

Deficiency Report (DR)

Formal, written documentation of Contractor non-performance or lack of performance for contract work.

Contracting Officer (CO)

A person duly appointed with the authority to enter into and administer contracts on behalf of the Government.

Contracting Officer Representative (COR).

An individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the Contracting Officer to perform specific technical or administrative functions.

Defective Service

Poor performance or nonperformance as specified by contract requirements.

End Item

The individual component part listed in the manufacturer's parts listing. End item, component part, and /or individual item are used interchangeably.

Government Property

All property owned or leased to the Government or acquired by the Government under terms of the contract. Government property includes both Government furnished property and Contractor acquired property as defined in FAR 45.101.

Government Property Administrator

An authorized representative of the Contracting Officer appointed in writing to administer contract requirements and obligations relative to Government property (FAR 45.101.)

Maintenance Backlog

Equipment repair that has not been completed in the specified time.

Maintenance

The routine recurring work required to keep the facility and its systems in such a condition that it can be used continuously at its designated capacity and efficiency. Maintenance includes work done to prevent damage which would be more costly to restore than prevent. Maintenance includes work to sustain components.

Mandatory (M) Documents

Directives with which the Contractor is obliged to comply.

Materials

Materials, parts, and supplies necessary for the maintenance and repair of facilities and equipment.

National Fire Protection Association (NFPA)

Cx Pilot Project

Exhibit SOW-1

An organization that published pamphlets on fire protection and safety, which are accepted by local, State and Federal Governments and considered directive in nature for this statement of work.

O&M Equipment and Facilities

Equipment and construction normally used to maintain general building environment and services (heating, ventilating, and air-conditioning (HVAC); electrical distribution systems; lighting; plumbing; building hardware and furnishings; etc.), except those items intended to perform a specific function not related to maintaining the building environment.

Preventive Maintenance (PM)

The systematic planned care, servicing, and inspection of equipment, utility plants and systems, buildings and structures, and ground facilities for the purpose of detecting and correcting incipient failures, preventing failures, and making minor repairs. Manufacturer's product literature/data sheets are to be used as principal guidance for determining minimal/recommended periodic maintenance missions.

Quality Assurance (QA)

Those actions taken by the Government to assure services meet the requirements of the Statement of Work (SOW) and all other service outputs.

Quality Assurance Review

Periodic examinations to ensure compliance with the Contractor's procedures, plans, schedules, and contract requirements (includes the recording of narrative audit results).

Quality Assurance Representative

A Government person responsible for surveillance of Contractor performance.

Quality Assurance Surveillance Plan (QASP)

An organized written document used for quality assurance surveillance. The document contains specific methods to perform surveillance of the Contractor.

Quality Control

Those actions taken by a Contractor to control the performance of services so that they meet the requirements of the SOW.

Random Sampling

A sampling method in which each service output in a lot has an equal chance of being selected.

Repair

The restoration of a real property asset to its originally constructed or installed condition, or if that restoration is not practical, to a condition that satisfactorily meets the intended purpose. Repair means the application of maintenance services in order to restore serviceability of an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

Sample

A sample consists of one or more service outputs drawn from a lot. The number of outputs in the sample is the sample size.

Sampling Guide

The part of the surveillance plan, which contains all the information, needed to perform surveillance of the service output(s) by the random sampling

Cx Pilot Project

Exhibit SOW-1
method of surveillance.

Scheduled Maintenance
Systematic and periodic servicing and inspection of equipment and components to maintain operational efficiency and replace worn or failed parts.

Service Order (SO)
Used to authorize and manage scheduled and unscheduled repair jobs.

Shall
This word is used in conjunction with the contract and specifies that a provision is binding.

Unscheduled Maintenance
Corrective Maintenance that involves repair or replacement for any building system or equipment not included in the Continuous Commissioning Program.

Work Order (WO)
Used to authorize and manage new construction or modification jobs.

Will.
This word is used to express a declaration of purpose on the part of the Government.

Exhibit SOW-2

Organization of SOMM

General Information

1. The following paragraphs provide guidance for the overall intent and structure for completion of a Systems Operation Maintenance Manual.
2. It is the intent that the Contractor will continuously build a SOMM. The Contractor shall continue to update the SOMM as the project develops. It is understood that standard industry formats can be substituted, provided the parties intent to compile all such data in a useable manner.
3. It is the intent that the SOMM should complement the CMMS and be jointly used in this operation. Redundancy of requirements shall revert to the CMMS system.
4. Where possible a standardized industry format may be substituted.
5. A standardized form format should be followed which makes it easy to review.
6. It is not the intent to duplicate operations and/or data retention. Where possible, all data should be consolidated for ease of use, updates and retrieval.

SOMM sections include:

A. Specific System Description

1. This section identifies examples of building systems and/or major subsystems that comprise the critical functional areas of the building

Cx Pilot Project

Exhibit SOW-2 infrastructure.

2. For systems consisting of more than one unit or item of equipment, or where complexity must be explained, an illustration or flow diagram may be included. If one system interfaces with another system or subsystem, this section shall define how they interface.

3. Safety topics shall be covered and referenced to the operating procedures, if applicable.

4. A table of capabilities and limitations shall be prepared for the systems, if applicable. The table will include data such as gallons per minute, transfers per hour, boom capacity, rated ranges, resolution, accuracy, data-handling capability, etc. Additional tables shall be provided as needed to clearly illustrate the capabilities required of a given system or item of equipment that differ because of its configuration within the system. The word "differ", as used above, refers to capabilities other than normal or standard. The fact that the input, output, feedback, or control levels required are within the design specifications of the system or item of equipment is not a sufficient reason for omitting the system or item of equipment from the table.

5. Major equipment components shall be identified and located by describing each component that is significant to O&M, logistics, and safety.

B. Theory of Operation

1. This section addresses how the specific systems and/or major subsystems function to meet the design specifications..

2. The final manual shall contain a brief discussion of the theory of operation and a listing of all the functions of the system and shall show how the various facility subsystem functions are tied together to accomplish the overall system function. The description shall include an overall analysis of the principles of operation of the system equipment and its functions, such as control interlocks, where such principles would not be obvious to a journeyman technician. Particular attention shall be paid to the interface between facility systems and other systems. The descriptions shall be sufficiently detailed to provide O&M personnel with the understanding necessary to adequately perform the system activities and to correctly interpret the results of these activities.

3. An introduction to each specific system has been made by the design team with pertinent data given for the Contractor's use.

C. Operations

1. The final manual shall include equipment and/or system layouts as required for clarity. Information to be provided or identified for reference, includes all piping, wiring, breakers, valves, dampers, controls, etc., complete with functional diagrams, schematics, isometrics, and data to explain the detailed operation and control of each individual piece of equipment and/or system components.

2. Layouts should show the location within the facility of controls, valves, switches, dampers, etc., by reference to site location, wing designation, floor, room number, or other clear and concise directions for locating the item.

Exhibit SOW-2

3. Operator data may be identical to posted data and framed instructions, and may be included as part of the O&M manuals. The instructions will include:

- a. Initial adjustments and control settings.
- b. Precautions and pre-checks to be executed prior to startup of equipment and/or system, including safety devices, monitoring devices, and control sequence.
- c. Step-by-step sequential procedures for startup and normal operation checks for optimal performance. Safety precautions and instructions that should be incorporated into the operating instructions and flagged for the attention of the operator. Procedures shall include test, normal, and automatic modes.
- d. Procedures for normal and emergency shutdown of equipment and/or systems. The instructions shall include any procedures necessary for placing the equipment and/or system on standby or preparing the equipment and/or system for startup at a later time. Procedures shall include test, normal, and automatic modes.
- e. Procedures for isolating individual equipment from the system and bringing individual equipment online once the system is operating.

f. Operational logs and records requirements.

D. Preventative Maintenance

1. Recommended procedures shall indicate preventative maintenance (i.e. lubrications, checks, adjustments, etc.) and good housekeeping practices which should be performed by operating personnel.

2. More complex maintenance procedures that would normally be performed only by trained maintenance personnel; will also be provided.

3. Schedules indicating timeframes or operating hours for initiating operator maintenance and adjustments and including manufacturer's recommended major maintenance requirements will be provided.

4. Safety precautions and instructions that should be followed during these procedures shall be incorporated into the maintenance procedures and flagged for the attention of personnel.

5. The procedures shall include necessary operating instructions for taking equipment offline, online, and putting equipment on standby.

6. The instructions shall address all material, equipment, and system data needed to perform maintenance work and shall include, but not be limited to the following: (as applicable)

a. Manufacturers' bulletins, catalogs, and descriptive data.

b. Certified performance curves.

c. Copies of approved test plans, including logs and records of performance acceptance test results and actual adjustments made during final acceptance

Cx Pilot Project

Exhibit SOW-2
and inspections.

- d. System layouts, including block, wiring, control, and isometric diagrams.
 - e. Schematic items within the facility.
 - f. Interrelationships with other items of the system.
7. Emergency adjustments shall be included and flagged for the operator's attention
- a. The instructions shall also include procedures for emergency repairs that could be performed by operating personnel.

E. Trouble Analysis (TA)

- 1. Trouble Analysis procedures for locating and correcting trouble shall be presented in a step-by-step format.
- 2. Repair procedures may be keyed to a troubleshooting guide outlined as shown in three columns with the following headings:
Trouble/Symptom Probable Cause(s) Corrective Action
The indication or symptom of trouble The instructions, including test hookups, necessary to determine the cause(s) Procedures for restoring the system to operating condition, or cross reference to where the procedure is written in SOMM.
- 3. Information may also be in logic tree form, or in another clear tabular format with appropriate headings.
- 4. Trouble analysis shall be documented to the extent necessary to locate the faulty piece of equipment within the system.
- 5. The procedures shall clearly indicate a major repair activity, which should be performed only in a shop or factory, as opposed to normal repair work, which may be performed onsite or with equipment online.
- 6. The procedures shall also clearly indicate the limit of repair work that may be performed by Government personnel during the warranty period without voiding the warranty provisions.
- 7. Safety precautions and instructions that should be followed during these procedures shall be incorporated into the repair documentation and flagged for the attention of personnel.
- 8. The Trouble Analysis section shall be cross-referenced to the appropriate Exhibits and other documents in the MP&SOMM.

F. Unscheduled Maintenance

- 1. Cross Referenced to Trouble Analysis and to applicable Exhibits, this section provides documentation on the procedures for isolation, replacement, checkout, and integration of the equipment within the system shall be provided.
- 2. Test, adjustment, and checkout data, required after replacement will be included.

Cx Pilot Project

Exhibit SOW-2

G. Repair Parts and Special Tools and Equipment

1. Repair Parts

a. The Contractor is to identify and provide all required repair parts. Just in time delivery shall be used where possible. Repair parts shall be stored on site, in designated areas, as defined in the O&M SOW.

b. A complete list of repair parts and supplies shall be maintained. The list shall include all parts and components of individual pieces of equipment and all parts and components of each system and shall identify such items as nomenclature of part, model number, circuit or component identification, etc., as applicable.

c. Parts and supplies lists shall be included within each volume of maintenance instructions.

d. A master list of repair parts and supplies recommended and or required by contract, from each manufacturer for one year of operation, including source of supply, shall be listed with each instruction.

e. The Contractor shall list the sources of supply for all parts and supplies, including name of supplier/manufacturer, address, and telephone number.

f. If the parts and suppliers are not normally stocked locally, necessary procurement lead-time shall also be a part of the listing.

H. Vendor Data and Acceptance Tests

1. Vendor Data

a. A complete set of data, provided by the equipment manufacturer, required for operation, maintenance and checkout will be included and referenced to the appropriate specification's number.

b. Data may consist of manufacturer's brochures, O&M manuals, catalogs, drawings, service bulletins, and illustrated parts lists necessary to support the O&M of the end item of equipment and assemblies. This reprinted data shall be edited as necessary to make material project specific.

2. Acceptance Tests

a. A record of all System's Acceptance Tests shall be included in this section.

b. Any pertinent information relating to problems during testing shall be noted.

I. Special Tools and Equipment List

1. The Contractor is to identify and provide all special tools and test equipment.

2. A list of all special tools and test, diagnostic measurement, and equipment for system level maintenance in this appendix.

3. For the purpose of this specification, the phrase "special tools and

Exhibit SOW-2

test, measurement, and diagnostic equipment" is used to identify all nonstandard tools and equipment designed and developed by the manufacturer and others to perform maintenance, test/calibration, diagnostic/prognostic analysis, and other acceptance testing, and successful O&M.

4. Frequency and method of calibration shall be indicated for all special tools, equipment, and test equipment items that require calibration. Necessary standards shall be listed immediately after each item that requires calibration.

J. Warranty Information

1. The Contractor shall incorporate warranty information for each system as identified.

2. In addition to the general warranty required by the contract, the Systems Operation and Maintenance Manual shall include any specific warranties required by other sections of the Technical Specifications and other warranties normally provided with the particular piece of equipment or system.

3. Warranties that are normally provided by manufacturers and which are beyond the warranty for construction shall be specifically noted.

4. A summary of all warranties shall be available either in the CMMS or the SOMM, and include, but not be limited to the following information:

- a. Specification Section
- b. System identification
- c. Subsystem or equipment identification
- d. Term of warranty
- e. Anticipated warranty inspection date with room for actual date.
- f. Problems during the warranty period. Latent defects if they present themselves.
- g. Copy of warranty or warranty data in the absence of an explicit warranty.

5. A master list of all warranties shall be included as defined under the O&M SOW.

K. Master Equipment List

1. The MEL identifies each major system, subsystem, and equipment item in generation breakdown order to the purchase end item level. The completed MEL shall contain as a minimum the following information:

- a. Item nomenclature
- b. Functional characteristics
- c. Item identifier (tag number)
- d. Specification number

Cx Pilot Project

Exhibit SOW-2

- e. Design/construction drawing number. (File number when available)
 - f. Manufacturer's name
 - g. Manufacturer's part number
 - h. Manufacturer's model/serial number
 - i. Location Plan
 - j. Current Warranty Status
2. The Contractor shall develop a projected and as-built Master Equipment List. Refer to Submittal Requirements of the Management Plan & Systems Operation and Maintenance Manual.
 3. The Contractor shall develop and maintain a master O&M manual list identifying all of the equipment for which O&M manuals will be furnished under this contract.
 4. Following setup of the O&M manual list, this master listing shall be updated monthly to reflect equipment additions, deletions, changes and alterations.
 5. The submittals shall be arranged in alphabetical order according to the type of equipment covered and by manufacturer's equipment noun name; and shall be cross-referenced to the systems involved. Each data submittal shall be dated and shall show the target or actual submittal date for O&M manuals for each item of equipment. For identical pieces of equipment within one system, only one set of O&M data for that equipment item will be required.
 6. The Contracting Officer and Contractor will work together to determine whether the above specified information as furnished by the Contractor is adequate and complete and to require such additional submittals by the Contractor as may be necessary to insure that adequate information has been furnished to provide the satisfactory operation and maintenance of the various items of equipment and fulfill the intent of the specifications.
 7. Additional submittals or re-submittals supplementing incorrect or incomplete data shall be made within 30 calendar days after receiving notice by the Contracting Officer. All cost arising from these resubmissions shall be borne by the Contractor.
 8. All system MELs will be incorporated by system and combined into a comprehensive list to be included in Volume 1, Comprehensive Management Plan of Appendix A - MP&SOMM.
 9. Posted Data
 - a. The Contractor shall post data for equipment or systems, in addition to O&M manuals, and as required by other Technical Specifications sections.
 - b. The data shall consist of as-built schematics of all wiring, controls, piping, etc., as necessary for the operation of the equipment or system, and a condensed typewritten description of the system. The data may include approved shop drawings, layout drawings, riser, and block diagrams and shall indicate all necessary interrelation with other equipment and systems.

Exhibit SOW-2

c. The data shall be presented in appropriate sized drawing sheets sealed with clear plastic laminate, collated and bound for clarity and convenience of locations. The framed data presentation and outline shall be acceptable to and provided at locations designated by the Contracting Officer.

10. Instructions may be presented in one or several binders for clarity and convenience of location. The instruction presentation and outline shall be acceptable to the Contracting Officer prior to posting, and shall be provided at locations designated by the Contracting Officer.

L. Training Requirements

1. The Contractor is required to present a training plan for approval. Four (4) copies of the training plans for all required formal training shall be submitted to the Contracting Officer in draft form in one submittal. The Contractor shall provide training, printed instruction material, and training aids, in accordance with the approved plan.

2. The training plan will identify the number of man-hours of instruction required for each system following the guidelines listed in the MP&SOMM templates. The training plan will also specify the proportions of the instruction time to be used for onsite classroom instruction and for onsite instruction which will be performed utilizing the installed equipment or systems.

3. All systems and subsystems requiring training of qualified personnel to properly operate and maintain those systems shall be identified. A task and skills analysis shall be documented to identify special skills required to operate and/or maintain critical, complex or specialized systems. After the skill requirements are approved, the actual training program shall be defined.

4. The Contracting Officer will review the Contractor's proposed training plan, and the Contracting Officer's approval of the plan shall be obtained by the Contractor prior to the start of any training. The Contracting Officer will require 30 days for review and approval of the plan or for disapproval and return to the Contractor for resubmission. The Contractor needs to provide sufficient float time for any necessary resubmissions to preclude possible delays to the scheduled training.

5. The Contractor will provide a draft and final training plan and schedule. The plan shall provide the following information at a minimum:

- a. Trades to be trained and skills required.
- b. Instructional methods.
- c. Materials
- d. Special training devices needed to support the program of instruction.
- e. Attendees - planned and actual
- f. A weekly outline of all scheduled training.
- g. A day-to-day schedule showing time intervals, the major and subordinate subjects to be covered in each session, with location of training.

Cx Pilot Project

Exhibit SOW-2

- h. Identification and qualifications of proposed instructors.
 - i. A list of reference material to be provided by the Contractor to the trainees and a list of training materials such as operation and maintenance instructions, other written and visual aids, mockups, tools, etc.
6. The MP&SOMM will be used as the primary training document for the training instructions.
7. Informal maintenance information shall be provided. General on-the-job training shall be provided by Contractor/subcontractor/Supplier personnel knowledgeable of the materials, finishes, equipment or systems, if determined necessary the Contracting Officer, for general knowledge, equipment orientation, installation observation, etc

M. Exhibits

- 1. Illustrations shall be incorporated to identify schematic drawings, riser diagrams, wiring requirements, etc., as required to provide a stand-alone comprehensive O&M manual.
- 2. The as-built drawings are to be kept on site for reference. All changes or additional information that arise during construction and during the five year O&M period shall be recorded and kept as a part of the manual. All detailed information shall be presented in a clear, concise and comprehensive manner to fully explain the as-built conditions. The Contractor shall provide changes to the as-built drawings to the Contracting Officer of any work performed by contractors personnel which cause changes including, but not limited to, plant layout, piping or equipment design or detection of an error within 90 days of change.
- 3. An index of all illustrations and data shall be developed and presented in draft and for final approval in the submittal process.

Exhibit SOW-3

Index of Volumes

Volume	Description
1	Comprehensive Management Plan
2	Site Systems
3	Architectural Systems
4	Security Systems
5	Fire Protection Systems
6	Plumbing Systems
7	Mechanical Systems
8	Electrical Systems
9	Specialty Systems

The Design, Construct, Commission Pilot Program consists of a 2-phased program during which the Contractor of Record provides continuous service. This pilot program streamlines the transition from construction into the operating phase of the building. Continuity will be provided by including the design team, construction Contractor and the owner/user in the critical initial phases of occupancy, through the warranty periods of systems and equipment and into the first five years of occupancy. Further enhancement is

Cx Pilot Project

Exhibit SOW-3

achieved by insuring continuity of knowledge and professionalism remains consistent during the first 5 years of operation at the facility. Preventive and Corrective/Unscheduled Maintenance will be provided under this program. Minor repairs will be accomplished as part an organized approach. The building systems will be monitored and benchmarked throughout the life cycles of the system. Emergency responses will be provided using a priority matrix.

Phase 1 of the pilot project spans the routine construction services through the Beneficial Occupancy Date of the facility. Phase 2 spans the first 5 years of use, concerning the operation and maintenance of the facility. The intention of the pilot program is to design, construct, and maintain the facility such that all building systems and equipment perform within the performance guidelines throughout the life cycle of the facility.

This comprehensive approach will create seamless O&M support service from design, construction, move-in and through the first five years of occupancy. The following documents guide the execution of the operation and maintenance mission:

- Construction Documents - Drawings and Specifications
- Operation and Maintenance Statement of Work
- Index of Volumes
- Equipment Manufacturers' Instructions

The Construction Documents, comprised of Drawings and Specifications, serve as means for constructing the facility and bringing the systems and equipment into an integrated whole allowing the facility to function as designed. These documents serve as the basis for establishing performance criteria for each building system.

The Operation and Maintenance Statement of Work defines the requirements of the Contractor during the operation and maintenance phase of the contract. The Index of Volumes is intended to serve as an outline for the systems to be maintained by the Contractor.

Equipment Manufacturers' Instructions are specification and support documents provided by the manufacturers of the equipment and systems installed in the Facility.

Using the outline provided in Exhibit SOW-3 as a guide, the Contractor shall derive three major deliverables to support the O&M phase of the contract:

- A comprehensive management plan that aggregates and integrates all supporting actions required to deliver an effective preventive maintenance program.
- A comprehensive series of operation and maintenance manuals, updated annually, for each of the building systems that serve as guidance documents for the various journeyman-level tradespersons; and
- The execution of an effective maintenance program that meets the objective of the O&M program.

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 15 - MECHANICAL

SECTION 15996

FACILITY MAINTENANCE

06/03

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 SUBMITTALS
- 1.3 SCOPE OF WORK
 - 1.3.1 Mechanical and Plumbing Equipment and Systems
 - 1.3.2 Diesel Generator Set ('Generator Preventive Maintenance Option')
- 1.4 BUILDING DESCRIPTIONS
 - 1.4.1 Training/Unit Storage Building
 - 1.4.1.1 HVAC Systems and Equipment
 - 1.4.2 OMS Building
 - 1.4.3 Generator Location
- 1.5 DEFINITIONS AND ABBREVIATIONS
 - 1.5.1 Definitions
 - 1.5.1.1 Maintenance
 - 1.5.1.2 Preventive Maintenance (PM)
 - 1.5.1.3 Repair
 - 1.5.1.4 Scheduled Maintenance
 - 1.5.2 Abbreviations
- 1.6 REQUIREMENTS OF CONTRACTOR
 - 1.6.1 Company Experience Requirement
 - 1.6.2 Personnel Experience Requirement
 - 1.6.3 Maintenance Mechanics and Technicians
 - 1.6.4 Security Requirements
 - 1.6.5 Building Access
 - 1.6.6 Environmental Compliance
 - 1.6.7 Fire Prevention and Security
 - 1.6.8 Anti-Terrorism Force Protection
 - 1.6.8.1 Exterior Equipment
 - 1.6.8.2 Trash Containers
 - 1.6.8.3 Exterior Doors
 - 1.6.8.4 Parking
 - 1.6.9 Coordination Requirements

PART 2 PRODUCTS

- 2.1 ITEMS, SERVICES AND EQUIPMENT
 - 2.1.1 Office Area, Storage and Lay-down Areas
 - 2.1.2 Computer and Software
- 2.2 CONTRACTOR FURNISHED ITEMS AND SERVICES
 - 2.2.1 Replacement Parts and Components
 - 2.2.2 Scheduled Maintenance
 - 2.2.3 Vehicles
 - 2.2.4 Communication Services

PART 3 EXECUTION

- 3.1 MANAGEMENT AND ADMINISTRATION SUPPORT

Cx Pilot Project

- 3.1.1 Meetings
- 3.1.2 Environmental Protection
- 3.1.3 Normal Working Hours
- 3.2 SAFETY PROGRAM
- 3.3 OPERATION AND MAINTENANCE DATA
- 3.4 TRAINING
- 3.5 REPORTING
 - 3.5.1 Maintenance Scheduling
 - 3.5.2 Review of Documents
 - 3.5.3 PM Schedules and Reports
 - 3.5.3.1 Yearly Master Report
 - 3.5.3.2 Monthly Detailed Report
 - 3.5.3.3 Monthly Completion Report
- 3.6 PREVENTIVE MAINTENANCE
- 3.7 UNSCHEDULED MAINTENANCE AND REPAIR
- 3.8 CONTRACTOR CLEAN-UP
- 3.9 PREVENTIVE MAINTENANCE SOFTWARE
 - 3.9.1 Updating Software

-- End of Section Table of Contents --

SECTION 15996

FACILITY MAINTENANCE

06/03

PART 1 GENERAL

1.1 REFERENCES

 NOTE: Issue (date) of references included in
 project specifications need not be more current than
 provided by the latest guide specification.

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

DEPARTMENT OF DEFENSE MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS

UFC-4-010-01

1.2 SUBMITTALS

 NOTE: Submittals must be limited to those necessary for adequate quality control. The importance of an item in the project should be one of the primary factors in determining if a submittal for the item should be required.

A "G" following a submittal item indicates that the submittal requires Government approval. Some submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's Quality Control system. Only add a "G" if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes

following the "G" typically are not used for Navy projects.

Submittal items not designated with a "G" are considered as being for information only for Army projects and for Contractor Quality Control approval for Navy projects.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

Preconstruction Submittals

Qualifications; G, RE

Qualifications of proposed personnel for the position of contract supervisor, designated alternate, and journeymen. Include years with firm and years of experience.

Project Master Maintenance Schedule; G, RE

Five copies of the preventive maintenance schedule for the first year shall be provided. This schedule shall include location, equipment nomenclature, task and frequency. Additionally, any calibration or certification requirements shall be identified. The PM procedures provided in Appendix B are a minimal starting point for the development of the contractor prepared master PM schedule. The schedule shall cite all standards which are to be met that have been identified by the Contractor.

Safety Program; G, RE

Five copies of the Safety and Health Plan including the Accident Prevention Plan, Hazard Analysis and the Lock Out and Tag Plan.

Monthly Reports; G, RE

Five copies showing the format to be used for the monthly detailed report and the monthly completion report.

1.3 SCOPE OF WORK

The Contractor shall provide all personnel, equipment, materials, tools, vehicles, supervision, and other items and services, required to perform preventive maintenance services on heating, ventilating, and air conditioning (HVAC) systems and other equipment located in the Army Reserve Center Training/Unit Storage Building and the Organizational Maintenance Shop (OMS) at Fort Story, Virginia for a period of 5 years. The 5-year service period will begin after commissioning is completed and the building owners have taken beneficial occupancy. A separate Notice to Proceed will be issued by the Government at the beneficial occupancy date identifying the start of the 5-year period. The Contractor shall also provide all personnel, equipment, materials, tools, vehicles, supervision and any other items required to perform preventive maintenance services on the Diesel

Cx Pilot Project

Generator Set for the Army Reserve Center Training/Unit Storage Building at Fort Story, Virginia for a period of 5 years. The Diesel Generator itself shall be bid as an option to the Base Bid (refer to contract drawings). The Preventive Maintenance Contract for the generator shall be listed as a separate line item under the preventive maintenance costs and shall be entitled 'Generator Preventive Maintenance Option'.

1.3.1 Mechanical and Plumbing Equipment and Systems

Mechanical and plumbing equipment and systems requiring maintenance services are identified in Appendix A of this specification section. The PM requirements are set forth in Appendix B of this specification section. These requirements are considered a minimum. The Contractor is also responsible for any preventive task recommended by the equipment manufacturer, and identified in the Operation and Maintenance Manuals.

1.3.2 Diesel Generator Set ('Generator Preventive Maintenance Option')

The generator maintenance services are identified in Appendix C of this specification. The requirements for the generator are located in Appendix D of this specification section. These requirements are considered a minimum. The contract is also responsible for any preventive task recommended by the equipment manufacturer.

1.4 BUILDING DESCRIPTIONS

1.4.1 Training/Unit Storage Building

The Training/Unit Storage Building is approximately 62,952 square feet. The building is a combination one and two-story building, the one story portion is the unit storage area, the two story portion houses the administrative support areas and education spaces.

1.4.1.1 HVAC Systems and Equipment

Natural gas and water are supplied to the building.

The heat generating system for the building is heating hot water, generated by two gas fired hot water boilers. Heating hot water is distributed to air handling units and fan coil units throughout the building.

The cooling for the building is generated by an air-cooled chiller. The chiller is located outside with the evaporator bundle located in the first floor mechanical room. The chilled water is distributed to the air handling units and fan coil units located throughout the building. Refrigerant piping is piped between the evaporator bundle inside and the chiller outside.

An air-handling unit located in the second floor mechanical room provides 100 percent outside air that distributes air throughout the building, meeting ASHRAE Standard 62-99 requirements. Fan coil units are located above the ceiling throughout the building. Each fan coil unit has a heating coil, cooling coil and filter.

1.4.2 OMS Building

Natural gas and water are supplied to the building.

The OMS building is heated and ventilated only with the exception of the

two offices, which are heated and cooled by packaged terminal wall air conditioning units.

A gas fired heating ventilating unit is located in the maintenance bay, hung overhead and accessible only via a lift. This unit provides heating and ventilation air to the maintenance bay. All other spaces are heated and ventilated via exhaust fans, intake louvers and unit heaters.

A condensing type boiler is located in the mechanical room generating heating hot water used in the in-floor radiant heating system.

1.4.3 Generator Location

The generator will be located outside just east of the Training Building if the generator option is executed. The generator will provide emergency back-up power for the entire facility through the operation of a manual transfer switch (all life safety equipment will be powered by an integral battery source to satisfy code). The generator will be located in a weatherproof enclosure.

1.5 DEFINITIONS AND ABBREVIATIONS

1.5.1 Definitions

1.5.1.1 Maintenance

Maintenance is the work required to preserve and maintain a facility in such a condition that it may be effectively used for its designated functional purpose. Maintenance includes work done to prevent damage which would be more costly to restore than prevent. Maintenance includes work to sustain components.

1.5.1.2 Preventive Maintenance (PM)

Routine, recurring work performed on all facilities. PM is systematic inspection, care and servicing of equipment and systems in order to detect and correct any incipient failures and accomplishing minor maintenance. Also referred to as PM.

1.5.1.3 Repair

Repair is the restoration of a facility, system or component to such a condition that it may be effectively used for its designated functional purpose. Repair may be overhaul, reprocessing, or replacement of deteriorated components, parts, or materials.

1.5.1.4 Scheduled Maintenance

Scheduled maintenance is the systematic and periodic servicing and inspection of equipment and components to maintain operational efficiency and replace worn and failed parts.

1.5.2 Abbreviations

CO Contracting Officer
COR Contracting Officer Representative
HVAC Heating, Ventilating and Air Conditioning
QA Quality Assurance
QAE Quality Assurance Evaluator
QC Quality Control

O&M Operations and Maintenance
PM Preventive Maintenance

1.6 REQUIREMENTS OF CONTRACTOR

1.6.1 Company Experience Requirement

The Contractor shall have experience managing and performing a maintenance contract for HVAC systems and equipment, (and generator equipment as applicable). The experience must have been gained as a result of the company being regularly engaged in the business of providing maintenance services for HVAC equipment (and generator equipment as applicable). The minimum acceptable experience is 2 years. The company shall have demonstrated knowledge of the codes and standards governing the installation, maintenance and repair of HVAC equipment, including but not limited to ASHRAE, ARI, ASME, ASTM, EPA, NFPA, NEMA, OSHA, SAE and UL (as applicable). The Contractor shall have a valid refrigerant transition and recovery certification and shall remain abreast of any changes that impact the maintenance of the systems and equipment covered by this contract and shall notify the Contracting Officer in writing of any changes or modifications that may be required to maintain code compliance.

1.6.2 Personnel Experience Requirement

There shall be one supervisor for all work to be done on site. That person shall be responsible for the performance of all work under this contract. The supervisor shall have in-depth knowledge and experience in the maintenance of HVAC systems and equipment (and generator equipment as applicable). The supervisor shall have a minimum of 10 years experience in the HVAC field (and generator field as applicable) and at least 2 years experience in project supervision. The supervisor shall be knowledgeable with all codes and standards relating to the installation, maintenance and repair of HVAC equipment (and generator equipment as applicable). The supervisor must be able to speak, read, write and understand English. The supervisor shall designate one alternate to act in the absence of the supervisor; this alternate must meet the requirements of the supervisor.

1.6.3 Maintenance Mechanics and Technicians

The maintenance mechanics and technicians actually performing the work on the systems and equipment shall be journeymen-level tradesmen with at least 3 years experience in the maintenance and repair of the equipment on which they will be performing work. Journeymen mechanics must possess the necessary licenses required by the state and/or locality in which the work is being performed. The Contractor shall submit a resume to the Contracting Officer for all journeymen mechanics and technicians identifying their experience, training, qualifications, licenses, and certifications and the types of equipment on which they will be working on.

Sub-journeymen level personnel may be used to assist the journeymen workers, and may be used to perform various tasks that normally do not require a journeymen level mechanic.

1.6.4 Security Requirements

Contractor shall comply with all installation security requirements. Contractor personnel shall obtain the required pass and identification items as applicable for Contractor personnel and for privately owned vehicles. The Contractor shall provide each employee with an

Cx Pilot Project

identification badge that includes the employee's name, employee's photograph, and the contractor's name.

1.6.5 Building Access

The Contractor will not be allocated any keys to the space. The Contractor must coordinate with building personnel to gain access to any secured room/area. The Contractor shall not leave any locked room/areas unattended or permit entrance by anyone other than their personnel into the space while they are performing duties. Once duties are complete the contractor shall ensure the space is secure and notify Facility Coordinator and/or Facility Management Specialist that they have completed the work within the secured area. All Contractor personnel shall follow the established building access procedures.

1.6.6 Environmental Compliance

The Contractor shall be knowledgeable of and comply with all applicable Federal, State and local laws, regulations, and requirements regarding environmental protection. The Contractor shall ensure policies and procedures are established that protect the health and safety of employees and the community and minimize/eliminate the risk of environmental pollution.

1.6.7 Fire Prevention and Security

Contractor personnel shall follow installation fire prevention and security procedures. The Contractor and his employees shall comply with the base fire regulation. Burning of any material by the Contractor is prohibited. Contracting Officer must approve any work that may interfere with fire exit routes and/or exits prior to the start of work. A welding permit must be obtained from the installation Fire Department prior to performing any welding.

1.6.8 Anti-Terrorism Force Protection

Contractor shall become familiar with and follow all requirements of the UFC-4-010-01 for buildings while on the base. (UFC-4-010-01 may be found at <http://www.ccb.org/ufgs/ufgs.htm>)

1.6.8.1 Exterior Equipment

At no time shall exterior equipment have panels or louvers removed and left without personnel present.

1.6.8.2 Trash Containers

At no time shall trash containers be moved closer to the building than 30 feet.

1.6.8.3 Exterior Doors

At no time shall locked exterior doors be held open while personnel are not present.

1.6.8.4 Parking

Parking of Contractor vehicles shall only be in the designated parking area, Contractor shall not leave any vehicles unattended out of parking

area.

1.6.9 Coordination Requirements

The Contractor shall fully cooperate with other contractors who may be performing other work in the facilities identified under this contract. Any conflicts between work being performed under this contract and that being performed by other contractors shall be brought to the attention of the Contracting Officer. The Contracting Officer shall resolve all work conflicts between this contract and the work of other contractors.

PART 2 PRODUCTS

2.1 ITEMS, SERVICES AND EQUIPMENT

2.1.1 Office Area, Storage and Lay-down Areas

There will be no space within the building or on site allocated to the Contractor. Any lay-down required during specific duties must be coordinated in advance and approved by the Contracting Officer.

2.1.2 Computer and Software

A computer, monitor and workstation with PM software shall be furnished and installed under Section 15951 DIRECT DIGITAL CONTROL FOR HVAC as part of the controls software. The Contractor will have access to the computer in order to utilize the PM software for use controlling and tracking data and information as well as scheduling any other duties related to contract performance. The Contractor shall not use the computer equipment and software for non-contractual purposes. The Contractor shall comply with all computer system and accountability procedures required by the Government. If the Contractor chooses to use their own maintenance software they are still required to update and maintain the software provided in Section 15951 DIRECT DIGITAL CONTROL FOR HVAC.

2.2 CONTRACTOR FURNISHED ITEMS AND SERVICES

2.2.1 Replacement Parts and Components

The Contractor shall furnish and install new or factory reconditioned parts and components when providing scheduled maintenance services. All replacement parts and components used in the maintenance of the buildings shall be compatible with the existing equipment on which it is to be used. They shall be standard products from manufacturer's regularly engaged in the production of such materials, parts and supplies and shall be of equal or better quality as original equipment specifications. They shall conform to the applicable specifications and be used in accordance with original design and manufacturer intent. Items without technical specifications shall be of acceptable industrial grade and quality. If the original manufacturer has updated the quality of parts for current production, parts supplied under this contract shall equal or exceed the updated quality. Replacement parts material and supplies shall meet current base energy efficiency standards.

2.2.2 Scheduled Maintenance

The Contractor shall acquire and bear the cost of all materials, parts and supplies, including filters, necessary to perform scheduled maintenance

actions under this contract.

2.2.3 Vehicles

The Contractor shall provide and maintain all vehicles necessary to perform the requirements of the contract. Contractor vehicles shall have the company name prominently displayed on both sides of the vehicle and be maintained clean to present a neat, professional appearance. Contractor owned vehicles shall be parked in authorized parking spaces. All vehicles shall be state-registered, registered on base, licensed, insured, and operated in accordance with base traffic regulations by a valid state licensed driver.

2.2.4 Communication Services

The use of Contractor provided two-way radios/pagers for communication between personnel must be approved by the Contracting Officer. The Contractor shall submit a written request to the Contracting Officer. The request shall detail proposed manufacturer and frequency.

PART 3 EXECUTION

3.1 MANAGEMENT AND ADMINISTRATION SUPPORT

3.1.1 Meetings

The supervisor, or approved designated alternate, shall meet with the Contracting Officer monthly to review project schedules, status and other matters pertaining to the performance of work under this contract.

3.1.2 Environmental Protection

The Contractor shall ensure appropriate coordination in the purchase, use, handling, storage and disposal of all hazardous materials and wastes.

3.1.3 Normal Working Hours

The Contractor shall perform all work required under this contract during normal duty hours of 8:00 am to 4:30 pm, Monday through Friday. Any work required to be performed outside of the normal working hours must be submitted and approved by the Contracting Officer 5 days in advance.

3.2 SAFETY PROGRAM

The Contractor shall establish and implement a safety program in accordance with OSHA requirements and EM 385-1-1 (EM385-1-1 may be found at <http://www.hnd.usace.army.mil/techinfo/> or ask the Contracting Officer). The Contractor shall submit an overall Safety and Health Plan prior to the start of any work under this contract. The overall Safety and Health Plan shall include, as a minimum, the plans listed below. The Contractor shall not start any work until the safety plans have been approved by the Government.

Accident Prevention Plan
Hazard Analysis
Lock Out and Tag Plan

3.3 OPERATION AND MAINTENANCE DATA

Cx Pilot Project

Operation and maintenance manuals are to be prepared per Section 01800 EQUIPMENT OPERATING, MAINTENANCE, AND REPAIR MANUALS.

3.4 TRAINING

The maintenance supervisor or his alternate shall be present for all training sessions with the building operating staff for the equipment being installed.

3.5 REPORTING

3.5.1 Maintenance Scheduling

The project supervisor, or alternate, shall submit a 4-week schedule for all work to the Contracting Officer for approval. Any changes to the schedule must be approved by the Contracting Officer. The project supervisor, or alternate, must be on-site whenever work is being performed.

Prior to starting work the contractor shall login to the computer identifying the task or tasks being performed. The Contractor shall also log-out when leaving the site.

3.5.2 Review of Documents

The Contractor shall review and become familiar with all design documents, including drawings and specifications.

3.5.3 PM Schedules and Reports

3.5.3.1 Yearly Master Report

The Contractor shall prepare, submit and comply with a written yearly master PM schedule. The Contractor shall research equipment manufacturer's and industry recommendations for preventive maintenance requirements and ensure these requirements are included in the Master PM Schedule and 4-week detailed schedule.

3.5.3.2 Monthly Detailed Report

The 4-week schedule shall identify the PM tasks that are scheduled during the specified period. Schedule shall identify the equipment and the task to be performed, the day the task will be performed, the number of personnel required and the estimated duration.

3.5.3.3 Monthly Completion Report

A monthly completed PM report will be submitted every month showing the PM actions completed the past month. PM actions that were scheduled but not completed should be clearly identified. An explanation for those PM actions scheduled but not completed shall be provided.

3.6 PREVENTIVE MAINTENANCE

The Contractor shall obtain all materials necessary and perform the scheduled maintenance tasks on the equipment identified in Appendix A and D in accordance with the Government-approved, Contractor-developed, Master PM schedule.

3.7 UNSCHEDULED MAINTENANCE AND REPAIR

Cx Pilot Project

Any maintenance or repair to equipment required to be done due to equipment neglect shall be done by the Contractor without any modifications to the contract price. However, in the event the Contracting Officer determines that the Contractor is unresponsive or untimely in addressing the unscheduled maintenance and repair, the Government reserves the right to have said repair performed by a third party with subsequent equitable adjustment in contract price.

3.8 CONTRACTOR CLEAN-UP

The Contractor shall, at all times, keep the work areas free from accumulation of waste material, rubbish, tools, scaffolding, equipment, and materials. Upon completion of the task, or nightly, the contractor shall leave the work area and premises in a clean, neat, safe and workmanlike condition. The Contractor is responsible for disposing of both hazardous and non-hazardous job-related waste material in accordance with the local installation procedures.

3.9 PREVENTIVE MAINTENANCE SOFTWARE

3.9.1 Updating Software

The Contractor shall input all data required to maintain records for existing equipment into the Government's PM software. The Contractor shall maintain an equipment file for each piece of equipment listed in Appendix A, to include:

- Contractor furnished O&M manuals
- Manufacturer's literature on preventive maintenance
- Current warranty information, if applicable
- Other literature relevant to the equipment items

This filing shall be maintained offsite since Contractor has no allocated space inside buildings.

Changes, additions and deletions of equipment may occur during the term of this contract and may require updates and/or revisions to the equipment inventory and the Master PM Schedule. Changes to the Master PM schedule will be negotiated and may result in a contract modification. The Contractor shall advise the Contracting Officer if any change to the PM schedule will result in substantial change to the contract prior to implementing the change.

It is the responsibility of the Contractor to maintain the PM software database up to date. The building occupants shall have access to the computer software program and can, at any time, print out a review schedule of past maintenance on any piece of equipment or look at future maintenance scheduled to be performed.

APPENDIX A

It shall be the contractor's responsibility to provide preventive maintenance on all equipment listed in Table 1 below. For a detailed PM schedule for the listed equipment refer to Appendix B.

EQUIPMENT TAG	EQUIPMENT NAME	TRAINING BLDG QUANTITY	OMS BUILDING QUANTITY
CH-	AIR COOLED CHILLER	1	-

Cx Pilot Project

EQUIPMENT TAG	EQUIPMENT NAME	TRAINING BLDG QUANTITY	OMS BUILDING QUANTITY
GFB-	GAS FIRED BOILER	2	-
HWB-	CONDENSING TYPE BOILER	-	1
AHU-	AIR HANDLING UNIT	2	-
FCU-	FAN COIL UNIT	101	-
HV-	HEATING VENTILATING UNIT	-	1
PTAC-	PACKAGED TERMINAL AIR CONDITIONING UNIT	-	2
EF-	EXHAUST FAN	5	8
UH-	HOT WATER UNIT HEATER	10	-
UH-	ELECTRIC UNIT HEATER	-	5
CUH-	HOT WATER CABINET UNIT HEATER	2	-
P-	PUMPS	8	2
L-	LOUVERS /DAMPERS	9	9
AC-	AIR CONDITIONING UNIT	1	-
ACCU-	AIR COOLED CONDENSING UNIT	1	-
AC-	AIR COMPRESSOR	-	1
EWB-	ELECTRIC WATER HEATER	-	1
GWH-	GAS WATER HEATER	2	-
KF-	KITCHEN EXHAUST FAN	3	-
KMAU-	KITCHEN MAKE-UP AIR UNIT	1	-
	OIL/WATER SEPARATOR	-	1
	GAS SUPPLY SYSTEM	1	1
	CHILLED WATER SYSTEM	1	-
	HEATING HOT WATER SYSTEM	1	1
	DOMESTIC WATER SYSTEM	1	1
	SEWER SYSTEM	1	1

Appendix B

The following procedures are to be considered the minimum requirements for preventive maintenance for the equipment in the Training/Unit storage building and the OMS building. In addition, the contractor shall research and schedule any manufacturer's recommended maintenance procedures for each piece of equipment.

GAS SUPPLY SYSTEM

SEMI-ANNUALLY:

1. Inspect gas trains on boilers, hot water heaters and heating ventilating unit for any leaks, repair as required.
2. Inspect main gas riser for leaks, repair as required.

HEATING HOT WATER SUPPLY SYSTEM

QUARTERLY:

1. Inspect piping for corrosion, leaks, damaged or missing supports, and chipped or flaking paint.
2. Check condition of insulation and jacketing, repair any damaged portions.

CHILLED WATER SUPPLY SYSTEM

QUARTERLY:

Cx Pilot Project

Appendix B

1. Inspect piping for corrosion, leaks, damaged or missing supports, and chipped or flaking paint.
2. Check condition of insulation and jacketing, repair any damaged portions.

SEWER SYSTEM

SEMI-ANNUALLY:

1. Inspection of the manholes to make sure nothing is clogged up and they are flowing.

AIR COOLER CHILLER (CH-1)

WEEKLY:

1. Check and record evaporator and condenser refrigerant pressures and temperatures.
2. Check liquid line sight glasses.
3. Visually inspect condenser coils and compressors.
4. Check chiller diagnostics.

MONTHLY:

1. Check and record superheat and sub cooling.
2. Manually rotate condenser fans and check clearances.
3. Check gages and thermometers for proper operation, fix any defects.

SEMI-ANNUALLY:

1. Clean coils and straighten any bent fins.

ANNUALLY:

1. Check oil level and refrigerant charge.
2. Have oil analysis performed
3. Leak test chiller
4. Clean any in-line strainers
5. Clean and repaint any areas showing signs of corrosion.
6. Clean condenser fans. Check for alignment, endplay, vibration and noise.
7. Check tightness of electrical connections.

GAS-FIRED BOILER (GFB-)

WEEKLY:

1. Visually check boilers for change in operating condition and unusual noise.

QUARTERLY:

1. Verify operating and safety controls.

SEMI-ANNUALLY:

1. Clean burners and heat exchanger
2. Visually inspect venting system, check all joints and pipe connections for tightness, corrosion or deterioration.
3. Clean screens in the venting air intake system.
4. Visually check main burner flame. Ensure that flame color is indicating normal operation.

CONDENSING TYPE GAS FIRED BOILER (HWB-)

SEMI-ANNUALLY:

1. Inspect diaphragm disk and gaskets for wear, replace as required.

Cx Pilot Project

Appendix B

ANNUALLY:

1. Replace sparkplug every 2 years or sooner as required.

AIR HANDLING UNITS (AHU-)

WEEKLY:

1. Visually observe units for changes in operating condition and noise.

MONTHLY:

1. Check filter. Measure pressure drop. Change whenever pressure drop exceeds 1 inch WC
2. Change filter every other month regardless of pressure drop.

QUARTERLY:

1. Lubricate fan bearings.
2. Lubricate motor bearings.
3. Check belt tension and condition. Replace if required.

SEMI-ANNUALLY:

1. Check bearings and motor brackets bolt torque.
2. Check supply fan for signs of excessive heat and vibration.
3. Check alignment of fan and motor sheaves. Adjust if required. Tighten sheave set screws.
4. Inspect and clean drain pans.
5. Check tightness of electrical connections.
6. Clean and dirt build-up on heating and cooling coils.
7. Blow down strainers upstream of chilled water and hot water coils.
8. Check disconnect switches for pitted, worn or burned knife blades and clips.
9. Check motor starters for worn, pitted or burned contacts.

ANNUALLY:

1. Clean fan wheels and fan shaft. Remove any rust and apply a coat of LPS #3 or equivalent.
2. Check damper linkages, set screws and blade adjustment. Clean damper bushings.
3. Clean damper operators and verify operation.
4. Manually rotate fan wheel and check clearances.
5. Check gasketing around doors and dampers.

FAN COIL UNITS (FCU-)

QUARTERLY:

1. Change filters.

ANNUALLY:

1. Check unit for noise and vibration.
2. Check belt condition and tension, adjust or replace as necessary.
3. Clean condensate drain pan.
4. Lubricate fan shaft and motor bearings.
5. Clean coils.
6. Use fin comb to straighten coil fins.
7. Check for leaks on all lines, valves, strainers, coils etc.
8. Clean strainers.
9. Damp wide exterior surface of unit.

HEATING VENTILATING UNIT (HV-)

Cx Pilot Project

Appendix B

QUARTERLY:

1. Lubricate as required.
2. Change filters

SEMI-ANNUALLY:

1. Check blower and related components for proper operation.
2. Check for proper operation of supply fan.
3. Check sheave alignment and adjust as required.
4. Check belt tension and condition, replace if required.

PACKAGE TERMINAL AIR CONDITIONING UNITS (PTAC-)

MONTHLY:

1. Check for unusual noise and knocks.
2. Replace filter.

ANNUALLY: Remove unit from the wall to allow for:

1. Cleaning of internals of unit, evaporator, and condenser.
2. Inspect electrical system and tighten any loose connections.
3. If required, add refrigerant.

EXHAUST FANS (EF-)

SEMI-ANNUALLY:

1. Check motor and fan shaft for noise, vibration and overheating.
2. Lubricate fan and motor bearings.
3. Check belts for wear, tension and alignment, adjust as required.
4. Tighten all electrical connections.
5. Confirm operation is in accordance with day/night cycle.

HOT WATER UNIT HEATERS (UH-) & CABINET UNIT HEATERS (CUH-)

ANNUALLY:

1. Clean casing, fan and coil.
2. Clean and adjust heat deflector fins.
3. Check tightness of fan guard, motor frame and fan bolts.
4. Verify fan and heat valve operation.
5. Lubricate fan and motor bearings.
6. Blow down strainer located upstream of hot water control valve.

ELECTRIC UNIT HEATERS (UH-)

ANNUALLY:

1. Clean casing, fan and coil.
2. Check tightness of fan guard, motor frame and fan bolts.

PUMPS

WEEKLY:

1. Visually check pumps for change in operating condition and unusual noise.

SEMI-ANNUALLY:

1. Lubricate as required.
2. Check alignment and seals.
3. Check tightness of electrical connections.
4. Clean or flush suction strainers.

Cx Pilot Project

Appendix B

EXPANSION TANK (ET-)

ANNUALLY:

1. Check tank hangers or floor supports for corrosion.
2. Check tank, piping and valves for leaks.
3. Check condition of pressure gage.

AIR SEPARATOR (AS-)

SEMI-ANNUALLY:

1. Inspect air separator and piping for signs of water leakage.
2. Check that air separator bleed valve is free of obstructions and debris.

LOUVERS/DAMPERS

ANNUALLY:

1. Clean out debris and dirt blown against louver.
2. Lubricate damper pivot points.
3. Check operation of motor driven actuator.

AIR CONDITIONING UNIT (AC-)

MONTHLY:

1. Observe condition of refrigerant through sight glass.
2. Observe belt wear and check belt tension.
3. Clean evaporator coil.
4. Clean drip pan and drains.
5. Replace filter.

ANNUALLY:

1. Check that all electrical connections are tight.

AIR COOLED CONDENSING UNIT (ACCU-)

SEMI-ANNUALLY:

1. Clean coil fins.
2. Clean fans.
3. Lubricate fan bearings.
4. Observe belt wear and check belt tension.
5. Remove dust and dirt for exterior of motor.
6. Check hold-down bolts and grounding straps for tightness.
7. Check alignment of motor and fans.

ANNUALLY:

1. Check that all electrical connections are tight.

AIR COMPRESSOR (AC-)

EVERY 2000 HOURS OF OPERATION:

1. Replace air filter.
2. Replace crankcase oil.
3. Inspect electrical connections and voltage.
4. Test tank in accordance with manufacturer's recommendation.
5. Drain tank in accordance with manufacturer's recommendation.

ELECTRIC WATER HEATER (EWH-)

Cx Pilot Project

Appendix B

ANNUALLY:

1. Flush the heater and verify thermal expansion protection.

GAS WATER HEATER (GWH-)

WEEKLY:

1. Visually check unit for change in operating condition and unusual noise.

MONTHLY:

1. Adjust operating temperature control as outside air temperature requires.

QUARTERLY:

1. Verify operating and safety controls.

SEMI-ANNUALLY:

1. Clean burners and heat exchanger.
2. Visually inspect venting system, check all joints and pipe connections for tightness, corrosion or deterioration.
3. Clean screens in the venting air intake system.
4. Visually check main burner flame. Ensure that flame color is indicating normal operation.

KITCHEN EXHAUST FAN AND HOOD (KEF-)

SEMI-ANNUALLY:

1. Check and clean grease off of duct interiors at connection to the hood.
2. Check and clean grease from duct interiors at access panels.
3. Check access panels for tight seal to prevent air leaks and for grease leaks.
4. Check and clean grease from all visible and accessible duct seams or joints.
5. Check hood exhaust fans for grease including exterior surfaces, fan housing, blades and protective grilles and screens. Clean as required.
6. Check and clean building surfaces at the discharge end of the exhaust fan housing.
7. Check fan belts for wear and tension and alignment, adjust as required.

KITCHEN MAKEUP AIR UNIT (KMAU-)

MONTHLY:

1. Visually inspect unit for changes in operating condition and unusual noise.

SEMI-ANNUALLY:

1. Wash filters.
2. Check blower and related components for proper operation.
3. Check sheave alignment and adjust if required.
4. Check belt tension and condition, replace if required.
5. Check discharge air temperature.

OIL/WATER SEPARATOR

QUARTERLY:

1. Inspect to check for build-up of sand, trash, sludge and oil.

SEMI-ANNUALLY:

Cx Pilot Project

Appendix B

1. Clean inside of separator.

APPENDIX C

It shall be the Contractor's responsibility to provide preventive maintenance on all equipment listed in Table 1 below. For a detailed PM schedule for the listed equipment refer to Appendix D.

Equipment Name
Generator Engine
Fuel Pumps
Batteries
Battery Chargers
Fuel Storage Tanks
Drive Belts
Engine Heater
Engine Exhaust
Engine Silencer
Generator Set Controller
Alternator
Gauges
Air Cleaner
Oil Filter
Fuel Filter
Cooling System
Enclosure
Starter
Fuel Lines

APPENDIX D

The following procedures are to be considered the minimum requirements for preventive maintenance for the generator and its components. In addition, the contractor shall research and schedule any manufacturer's recommended procedures. All service adjustments will be made in accordance with manufacturer's specifications using required tools and procedures.

Oil System

Annually:

1. Change oil and filter.

Semi-Annually:

1. Check entire unit for oil leaks.
2. Check lube oil level.
3. Take oil sample.

Fuel System

Annually:

1. Change fuel filters and clean fuel bowl, if applicable.

Semi-Annually:

1. Check flexible fuel connections and lines.

Cx Pilot Project

APPENDIX D

2. Check day tank float level.
3. Check fuel filter(s) for debris.
4. Check and record fuel supply.
5. Service transfers of day tank pump motor.
6. Check and adjust float switch alarm.
7. Check drain operation.

Cooling System

Semi-Annually:

1. Check cooling system for leaks.
2. Record antifreeze protection level and change if necessary.
3. Record DCA treatment level.
4. Check condition of cooling hoses and tighten clamps.
5. Check engine block heater for proper operation.
6. Change water filters.

Air System

Semi-Annually:

1. Check hoses, clamps, and louvers.
2. Clean air filter.
3. Remove dust from dry-type filter.
4. Refill oil from wet-type filter.
5. Check air restriction indicator.

Exhaust System

Semi-Annually:

1. Visual inspection of exhaust system.
2. Check for exhaust leaks.

Batteries

Semi-Annually:

1. Check battery starting system.
2. Check battery charger and record readings.
3. Check solution level.
4. Check connections and clean.
5. Check battery cranking voltage.
6. Note overall condition of battery system.

Electrical

Semi-Annually:

1. Check electrical connections.
2. Check AC and DC brushes.
3. Check collector ring.
4. Check commutator.
5. Free and seat brushes and check shunts, stone and clean if needed.
6. Lubricate main generator bearing.

Hoses/Belts

Semi-Annually:

1. Check all hoses for proper pliability.
2. Check hard plumbing for problems including tank cap, cones, and air vent.

Cx Pilot Project

APPENDIX D

3. Check and adjust belts and/or replace if required.

Engine

Semi-Annually:

1. Check turbo chargers bearing clearance.
2. Remove carbon build up from turbo charger.
3. Check injection pump.
4. Change governor oil.
5. Lubricate starter bendix, generator-alternator, water pump, and governor and linkage.

Operating Check

Semi-Annually:

Run Generator Under Load to:

1. Check for leaks.
2. Check voltage.
3. Check frequency.
4. Check all instrumentation.
5. Check condition of trickle charge.
6. Check alternator charge rate.
7. Conduct safety test for:
 - a) Overspeed.
 - b) Low oil pressure.
 - c) High water temperature.
8. Record all engine gauge and meter readings.
9. Record all transfer switch readings and adjustment.
10. Return system to auto start.

Report:

Furnish a written report of the service performed to the Owner after each inspection. The report may include recommendations and suggestions based on the observation of the service technicians during the inspections.
Observation of the service technicians during the inspections.

-- End of Section --

SECTION 00115

PROCEDURES FOR SUBMITTAL OF OFFERS

1. GENERAL REQUIREMENTS.

- 1.1. The intent of this solicitation is to select one Contractor for the construction and maintenance of the [Project Name, Location]. This solicitation is unrestricted and open to all offerors.
- 1.2. Offerors submitting proposals for this project should limit submissions to data essential for evaluation of proposals so that a minimum of time and monies will have been expended in preparing information required herein. However, in order to be effectively and equitably evaluated, the proposals must include information sufficiently detailed to clearly describe the offeror's experience and management capabilities to successfully complete the project. Any deviations from requirements should be clearly noted and justified in the proposal.
- 1.3. Offerors shall submit their proposals to the US Army Corps of Engineers, [Mailing address] (ATTN: POC) no later than the time and date specified in Block 13 of Standard Form 1442.
- 1.4. Offerors are required to submit a proposal addressing the areas identified in Paragraph 2. All proposal materials shall be submitted in binders with a table of contents and tabbed section dividers. The sections should parallel the submission requirements identified below. The Technical Proposal (Sections I, II, III, IV, V, VI, and VII) shall be submitted in original and 5 copies. The Price Proposal shall be submitted in original only and shall be placed in a separate envelope. There is a limit of 125 pages (excluding dividers) using a font size of 11 to 14 pitch and a minimum margin of one half inch on all sides.
- 1.5. Clarifications of Provisions for this RFP. Any explanation desired by an offeror regarding the meaning or interpretation of the RFP shall be requested in writing and received by the Contracting Officer prior to the closing date of this solicitation. Any interpretation may be in the form of an amendment to the RFP, and furnished to all prospective offerors. Receipt of all amendments must be acknowledged in the space provided on the proposal form or by letter received by the time set for receipt of proposals.
- 1.6. Offerors are required to submit a proposal made up of two parts; a Technical Proposal package and a Price Proposal package.

2. TECHNICAL PROPOSAL

The sections should parallel the submission requirements identified below.

TAB I – CONSTRUCTION CONTRACTOR EXPERIENCE
TAB II – CONSTRUCTION PAST PERFORMANCE
TAB III – FIVE YEAR FACILITY MANAGEMENT PLAN
TAB IV – KEY SUBCONTRACTOR EXPERIENCE
TAB V – KEY SUBCONTRACTOR PAST PERFORMANCE
TAB VI – KEY PERSONNEL
TAB VII – SELF-PERFORMED WORK

Section I. Construction Contractor Experience (Tab I)

Provide at least three descriptions of recent projects completed in the last six (6) years similar to this project in size, scope, complexity, and dollar value. Include a description of the self-performed work for each project, the original and final contract amounts, the original and final completion dates, and an explanation for any differences. Include a point of contact and phone number for verification. Describe previous experience, if any, in working with the proposed subcontractors in Section IV. **Sample forms are available at the end of this section for use in submitting information.** The information identified on this form is required for evaluation of this factor.

Section II. Construction Past Performance (Tab II)

Provide references for all of the experience identified in Section I. Reference information should include project name, location, owner's name, point of contact and telephone number. Also include any ratings, letters, awards, etc which support past performance on these projects. The Government may also use other methods to obtain past performance information such as CCASS, contacting references, etc.

Section III. Five Year Facility Management Plan (Tab III)

Provide a narrative describing the approach to be used for successful operation and maintenance of the facility. Describe steps to be taken to assure smooth transition from construction to O&M of the facility. Describe contracting method (in-house or subcontractor) to be used. Describe lines of communication and authority to act on behalf of the General Contractor. Submit a Contractor Facility Manager (CFM) resume(s) that represents the level of quality to be expected from the assigned person/subcontractor. Note: The Government realizes that a resume of a specific individual may not be possible at this time. Substitution of person/persons of lesser quality will require prior approval of the Contracting Officer.

Section IV. Key Subcontractor (Roofing, Mechanical, Electrical) Experience (Tab IV)

Identify the following key subcontractors to be used for this project:

- (TAB IV-A) Roofing
- (TAB IV-B) Mechanical
- (TAB IV-C) Electrical

Provide at least three descriptions of recent projects completed in the last six (6) years similar to this project in size, scope, complexity, and dollar value. **Include a description of the self-performed work for each project**, the original and final contract amounts, the original and final completion dates, and an explanation for any differences. Include a point of contact and phone number for verification. **Sample resume forms are available at the end of this section for use in submitting resumes.** The information identified on this form is required for evaluation of this factor. Note that key subcontractors assigned in this proposal must be utilized on the project. Should any of the organizations leave the project for any reason, the offerors shall submit for approval the qualifications of their replacements. Substitution of any Key Subcontractors shall require the acceptance of the Contracting Officer.

Section V. Key Subcontractor (Roofing, Mechanical, Electrical) Past Performance (Tab V)

Provide references for all of the experience identified in Section IV.

(TAB V-A) Roofing

(TAB V-B) Mechanical

(TAB V-C) Electrical

Reference information should include project name, location, owner's name, point of contact and telephone number. Also include any ratings, letters, awards, etc which support past performance on these projects. The Government may also use other methods to obtain past performance information such as CCASS, contacting references, etc.

Section VI. Key Personnel (Tab VI)

Identify the following key personnel to be assigned to this project:

(TAB VI-A) Construction Project Manager

(TAB VI-B) Project Field Superintendent

(TAB VI-C) Quality Control Manager

Provide a resume for each of the above individuals. Resumes shall state the role or title on the proposed project. Resumes shall identify relevant specific experiences on other projects within the past 6 years. Include total number of years experience working in the construction fields, and number of years working with the current firm. Identify the specific role/job title of the individual for the experience cited. Provide relevant educational degrees and professional licenses. Only one individual for each of the key personnel categories listed above will be evaluated. See attached sample resume form. Note that key personnel assigned in this proposal must be utilized on the project. Should any of personnel leave the project for any reason, the offeror shall submit for approval the qualifications of replacements. Substitution of any personnel shall require the acceptance of the Contracting Officer.

Section VII. Self-Performed Work (Go/No-Go) (Tab VII)

Identify what construction parts of the project will be self-performed by in-house forces and the percentage for each part. At least 20 percent of the total amount of the actual construction must be performed directly by the Prime Contractor.

3.0 PRICE PROPOSAL. The Price Proposal is to be submitted in a separate sealed envelope labeled "PRICE PROPOSAL". Only an original is required for the Price Proposal. The envelope will contain the following:

- a. Completed Standard Form 1442 and Section B, Proposal Bid Schedule
- b. Completed Section 00600, Representations and Certifications
- c. Proof of Financial Ability (most recent financial statement showing assets and liabilities)
- d. Name, address and telephone number of two credit/trade references.
- e. Name, address and telephone number of the firm's bonding company.
- f. A statement of how many years the firm(s) has been in business.
- g. Documentation supporting Past Performance on Utilization of Small, Small Disadvantaged and Women-Owned Small Business (required regardless whether Prime Contractor is Large OR Small Business) – see below.
- h. Subcontracting Plan (only required if Prime Contractor is a Large Business) – see below.
- i. Any other pro-forma requirements indicated in Standard Form 1442 and this section

3.1. Subcontracting Plan. Submit the original only. Provide a Subcontracting Plan in accordance with Section 00700, FAR 52.219.9, Small Business Subcontracting Plan and DFAR 252.219-7004, Small, Small Disadvantaged and Women-owned Small Business Subcontracting Plan. The Subcontracting Plan and the Subcontracting Past Performance Information will be submitted with the "PRICE PROPOSAL". To be acceptable, plans must adequately address the required statutory elements and provide sufficient information to enable the Contracting Officer to evaluate in accordance with AFARS, Appendix DD, Subcontracting Plan Evaluation Guide, provided as part of the solicitation package. To be acceptable, subcontracting plans must be rated 71. You may use the sample-subcontracting plan, that is part of the solicitation documents as a guide. Percentage goals apply to the total amount being subcontracted. The current goals of the Louisville District are 57.1% to Small Business, 8.9% to Small Disadvantaged Business, 8.1% to Women-Owned Small Business, 3.0% to Veteran Owned Small Business and Service Disabled Veteran-owned Small Business and 3.0% for HUBZone Business.

3.2. Subcontracting Past Performance on Utilization of Small, Small Disadvantaged, Historically Black Colleges or Universities, Minority Institutions, HUBZone Small Business and Women-Owned Small Businesses. If you are a large business, provide the extent of participation of small businesses and historically black colleges or universities and minority institutions in performance of this project in accordance with FAR 52.219-9. If you are a small business or large business, provide the extent of utilization of small businesses, Veteran Owned small businesses, HUBZone small businesses, small businesses owned and controlled by socially and economically disadvantaged individuals, and small businesses owned and controlled by women in accordance with FAR 52.219.8, Utilization of Small Business Concerns. Information shall be limited to projects performed within the last five (5) years.

CONSTRUCTION EXPERIENCE FORM (TAB I)

Your firm's name _____

Name of Project/Location

General Scope of Project

Your role (prime, joint venture, subcontractor) and work your company self-performed

Construction Cost:

At Award: \$ _____

Final Cost : \$ _____

Award Date: _____

Schedule Completion: _____

Actual Completion: _____

Extent and type of work you subcontracted out

Owner's POC for reference (name and company)

Your Performance Evaluation by Owner, if known

Telephone number and Email address of reference POC

SAMPLE SMALL BUSINESS SUBCONTRACTING PLAN

DATE: _____

CONTRACTOR: _____

ADDRESS: _____

SOLICITATION/CONTRACT NO: _____ CONTRACT AMOUNT \$ _____

DESCRIPTION: _____

Our firm has established a policy to afford Small Business concerns (SB), Small Disadvantaged Business concerns (SDB), Women-Owned Small Business concerns (WOSB), Veteran-Owned Small Business concerns (VOSB), Service Disabled Veteran-Owned Small Business concerns (SDVOSB), Historically Black Colleges and Universities/Minority Institutions (HBCU/MI) and HUBZone Small Business (HSB) concerns opportunities to participate in all contracts with the Department of Defense or other entities, both public and private. In most instances, HBCU/MI are not applicable to construction contracts, but will be included throughout this plan with the intent to involve them whenever possible. The following, together with any attachments, is hereby submitted as a Small Business Subcontracting Plan to satisfy the applicable requirements of Public Law 95-507, Public Law 99-661, Section 1207, and Public Law 100-180, Section 806.

1. (a) **BASE BID ONLY:** The following percentage goals (expressed in terms of a percentage of total planned subcontracting dollars) and dollar amounts are applicable to the contract cited above or to the contract awarded under the solicitation cited. Total Base Bid is \$_____.

(i) Total Planned Subcontracting Dollars \$_____

(i) Small Business concerns (SB): _____% or \$_____ of total planned subcontracting dollars under this contract will be awarded to subcontractors who are SB.

(iii) Small Disadvantaged Business concerns (SDB): _____% or \$_____ of total planned subcontracting dollars under this contract will be awarded to subcontractors who are small concerns owned and controlled by socially and economically disadvantaged individuals and appear on the Small Business Administration's Procurement and Marketing and Access Network (PRO-Net). (<http://pro-net.sba.gov>) This percentage is included in the percentage shown under 1 (a)(i) above, as a subset.

(iv) Women-Owned Small Business concerns (WOSB): _____% or \$_____ of total planned subcontracting dollars under this contract will be awarded to subcontractors who are WOSB. This percentage is included in the percentage shown under 1.(a)(i) above, as a subset.

(v) Veteran-Owned Small Business concerns (VOSB): _____% or \$_____ of total planned subcontracting dollars under this contract will be awarded to subcontractors who are VOSB. This percentage is included in the percentage shown under 1 (a) (i) above, as a subset.

(vi) Service-Disabled Veteran-Owned Small Business concerns (SDVOSB): _____% or \$_____ of total planned subcontracting dollars under this contract will be awarded to subcontractors who are SDVOSB. This percentage is included in the percentage shown under 1 (a) (i) above.)

(vii) Historically Black Colleges and Universities/Minority Institutions (HBCU/MI): _____% or \$_____ of total planned subcontracting dollars under this contract will go to HBCU's who are an institution determined by the Secretary of Education to meet the requirements of 34 CFR 608.2, the term also includes any nonprofit research institution that was an integral part of such a college or university before November 14, 1986; or MI's who are an institution of higher education meeting the requirements of Section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)) which,

(e) If "have been" is checked, explain the method used in determining the proportionate share of indirect and overhead cost to be allocated as subcontracts to small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.

2. The following individual will administer the subcontracting program:

Name & Title: _____

Address & Telephone: _____

This individual's specific duties, as they relate to the firm's subcontracting program, are as follows:

General overall responsibility for this company's Small Business Program, the development, preparation and execution of individual subcontracting plans and for monitoring performance relative to contractual subcontracting requirements contained in this plan, including but not limited to:

(a) Developing and maintaining offerors/bidders lists of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns from all possible sources. Our firm may rely on the information contained in PRO-Net as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining a small business, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged and women-owned small business source list. The Small Business Administration's (SBA's) list of Small Disadvantaged Businesses and small HUBZone businesses can be accessed at <http://pro-net.sba.gov/pro-net/search.html>.

(b) Ensuring that procurement packages are structured to permit small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns to participate to the maximum extent possible.

(c) Assuring inclusion of small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns in all solicitations for products or services that they are capable of providing.

(d) Reviewing solicitations to remove statements, clauses, etc., which may tend to restrict or prohibit small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business participation, including recommendations to set aside competitions for SDB's

(e) Ensuring periodic rotation of potential subcontractors on bidders' lists.

(f) Ensuring that the bid proposal review board documents its reasons for not selecting low bids submitted by small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns.

(g) Ensuring the establishment and maintenance of records of solicitations and subcontract award activity.

(h) Attending or arranging for attendance of company counselors at Business Opportunity Workshops, Minority Business Enterprise Seminars, Trade Fairs, etc.

(i) Conducting or arranging for conduct of motivational training for purchasing personnel pursuant to the intent of Public Laws 95-507, 99-661, and 100-180.

(j) Monitoring attainment of proposed goals.

(k) Preparing and submitting periodic subcontracting reports required, which will include Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and SF 295, Summary Subcontract Report, in accordance with the instructions on the forms.

(l) Coordinating contractor's activities during the conduct of compliance reviews by Federal agencies.

(m) Coordinating the conduct of contractor's activities involving its small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business subcontracting program.

(n) Notifying the Contracting Officer or his representative in writing of any substitutions of firms that are not small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, or women-owned small business for the firms listed in the subcontracting plan.

(o) Additions to (or deletions from) the duties specified above are as follows:

3. The following efforts will be taken to assure that small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concerns will have an equitable opportunity to compete for subcontracts, including items not traditionally awarded to SB or SDB firms:

(a) Outreach efforts will be made by:

(i) Contacts with minority and small business trade associations such as veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce.

(ii) Contacts with business development organizations.

(iii) Attendance at small and minority business procurement conferences and trade fairs.

(iv) Sources will be requested from Small Business Administration's Procurement Marketing and Access Network (PRO-Net).

(v) Reviews to determine the competence, ability, experience and capacity available from SB and SDB firms and providing technical assistance to same.

(vi) Evaluations of our SB, SDB, WOSB, VOSB, SDVOSB and HUBZone award performance and program effectiveness against goals established company-wide.

(b) The following internal efforts will be made to guide and encourage buyers:

(i) Workshops, seminars and training programs will be conducted.

(ii) Activities will be monitored to evaluate compliance with this subcontracting plan, evaluating SB, SDB, WOSB, VOSB, SDVOSB and HUBZone award performance and program effectiveness.

(c) Small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concern source lists, guides and other data identifying small, small disadvantaged and women-owned small business concerns will be maintained and utilized by buyers in soliciting subcontracts.

(d) Additions to (or deletion from) the above listed efforts are as follows:

4. The offeror (contractor) agrees that the clause entitled "Utilization of Small Business Concerns" at FAR 52.219-8 will be included in all subcontracts that offer further subcontracting opportunities, and all subcontractors (except small business concerns) who receive subcontracts in excess of \$500,000 (\$1,000,000 in construction) will be required to adopt a subcontracting plan that complies with FAR 52.219-9. Such plans will be reviewed by comparing them with the provisions of Public Law 95-507, and assuring that all minimum requirements of an acceptable subcontracting plan have been satisfied. The acceptability of percentage goals shall be determined on a case-by-case basis depending on the supplies/services involved, the availability of potential small businesses, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small businesses, small disadvantaged businesses and women-owned small business subcontractors, and prior experience. Once approved and implemented, plans will be monitored through the submission of periodic reports, and/or, as time and availability of funds permit, periodic visits to subcontractors facilities to review applicable records and subcontracting program progress.

5. The offeror/contractor agrees to submit such periodic reports and cooperate in any studies or surveys as may be required by the contracting agency or the Small Business Administration in order to determine the extent of compliance by the offeror/contractor with the subcontracting plan and with the clause entitled "Utilization of Small Business Concerns," contained in the contract. The above reports will include Standard Form (SF) 294, Subcontracting Report for Individual Contracts, and SF 295, Summary Subcontract Report, in accordance with the instructions on the forms.

The offeror/contractor further agrees to ensure that its subcontractors agree to submit SF 294 and SF 295.

6. The offeror/contractor agrees that he will maintain at least the following types of records to document compliance with this subcontracting plan:

(a) Small business, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business, and women-owned small business concern source lists, guides and other data identifying SB/SDB concerns.

(b) Organizations contacted for small, veteran-owned small business, service-disabled veteran-owned small business, HUBZone small, small disadvantaged and women-owned small business sources.

(c) On a contract-by-contract basis, records on all subcontract solicitations over \$100,000, indicating on each solicitation (i) whether small business concerns were solicited, and if not, why not; (ii) whether veteran-owned small business concerns were solicited, and if not, why not; (iii) whether service-disabled veteran-owned small business concerns were solicited, and if not, why not; (iv) whether HUBZone small business concerns were solicited, and if not, why not; (v) whether small disadvantaged business concerns were solicited, and if not, why not; (vi) whether women-owned small business concerns were solicited, and if not, why not; and (vii) reasons for the failure of solicited small, veteran-owned small, service-disabled veteran-owned small, HUBZone small, small disadvantaged or women-owned small business concerns to receive the subcontract award.

(d) Records to support other outreach efforts: Contacts with veteran service organizations, Minority and Small Business Trade Associations, etc., and attendance at small and minority business procurement conferences and trade fairs.

(e) Records to support internal activities to guide and encourage buyers: Workshops, seminars, training programs, etc., monitoring activities to evaluate compliance.

(f) On a contract-by-contract basis, records to support subcontract award data to include name and address and business size of each subcontractor. Contractors having commercial plans need not comply with this requirement.

(g) Records to be maintained in addition to the above are as follows:

Signed: _____ Date: _____

Typed Name and Title: _____

Plan Accepted by: _____ Date: _____

Contracting Officer

CONTINUATION OF PARAGRAPH 1(a)
(SUBMIT ADDITIONAL OPTION PAGES FOR EACH OPTION)

NAME OF OPTION: _____

	Dollars	Percents
1. Total option contract price	_____	
2. Total to be subcontracted (to all types of businesses)	_____	100%
a. To large business	_____	_____
b. To small business	_____	_____
i. To nondisadvantaged small business	_____	_____
ii. To veteran-owned small business	_____	_____
iii. To service-disabled veteran-owned small business	_____	_____
iv. To HUBZone small business	_____	_____
v. To disadvantaged small business	_____	_____
vi. To women-owned small business	_____	_____

The following principal products and/or services will be subcontracted under Option 1 of this contract, and the distribution among LB, SB, SDB, WOSB, VOSB, SDVOSB, HBCU/MI, and HUBZone SB is as follows: **(Check all that apply)**

Subcontractor Name	Product or Service	Large Business	Small Business	SDB	WOSB	VOSB	SDVOSB	HBCU/MI	HSB

SECTION 00130

PROPOSAL EVALUATION CRITERIA

1. **STATEMENT OF WORK.** The contractor shall construct and maintain the [Project Name, Location] in accordance with the provisions set forth in the Request for Proposal (RFP) and in the contractor's proposal thereto.
 - 1.1. Requirements stated in this RFP are minimums.
2. **EVALUATION PROCESS.** The evaluation process essentially consists of five parts: proposal compliance review, technically/quality evaluation, price analysis, competitive range (if discussions are opened) and cost/technical trade-off analysis.
 - 2.1. Proposal Compliance Review. This is an initial review to ensure that all required forms and certifications are complete and that both a technical and price proposal were received.
 - 2.2. Technical/Quality Evaluation: A Source Selection Evaluation Board (SSEB), comprised of representatives of the Corps of Engineers and the Using Agency, will evaluate the proposals using the evaluation criteria in this section. The number and identities of offerors are not revealed to anyone who is not involved in the evaluation and award process or to other offerors. Proposals will be evaluated based on the factors described herein. The evaluation will identify quality issues, both positive and negative, that may be discussed between the government and the offerors. Proposals will be evaluated on their own merit. An adjective will be assigned to all factors, except for the Subcontracting Plan and the Subcontracting Past Performance Information and Price.
3. **TECHNICAL PROPOSAL EVALUATION.**
 - 3.1. Criteria: The Government, at its option, may utilize CCASS (Construction Contractor Appraisal Support System) or PPIMS (U.S. Army Past Performance Information Management System) information to evaluate an offeror's proposal. Offerors with no relevant performance history will be evaluated with a neutral rating.

Construction Contractor Experience (Tab I)

The Source Selection Evaluation Board (SSEB) will adjectivally evaluate if the construction contractor experience provided demonstrates that the contractor has constructed projects with similar scope, size, and complexity to the proposed project. Demonstrating the contractor has constructed projects with similar scope, size, and complexity to the proposed project is required. Demonstration of experience in completing projects that had unique characteristics of the proposed project will be evaluated favorably. Experience will not be given consideration unless the project can be shown to be similar to this project considering changes in technology, materials, equipment, codes, etc. Documentation of successful completion of projects similar in nature and scope to this project will be favorably considered in the evaluation. Conversely, proposals that do not include substantial evidence that the offer has experience, qualifications and production capability to successfully prosecute the proposed project will be unfavorably considered. Favorable consideration will be given for successfully completed projects in similar climates. Metric projects will be considered favorably. Prior

Government or Corps of Engineers project experience is not required to meet the minimum requirements of this criteria, however, it will be favorably considered.

Construction Past Performance (Tab II)

The SSEB will adjectivally evaluate past performance on relevant projects provided under TAB I. The SSEB will evaluate the degree of successful completion of all experience identified in Tab I above. Documentation of successful completion of projects similar in size, scope, complexity and dollars will be favorably considered. Conversely, offers which do not include substantial evidence of successful completion will not be favorably considered. References and documentation that reflect better than satisfactory past performance will be rated favorably. Conversely, references that reflect below satisfactory past performance will be considered a deficiency. The Government reserves the right to check any or all cited references to verify supplied information and to assess owner satisfaction. The Government may also use other tools to gather information regarding an offeror's past performance. Prior Government or Corps of Engineers project experience is not required to meet the minimum requirements of this criteria, however, it will be favorably considered.

Five-Year Facility Management Plan (Tab III)

The SSEB will adjectivally evaluate the narrative for technical approach. Acknowledgement that requirements contained in RFP will be met and the proposal contains no deviations from the project requirements is required. Proposals that provide a narrative that provides a clear description of the contractor's approach to the building maintenance phase and construction and key subcontractor involvement during the maintenance period will be favorably considered. Evidence of effective lines of communication and authorities will be evaluated favorably. Resumes that provide evidence of quality maintenance personnel will be evaluated favorably. Deviations will result in an unfavorable evaluation.

Key Subcontractor (Roofing, Mechanical, Electrical) Experience (Tab IV)

The Source Selection Evaluation Board (SSEB) will adjectivally evaluate if the key subcontractor experience provided demonstrates that the subcontractor has constructed projects with similar scope, size, and complexity to the proposed project. Demonstrating the subcontractor has constructed projects with similar scope, size, and complexity to the proposed project is required. Demonstration of experience in completing projects that had unique characteristics of the proposed project will be evaluated favorably (standing-seam metal roof, for example). Experience will not be given consideration unless the project can be shown to be similar to this project considering changes in technology, materials, equipment, codes, etc. Documentation of successful completion of projects similar in nature and scope to this project will be favorably considered in the evaluation. Conversely, proposals that do not include substantial evidence that the offer has experience, qualifications and production capability to successfully prosecute the proposed project will be unfavorably considered. Favorable consideration will be given for successfully completed projects in similar climates. Metric projects will be considered favorably. Prior Government or Corps of Engineers project experience is not required to meet the minimum requirements of this criteria, however, it will be favorably considered.

Key Subcontractor (Roofing, Mechanical, Electrical) Past Performance (Tab V)

The SSEB will adjectivally evaluate past performance on relevant projects provided under TAB IV. The SSEB will evaluate the degree of successful completion of all experience identified in Tab IV above. Documentation of successful completion of projects similar in size, scope, complexity and dollars will be favorably considered. Conversely, offers which do not include substantial evidence of successful completion will not be favorably considered. References and documentation that reflect better than satisfactory past performance will be rated favorably. Conversely, references that reflect below satisfactory past performance will be considered a deficiency. The Government reserves the right to check any or all cited references to verify supplied information and to assess owner satisfaction. The Government may also use other tools to gather information regarding an offeror's past performance.

Key Personnel (Tab VI)

The SSEB will adjectivally evaluate the resumes submitted for this project. The SSEB will evaluate the degrees of qualification and experience. Only one individual for each of the key personnel categories listed above will be evaluated. The SSEB will also evaluate for compliance with registration, degree of qualification and experience, familiarity with local conditions, building codes, etc. The personnel assigned in the proposal shall be utilized on the project. In the event a personnel change is needed, the replacement shall be equal in registration, qualification, and experience. The replacement must be approved by the Contracting Officer. Each individual noted in Section 00115, Tab VI must be submitted as part of the submission by the offeror. If requested individual management personnel specifically for this project are not submitted for evaluation, the offeror's proposal will not be favorably evaluated.

Self-Performed Work (Go/No-Go) (Tab VII)

This factor will be evaluated on a "go, no-go" basis.

4. Subcontracting Plan for Large Business

Subcontracting Information. This factor will be evaluated on a "go, no-go" basis.

4.1. Past Performance on Utilization of Small, Small Disadvantaged and Women-Owned Small Business. The SSEB will evaluate the clarity, adequacy, capabilities and strengths of the offeror's past efforts to comply with FAR Clause 52.219-8, Utilization of Small, Small Disadvantaged and Women-Owned Small Business Concerns, and, if a large business firm, the successes of meeting and /or exceeding the goals on previous projects containing subcontracting plans.

4.2 Subcontracting Plan for Large Business. The plan will be evaluated for acceptability in accordance with AFARS 19.705. To be acceptable, subcontracting plans must:

(a) Adequately address the required statutory elements.

(b) Provide sufficient information to enable the Contracting Office to answer affirmatively questions A through H of Appendix DD (AFARS 19.705).

(c) The Plan will not be adjectivally evaluated, but will be evaluated for acceptability (go, no-go) in accordance with AFARS 19.705. To be acceptable, subcontracting plans must be rated 71 percent or higher under the AFAR evaluation system. Any plan that is rated 70 percent or less under the AFAR evaluation system will be carefully considered for acceptability. If discussions with offerors are necessary, those areas where the plan is deficient will be reviewed with the offeror with the goal of correcting deficiencies. Due to requirements for review of the successful offeror's subcontracting plan by other agencies, the Government reserves the right to negotiate the final plan with the successful offeror before award.

4.3 Past Performance on Utilization: Documentation will not be adjectivally evaluated, but will be evaluated for acceptability (go, no-go) in accordance with Clauses 52.219-8, Utilization of Small Business Concerns, and FAR Clause 52.219-9, Small Business Subcontracting Plan.

5. **PRICE PROPOSAL ANALYSIS**

5.1. After the proposals are quality rated, the proposals are evaluated against price. Price will be checked for fairness and reasonableness through the use of price analysis. Price will also be checked for unbalancing of line items. Offerors are cautioned to distribute costs appropriately. All evaluation factors other than cost or price, when combined, are significantly more important than cost or price.

5.2. Competitive Range (if discussions are opened): The results of the evaluation, together with the price proposal, become the basis for determining the competitive range. The group of offerors that have a reasonable chance of being awarded a contract are in the competitive range and will merit further consideration by the Government. If discussions are necessary, all offerors in the competitive range will be included in discussions. Upon conclusion of discussions, all offerors remaining in the competitive range will be invited to submit their Final Revised Proposal. Following receipt of the Final Revised Proposals, each received offer will be evaluated.

5.3. Cost/Technical Trade-Off Analysis: After all above evaluations are complete, the SSEB will then consider all factors to determine the proposal offering the most advantage to the Government. The SSEB will compare the relative advantages and disadvantages of technical proposals and compare prices.

5.4. Award: An award will be made to that offeror whose proposal, conforming to the solicitation, will be most advantageous to the Government within the available funds. Note: An award may be made on the basis of initial offerors received, without discussions; therefore, the offeror should submit the best initial offer possible.

5.5. Notification: The Government will notify all offerors not selected, advising them of the proposal which was selected. Unsuccessful offerors are invited to request in writing for a debriefing within three (3) days after the date on which that offeror has received notification of contract award.

END OF SECTION 00130

APPENDIX G
SAMPLE SPECIAL CONTRACT CLAUSES

SECTION 00801 – SPECIAL CLAUSES – O&M PHASE

SC-A1. INTRODUCTION. This section contains special contract requirements related to the Operation and Maintenance (O&M) phase of this contract that are not provided in Section 01830 or elsewhere in the contract. After completing construction of the Battle Simulation Center at Fort Lewis, WA, the Contractor shall provide supervision, personnel, equipment, transportation, material, and other items necessary to operate, service and maintain the facility, except as provided in Section 01830 or elsewhere in the contract. During this portion of this contract, professional and non-professional non-personal services will be performed. This is a non-personal services contract, which means that the personnel rendering the services are not subject, either by the contract's terms or by the manner of its administration, to the supervision and control usually prevailing in relationships between the Government and its employees.

SC-A2. PERIOD OF SERVICE. The Contractor shall commence the operations and maintenance (O&M) phase of performance under this contract on the beneficial occupancy date (BOD). The O&M phase of this contract O&M portion of this contract will consist of a base period not-to-exceed (NTE) one year (365 days or 366 in the case of a leap year) after the BOD, and four option periods NTE one year each.. The total O&M performance period shall not exceed five years. The four optional periods may be exercised at time of award or in accordance with clause 52.217-9, Option to Extend the Term of the Contract, in Section 00700 of this contract. Each extension shall be evidenced by modification to this contract, which may include revisions necessitated by statute, executive order, and applicable regulations.

SC-A3. OPTIONAL SERVICES. Clause 52.217-9, Option to Extend the Term of the Contract, will govern exercise of any optional periods that are not part of the initial contract award. During the last option period, if it is necessary to extend the contract, clause 52.217-8, Option to Extend Services, will govern exercise of any extension of services. Both of these clauses are provided in Section 00700 of this contract.

SC-A4. SERVICE CONTRACT ACT (SCA) AND PRICING CHANGES FOR OPTION PERIODS. The SCA applies to all non-professional positions either shown in the SCA wage determination provided in this document or included as additional classification categories requested by the Contractor after award. The SCA wage rates provided during the solicitation phase of the procurement are for pricing purposes. They will also serve as the basis for future adjustments required when revisions to the wage determination are accomplished.

A4.1 Within the six-month period preceding the beginning of the first and each subsequent year of O&M service, the Seattle District Contracting Office will request and obtain from the Department of Labor any updates to the SCA wage determination. If there has been an increase from the rates used at the time of award or in the previous year of service, the Contractor will be provided with the new rates and requested to submit a proposal to reflect any revisions to the item pricing for the applicable O&M line item based upon the new rates. The Contractor's requested revisions shall only reflect changes resulting from the current contract rates, and must not reflect proposed increases to other

cost elements that make up the price for the applicable year of service. New rates for the succeeding 365-day period will be incorporated via modification when required.

SC-A5. INSURANCE - WORK ON A GOVERNMENT INSTALLATION – O&M PHASE. In accordance with FAR 52.228-5 (JAN 1997) in Section 007000, the Contractor shall, at its own expense, provide and maintain during the entire performance period of this Contract the kinds and minimum amounts of insurance stated in Section 00800 – Construction Phase, SC-5.

SC-A6. SUBSTITUTE PERSONNEL AND SUBCONTRACTORS. The Contractor shall hire personnel to serve as the Contractor Facility Manager (CFM) and Alternate CFM for the O&M phase with at least the minimum qualifications and experience stated in the sample resumes provided with the firm's proposal.

A6.1 No later than 30 calendar days prior to the beginning of the O&M phase of this contract, the Contractor shall provide to the Contracting Officer, in writing, the qualifications and experience of the individual who will serve as the CFM and the Alternate CFM. The submission should discuss how the qualifications and experience those of the individuals who will actually perform the work meet and/or exceed those standards identified in the sample resumes.

A6.2 Should the CFM or Alternate CFM leave the project for any reason, the Contractor shall submit for approval the qualifications of replacements. Substitution of these personnel shall require the approval of the Contracting Officer. In the event a personnel change is needed, the replacement shall be equal in qualification and experience.

SC-A7. INVOICING. Within the 30 days prior to the date that begins the O&M phase, the Contractor will be notified of the person and address for submission of invoices. See Specification Section 01270, Payment, and Section 00700, Contract Clauses, for further information on payment for services.

SC-A8. PERFORMANCE EVALUATION OF CONTRACTOR. As a minimum, the Contractor's performance at the end of the construction portion of the contract will be rated in the Corps of Engineers Construction Contract Administration Support System (CCASS). This will be an interim evaluation. At the end of the entire contract, a final overall performance rating will be entered into CCASS. Other interim evaluations may be prepared at any time during contract performance when determined to be in the best interest of the Government.

SC-A9. GOVERNMENT-FURNISHED PROPERTY.

A9.1 No later than the BOD, the Government will furnish the Contractor with the property identified in Section 01830 to be used for performing the O&M phase of the contract (e.g., desk, chair, file storage, etc.). The Government will retain title to the government-furnished property and maintain the Government's official property records in connection with this property.

A9.2 The government property shall be used only for performing this contract. The Contractor shall be responsible and accountable for all government property provided under this contract, and shall use, maintain, protect, and preserve this property with reasonable care. The Contractor is not responsible for reasonable wear and tear to government property or for government property that is properly consumed in performing this contract. However, the Contractor is responsible for loss or destruction of, or damage to, the government property provided under this contract that results from

misconduct or lack of good faith on the part of the Contractor's managerial personnel. If damage occurs to the property, the Government will replace the items or the Contractor shall make such repairs as the Government directs.

A9.3 If the Contractor transfers the government property to the possession and control of a subcontractor, the transfer shall not affect the liability of the Contractor for loss or destruction of, or damage to, the property.

A9.4 The Government and all its designees shall have access at all reasonable times to the premises in which any government property is located for the purpose of inspecting the government property.

A9.5 The Contractor shall leave any government property in place at the completion of contract performance.

END OF SECTION 00801