

SOLICITATION, OFFER, AND AWARD <i>(Construction, Alteration, or Repair)</i>		1. SOLICITATION NO. W917PM-07-R-0085	2. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED 09-Aug-2007	PAGE OF PAGES 1 OF 221
IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.					
4. CONTRACT NO.		5. REQUISITION/PURCHASE REQUEST NO.		6. PROJECT NO.	
7. ISSUED BY AFGHANISTAN ENGINEER DISTRICT US ARMY CORPS OF ENGINEERS KABUL APO AE 09356 TEL: _____ FAX: _____		CODE W917PM	8. ADDRESS OFFER TO <i>(If Other Than Item 7)</i> CODE _____ See Item 7 TEL: _____ FAX: _____		
9. FOR INFORMATION CALL:		A. NAME HAMILTON BATISTA	B. TELEPHONE NO. <i>(Include area code) (NO COLLECT CALLS)</i>		
SOLICITATION					
NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".					
10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS <i>(Title, identifying no., date):</i> The Government intends to award one firm fixed price contract for the design and construction of a new connex office addition in Kabul, Afghanistan. This magnitude of this acquisition is estimated to be between \$250,000 and \$500,000. POC for the solicitation is Hamilton Batista at Hamilton.Batista@tac01.usace.army.mil.					
11. The Contractor shall begin performance within <u>7</u> calendar days and complete it within <u>455</u> calendar days after receiving <input type="checkbox"/> award, <input checked="" type="checkbox"/> notice to proceed. This performance period is <input checked="" type="checkbox"/> mandatory, <input type="checkbox"/> negotiable. (See FAR 52.211-10 .)					
12 A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? <i>(If "YES," indicate within how many calendar days after award in Item 12B.)</i> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				12B. CALENDAR DAYS	
13. ADDITIONAL SOLICITATION REQUIREMENTS: A. Sealed offers in original and <u>1</u> copies to perform the work required are due at the place specified in Item 8 by <u>05:00 PM</u> (hour) local time <u>24 Aug 2007</u> (date). If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due. B. An offer guarantee <input type="checkbox"/> is, <input checked="" type="checkbox"/> is not required. C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference. D. Offers providing less than <u>90</u> calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.					

SOLICITATION, OFFER, AND AWARD (Continued) <i>(Construction, Alteration, or Repair)</i>										
OFFER (Must be fully completed by offeror)										
14. NAME AND ADDRESS OF OFFEROR <i>(Include ZIP Code)</i>					15. TELEPHONE NO. <i>(Include area code)</i>					
					16. REMITTANCE ADDRESS <i>(Include only if different than Item 14)</i>					
					See Item 14					
CODE		FACILITY CODE								
17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. <i>(Insert any number equal to or greater than the minimum requirements stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)</i>										
AMOUNTS		SEE SCHEDULE OF PRICES								
18. The offeror agrees to furnish any required performance and payment bonds.										
19. ACKNOWLEDGMENT OF AMENDMENTS										
<i>(The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each)</i>										
AMENDMENT NO.										
DATE										
20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER <i>(Type or print)</i>					20B. SIGNATURE			20C. OFFER DATE		
AWARD (To be completed by Government)										
21. ITEMS ACCEPTED:										
22. AMOUNT		23. ACCOUNTING AND APPROPRIATION DATA								
24. SUBMIT INVOICES TO ADDRESS SHOWN IN <i>(4 copies unless otherwise specified)</i>				ITEM		25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO				
						<input type="checkbox"/> 10 U.S.C. 2304(c) <input type="checkbox"/> 41 U.S.C. 253(c)				
26. ADMINISTERED BY		CODE		27. PAYMENT WILL BE MADE BY:			CODE			
CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE										
<input type="checkbox"/> 28. NEGOTIATED AGREEMENT <i>(Contractor is required to sign this document and return _____ copies to issuing office.)</i> Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications or incorporated by reference in or attached to this contract.					<input type="checkbox"/> 29. AWARD <i>(Contractor is not required to sign this document.)</i> Your offer on this solicitation, is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.					
30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN <i>(Type or print)</i>					31A. NAME OF CONTRACTING OFFICER <i>(Type or print)</i>					
30B. SIGNATURE					30C. DATE		TEL:		EMAIL:	
					31B. UNITED STATES OF AMERICA BY			31C. AWARD DATE		

Section 00010 - Solicitation Contract Form

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RFP for GEODESY House Connex Building
Kabul. Afghanistan

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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Design FFP FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002	Site Development FFP Grading and demolition FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003	Office Building FFP FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004	Generator and Pad FFP FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005	Fuel Storage Tank FFP FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006	Walkway Connection FFP FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007	Miscellaneous FFP FOB: Destination				

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007AA	Power Connection FFP FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007AB	Earth Work FFP Restore grass area. FOB: Destination	1	Lump Sum		

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007AC	Trash Collection Point FFP FOB: Destination	1	Lump Sum		

NET AMT

PROPOSAL SCHEDULE NOTES

PROPOSAL SCHEDULE NOTES

1. Offeror shall submit prices on all items.
2. Only one contract for the entire schedule will be awarded under this solicitation. This project will be awarded as a lump sum contract. This Proposal Schedule is an accounting tool for allocating funds to applicable budget.
3. Costs associated with this project shall include design and construction costs for uxo removal, site development, and utility installation.
4. DESIGN COSTS DEFINITION: Design costs shall consist of preparation of master planning and site designs, plans, drawings, and specifications.
5. NON-DESIGN COSTS DEFINITION: Non-design costs shall include the following: initial site visits; field, topographic, property, boundary, utility, and right-of-way surveys; subsurface explorations and borings; feasibility, functional, and economic studies and other investigations; flow gauging and model testing; preparation or verification of as-built drawings; preparation of general and development criteria; preparation of general and feature design memoranda; services of consultants where not specifically applied to the preparation of working drawings or specifications; construction phase services; models, renderings, or photographs of completed designs; reproduction of designs for review purposes; and travel and per diem allowances in connection with the above excludable services.
6. COST LIMITATION: The established design cost limitation for all Design Costs, as defined in paragraph 4, shall not exceed 6 percent of the total construction cost.
7. SEPARATION OF WORK: All work for Design and Construction shall be included in all Proposal Items.

CLAUSE CAVEATS

Section 100 – 52.222-23

Section 600 – 52.222-22

Section 700 – 52.222-21, 26, 27, 29, 35, 36, 37

“Only applicable if contractor recruits personnel within the US.”

252.247-7024 “Only applicable if contractor gave a negative response to 252.247-7022.”

52.204-3, 52.232-38, 52.204-6, 252.204-7001, 52.232-34

“Only applicable to contractors that are not to be registered in the CCR database.”

52.232-33, 252.204-7004)“Only applicable to contractors that are to be registered in the CCR database.”

252.229-7000, 252.229-7001

“Only applicable if contractor is a foreign concern.”

Section 00100 - Bidding Schedule/Instructions to Bidders

SECTION 00100

INSTRUCTIONS TO OFFERORS

1. The estimated cost range of this project in accordance with FAR 36.204, Disclosure of magnitude of construction projects, is estimated to be between \$250,000 and \$500,000.

2. PROPOSAL CHECKLIST – “MINIMUM CONTENT”

The following items or “minimum contents” are required to be submitted with and made a part of each offeror's proposal. Extreme care and personal attention should be given to assure that all required items are included in the proposal. A space is provided beside each item for checking as each action is completed. You must submit an original and three (3) complete copies of your proposal. Also, provide one CDROM of your proposal.

PRICE/CERTIFICATION SUBMITTAL (See Section 00120):

- a. Signed Solicitation, Offer and Award, SF 1442 with Blocks 14-20c completed, including acknowledgment of all amendments
- b. Completed Proposal Schedule
- c. Completed Representations and Certifications

TECHNICAL SUBMITTAL (See Section 00110)

- a. Past performance
- b. Construction Experience
- c. Project Management Plan
- d. Personnel and Equipment Resource Commitment

(End of Instruction)

3. Requests for information must be directed to James Sinclair, Contracting Officer. Please email all questions to James.R.Sinclair@tac01.usace.army.mil.

4. Proposals should be delivered to: U.S. Army Corps of Engineers, House #1 Street #1, West Wazir Akbar Khan (behind Amani High School), Kabul, Afghanistan, Attn: James Sinclair, prior to the time and date specified for receipt of proposals. Due to heightened security conditions, access to the building is controlled by security. **Electronic proposals will not be accepted.**

5. Please note, to receive a DUNS number access the website below:

INTERNATIONAL DUNS REQUEST INFORMATION:

Please click on the link below and fill in the International DUNS Request form.

<http://www.dnb.com/upik/uk/intldunsform.asp?link=request>

If you have problems with the form or require a DUNS number immediately, please contact your local D&B Office which can be found by clicking through this link.

http://www.dnb.com/US/customer_service/global_listing.asp

6. Contractors not having done business with USACE before shall fill out and submit the wire transfer form below:

WIRE TRANSFER AUTHORIZATION FORM

PRIVACY ACT STATEMENT

The following information is provided to comply with the Privacy Act of 1974 (P.L. 93-579). All information collected on this form is required under the provisions of 31 U.S.C 3322 and 31 CFR 210. This information will be used by the U.S. Army Corps of Engineers, hereinafter called USACE, to transmit data by electronic means to vendor's financial institution. Failure to provide the requested information may delay or prevent the receipt of payments.

I hereby authorize USACE to initiate direct deposit credit entries to my (our) account indicated below and the financial institution named below, hereinafter called DEPOSITORY, to credit the same to such account.

Name or (Company as shown on invoice) (1)			
Address: (2)			
City: (3)	State:	Country:	Postal Code:
Mailing Address (If different): (4)			
Daytime Phone or Email Address: (5)			

Contract # (Optional):
If more than one contract, please list on a separate sheet.

Name of Financial Institution: (6)			
Address: (7)			
City: (8)	State:	Country:	Postal Code:
SWIFT (BIC) Number: (9)			
Account Number: (10)			
Depositor Account Title: (11)			

Name of Corresponding Bank: (12)			
Address: (13)			
City: (14)	State:	Country:	Postal Code:
SWIFT (BIC) Number: (15)		ABA Number:	
Account Number of Bank listed above: (16)			

Name of Corresponding Bank: (17)			
Address: (18)			
City: (19)	State:	Country:	Postal Code:
SWIFT (BIC) Number: (20)		ABA Number:	
Account Number of Bank listed above: (21)			

SIGNATURE of Payee: _____ DATE: _____

INSTRUCTIONS FOR COMPLETING WIRE TRANSFER AUTHORIZATION FORM

1. Include the name or Company as it appears on the invoice. This should be the same as the name on the contract.
2. This address should be the physical address of the business.
3. The city, state, country and postal code should be for the physical address.
4. The mailing address should include any and all Remit to/payment addresses that are different from the physical address.
5. Include daytime phone number or email address in case there are questions concerning the completed form.

Payee's Banking Information:

6. The name of the bank for the person or company listed in block 1.
7. Bank address and e-mail address
8. City, state, country, and postal code of the bank.
9. The SWIFT or Bank Identifier Code (BIC) of the bank.
10. The account number at this bank of the person or company listed in block 1.
11. Exact name on the above account at this bank. Bank will not credit the account if the recipient of the wire transfer is different than the name on the account.

1st Corresponding Bank:

12. Name of corresponding bank. If this bank is not located in the United States, completion of blocks 17 – 21 is also required.
13. Address of corresponding bank and e-mail address.
14. City, state, country and postal code of corresponding bank.
15. SWIFT or Bank Identifier Code (BIC) (if bank is located outside the US) or ABA number of corresponding bank.
16. Account number at corresponding bank of bank listed in block 6.

2nd Corresponding Bank:

17. Additional corresponding bank if first corresponding bank is not located in the United States.
 18. Address of this corresponding bank and e-mail address.
 19. City, state, country, and postal code of this corresponding bank.
 20. SWIFT (BIC) code or ABA number of this corresponding bank.
 21. Account number at this corresponding bank of the bank listed in block 12.

Blocks 17 thru 21 will only be necessary if the first corresponding bank is not located in the United States.

*Note the last corresponding bank listed on the form must be a bank located in the United States.

SECTION 00110

SECTION 00110
PROPOSAL PREPARATION

PART 1 – GENERAL

A. PROPOSAL PREPARATION. Instructions for the preparation and organization of each proposal are included herein. The proposal submittal shall include one original and three copies of the Volume I and one original and two copies of the Volume II proposal. Volume I and Volume II shall be clearly marked and sealed. The proposal shall be submitted as required herein and elsewhere in the solicitation.

Volume I shall be typed, with numbered pages and sections tabbed. A cover sheet shall identify the offeror and the project and the second sheet shall be a table of contents. The Volume I proposal is limited to no more than 50 single-sided or 25 double-sided pages, printed on 8-1/2" x 11" sheets, not including the cover sheet, designs/sketches, table of contents and letters of recommendation / evaluations / related certificates. Do not use condensed print. Do not submit any extraneous materials with your proposal.

Note: Templates. Model templates are provided in this RFP as a possible format available to assist offerors in the preparation of their proposals. Use of the template format is not required. Sections 110 and 120 of this RFP govern and the templates do not supplant or substitute the requirements stated in these sections.

B. PROPOSAL EVALUATION & AWARD:

B.1 Proposals will be evaluated based on their technical merit of acceptability and lowest price for the work described herein. Award will be made to the offeror whose proposal is technically acceptable and is the lowest priced benefit to the Government. The technical factors of Factor 1-Past Performance; Factor 2- Construction Experience; Factor 3- Project Management and Factor 4- Personnel and Equipment Resources will be evaluated, as described below, for an acceptable or unacceptable technical rating. To be considered technically acceptable an offeror must be acceptable for all factors.

B.2 VOLUME I – MANAGEMENT-TECHNICAL PROPOSAL PREPARATION. The Management/Technical proposal shall include the information as described below and shall be presented in the sequence listed.

Factor 1- Past Performance: For the projects listed under Factor 2, - Experience, provide the following information:

- Customer Point of Contact (name, telephone, email) for performance information
- List the problems encountered and the corrective actions taken
- List of change orders and circumstances associated with them
- Construction time duration beyond the original performance period and why.
- Construction cost in dollars beyond the original contract amount and why.
- Safety record and accident report

The offeror may also provide letters of recommendation, references, performance evaluations or other evidence of successful performance of the project.

Factor 2- Construction Experience: Demonstrate the experience of the team, including sub-contractors, on projects similar to that described in this RFP. Provide a list of no more than five similar and relevant projects underway or completed in the last four years that best demonstrates your experience. The list of projects shall include the following information:

- Project name and location.
- Nature of firm's responsibility (prime or subcontractor).
- Project owner's name, address, telephone, email (to be contacted by the Government).
- Project completion date and duration (estimated if in progress)
- Construction cost
- Brief explanation that illustrates the capabilities of the contractor or joint-venture and relevant job experiences.

Factor 3 - Project Management Plan: The Project Management Plan shall include the following:

- Procedures used to manage the construction process. Include a discussion of management of concurrent work at multiple job sites.
- Provide an organization chart.
- Quality control and safety management processes.
- Process to control cost and schedule growth.
- Interaction process with the Corps of Engineers and the roles that the team members will have in dealing with significant issues.
- Logistics Management - procedures for ordering and timely delivery of construction supplies. Include a plan to support concurrent construction at multiple sites.

Do NOT provide biographical information in this section.
Limit discussion to no more than ten pages.

Factor 4 – Personnel and Equipment Resources Plan: Provide professional resume data on the following individuals who will be key personnel on the project team. Key personnel identified in this section should be senior working-level people who will be involved in design and construction on a day-to-day basis, as opposed to departmental level supervisors or executives. By identifying these personnel, the offeror makes a commitment that, barring unforeseen circumstances; they are the personnel who shall be assigned to the project. All key personnel shall have a minimum of **five** years of professional experience.

- Project Manager for design and for construction
- Quality Control Manager
- Project Architect
- Senior Structural Engineer
- Senior Civil Engineer
- Senior Mechanical Engineer
- Senior Electrical Engineer
- Fire Protection Engineer
- Construction Superintendent
- Construction Foreman (if different from above)

Information to be provided for key personnel should be limited to no more than one page per person and shall include:

- Name and title
- Project assignment
- Name of firm with which associated
- Years experience with this firm and with other firms
- Education degree(s), year, specialization

- Active registration, year first registered
- Other experience and qualifications relevant to the proposed project
- Provide the proposed use of Afghan contractors and labor in numbers or percentages.

Provide equipment resources to be utilized for this project (i.e. offices, shops, warehouses, machinery, construction tools, vehicles, loaders, etc.) and other resources (i.e. cooperating companies supplying materials and/or services)

B.3 VOLUME II - COST/PRICE PROPOSAL PREPARATION

Proposal Schedule. Offerors shall provide a signed cover letter and complete the Proposal Schedule by filling out the pricing data blanks. An executable Proposal Schedule is included in Section 00010 herein. Overhead and profit and all other costs associated with the execution of this project shall be applied proportionally to each category and shall not be required to be shown separately. All costs and prices shall be firm-fixed.

Cost/Price Supporting Information. In addition to the completed pricing schedule, the contractor shall provide supporting information in the way of cost breakdowns and assumptions made in determining the proposed prices for this project.

B.4 CLARIFICATIONS AND PROPOSAL REVISION:

Clarifications Prior to Proposal Due Date: In the event that clarifications are required prior to submitting the proposal, contact the individuals listed on the solicitation. Any changes made to the solicitation will be made via an amendment which will be disseminated amongst all the interested offerors.

Initial Offer: The Government intends to award a contract on the basis of the initial offers received without further discussions or negotiations. Offers should contain the offeror's best terms from a cost and management standpoint.

- End of Section -

SECTION 00120

SECTION 00120

PROPOSAL EVALUATION AND CONTRACT AWARD

PART 1 – GENERAL

A. BASIS FOR AWARD: Award will be made on the basis of the lowest evaluated price of proposals meeting or exceeding the acceptability standards for non-cost factors. Tradeoffs are not permitted. Proposals are evaluated for acceptability but not ranked using non-cost/price factors.

B. EVALUATION OF FACTORS: Evaluation will be performed on each proposal. The Evaluation Factors for Award are outlined below: The proposal that provides the lowest price that is considered to be fair and reasonable will be evaluated to determine if it is technically acceptable. To be considered technically acceptable, no technical factor in the proposal may be determined to be unacceptable.

B.1 FACTORS: The Technical Factors are comprised of:

Past Performance; Construction Experience and Project Management, and Personnel and Equipment Resources. The failure of a proposal to meet any of the factors will result in a technically unacceptable rating and preclude award to the offeror submitting the proposal.

C. PROPOSAL EVALUATION.

VOLUME 1 – MANAGEMENT-TECHNICAL PROPOSAL.

Factor 1 – Past Performance. This factor may be evaluated by contacting references for **customer satisfaction** and review of **quality performance** evaluations or other information provided by the offeror or obtained by the Government. The evaluators will consider the **relevance** of the past performance information and the success achieved on past projects to determine the rating. In the event that an offeror does not have a record of past performance evaluations, a written explanation of the reasons why no record is available is requested. In the case of an offeror without a record of relevant past performance evaluations or for whom information on past performance is not available, a neutral rating will be assigned.

The information provided will be used to evaluate the relevancy of each offeror's construction experience. Qualifying project(s) shall have been awarded within the past three years. Relevancy for an incomplete project will depend upon the status of the physical completion of the project. Those closer to physical completion will be considered more relevant. Offerors are responsible for providing project descriptions in sufficient detail to permit evaluation of project relevancy. An English speaking representative and phone number must be included with every project listed.

Factor 2 - Construction Experience. The Government will evaluate the relevant work experience of the contractor's company and designer, including subcontractors, on projects similar to that described in this RFP. Contractor experience with similar relevant projects (type of construction, dollar value, design-build method, complexity) will have a better chance to receive an acceptable rating than those with dissimilar or non-relevant projects.

Factor 3 – Project Management Plan. The Government will evaluate the Project Management Plan which will include the contractor's construction management process, the company's quality control and safety management procedures, its ability to control cost and schedule growth, its ability to resolve problems, a description of its interactions with the Corps of Engineers, and its logistics management capabilities. The Plan will also address how the offeror will adequately manage the project described in this RFP in light of any other ongoing projects and contractual commitments it may have within Afghanistan. The less convincing the evidence, the more likely the Project Management Plan will be considered unacceptable. Deviations from RFP requirements or technical specifications may result in an unacceptable rating.

Factor 4 – Personnel and Equipment Resources Plan.

Personnel. The Government will evaluate the qualifications and experience of contractor's personnel for this project. Contractor personnel with experience that is associated with **similar and relevant** projects (type of construction, dollar value, design-build method, complexity) will have a better chance to receive an acceptable rating than those with dissimilar or non-relevant project experience. Proposals will also address how the offeror will have adequate personnel for the project described in this RFP in light of any other ongoing projects and contractual commitments it may have within Afghanistan. The contractor's utilization of Afghan personnel will also be evaluated.

Equipment Resources- The Government will evaluate the adequacy of the offeror's equipment resources to successfully complete the project. Proposals will also address how the offeror will have adequate equipment for the project described in this RFP in light of any other ongoing projects and contractual commitments it may have within Afghanistan.

C.1 Each offeror's proposal shall receive a technical evaluation of the offeror's Past Performance; Construction Experience, Project Management and Personnel and Equipment Resources. Each factor (evaluation criteria) will receive an rating of either acceptable or unacceptable.

D. VOLUME II - COST/PRICE PROPOSAL PREPARATION. Price or cost to the Government will be evaluated and considered, but will not receive an actual rating or be combined with other aspects of the proposal evaluation. The proposed price will be analyzed for fairness and reasonableness. It may also be evaluated to determine whether it is realistic for the work to be performed; reflects the Contractor's clear understanding of the requirements; and is consistent with the offeror's technical proposal. Additionally, all offers with separately priced line items will be reviewed for unbalanced pricing.

E. METHOD OF PROPOSAL EVALUATION

E.1 Proposals will be reviewed to determine if they contain the required minimum procurement and technical data.

Incomplete proposals may be eliminated. All forms shall be filled in and all requested data must be provided.

E.2 The Government may reject any or all proposals and waive minor irregularities in proposals.

E. 3 SELECTION and AWARD. Award will be made to the offeror that, in the judgment of the Contracting Officer, is technically acceptable and provides the lowest price that is considered to be fair and reasonable.

-- End of Section --

SECTION 00555

**SECTION 00555
DESIGN CONCEPT DOCUMENTS**

PART 1 GENERAL

1.1 GENERAL

This section identifies documents issued with this RFP which establish the concept or basis for the project design. These requirements are minimum standards and may be exceeded by the Offeror. Deviations from these concepts and standards may be approved if considered by the Government to be in its best interests.

The extent of development of these requirements in no way relieves the successful Offeror from the responsibility of completing the design, construction documentation, and construction of the facility in conformance with applicable criteria and codes.

1.2 ENGINEERING AND DESIGN CRITERIA

General design requirements are set forth in this RFP herein. The Specifications Divisions 02 thru 16 are the primary specifications criteria for the design and construction of the project. No design criteria will be furnished by the Afghanistan Engineer District except that which may be required for design and is not available from commercial sources or from the Construction Criteria Base (CCB) or 'Techinfo' website located at <http://www.wbdg.org/ccb/>. The references within CCB must be obtained by the A/E if the criteria are required or desired. All design, unless otherwise specified, shall be based on nationally recognized industry standard, criteria, and practice.

1.3 APPENDIX DOCUMENTS

See Appendices for further technical requirements, criteria and parameters that are a part of this contract.

1.4 SPECIFICATIONS

Specifications included herein shall be utilized as design criteria and minimum standards for the corresponding construction work. The successful Offeror shall develop complete construction specifications using the criteria included in these specifications.

The Government will provide Division 1 specifications sections as required, to the successful Offeror; and these sections shall be included in the final construction specifications without change. The Design Build Contractor shall furnish these specifications on electronic media for the production of construction specifications. These specifications shall be submitted together with other required contractor

prepared project construction documents during the Second Design Submittal of the Design Phase, Part II.

1.5 ORDER OF PRECEDENCE

In case of conflict, duplication, or overlap of design criteria specified in the documents referenced in this section, the following order of precedence shall be followed:

1. General written design requirements within RFP narrative.
2. General guidance from referenced publications herein.
3. Drawings.

1.6 MANDATORY CRITERIA

Portions of the design criteria documents provide mandatory criteria. Mandatory criteria consists of drawings, schematics, specifications, and other requirements which shall not be altered or modified for proposal submittal or subsequent final design except for minor adjustments for coordination or except for cost reduction proposals as specified in Section 00150 - THE DESIGN BUILD PROCESS. Non-mandatory criteria shall be considered minimum requirements and may be enhanced, improved, or substituted to better suit design requirements or to improve evaluation consideration.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

CLAUSES INCORPORATED BY REFERENCE

52.204-6	Data Universal Numbering System (DUNS) Number	OCT 2003
52.214-34	Submission Of Offers In The English Language	APR 1991
52.214-35	Submission Of Offers In U.S. Currency	APR 1991
52.215-1	Instructions to Offerors--Competitive Acquisition	JAN 2004
52.222-38	Compliance With Veterans' Employment Reporting Requirements	DEC 2001
52.236-28	Preparation of Proposals--Construction	OCT 1997
252.204-7001	Commercial And Government Entity (CAGE) Code Reporting	AUG 1999

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52.214-5000 APPARENT CLERICAL MISTAKES (MAR 1995)--EFARS

(a) For the purpose of initial evaluations of bids, the following will be utilized in the resolving arithmetic discrepancies found on the face of bidding schedule as submitted by the bidder:

- (1) Obviously misplaced decimal points will be corrected;
- (2) Discrepancy between unit price and extended price, the unit price will govern;
- (3) Apparent errors in extension of unit prices will be corrected;
- (4) Apparent errors in addition of lump-sum and extended prices will be corrected.

(b) For the purpose of bid evaluation, the government will proceed on the assumption that the bidder intends his bid to be evaluated on basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

(c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

(End of statement)

52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)

(a) Exceptions from cost or pricing data. (1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Commercial item exception. For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities;

(B) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market;

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or

regulation, access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the offeror is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The offeror shall prepare and submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(End of provision)

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a Firm Fixed Price contract resulting from this solicitation.

(End of clause)

52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 1999)

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade
Please contact the Office of Federal Contract Compliance Programs as appropriate.	Please contact the Office of Federal Contract Compliance Programs as appropriate.

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4.

Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the --

(1) Name, address, and telephone number of the subcontractor;

(2) Employer's identification number of the subcontractor;

(3) Estimated dollar amount of the subcontract;

(4) Estimated starting and completion dates of the subcontract; and

(5) Geographical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is **Afghanistan**.

(End of provision)

52.232-2 PAYMENTS UNDER FIXED-PRICE RESEARCH AND DEVELOPMENT CONTRACTS (APR 1984)

The Government shall pay the Contractor, upon submission of proper invoices or vouchers, the prices stipulated in this contract for work delivered or rendered and accepted, less any deductions provided in this contract. Unless otherwise specified, payment shall be made upon acceptance of any portion of the work delivered or rendered for which a price is separately stated in the contract.

(End of clause)

52.236-27 SITE VISIT (CONSTRUCTION) (FEB 1995) – ALTERNATE I (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

(b) An organized site visit has been scheduled for--

Not Applicable

(c) Participants will meet at--

Not Applicable

(End of provision)

52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<http://farsite.hill.af.mil/>

(End of provision)

52.252-5 AUTHORIZED DEVIATIONS IN PROVISIONS (APR 1984)

(a) The use in this solicitation of any Federal Acquisition Regulation (48 CFR Chapter 1) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the provision.

(b) The use in this solicitation of any Defense FAR supplement (48 CFR Chapter 2) provision with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of provision)

Section 00600 - Representations & Certifications

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52.203-11	Certification And Disclosure Regarding Payments To Influence Certain Federal Transactions	SEP 2005
52.222-38	Compliance With Veterans' Employment Reporting Requirements	DEC 2001
252.209-7001	Disclosure of Ownership or Control by the Government of a Terrorist Country	OCT 2006
252.225-7031	Secondary Arab Boycott Of Israel	JUN 2005
252.225-7042	Authorization to Perform	APR 2003

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52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that --

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to --

(i) Those prices,

(ii) The intention to submit an offer, or

(iii) The methods of factors used to calculate the prices offered:

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory --

(1) Is the person in the offeror's organization responsible for determining the prices offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision _____ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of clause)

52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (SEP 2005)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this Certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989,--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of this contract.

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.

(End of provision)

52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions.

Common parent, as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

Taxpayer Identification Number (TIN), as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

___ TIN:.....

___ TIN has been applied for.

___ TIN is not required because:

___ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

___ Offeror is an agency or instrumentality of a foreign government;

___ Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

___ Sole proprietorship;

___ Partnership;

___ Corporate entity (not tax-exempt);

___ Corporate entity (tax-exempt);

___ Government entity (Federal, State, or local);

___ Foreign government;

___ International organization per 26 CFR 1.6049-4;

___ Other.....

(f) Common parent.

___ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

___ Name and TIN of common parent:

Name.....

TIN.....

(End of provision)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is ----- [insert NAICS code].

(2) The small business size standard is ----- [insert size standard].

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (c) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (b) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

Paragraph (c) applies.

Paragraph (c) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at <http://orca.bpn.gov>. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause	Title	Date	Change
-----	-----	-----	-----
-----	-----	-----	-----
-----	-----	-----	-----

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

(End of Provision)

52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 2001)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that-

(i) The Offeror and/or any of its Principals-

(A) Are () are not () presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have () have not (), within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are () are not () presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.

(ii) The Offeror has () has not (), within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

(a) () It has, () has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) () It has, () has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

52.230-1 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION (JUN 2000)

Note: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

If the offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

I. DISCLOSURE STATEMENT--COST ACCOUNTING PRACTICES AND CERTIFICATION

(a) Any contract in excess of \$500,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.

(b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless the offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

CAUTION: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:

(1) Certificate of Concurrent Submission of Disclosure Statement.

The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows: (i) original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable, and (ii) one copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: _____ Name and Address of Cognizant ACO or Federal Official Where Filed: _____

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

(2) Certificate of Previously Submitted Disclosure Statement.

The offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: _____ Name and Address of Cognizant ACO or Federal
Official Where Filed: _____

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

(3) Certificate of Monetary Exemption.

The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling more than \$50 million (of which at least one award exceeded \$1 million) in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

(4) Certificate of Interim Exemption.

The offeror hereby certifies that (i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 48 CFR 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

CAUTION: Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of \$50 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

II. COST ACCOUNTING STANDARDS--ELIGIBILITY FOR MODIFIED CONTRACT COVERAGE

If the offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.

() The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$50 million in awards of CAS-covered prime contracts and subcontracts. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

CAUTION: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$50 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of \$25 million or more.

III. ADDITIONAL COST ACCOUNTING STANDARDS APPLICABLE TO EXISTING CONTRACTS

The offeror shall indicate below whether award of the contemplated contract would, in accordance with subparagraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

() YES () NO

(End of clause)

252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it:

___ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

___ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

(End of provision)

Section 00700 - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	SEP 2006
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	SEP 2005
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	SEP 2006
52.215-2	Audit and Records--Negotiation	JUN 1999
52.215-11	Price Reduction for Defective Cost or Pricing Data-- Modifications	OCT 1997
52.215-13	Subcontractor Cost or Pricing Data--Modifications	OCT 1997
52.215-15	Pension Adjustments and Asset Reversions	OCT 2004
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions	JUL 2005
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data--Modifications	OCT 1997
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	APR 2002
52.222-27	Affirmative Action Compliance Requirements for Construction	FEB 1999
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	SEP 2006
52.225-13	Restrictions on Certain Foreign Purchases	FEB 2006
52.225-14	Inconsistency Between English Version And Translation Of Contract	FEB 2000
52.227-4	Patent Indemnity--Construction Contracts	APR 1984
52.228-3	Worker's Compensation Insurance (Defense Base Act)	APR 1984
52.229-6	Taxes--Foreign Fixed-Price Contracts	JUN 2003
52.232-5	Payments under Fixed-Price Construction Contracts	SEP 2002
52.232-17	Interest	JUN 1996
52.232-27	Prompt Payment for Construction Contracts	SEP 2005
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.232-38	Submission of Electronic Funds Transfer Information with Offer	MAY 1999
52.233-1	Disputes	JUL 2002
52.233-3	Protest After Award	AUG 1996
52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.236-2	Differing Site Conditions	APR 1984
52.236-3	Site Investigation and Conditions Affecting the Work	APR 1984
52.236-5	Material and Workmanship	APR 1984

52.236-6	Superintendence by the Contractor	APR 1984
52.236-7	Permits and Responsibilities	NOV 1991
52.236-8	Other Contracts	APR 1984
52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements	APR 1984
52.236-10	Operations and Storage Areas	APR 1984
52.236-11	Use and Possession Prior to Completion	APR 1984
52.236-12	Cleaning Up	APR 1984
52.236-13 Alt I	Accident Prevention (Nov 1991) - Alternate I	NOV 1991
52.236-15	Schedules for Construction Contracts	APR 1984
52.236-17	Layout of Work	APR 1984
52.236-21 Alt I	Specifications and Drawings for Construction (Feb 97) - Alternate I	APR 1984
52.236-23	Responsibility of the Architect-Engineer Contractor	APR 1984
52.236-24	Work Oversight in Architect-Engineer Contracts	APR 1984
52.236-25	Requirements for Registration of Designers	JUN 2003
52.236-26	Preconstruction Conference	FEB 1995
52.242-13	Bankruptcy	JUL 1995
52.242-14	Suspension of Work	APR 1984
52.243-4	Changes	AUG 1987
52.243-6	Change Order Accounting	APR 1984
52.244-4	Subcontractors and Outside Associates and Consultants (Architect-Engineer Services)	AUG 1998
52.244-5	Competition In Subcontracting	DEC 1996
52.246-21	Warranty of Construction	MAR 1994
52.247-34	F.O.B. Destination	NOV 1991
52.247-63	Preference For U.S. Flag Air Carriers	JUN 2003
52.248-3	Value Engineering-Construction	SEP 2006
52.249-2 Alt I	Termination for Convenience of the Government (Fixed-Price) (May 2004) - Alternate I	SEP 1996
52.249-10	Default (Fixed-Price Construction)	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.201-7000	Contracting Officer's Representative	DEC 1991
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	DEC 2004
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	DEC 2006
252.215-7000	Pricing Adjustments	DEC 1991
252.215-7002	Cost Estimating System Requirements	DEC 2006
252.222-7002	Compliance With Local Labor Laws (Overseas)	JUN 1997
252.223-7002	Safety Precautions For Ammunition And Explosives	MAY 1994
252.223-7003	Changes In Place Of Performance--Ammunition And Explosives	DEC 1991
252.223-7004	Drug Free Work Force	SEP 1988
252.225-7005	Identification Of Expenditures In The United States	JUN 2005
252.225-7041	Correspondence in English	JUN 1997
252.227-7013	Rights in Technical Data--Noncommercial Items	NOV 1995
252.227-7022	Government Rights (Unlimited)	MAR 1979
252.227-7023	Drawings and Other Data to become Property of Government	MAR 1979
252.227-7030	Technical Data--Withholding Of Payment	MAR 2000
252.227-7033	Rights in Shop Drawings	APR 1966
252.231-7000	Supplemental Cost Principles	DEC 1991
252.232-7003	Electronic Submission of Payment Requests	MAY 2006
252.232-7008	Assignment of Claims (Overseas)	JUN 1997

252.232-7010	Levies on Contract Payments	DEC 2006
252.233-7001	Choice of Law (Overseas)	JUN 1997
252.236-7000	Modification Proposals-Price Breakdown	DEC 1991
252.236-7008	Contract Prices-Bidding Schedules	DEC 1991
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

CLAUSES INCORPORATED BY FULL TEXT

52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)

(a) The Contractor shall make the following notifications in writing:

(1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.

(2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall--

(1) Maintain current, accurate, and complete inventory records of assets and their costs;

(2) Provide the ACO or designated representative ready access to the records upon request;

(3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and

(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

(End of clause)

52.222-29 NOTIFICATION OF VISA DENIAL (JIUN 2003)

It is a violation of Executive Order 11246 for a Contractor to refuse to employ any applicant or not to assign any person hired in the United States, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, or Wake Island, on the basis that the individual's race, color, religion, sex, or national origin is not compatible with the policies of the country where or for whom the work will be performed (41 CFR 60-1.10). The Contractor shall notify the U.S. Department of State, Assistant Secretary, Bureau of Political-Military Affairs (PM), 2201 C Street NW., Room 6212, Washington, DC 20520, and the U.S. Department of Labor, Deputy Assistant Secretary for Federal Contract Compliance, when it has knowledge of any employee or potential employee being denied an entry visa to a country where this contract will be performed, and it believes the denial is attributable to the race, color, religion, sex, or national origin of the employee or potential employee.

(End of clause)

52.232-34 PAYMENT BY ELECTRONIC FUNDS TRANSFER—OTHER THAN CENTRAL CONTRACTOR REGISTRATION (MAY 1999)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT) except as provided in paragraph (a)(2) of this clause. As used in this clause, the term "EFT" refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either-

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend payment due dates until such time as the Government makes payment by EFT (but see paragraph (d) of this clause).

(b) Mandatory submission of Contractor's EFT information. (1) The Contractor is required to provide the Government with the information required to make payment by EFT (see paragraph (j) of this clause). The Contractor shall provide this information directly to the office designated in this contract to receive that information (hereafter: "designated office") by no later than 15 days prior to submission of the first request for payment. If not otherwise specified in this contract, the payment office is the designated office for receipt of the Contractor's EFT information. If more than one designated office is named for the contract, the Contractor shall provide a separate notice to each office. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the designated office(s).

(2) If the Contractor provides EFT information applicable to multiple contracts, the Contractor shall specifically state the applicability of this EFT information in terms acceptable to the designated office. However, EFT information supplied to a designated office shall be applicable only to contracts that identify that designated office as the office to receive EFT information for that contract.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. (1) The Government is not required to make any payment under this contract until after receipt, by the designated office, of the correct EFT payment information from the Contractor. Until receipt of the correct EFT information, any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(2) If the EFT information changes after submission of correct EFT information, the Government shall begin using the changed EFT information no later than 30 days after its receipt by the designated office to the extent payment is made by EFT. However, the Contractor may request that no further payments be made until the updated EFT information is implemented by the payment office. If such suspension would result in a late payment under the prompt payment terms of this contract, the Contractor's request for suspension shall extend the due date for payment by the number of days of the suspension.

(e) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

(i) Making a correct payment;

(ii) Paying any prompt payment penalty due; and

(iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment and the provisions of paragraph (d) shall apply.

(f) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(g) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall provide the EFT information required by paragraph (j) of this clause to the designated office, and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(h) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information provided by the Contractor's financial agent.

(i) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address in the contract.

(j) EFT information. The Contractor shall provide the following information to the designated office. The Contractor may supply this data for this or multiple contracts (see paragraph (b) of this clause). The Contractor shall designate a single financial agent per contract capable of receiving and processing the EFT information using the EFT methods described in paragraph (c) of this clause.

(1) The contract number (or other procurement identification number).

(2) The Contractor's name and remittance address, as stated in the contract(s).

(3) The signature (manual or electronic, as appropriate), title, and telephone number of the Contractor official authorized to provide this information.

(4) The name, address, and 9-digit Routing Transit Number of the Contractor's financial agent.

(5) The Contractor's account number and the type of account (checking, saving, or lockbox).

(6) If applicable, the Fedwire Transfer System telegraphic abbreviation of the Contractor's financial agent.

(7) If applicable, the Contractor shall also provide the name, address, telegraphic abbreviation, and 9-digit Routing Transit Number of the correspondent financial institution receiving the wire transfer payment if the Contractor's financial agent is not directly on-line to the Fedwire Transfer System; and, therefore, not the receiver of the wire transfer payment.

(End of clause)

52.236-1 PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984)

The Contractor shall perform on the site, and with its own organization, work equivalent to at least Twelve (12%) percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

(End of clause)

52.249-5000 BASIS FOR SETTLEMENT OF PROPOSALS

Actual costs will be used to determine equipment costs for a settlement proposal submitted on the total cost basis under FAR 49.206-2(b). In evaluating a terminations settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

(c) Actual costs for each piece of equipment, or groups of similar serial or series equipment, need not be available in the contractor's accounting records to determine total actual equipment costs.

(d) If equipment costs have been allocated to a contract using predetermined rates, those charges will be adjusted to actual costs.

(3) Recorded job costs adjusted for unallowable expenses will be used to determine equipment operating expenses.

(4) Ownership costs (depreciation) will be determined using the contractor's depreciation schedule (subject to the provisions of FAR 31.205-11).

(5) License, taxes, storage and insurance costs are normally recovered as an indirect expense and unless the contractor charges these costs directly to contracts, they will be recovered through the indirect expense rate.

(End of Clause)

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://farsite.hill.af.mil/>

(End of clause)

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense FAR supplement (48 CFR Chapter 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

(End of clause)

252.204-7004 CENTRAL CONTRACTOR REGISTRATION (52.204-7) ALTERNATE A (NOV 2003)

(a) Definitions. As used in this clause--

"Central Contractor Registration (CCR) database" means the primary Government repository for contractor information required for the conduct of business with the Government.

"Commercial and Government Entity (CAGE) code" means--

(1) A code assigned by the Defense Logistics Information Service (DLIS) to identify a commercial or Government entity; or

(2) A code assigned by a member of the North Atlantic Treaty Organization that DLIS records and maintains in the CAGE master file. This type of code is known as an "NCAGE code."

"Data Universal Numbering System (DUNS) number" means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

"Data Universal Numbering System +4 (DUNS+4) number" means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11 of the Federal Acquisition Regulation) for the same parent concern.

"Registered in the CCR database" means that--

(1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, into the CCR database;

(2) The Contractor's CAGE code is in the CCR database; and

(3) The Government has validated all mandatory data fields and has marked the records "Active."

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the CCR database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" or "DUNS +4" followed by the DUNS or DUNS +4 number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(c) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one.

(1) An offeror may obtain a DUNS number-

(i) If located within the United States, by calling Dun and Bradstreet at 1-866-705-5711 or via the Internet at <http://www.dnb.com>; or

(ii) If located outside the United States, by contacting the local Dun and Bradstreet office.

(2) The offeror should be prepared to provide the following information:

(i) Company legal business.

(ii) Tradestyle, doing business, or other name by which your entity is commonly recognized.

(iii) Company Physical Street Address, City, State, and Zip Code.

(iv) Company Mailing Address, City, State and Zip Code (if separate from physical).

(v) Company Telephone Number.

(vi) Date the company was started.

(vii) Number of employees at your location.

(viii) Chief executive officer/key manager.

(ix) Line of business (industry).

(x) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the CCR database in the time prescribed by the Contracting Officer, the Contracting Officer will proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) The Contractor is responsible for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(g)

(1)

(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in Subpart 42.12, the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of Subpart 42.12 of the FAR; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (g)(1)(i) of this clause, or fails to perform the agreement at paragraph (g)(1)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(2) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see FAR Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(h) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423, or 269-961-5757.

(End of clause)

252.222-7006 COMBATING TRAFFICKING IN PERSONS (OCT 2006)

(a) Definitions. As used in this clause--

Coercion means--

- (1) Threats of serious harm to or physical restraint against any person;
- (2) Any scheme, plan, or pattern intended to cause a person to believe that failure to perform an act would result in serious harm to or physical restraint against any person; or
- (3) The abuse or threatened abuse of the legal process.

Commercial sex act means any sex act on account of which anything of value is given to or received by any person.

Construction means construction, alteration, or repair (including dredging, excavating, and painting) of buildings, structures, or other real property. For purposes of this definition, the terms "buildings, structures, or other real property" include, but are not limited to, improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, cemeteries, pumping stations, railways, airport facilities, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, canals, and channels. Construction does not include the manufacture, production, furnishing, construction, alteration, repair, processing, or assembling of vessels, aircraft, or other kinds of personal property.

Debt bondage means the status or condition of a debtor arising from a pledge by the debtor of his or her personal services or of those of a person under his or her control as a security for debt, if the value of those services as reasonably assessed is not applied toward the liquidation of the debt or the length and nature of those services are not respectively limited and defined.

Employee means an employee of a contractor directly engaged in the performance of work under a Government contract, including all direct cost employees and any other contractor employee who has other than a minimal impact or involvement in contract performance.

Individual means a contractor that has no more than one employee including the contractor.

Involuntary servitude includes a condition of servitude induced by means of--

(1) Any scheme, plan, or pattern intended to cause a person to believe that, if the person did not enter into or continue in such conditions, that person or another person would suffer serious harm or physical restraint; or

(2) The abuse or threatened abuse of the legal process (22 U.S.C. 7102(5)).

Service contract means a contract that directly engages the time and effort of a contractor whose primary purpose is to perform an identifiable task rather than to furnish an end item of supply.

Service (other than commercial) means a service that does not meet the definition of commercial item in section 2.101 of the Federal Acquisition Regulation.

Severe forms of trafficking in persons means--

(1) Sex trafficking in which a commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age; or

(2) The recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.

Sex trafficking means the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose of a commercial sex act.

United States means the 50 States, the District of Columbia, and outlying areas.

(b) Policy. It is the policy of the Department of Defense (DoD) that trafficking in persons will not be facilitated in any way by the activities of DoD contractors or contractor personnel. DoD will not tolerate severe forms of trafficking in persons or use of forced labor by DoD contractors, DoD subcontractors, or DoD contractor or subcontractor personnel during the period of contract performance. Furthermore, DoD will not tolerate the procurement of commercial sex acts by DoD contractors, DoD subcontractors, or DoD contractor or subcontractor personnel, during the period of performance of service or construction contracts. As delineated in National Security Presidential Directive 22, the United States has adopted a zero tolerance policy regarding contractor personnel who engage in or support trafficking in persons.

(c) Contractor compliance.

(1) During the performance of this contract, the Contractor shall comply with the policy of DoD and shall not engage in or support severe forms of trafficking in persons or use forced labor. The Contractor is responsible for knowing and adhering to United States Government zero-tolerance policy and all host nation laws and regulations relating to trafficking in persons and the use of forced labor.

(2) Additionally, if this contract is a service or construction contract, the Contractor shall not engage in or support the procurement of commercial sex acts during the performance of this contract and is responsible for knowing and adhering to United States Government policy and all host nation laws and regulations relating thereto.

(d) Contractor responsibilities for employee conduct--service or construction contracts. If this contract is a service or construction contract, the Contractor, if other than an individual, shall establish policies and procedures for

ensuring that during the performance of this contract, its employees do not engage in or support severe forms of trafficking in persons, procure commercial sex acts, or use forced labor. At a minimum, the Contractor shall--

(1) Publish a statement notifying its employees of the United States Government policy described in paragraph (b) of this clause and specifying the actions that will be taken against employees for violations of this policy. Such actions may include, but are not limited to, removal from the contract, reduction in benefits, termination of employment, or removal from the host country;

(2) Establish an awareness program to inform employees regarding--

(i) The Contractor's policy of ensuring that employees do not engage in severe forms of trafficking in persons, procure commercial sex acts, or use forced labor;

(ii) The actions that will be taken against employees for violation of such policy; and

(iii) Laws, regulations, and directives that apply to conduct when performance of the contract is outside the United States, including--

(A) All host country Government laws and regulations relating to severe forms of trafficking in persons, procurement of commercial sex acts, and use of forced labor;

(B) All United States laws and regulations on severe forms of trafficking in persons, procurement of commercial sex acts, and use of forced labor that may apply to its employees' conduct in the host nation, including those laws for which jurisdiction is established by the Military Extraterritorial Jurisdiction Act of 2000 (18 U.S.C. 3261-3267) and 18 U.S.C. 3271, Trafficking in persons offenses committed by persons employed by or accompanying the Federal Government outside the United States; and

(C) Directives on trafficking in persons from the Combatant Commander, or the Combatant Commander's designated representative, that apply to contractor employees, such as general orders and military listings of "off-limits" local establishments; and

(3) Provide all employees directly engaged in performance of the contract with--

(i) Any necessary legal guidance and interpretations regarding combating trafficking in persons policies, laws, regulations, and directives applicable to performance in the host country; and

(ii) A copy of the statement required by paragraph (d)(1) of this clause. If this contract is for services (other than commercial), the Contractor shall obtain written agreement from the employee that the employee shall abide by the terms of the statement.

(e) Employee violations--notification and action. The Contractor shall--

(1) Inform the Contracting Officer immediately of any information it receives from any source (including host country law enforcement) that alleges a contractor or subcontractor employee has engaged in conduct that violates the policy in paragraph (b) of this clause. Notification to the Contracting Officer does not alleviate the Contractor's responsibility to comply with applicable host nation laws;

(2) In accordance with its own operating procedures and applicable policies, laws, regulations, and directives, take appropriate action, up to and including removal from the host nation or dismissal, against any of its employees who violate the policy in paragraph (b) of this clause; and

(3) Inform the Contracting Officer of any actions taken against employees pursuant to this clause.

(f) Remedies. In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraphs (c), (d), (e), or (g) of this clause may render the Contractor subject to--

- (1) Required removal of a Contractor employee or employees from the performance of the contract;
- (2) Required subcontractor termination;
- (3) Suspension of contract payments;
- (4) Loss of award fee, consistent with the award fee plan, for the performance period in which the Government determined Contractor non-compliance;
- (5) Termination of the contract for default, in accordance with the Termination clause of this contract; or
- (6) Suspension or debarment.

(g) Subcontracts.

(1)(i) The Contractor shall include the substance of this clause, including this paragraph (g), in all subcontracts performed outside the United States; and

(ii) If this contract is for services (other than commercial), the Contractor shall include the substance of this clause, including this paragraph (g), in all subcontracts performed in the United States for the acquisition of services (other than commercial).

(2) If this contract is a service or construction contract, the Contractor shall conduct periodic reviews of its service and construction subcontractors to verify compliance with their obligations pursuant to paragraph (d) of this clause.

(3) The Contractor shall--

(i) Immediately inform the Contracting Officer of any information it receives from any source (including host country law enforcement) that alleges a subcontractor has engaged in conduct that violates the policy in paragraph (b) of this clause. Notification to the Contracting Officer does not alleviate the Contractor's responsibility to comply with applicable host nation laws;

(ii) Take appropriate action, including termination of the subcontract, when the Contractor obtains sufficient evidence to determine that the subcontractor is in non-compliance with its contractual obligations pursuant to this clause; and

(iii) Inform the Contracting Officer of any actions taken against subcontractors pursuant to this clause.

(End of Clause)

252.225-7043 ANTITERRORISM/FORCE PROTECTION POLICY FOR DEFENSE CONTRACTORS
OUTSIDE THE UNITED STATES (MAR 2006)

(a) Definition. United States, as used in this clause, means, the 50 States, the District of Columbia, and outlying areas.

(b) Except as provided in paragraph (c) of this clause, the Contractor and its subcontractors, if performing or traveling outside the United States under this contract, shall--

(1) Affiliate with the Overseas Security Advisory Council, if the Contractor or subcontractor is a U.S. entity;

(2) Ensure that Contractor and subcontractor personnel who are U.S. nationals and are in-country on a non-transitory basis, register with the U.S. Embassy, and that Contractor and subcontractor personnel who are third country nationals comply with any security related requirements of the Embassy of their nationality;

(3) Provide, to Contractor and subcontractor personnel, antiterrorism/force protection awareness information commensurate with that which the Department of Defense (DoD) provides to its military and civilian personnel and their families, to the extent such information can be made available prior to travel outside the United States; and

(4) Obtain and comply with the most current antiterrorism/force protection guidance for Contractor and subcontractor personnel.

(c) The requirements of this clause do not apply to any subcontractor that is--

(1) A foreign government;

(2) A representative of a foreign government; or

(3) A foreign corporation wholly owned by a foreign government.

(d) Information and guidance pertaining to DoD antiterrorism/force protection can be obtained from Combined Security Transition Command, Afghanistan (CSTC-A) Camp Eggers, Kabul, Afghanistan.

(End of clause)

252.229-7000 INVOICES EXCLUSIVE OF TAXES OR DUTIES (JUNE 1997)

Invoices submitted in accordance with the terms and conditions of this contract shall be exclusive of all taxes or duties for which relief is available.

(End of clause)

252.229-7001 TAX RELIEF (JUN 1997)

(a) Prices set forth in this contract are exclusive of all taxes and duties from which the United States Government is exempt by virtue of tax agreements between the United States Government and the Contractor's government. The following taxes or duties have been excluded from the contract price:

Reference the exchange of diplomatic notes between the USA and Afghanistan dated September 26, 2002, December 12, 2002 and May 28, 2003; and/or successor notes or agreements as applicable.

(b) The Contractor's invoice shall list separately the gross price, amount of tax deducted, and net price charged.

(c) When items manufactured to United States Government specifications are being acquired, the Contractor shall identify the materials or components intended to be imported in order to ensure that relief from import duties is obtained. If the Contractor intends to use imported products from inventories on hand, the price of which includes a factor for import duties, the Contractor shall ensure the United States Government's exemption from these taxes. The Contractor may obtain a refund of the import duties from its government or request the duty-free import of an amount of supplies or components corresponding to that used from inventory for this contract.

(End of clause)

252.236-7001 CONTRACT DRAWINGS AND SPECIFICATIONS (AUG 2000)

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall--

- (1) Check all drawings furnished immediately upon receipt;
- (2) Compare all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Contracting Officer of any discrepancies;
- (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and
- (5) Reproduce and print contract drawings and specifications as needed.

(c) In general--

- (1) Large-scale drawings shall govern small-scale drawings; and
- (2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

Title	File	Drawing No.
(See Appendix A of the RFP)		
(End of clause)		

Section 00800 - Special Contract Requirements

52.000-4105

**WORKERS COMPENSATION INSURANCE (DEFENSE BASE ACT) -
CONSTRUCTION (NOV 2005)**

- (a) This clause supplements FAR Clause 52.228-3
- (b) The contractor agrees to procure Defense Base Act (DBA) insurance pursuant to the terms of the contract between the U.S. Army Corps of Engineers (USACE) and the USACE DBA insurance carrier unless the contractor has a DBA self-insurance program approved by the Department of Labor. The contractor shall submit a copy of the Department of Labor's approval to the contracting officer upon contract award. Check the insurance provider for the current rates.
- (c) The contractor agrees to insert a clause substantially the same as the one in all subcontracts to which DBA is applicable. Subcontractors shall be required to insert a similar clause in any of their subcontracts subject to the DBA.
- (d) Should the rates for DBA insurance coverage increase or decrease during the performance of this contract, USACE shall modify the contract accordingly.

ECONOMIC SURVEILLANCE

Economic Surveillance Contract Language

Contractor shall report average pay rates and employment levels, for both domestic and international employees monthly. The information will be reported by labor category (as specified by USACE) and be specific to each work active work site. In addition the contractor shall report monthly non-labor contract spending for domestic and international contract expenses. This information will be reported by category (as specified by USACE) and will be specific to each active work site.

CLAUSES INCORPORATED BY REFERENCE

52.211-13	Time Extensions	SEP 2000
52.246-12	Inspection of Construction	AUG 1996
252.232-7003	Electronic Submission of Payment Requests	MAY 2006

CLAUSES INCORPORATED BY FULL TEXT

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within **seven (7)** calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than **four hundred and fifty five (455) calendar days following notice to proceed.** * The time stated for completion shall include final cleanup of the premises.

(End of clause)

52.211-12 LIQUIDATED DAMAGES--CONSTRUCTION (SEP 2000)

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of \$1977.44 for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(End of clause)

52.232-5000 PAYMENT FOR MATERIALS DELIVERED OFF-SITE (MAR 1995)--EFARS

(a) Pursuant to FAR clause 52.232-5, Payments Under Fixed Priced

Construction Contracts, materials delivered to the contractor at locations other than the site of the work may be taken into consideration in making payments if included in payment estimates and if all the conditions of the General Provisions are fulfilled. Payment for items delivered to locations other than the work site will be limited to: (1) materials required by the technical provisions; or (3) materials that have been fabricated to the point where they are identifiable to an item of work required under this contract.

(b) Such payment will be made only after receipt of paid or receipted invoices or invoices with canceled check showing title to the items in the prime contractor and including the value of material and labor incorporated into the item. In addition to petroleum products, payment for materials delivered off-site is limited to the following items: **Not Applicable.**

(End of clause)

52.236-4 PHYSICAL DATA (APR 1984)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations by Not Applicable.

- (b) Weather conditions Not Applicable.
- (c) Transportation facilities Not Applicable.
- (d) Not Applicable.

(End of clause)

SECTION: 01010

**SECTION 01010
SCOPE OF WORK**

1. GENERAL

1.1 PROJECT WORK SITES

This project consists of the design and construction of a new connex office addition in Kabul, Afghanistan. The work shall include but not be limited to the following: The contractor shall furnish all design expertise, drafting, labor equipment and materials to construct new offices using three (3) 8ftx40ftx9.5ft high connex containers. The roof shall be a metal standing seam over metal trusses. Interior will be painted drywall over insulated wood framing. Floor finish will be carpet over plywood base. To include electrical work consisting of ceiling mounted fixtures, duplex outlets and data ports to include telephone jacks for phone service for 14 work stations and plotter (2 plotters) stations, see Appendix A drawing. To include a generator and concrete pad with a fuel tank adjacent to the new office. Demolition work shall be limited to the removal of a portion of the concrete planter lining that would be underneath the office and any site work involved for foundations and concrete pads (generator pad and fuel tank pad). The contractor shall survey site and verify the existing conditions and report to the Contracting Officer any interface problems that could potentially impact this work. The Contractor shall be responsible for all submittals and developing and performing all operational and acceptance testing, training, and preparation of Operation and Maintenance manuals. The work will take place on the existing Afghanistan Geodesy and Cartography Head Office (AGCHO) Compound at Kabul, Afghanistan.

WORK TO BE PERFORMED

The work shall include the preparation of design documents and the subsequent construction of the facilities described within this Request for Proposal. The compound facility shall include structures as shown on the drawings herein, specifications and contain all necessary utilities for operation of such. These facilities shall be designed and constructed in accordance with current American or European or other equivalent standards as determined by the Government, building codes, safety and security standards. A partial listing of references is included within the Request for Proposal.

It is the intent of these RFP notes to cover the major items and leave many of the details to be completed by the contractor's designer. Responsibility to identify these details is that of the contractor and not the Government under the Design/Build concept. Note the contractor will be evaluated for his performance on how well these details are handled for future government work.

The work shall consist of a base bid and option bid items, as follows:

Base Bid Items:

1. Demolition Work:

- a. Demolish existing concrete planter curbing as required to construct the new office. Removal of some existing trees may also be required to accommodate the office footprint.
- b. Trench, install conduit, and install wiring as necessary to connect building to base services (power, phone network, data network, emergency communications, emergency generator)

2. Construct new Office Building: (See Appendix D)

- a. Building type shall be metal buildings constructed of three (3) 8ftx40ftx9.5ft high connex containers.
 - Trench, install conduit, and install wiring as necessary to connect building to base services (power, phone network, data network, emergency generator)
 - Provide a metal standing seam roof over metal trusses.
 - Building interior shall be painted drywall over wood framing with insulation.
 - Flooring shall be carpet over 13mm plywood underlayment.
 - Provide electrical ceiling mounted fixtures.
 - Provide duplex outlet and data port at each 14 work stations, 2 plotters and 5 extra electrical receptacles to include telephone jacks for phone service.
 - Provide a plotter area (for 2 plotters), and server room
 - Windows shall be double glazed 6mm laminated glass with blinds.
 - Provide 4 split pacs for heating and cooling.
 - Provide a covered building connected to the adjacent facility and provide exit points that continues goes through the sidewalk on both sides.
 - Contractor will insure that all seismic requirements are met in the design and construction of the facility.
 - The roof shall have a gutter and downspout system to evacuate rain accumulation.
 - Commercial grade standards are required on sliding windows. Windows shall be configured to slide in a metal track in order to open.
 - Heavy duty metal doors to be provided. Commercial grade hinges are required on personnel door. Door pull to be standard door pull product or can be fabricated out of metal. Product should be sturdy and functional. Install door stop in door frames on all sides. Install slide bolts on all doors or some equivalent locking device. Pre drill holes in glazing for attachment with screws.
 - All exterior steel surfaces shall be provided with primed and finished with galvanized coating.

- Provide with general illumination, Communication/Data and duplex receptacles.
- Provide conduit to for installation of internal communication systems.

b. Generator

- Construct a concrete generator pad adjacent to the new office building to support a fully-loaded generator fuel tank 500 gallon capacity and have drive up to access for refueling periodically from the area accessible in the back.
- Provide spill protection as to contain any fuel tank leakage.
- Provide a secured chainlink fence with concertina wire 2400mm high around the generator area to include the fuel tanks with lockable gates.
- Locate the generator behind the building exterior solid wall, so noise attenuation IS required, as noise from generator will be extreme loud.

c. Walk way Connection

- Provide a connection walkway between the new office and the existing building per Appendix A.
- Provide entry and exit doors on either side of the connection so that the sidewalk traffic may continue to walk around the existing building.
- The doors shall be made of metal and metal frames with 6mm glazing windows in the door.
- Replace the two exit doors on existing building that the new walkway connects to with two metal exist doors with glazing and metal door frames. See Appendix C.

1.3 TECHNICAL REQUIREMENTS

Work shall be executed in accordance with the Technical Requirements in Section 01015 and the attached schematic building layouts. All requirements set forth in the Scope of Work, Section 01010, but not included in the Technical Requirements, shall be considered as set forth in both and vice versa. In case of question or ambiguity, the Contracting Officer (KO) shall make the final decision. The KO shall furnish the decision in writing if requested by the Contractor. Designs shall be approved by the Contracting Officer's Representative (COR) prior to the start of work. The Contractor shall verify all dimensions provided in the scope of work prior to the start of any construction.

Design Guide Information is provided in paragraph 6 and is to be used in the project design and construction phase. All designs and specifications for any buildings and systems for review and approval will be by the Government. All designs and specifications created by the Contractor shall become the property of the Government and may be used in the future by the Government for construction of similar facilities without further compensation to the Contractor.

1.4 ENGLISH LANGUAGE REQUIREMENT

All information shall be presented in English. The Contractor shall have a minimum of one English-speaking representative on site at all times when work is in progress.

1.5 PERIOD OF PERFORMANCE

All work in AGCGO compound at Kabul, Afghanistan shall be complete in Period of Performance shall be 120 Calendar days Liquidated damages shall be assessed for every calendar day beyond the scheduled contract completion date and charged to the Contractor.

1.6 SUBMITTALS

Submittals and a Submittal Register are required as specified in Section 01335 of the Basic Contract.

1.7 Not used

1.8 GENERAL REQUIREMENTS FOR THE CSE COMPOUND SUPPORT ELEMENT

The contractor shall perform work that consists of site security, force protection measures, topographic survey, installation master planning, site demolition (as required), grading, design and construction of new buildings, construction of a generator pad and fuel tank and electrical distribution system.

Connect the electrical power from the existing building. Connect the new generator to the new office building for emergency backup power. All utilities shall be complete and operational prior to occupancy. All requirements set forth in the Scope of Work, but not included in the Technical Requirements shall be considered as set forth in both, and vice versa. All work under this contract shall be completed in accordance with the table below. This table provides completion durations after the Notice to Proceed (NTP).

The work shall include the preparation of design documents and the subsequent construction of the facilities described within this Request for Proposal. The compound facility shall include structures as shown on the drawings herein, specifications and contain all necessary utilities for operation of such. These facilities shall be designed and construct in accordance with current American or European or other equivalent standards as determined by the Government, building codes, safety and security standards and applicable local standards. A partial listing of references is included within the Request for Proposal.

Required are 5 days of CQM training for the Contractor's Quality Control Manager.

1.9 SITE SECURITY

The Contractor shall provide perimeter force protection security during development of the site. Security may include but is not limited to fence and private security guards by the contractor. Perimeter security shall prevent unauthorized site access and provide safety protection to the Contractor's work force and government personnel for the duration of the project. The Contractor is solely responsible for security; however, local police should be coordinated with regarding security. The contractor shall be able to utilize the existing compound for temporary staging area.

2. BASE BID WORK ITEMS:

2.1 SURVEYS AND MASTER PLANNING

The Contractor shall perform a geotechnical investigation as defined in Section 01015; perform a site topographic survey; a concept plan and a complete site Drainage Plan with existing grades, proposed grades, and building finished floor elevations. The development of the concept plan will include participation in a Planning Charette that will be conducted at the Afghanistan Engineer District (AED), Qalaa House in Kabul. The Charette shall be completed within 30 days of contract award. A required site plan for this project will be designed per this RFP.

2.2 SITE WORK

The proposed project is located in an existing grassed compound area. Provide grassing of all damaged areas used in the construction of the new buildings and structures.

2.2.1 FOUNDATION

All building shall have reinforced concrete slab with reinforced concrete foundation 800 mm minimum or below the frost line.

2.3 DEMOLITION

Buildings and debris: Demolish and remove the existing concrete plant curbing. Remove any existing trees that the office foot print may occupy.

2.4 SITE GRADING AND DRAINAGE

The contractor will provide all necessary site grading to insure adequate drainage so that no areas will be flooded due to a rainfall of a 10-year frequency. Drainage of the area should be compatible with the existing terrain. Building floor elevations shall be a minimum 150 mm above grade and slope away from the building on all sides at a minimum of 5% for 3 meters.

2.5 SAFETY REQUIREMENTS

The Contractor shall comply with the most recent edition of applicable portions of the USACE Engineering Manual (EM) 385-1-1, Safety and Health Requirements Manual. The Contractor shall obtain a copy of EM 385-1-1 and be familiar with all provisions prior to submitting their Accident Prevention Plan. Within seven (7) calendar days after award of this task order, four (4) copies of the Accident Prevention Plan are required. The Contractor shall not commence physical work at the site until the Accident Prevention Plan has been reviewed and accepted by the Contracting Officer or authorized representative. The Accident Prevention Plan shall follow the specified format and meet all requirements listed in Appendix "A" of EM 385-1-1.

No separate payment will be made for compliance with this paragraph or for compliance with other safety and occupational health requirements of this contract. TAC Form 61 " Accident Prevention Program Hazard Analysis (Activity Hazard Analysis)" fully completed and signed by an executive officer of the company in block No. 13. The Activity Hazard Analysis is a method in which those hazards likely to cause a serious injury or fatality are analyzed for each phase of operations. Corrective action is planned in advance which will

eliminate the hazards. An analysis is required for each new phase of work. On large or complex jobs the first phase may be presented in detail with the submittal of the Accident Prevention Plan rather than presenting the complete analysis. If the plan is to be presented in phases, a proposed outline for future phases must be submitted as a part of the initial Accident Prevention Plan submittal. Accident Prevention Plans will be reviewed for timeliness and adequacy at least monthly with a signature sheet signed and dated documenting that these reviews took place. Copy of company policy statement of Accident Prevention and any other guidance as required by EM 385-1-1, Appendix A.

2.6 FORCE PROTECTION PERIMETER- No work required

2.20 HEATING VENTILATION AND AIRCONDITIONING (HVAC)

Building shall be constructed with exhaust fans in toilets and shower rooms to ventilate odor and steam to the outside environment, and, where required, insulated piping to prevent freezing of water pipes in winter and install them inside of buildings, NOT on the exterior side of the walls. Provide heating and air conditioning in occupied rooms and electronic equipment in accordance with section-01015 of this RFP.

2.21 BUILDING ORIENTATION

Facility should be located per Appendix A.

2.23 PORTABLE TOILETS

A porta-potty needs to be positioned in the construction area to ensure that this quality of life concern is not an issue/problem for construction workers during construction.

Contractor shall furnish and install portable latrine units for western style units for the Government temporary office provided by the contractor: Contractor shall furnish and install hand wash units. The wash unit shall consist of a basin, foot controlled wash water dispenser, hand soap dispenser, and towel dispenser.

2.25 POWER GENERATOR

Contractor shall supply a new generator with this contract. Generator shall be sized to support the full load of the new facilities, as defined in the NEC, plus provide 25% spare capacity and as a backup generator.

The power generator shall include bulk fuel storage capacity based on four weeks full-load operation for current capacity on design with provision to accommodate fuel storage for one additional generator.

The generator shall have a roof cover and if located close to any habitable facility, a cmu wall is to be constructed as to mitigate the generator sound. When sizing the generator, ensure it is de-rated for altitude and temperature in accordance with manufacturer's recommendations for the site conditions.

The new generator, transfer switch, MDP, and related components shall include all necessary equipment pads and connection conduits. Contractor to include bulk fuel storage capacity

based on 4 week (28 days) full-load operation for current planned capacity. After testing generators, Contractor shall provide a full supply of fuel to the tanks (new and existing) at the time of turnover to the Government. Provide switch gear for future connection to local power.

3.3 FINAL SITE GRADING AND DRAINAGE

Perform complete final site grading and installation of all remaining required drainage structures to slope the existing the compound towards the existing perimeter drainage ditch. Grade away from buildings at 5% for a distance of 3 m, being mindful of the open drainage/sewage ditches located on two sides of the AGCHO complex construction area.

3.5 SPARE

4.0 SOLID WASTE MANAGEMENT AND DISPOSAL

Provide and install collection points for solid waste until it is picked up and removed to an **off-site** landfill/burn site **daily**.

5.0 DESIGN GUIDE INFORMATION

The RFP notes in sections 01010 and 01015 are minimum requirements for this design build project. It is the intent of these notes to cover the major items and leave many details to complete the design up to the contractor's designer to provide and not the Government's responsibility to identify. Note that the government evaluates the contractor's design performance for future evaluations.

6.0 UNIQUE SITE AND OTHER REQUIREMENTS

- All building shall have a sloped metal roof, with metal eaves, and soffits. All exterior entry ways to be covered and protected by rain gutters and diverters as to not have water falling on the entry ways to all buildings.
- Building Insulation Requirements shall include all walls will be rated R-20 (3.5 m²-K/watt) and all roofing systems shall be rated R-30 (5.3 m²-K/watt).
- Reversible type motor ceiling fans (minimum 52-inch blades) shall be designed and installed barracks areas, bedrooms, dining room and offices.
- Provide at all Buildings, swinging doors: Walk-off metal grates shall be provided at all exterior doors with removable galvanized steel grates and dirt wells, 30mm width by one (1) meter long, see Appendix B.

PART 2 - PRODUCTS

2.1 DRAWINGS AND OTHER DATA TO BECOME PROPERTY OF THE GOVERNMENT

All designs, drawings, specifications, notes, and other works developed in the performance of this contract shall become the sole property of the Government and may be used on any other design without additional compensation to the Contractor. The Government shall be considered the "person for whom the work was prepared" for the purpose of authorship in a copyrightable work under 17 U.S.C. 201(b). With respect thereto, the Contractor agrees not to assert or authorize others to assert any rights or to establish any claim under the design patent or copyright laws. The Contractor for a period of three (3) years after completion of the project agrees to furnish all retained works on the request of the Contracting Officer. Unless otherwise

provided in the contract, the Contractor shall have the right to retain copies of all works beyond such period.

PART 3 – EXECUTION

3.1 SCHEDULE

The Contractor and Design Team shall finalize concept drawings of all facilities within 30 days of the award of this contract. The development of the conceptual plans will include participation in a Planning Charette meeting at the 15% design effort in Kabul to finalize design. The Charette shall consist of the Owner, Contractor, Design Team and U.S. Army Corps of Engineers personnel to finalize design prior to the 35% submission. Completion of construction documents shall be no later than 60 days after completion of the Charette. After approval of a preliminary facility layout, the Contractor may commence Site Work. Any Options to be awarded shall be awarded 180 calendar days after the Notice to Proceed (NTP). Construction shall commence no later than 120 days after award of contract and the Contractor will execute the work diligently, and complete the entire work. Period of Performance shall be 120 Calendar days after Notice to Proceed. See Section 010150 for liquidated damages for non-completion deadlines not met. The time stated for completion shall include final cleanup of the premises. The Contractor shall survey site and verify the existing conditions and report to the Contracting Officer any interface problems that could potentially impact this work. The Contractor shall be responsible for submittals and developing and performing all operational and acceptance testing. Contractor shall construct the facilities as a Design-Build construction contract and shall be in accordance with all codes, regulations, and requirements outlined in this Request for Proposal (RFP).

3.2 ACCIDENT REPORTING AND RECORDKEEPING

All accidents will be reported immediately using EM 385-1-1, Section 01.D. requirements. Contractors will hold employees and sub-contractors responsible for reporting all injuries or occupationally related illnesses as soon as possible to their employer or immediate supervisor. The contractor will be responsible for reporting all injuries to the GDA within 24 hours. In addition, "AED Accident Reporting Guidance Policy Memo, dated, 16 September 2004" will be provided to the contractor at the Preconstruction "Notice to Proceed" briefing with one copy of Engineer Manual 385-1-1, Safety and Occupational Health Requirements Manual.

Note: Any discrepancies between sections 01010 and 01015 of the RFP, the most stringent criteria will be applied to this contract.

- End of Section -

SECTION: 01015

SECTION 01015

TECHNICAL REQUIREMENTS

1. GENERAL

1.1 The Contractor's design and construction must comply with technical requirements contained herein. The Contractor shall provide design and construction using the best blend of cost, construction efficiency, system durability, ease of maintenance and environmental compatibility.

1.2 These design and product requirements are minimum requirements. The Contractor is encouraged to propose alternate design or products (equipment and material) that are more commonly used in the region; will be equally or more cost effective or allow for more timely completion, but furnish the same system durability, ease of maintenance and environmental compatibility. The Contractor will be required to submit information as requested by the Contracting Officer to make a comparison of the proposed alternate. All variations must be approved by the Contracting Officer.

1.3 ASBESTOS CONTAINING MATERIALS

Asbestos containing material (ACM) shall not be used in the design and construction of this project. If no other material is available which will perform the required function or where the use of other material would be cost prohibitive, a waiver for the use of asbestos containing materials must be obtained from the Contracting Officer.

1.3.1 Other Regulated Building Materials and Components

The restricted use of lead-based paint coatings, electrical components requiring the use of oil filled cooling agents containing known PCBs and refrigerant agents known to contain HFCs and CFCs shall not be utilized.

1.4 SAFETY

1.4.1 Unexploded Ordnance (UXO)

1.4.1.1 Mine/UXO Discovery During Project Construction

It shall be the responsibility of the Contractor to be aware of the risk of encountering mines and/or UXO and to take all actions necessary to assure a safe work area to perform the requirements of this contract. If the site is known to have been previously cleared of mines/UXO to the anticipated required excavation depth, and the Contractor becomes aware of or encounters potential mines/UXO during construction, the Contractor shall immediately stop work at the site of the encounter, move to a safe location, notify the COR, and mitigate any delays to scheduled or unscheduled contract work. If the Contractor encounters such mines/UXO, the Contractor shall not be responsible for removing them. However, the Contractor assumes the risk of any and all personal injury, property damage or other liability, arising out of and resulting from any Contractor action hereunder. If during the performance of the work under this contract, the Contractor encounters U.S. UXO, the Contractor shall immediately stop work in this area and notify the Contracting Officer.

Scrap metal shall be the property of the host Government. The scrap metal on site shall be moved to an area away from the site perimeter as directed by the Contracting Officer's Representative, and left for the host Government to remove and/or salvage.

NOTE: For previous demining information, the following points of contact from the UN Mine Action Center for Afghanistan are provided:

Mr. Allan Mansell CSC
Area Technical Advisor
Mobile 099332265
0700181922
allan@unmaca.org

or

Daniel Bellamy
Programme Manager
Mobile 93 0 70282086
93 0 79401546
Daniel@unmaca.org

Explosives Safety

1.4.1.1.1 General Safety Considerations

General safety considerations applicable to personnel, both essential and non-essential, at project sites where UXO may be encountered include:

- a. Do not carry fire or spark-producing devices.
- b. Do not conduct explosive or explosive-related operations without approved procedures and proper supervision and UXO safety support.
- c. Do not become careless by reason of familiarity with UXO or the reported probability level of UXO contamination.
- d. Do not conduct explosive or potentially explosive operations during inclement weather.
- e. Avoid contact with UXO except during UXO clearance operations.
- f. Conduct UXO-related operations during daylight hours only.
- g. Employ the "buddy system" at all times.

1.4.1.1.2 Activity Hazard Analysis (AHA) briefings

- a. Activity Hazard Analysis's shall be prepared in accordance with the Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1.
- b. Hazard analyses will be prepared and briefed by personnel that are knowledgeable in UXO and explosives safety standards and requirements. These personnel should understand the specific operational requirement and hazard analysis methodologies. A hazard analysis will be performed for each activity to determine the significance of any potential explosive-related hazards. Explosive residues may be discovered or exposed during UXO operations in the form of powder or various granular and powder based pellets. These contaminants can enter the body through the skin or by ingestion if proper personal hygiene practices are not followed. Explosive fillers such as white phosphorus are dangerously reactive in air and acute exposure can result in serious injury to the skin, eyes, and mucous membranes. They are also a fire hazard.

Safety requirements (or alternatives) that will either eliminate the identified hazards, mitigate or control them to reduce the associated risks to an acceptable level will be developed. The adequacy of the operational and support procedures that will be implemented to eliminate, control, or abate identified hazards or risks will then be evaluated and a second risk assessment completed to verify that a satisfactory safety level has been achieved.

1.4.1.2 Notification of Noncompliance

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall make no part of the time lost due to such stop orders the subject of claim for extension of time or for excess costs or damages.

1.5 LIMITATION OF WORKING SPACE

1.6 The Contractor shall, except where required for service connections or other special reason(s), confine his operations strictly within the boundaries of the site. Workmen will not be permitted to trespass on adjoining property. Any operations or use of space outside the boundaries of the site shall be by arrangement with all interested parties. It must be emphasized that the Contractor must take all practical steps to prevent his workmen from entering adjoining property and in the event of trespass occurring the Contractor will be held entirely responsible. **Coordinate the delivery of construction materials with the user and Contracting Officer to gain access to the project site from the adjacent property where permission must be granted first.**

TEMPORARY STRUCTURES

The Contractor shall erect suitable temporary fences, lighting, and necessary structures to safeguard the site, materials and plant against damage or theft and for the protection of the general public and shall adequately maintain the same throughout the course of the contract.

1.7 SUBCONTRACTORS

Compliance with the provisions of this section by subcontractors will be the responsibility of the contractor.

1.8 LIST OF CODES AND TECHNICAL CRITERIA:

The following codes and technical criteria and those referenced therein shall be required for this project. References within each reference below shall be required and adhered to. This list is not exhaustive and is not necessarily complete.

AABC - Associated Air Balance Council (National Standards for total System Balance)
ACI 318 Building Code Requirements for Structural Concrete (latest edition), American Concrete Institute
Air Force Manual 32-1071, Security Engineering, volumes 1-4, 1 May 1994
American Water Works Association, ANSI/AWWA C651-99 standard
ARI - Air Conditioning and Refrigeration Institute
ASCE 7-02, Minimum Design Loads for Buildings and Other Structures, 2002
ASHRAE - American Society of Heating, Refrigeration and Air-Conditioning Engineers
ASHRAE Standard 55-2004, Thermal Environmental Conditions for Human Occupancy
ASHRAE Standard 62.1-2004, Ventilation for Acceptable Indoor Air Quality
ASHRAE Standard 62.2-2004, Ventilation and Acceptable Indoor Air Quality for Low-Rise Residential
ASHRAE Standard 90.1-2001, Energy Standard for Buildings Except Low-Rise Residential Buildings
ASHRAE Standard 90.2-2004 with 2006 supplement, Energy-Efficient Design of Low-Rise Residential Buildings
ASME - American Society for Mechanical Engineering
ASTM - American Society for Testing and Materials
AWS - American Welding Society
DCID 6/9 Physical Security Standards for Sensitive Compartmented Information Facilities
DCID 1/21, Manual for Physical Security Standards For Sensitive Compartmented Information Facilities (SCIF).
EIA ANSI/TIA/EIA-607: (1994) Commercial Building Grounding/Bonding Requirement Standard.
Factory Mutual (FM) Approval Guide-Fire Protection (2002).
IBC - International Building Codes, 2003 (and its referenced codes including those inset below)
IFGC – International Fuel Gas Code
IMC – International Mechanical Code

IPC – International Plumbing Code
Lighting Handbook, IESNA, latest edition
International Mine Action Standards (IMAS), IMAS 07.30, latest edition: refer <http://www.mineactionstandards.org> for copy of standards.
MIL-HDBK-1190, Facility Planning and Design Guide
Codes and Standards of the National Fire Protection Association (NFPA)
[as applicable and enacted in 2002 or later, unless otherwise noted].
National Electrical Safety Code (NESC), Institute of Electrical and Electronic Engineers (IEEE C2), 2002 edition
NFPA 10, Portable Fire Extinguishers, 2002 edition
NFPA 54, National Fuel Gas Code, 2002
NFPA 58, Liquefied Petroleum Gas Code, 2004
NFPA 70, National Electrical Code, 2002 edition
NFPA 72, National Fire Alarm Code, 2002 edition
NFPA 75, Standard for the Protection of Information Technology Equipment
NFPA 90A, Air Conditioning and Ventilating Systems, 2002 edition
NFPA 101, Life Safety Code, 2003 edition
NFPA 110, Standard for Emergency and Standby Power Systems, 2005 edition
Plumbing and Drainage Institute (PDI-WH-201) water hammer arrestors
SMACNA - Sheet Metal and Air Conditioning Contractors' National Association, Standards and Guides, latest editions
International Mine Action Standards, latest edition; (see <http://www.mineactionstandards.org> for copy of standards)
TM 5-785 Weather Data
TM 5-802-1 Economic Studies
TM 5-805-4 Noise and Vibration
UFC 1-200-01, Design: General Building Requirements, 20 June 2005
UFC 1-300-07A Design Build Technical Requirements
UFC 3-230-03a, Water Supply, 16 Jan 2004
UFC 3-230-04a, Water Distribution, 16 Jan 2004
UFC 3-230-06a, Subsurface Drainage, 16 Jan 2004
UFC 3-230-07a, Water Supply: Sources and General Considerations, 16 Jan 2004
UFC 3-230-08a, Water Supply: Water Treatment, 16 Jan 2004
UFC 3-230-09a, Water Supply: Water Storage, 16 Jan 2004
UFC 3-230-10a, Water Supply: Water Distribution, 16 Jan 2004
UFC 3-230-13a, Water Supply: Pumping Stations, 16 Jan 2004
UFC 3-230-17FA, Drainage in Areas Other than Airfields, 16 Jan 2004
UFC 3-240-03N, Operation and Maintenance: Wastewater Treatment System Augmenting Handbook, 16 Jan 2004
UFC 3-240-04a, Wastewater Collection, 16 Jan 2004
UFC 3-260-01, Airfield and Heliport Planning and Design, 1 Nov 2001 with changes dated 19 May 2006
UFC 3-260-02, Pavement Design for Airfields, 30 June 2001
UFC 1-300-09N, Design Procedures, 25 May 2005
UFC 3-400-01, Design: Energy Conservation, 5 July 2002
UFC 3-410-01FA Heating, Ventilating and Air Conditioning, Change 1, 15 May 2003
UFC 3-410-02A, HVAC Control Systems. 15 May 2003
UFC 3-430-01FA, Heating and Cooling Distribution Systems, 27 Jy 2003
UFC 3-501-03N, Electrical Engineering Preliminary Considerations, 16 Jan 2004
UFC 3-520-01, Interior Electrical Systems, 10 June 2002
UFC 3-530-01AN, Design: Interior and Exterior Lighting and Controls, 19 Aug 2005
UFC 3-540-04N Design: Diesel Electric Generating Plants, 16 Jan 2004
UFC 3-550-03FA Design: Electrical Power Supply and Distribution Systems, 1 Mar 2005
UFC 3-600-01, Design: Fire Protection Engineering for Facilities, 26 Sept 2006
UFC 4-010-01, Design: Minimum DoD Antiterrorism Standards for Buildings, 22 Jan 2007
UFC 4-010-02, DoD Minimum Antiterrorism Standoff Distances for Buildings, 19 Jan 2007
UFC 4-020-01FA, Security Engineering: Project Development, 1 Mar 2005

UFC 4-020-02FA, Security Engineering: Concept Design, 1 Mar 2005
UFC 4-020-03FA, Security Engineering: Final Design, 1 Mar 2005
UFC 4-020-04FA, Electronic Security Systems: Security Engineering, 1 Mar 2005
UFC 4-021-01, Design and O&M: Mass Notification Systems, draft 1 May 2006
Underwriters' Laboratories (UL) Fire Protection Equipment Directory (2002)
UL Standards (as applicable)
UL 710, Exhaust Hood for Commercial Cooking Equipment, latest edition
UL 737, Fireplace Stoves, latest edition
UL 752, Bullet Resisting Equipment, 2000 or later
USCINCCENT OPOD 97-1

The publications to be taken into consideration shall be those of the most recent editions. Standards other than those mentioned above may be accepted if the standards chosen are internationally recognized and meet the minimum requirements of the specified standards. The Contractor shall be prepared to submit proof of this if requested by the Contracting Officer.

2. SITE DEVELOPMENT:

2.1 GENERAL

The project includes furnishing all materials, equipment and labor for constructing and storm sewer service lines, as applicable.

2.2 ENVIRONMENTAL PROTECTION

2.2.1 Applicable regulations

The Contractor shall comply with all Host Nation laws, rules, regulations or standards concerning environmental pollution control and abatement with regard to discharge of liquid waste into natural streams or manmade channels. The contractor shall review host nation and U.S. Government environmental regulations with the contracting officer prior to design and discharge of any liquid wastes into natural streams or manmade channels.

2.2.2 Notification

The Contracting Officer will notify the Contractor in writing of any observed non-compliance with the foregoing provisions. The Contractor shall immediately take corrective action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No extension of time or damages will be awarded to the Contractor unless it was later determined that the Contractor was in compliance.

2.2.3 Spillages

Measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, waste washings, herbicides and insecticides, and construction materials from polluting the construction site and surrounding area.

2.2.4 Disposal

Disposal of any materials, wastes, effluents, trash, garbage, oil, grease, chemicals, etc., shall be taken to a dumpsite off site and subject to the approval of the Contracting Officer. Burning at the project site for the disposal of refuse and debris will not be permitted.

2.3 CIVIL SITE DEVELOPMENT

The site plan shall show geometric design of the site, including applicable dimensions of all exterior facilities, mechanical equipment, pavements, utilities, etc. Required facilities are described in the following sections of this specification. Design of pavements and pads shall be based on recommendations from geotechnical investigation required herein.

All site plans and master plans shall be drawn in the following projection and datum for incorporation into the U.S. Army Corps of Engineers GIS system:

WGS 1984 UTM Zone 42 N

2.3.1 GRADING AND DRAINAGE

The contractor shall provide all necessary site grading to insure adequate drainage so that no areas will be flooded due to a rainfall of the baseline frequency. Drainage of the area should be compatible with the existing terrain. All new facilities shall be a minimum of 150 mm above finished grades. Positive drainage shall be provided for all areas and existing drainage ways shall be utilized to the extent possible. Swales between buildings and streets and parking areas shall be avoided if possible, unless utilized for storm water management.

Ditch Slopes

Minimum grade of 2.0 percent for channelized flow.

Ditches

Ditches shall be graded at non-erodible slopes or the ditch shall be lined with an appropriate material to prevent erosion. A design storm with a return period of at least 2 years shall be used to determine erodibility of ditches and swales. The depth of ditches along pavement shoulders shall be such that the water surface from the 10-year design storm is below pavement sub-base and base courses which daylight through the adjacent shoulder.

2.3.2 PAVING

2.3.2.1 Site Grading Plan

Preliminary investigation indicates no need for bridges or major drainage structures. The Contractor shall notify the Contracting Officer immediately if initial site survey determines that area hydrology requires major drainage structures or bridges. The contractor shall design a site grading plan that provides positive drainage and minimizes the requirement for major structures in a cost effective manner.

3. ARCHITECTURAL REQUIREMENTS

3.1 GENERAL

All material approved shall become standardized material to be used throughout the facilities under contract. Different sub-contractors shall not use different material or standards under the contract. Intent of the project is to use locally procured materials (unless specified otherwise) and labor to the maximum extent possible while satisfying seismic building code. Conflicts between criteria shall be brought to the attention of the Contracting Officer for resolution. In such instances, the Contractor shall furnish all available information with justification to the Contracting Officer.

3.2 DESIGN CRITERIA

The Codes, Standards, and Regulations listed herein shall be used in the construction of this project. The publications shall be the [referenced [most recent] editions. Standards other than those mentioned may be accepted provided they meet the minimum requirements and the contractor shall submit proof of equivalency to the Contracting Officer for approval.

IBC- International Building Code
NFPA-101- National Fire Protection Association, Life Safety Code.

3.3 LIFE SAFETY/ FIRE PROTECTION/ HANDICAPPED ACCESSIBILITY

To the extent possible, all facilities will be designed in accordance with recognized industry standards for life safety and building egress. An adequate fire alarm system, fire extinguishers, and smoke alarms shall all be included as required. If a sprinkler system is required by building code, a waiver will have to be obtained before construction notice to proceed is issued. However, due to the lack of adequate water volume and pressure, sprinkler systems may not be feasible. The facility shall comply with all other safety requirements of NFPA 101. In keeping with the intended function of these facilities, handicapped accessibility will not be incorporated into this project. Due to the war contingency requirement, it is assumed that only able-bodied military and civilian personnel will use the facilities listed herein.

3.4 ANTITERRORISM/ FORCE PROTECTION

Force protection/anti-terrorism measures for this location shall be followed and incorporated into this project in accordance with the referenced DoD Regulations. Information regarding force protection may be found herein and at the following link: <http://www.tisp.org/tisp.cfm> .

3.5 EXCAVATION

Trench excavation shall be made for concrete footings. Trenches shall be a minimum of .8 meter deep. Trenches deeper than 1.5 meters shall have protective shoring to protect workers or have the sides of the trench sloped back at a slope of 1.5:1. Care shall be taken when backfilling of foundation trenches to avoid damage to walls. Any excess dirt shall become the property of the Contractor and shall be removed from the site to a location approved by the Contracting Officer.

3.6 CONCRETE

Place 150 mm (6") of capillary water barrier below areas to receive a concrete slab on properly compacted soil free of organic material. A plastic vapor barrier (10 mils thick) shall be placed over the crushed stone prior to placing of concrete slabs. Concrete flooring in wet areas shall slope to the floor drain and not allow for water to puddle. Concrete slabs in all areas shall not be placed prior to inspection and approval of piping and sub-surface by the Contracting Officer. Foundation trenches shall be level and free of loose material. Trenches shall be inspected and approved by the Contracting Officer prior to placing of any concrete foundations. See paragraph 5 for structural characteristics of concrete and reinforcing steel for foundations and slabs.

3.6 METAL

3.6.1 STEEL ROOF JOISTS

Steel roof joists shall be placed according to the roof design and roof manufacturer specifications. Steel purlins shall be installed perpendicular to the steel beams. Use continuous metal roof sheets from ridge to eave to avoid constructing roof seams. In lieu of the continuous metal roof sheets, the Contractor can submit a plan for roofing seams; however, the plan must show a detail of how leaks will be avoided, and the Contracting Officer before application must approve the plan. Steel "hat channels" shall be installed

on the bottom side of steel frames for the installation of gypsum board with screws. Provide all necessary metal framing for roof fascia and soffits. See structural paragraph for structural characteristics of steel joists.

3.6.2 METAL WINDOW SILLS

Galvanized metal window sills, 1 mm (20 gage), shall be installed on the exterior of all windows. Metal sills shall extend from side to side of the window opening in a single piece. Extend the metal windowsill a minimum of 20 mm under the bottom of the aluminum windows. Sills shall slope a minimum of 6mm to the exterior and not allow water to puddle.

3.7 CARPENTRY

3.7.1 WOOD PURLINS

If Contractor chooses to utilize wood purlins, provide and install roof purlins of natural wood, locally available material 1 meter on center securely wedged between steel trusses. Tightly fit 25 mm boards over roof structure and nail into wood purlins. New roofing shall extend a minimum of 300 mm past the exterior surface of the wall.

3.7.2 Wood Fascia & Soffit

If Contractor chooses to utilize wood fascia and soffit boards, provide and install 30 mm fascia and soffit boards. Wood boards shall be planed and smooth ready for paint finish. Soffit shall extend 300 mm out from exterior wall surface. Extend fascia board down past bottom of soffit a minimum of 6 mm for water drip. Extend roof decking out over fascia a minimum of 20 mm. Provide a 40 mm drip flashing over edge of roof decking so that it extends past bottom of decking on all sides of the building. Provide continuous soffit venting of all overhangs at both bottom and top of roof slope.

3.7.3 Wood Battens

If Contractor chooses to utilize wood ceiling batten strips, wood ceiling batten strips, 20 mm x 60 mm, shall be nailed to the bottom of the wood purlins. Battens shall be spaced at 400 mm on center (or per UBC requirements if sheetrock is substituted for plaster). This is for the support of a plaster ceiling.

3.8 ROOFING AND WEATHERPROOFING

3.8.1 SLOPED ROOFS

On sloping roofs provide and install .70 mm (24 gauge) galvanized steel in either corrugated or standing seam design. Metal roofing shall be anchored to the steel "Z" purlins or wood deck sub-surface using exposed fasteners at 300 mm on center at all seams and at 600 mm on center in the panel field. Fasteners shall be placed at the top of the corrugation taking care not to dent panel. Roof sealant or adhesive shall be placed over each anchor head. Roofing system shall include all edge, ridge and penetration flashings necessary for a watertight installation and as described in this section. Roofing shall be galvanized mil finish. Panels shall be overlapped two corrugations side to side and be continuous sheets from ridge to eave. Provide continuous ridge vents on all gable roofs.

3.8.2 LOW SLOPE ROOFS

Provide and install metal framing and roofing. Contractor may propose to the Contracting Officer an alternate roofing system with justification for consideration and alternate pricing.

3.8.2.1 Insulation Installation

Comply with insulation manufacturer's instructions and recommendations for handling, installing, and

bonding or anchoring insulation to substrate. Insulation boards shall be installed loose, without glue, in staggered manner. Attention should be paid not to leave separation along edges. Where overall insulation thickness is 50 mm (2 inches) or greater, install required thickness in two layers with joints of second layer offset from joints of first layer a minimum of 300 mm (12 inches) each direction. Trim surface of insulation where necessary at roof drains so completed surface is flush with drain ring. Polyester felt or geotextile shall be installed over insulation layers as a filter layer to prevent the passage of fines in gravel layer to lower strata.

3.8.2.2 Flashing And Stripping

A. Install flashing at sloping and vertical surfaces, at roof edges, and at penetrations through roof. Nail or provide other forms of mechanical anchorage of composition flashing to vertical surfaces as recommended by manufacturer of primary roofing materials.

B. Install roof gutters and downspouts with splash blocks

C. Allow for expansion of running metal flashing and edge trim that adjoins roofing.

D. Counterflashings: Counterflashings, cap flashings, expansion joints and similar work to be coordinated with the roofing work.

E. Roof Accessories: Miscellaneous sheet metal accessory items, including insulation vents and other devices and major items of roof accessories to be coordinated with the roofing work.

3.8.3 FLASHING AND SHEET METAL

3.8.3.1 Materials

Any metal listed by ASTM, DIN, BS or EN standards. Manual for a particular item may be used, unless otherwise specified or indicated. Materials shall conform to the requirements specified below and to the thicknesses and configurations established in ASTM, DIN, BS or EN standards. Different items need not be of the same metal, except that if copper is selected for any exposed item, all exposed items shall be copper.

3.8.3.2 Steel Sheet, Zinc-Coated (Galvanized)

Zinc coated steel conforming to ASTM A 525, DIN BS or EN Standards.

3.8.3.3 Aluminum wall capping and expansion joint profiles.

Aluminum wall capping conforming to ASTM B 209 M, DIN 18339, BS or EN Standards.

3.8.3.4 General

Downspouts shall be designed and fabricated on site. Unless otherwise specified or indicated, exposed edges shall be folded back to form a 13 mm (1/2 inch) hem on the concealed side, and bottom edges of exposed vertical surfaces shall be angled to form drips. Bituminous cement shall not be placed in contact with roofing membranes.

3.8.3.5 Wall, Floor, Ceiling Expansion Joints Over Plaster

Expansion joints shall be provided as specified in ASTM, DIN 18339, BS or EN Standards.

3.8.3.6 Connections and Jointing

3.8.3.6.1 Soldering

Soldering shall apply to copper, and stainless steel items. Edges of sheet metal shall be pre-tinned before soldering is begun. Soldering shall be done slowly with well heated soldering irons so as to thoroughly heat the seams and completely sweat the solder through the full width of the seam. Edges of stainless steel to be pre-tinned shall be treated with soldering acid flux. Soldering shall follow immediately after application of the flux. Upon completion of soldering, the acid flux residue shall be thoroughly cleaned from the sheet metal with a water solution of washing soda and rinsed with clean water.

3.8.3.6.2 Seaming

Flat-lock and soldered-lap seams shall finish not less than 25 mm. wide. Unsoldered plain-lap seams shall lap not less than 75 mm. unless otherwise specified. Flat seams shall be made in the direction of the flow.

3.8.3.6.3 Cleats

A continuous cleat shall be provided where indicated or specified to secure loose edges of the sheet metalwork. Butt joints of cleats shall be spaced approximately 3 mm. apart. The cleat shall be fastened to supporting wood construction with nails evenly spaced not over 300 mm. on centers. Where the fastening is to be made to concrete or masonry, screws shall be used and shall be driven in expansion shields set in concrete or masonry.

3.8.3.7 Downspouts

Downspouts shall be installed as indicated. Downspouts shall be rigidly attached to the building. Supports for downspouts shall be spaced according to manufacturer's recommendations.

3.8.3.8 Flashing

Flashing shall be installed at locations indicated and as specified below. Sealing shall be according to the flashing manufacturer's recommendations. Flashings shall be installed at intersections of roof with vertical surfaces and at projections through roof, except that flashing for heating and plumbing, including piping, roof and floor drains, and for electrical conduit projections through roof or walls are specified in other sections. Except as otherwise indicated, counter flashings shall be provided over base flashings. Perforations in flashings made by masonry anchors shall be installed on top of joint reinforcement. Lashing shall be formed to direct water to the outside of the system.

3.8.3.8.1 Through-wall Flashing

Through-wall flashing includes sill, lintel, and spandrel flashing. The flashing shall be laid with a layer of mortar above and below the flashing so that the total thickness of the two layers of the mortar and flashing are the same thickness as the regular mortar joints. Flashing shall not extend further in to the masonry backup wall than the first mortar joint. Joints in flashing shall be lapped and sealed. Flashing shall be one piece for lintels and sills.

3.8.3.8.2 Lintel Flashing

Lintel flashing shall extend the full length of lintel. Flashing shall extend through the wall one masonry course above the lintels and shall be bent down over the vertical leg of the outer steel lintel angle not less than 50 mm, or shall be applied over top of masonry and pre-cast concrete lintels. Bed joints of lintels at joints shall be under laid with sheet metal bond breaker.

3.8.3.8.3 Sill Flashing

Sill flashing shall extend the full width of the sill and not less than 100 mm beyond ends of sill except at joint where the flashing shall be terminated at the end of the sill.

3.8.3.9 Wall Capping

Wall Capping shall be installed according to the manufacturer's recommendations.

3.8.4 SEALANTS

3.8.4.1 Interior Sealant

ASTM C 834 or ASTM C 920, Type S or M, Grade NS, Class 12.5, Use NT, DIN, BS, or EN equal standards.

3.8.4.2 Exterior Sealant

For joints in vertical and horizontal surfaces, provide ASTM C 920, Type S or M, Grade NS, DIN, BS, or EN equal standards.

3.8.4.3 Floor Joint Sealant

(ASTM C 920) Type S or M, Grade P, class 25, use T

3.8.4.4 Primers

Provide a non-staining, quick-drying type and consistency recommended by the sealant manufacturer for the particular application.

3.8.4.5 Bond Breakers

Provide the type and consistency recommended by the sealant manufacturer to prevent adhesion of the sealant to backing or to bottom of the joint.

3.8.4.6 Backstops

Backing shall be 25 to 33 percent oversize for closed cell and 40 to 50 percent oversize for open cell material, unless otherwise indicated.

3.8.4.7 Cleaning Solvents

Provide type(s) recommended by the sealant manufacturer except for aluminum and bronze surfaces that will be in contact with sealant.

3.8.4.8 Surface Preparation

Surfaces shall be clean, dry to the touch, and free from dirt, frost, moisture, grease, oil, wax, lacquer, paint, or other foreign matter that would tend to destroy or impair adhesion. Oil and grease shall be removed with solvent and surfaces shall be wiped dry with clean cloths. When resealing an existing joint, remove existing caulk or sealant prior to applying new sealant. For surface types not listed below, the sealant manufacturer shall be contacted for specific recommendations.

3.8.4.9 Masking Tape

Masking tape shall be placed on the finish surface on one or both sides of a joint cavity to protect adjacent finish surfaces from primer or sealant smears. Masking tape shall be removed within 10

minutes after joint has been filled and tooled.

3.8.4.10 Backstops

Install backstops dry and free of tears or holes. Tightly pack the back or bottom of joint cavities with backstop material to provide a joint of the depth specified.

3.8.4.11 Primer

Immediately prior to application of the sealant, clean out loose particles from joints. Where recommended by sealant manufacturer, apply primer to joints in concrete masonry units, wood, and other porous surfaces in accordance with sealant manufacturer's instructions. Do not apply primer to exposed finish surfaces.

3.8.4.12 Bond Breaker

Provide bond breakers to the back or bottom of joint cavities, as recommended by the sealant manufacturer for each type of joint and sealant used, to prevent sealant from adhering to these surfaces. Carefully apply the bond breaker to avoid contamination of adjoining surfaces or breaking bond with surfaces other than those covered by the bond breaker.

3.8.4.13 Sealants

Provide a sealant compatible with the material(s) to which it is applied. Do not use a sealant that has exceeded shelf life or has jelled and can not be discharged in a continuous flow from the gun. Apply the sealant in accordance with the manufacturer's instructions with a gun having a nozzle that fits the joint width. Force sealant into joints to fill the joints solidly without air pockets. Tool sealant after application to ensure adhesion. Sealant shall be uniformly smooth and free of wrinkles. Upon completion of sealant application, roughen partially filled or unfilled joints, apply sealant, and tool smooth as specified. Sealer shall be applied over the sealant when and as specified by the sealant manufacturer.

3.8.4.14 Protection

Protect areas adjacent to joints from sealant smears. Masking tape may be used for this purpose if removed 5 to 10 minutes after the joint is filled.

3.8.4.15 Final Cleaning

Upon completion of sealant application, remove remaining smears and stains and leave the work in a clean and neat condition.

- a. Metal and Other Non-Porous Surfaces: Remove excess sealant with a solvent-moistened cloth.

3.9 WINDOWS, DOORS & GLAZING

3.9.1 WINDOWS

Provide factory finished aluminum windows with locking device with 25 mm horizontal aluminum blinds at each window. All glazing shall 6mm laminate glass. All windows shall have factory installed screens and be operable from the inside handle shall not interfere with blinds hanging straight. All windows shall be 1000 mm H X 1200 mm W min. Color: White

3.9.1.1 Materials

A. Aluminum Extrusions: Provide alloy and temper recommended by the window manufacturer for the strength, corrosion resistance, and application of required finish, meeting the DIN 1725 raw material requirements, but not less than 215 N/mm² ultimate tensile strength and not less than 1.5 mm thick at any location for main frame and sash members.

B. Fasteners: Provide aluminum, nonmagnetic stainless steel, epoxy adhesive, or other materials warranted by the manufacturer to be non-corrosive and compatible with aluminum window members, trim, hardware, anchors, and other components of window units.

1. Reinforcement: Where fasteners screw-anchor into aluminum less than 0.125 inch thick, reinforce the interior with aluminum or nonmagnetic stainless steel to receive screw threads or provide standard non-corrosive pressed-in splined grommet nuts.

2. Exposed Fasteners: Except where unavoidable for application of hardware, do not use exposed fasteners. For application of hardware, use fasteners that match the finish of the member or hardware being fastened, as appropriate.

C. Anchors, Clips, and Window Accessories: Fabricate anchors, clips, and window accessories of aluminum, nonmagnetic stainless steel, or hot-dip zinc-coated steel or iron complying with the requirements of DIN 1748; provide sufficient strength to withstand design pressure indicated. As a minimum provide 3 anchors on each side of the frame or welded to the connex container walls.

D. Compression-Type Glazing Strips and Weatherstripping: Unless otherwise indicated, and at the manufacturer's option, provide compressible stripping for glazing and weatherstripping such as molded EPDM or neoprene gaskets.

E. Sealant: For sealants required within fabricated window units, provide type recommended by the manufacturer for joint size and movement. Sealant shall remain permanently elastic non-shrinking, and non-migrating. Comply with Sealants of these specifications for selection and installation of sealants.

F. Wire Fabric Insect Screen shall be permanently fixed to the exterior.

3.9.1.2 Hardware

A. General: Provide the manufacturer's standard hardware fabricated from aluminum, stainless steel, or other corrosion-resistant material compatible with aluminum and of sufficient strength to perform the function for which it is intended.

3.9.1.3 Horizontal Sliding Windows

Provide window units with 6 mm laminated glazed. Provide cam action sweep sash lock and keeper at meeting rails.

3.9.1.4 Fabrication

Provide horizontally sliding aluminum windows with factory finish in all buildings to fit the wall openings. Window frames to be welded into the metal walls. Window openings shall be provided with insect screening permanently fixed to the exterior. Provide a locking device on the interior of each window. Provide weather stripping system for all exterior windows and doors.

3.9.1.5 Finishes

Apply baked enamel in compliance with paint manufacturer's specifications for cleaning, conversion coating, and painting.

1) Color: White meeting the requirements of DIN 50018

3.9.1.6 Inspection

Inspect openings before beginning installation. Verify that rough opening is correct and the sill plate is level.

3.9.1.7 Installation

Comply with manufacturer's specifications and recommendations for installation of window units, hardware, operators, and other components of the work. Set window units plumb, level, and true to line, without warp or rack of frames or sash. Provide proper support and anchor securely in place. Set sill members and other members in a bed of compound or with joint fillers or gaskets, as shown, to provide weathertight construction. Refer to the Sealant sections for compounds, fillers, and gaskets to be installed concurrently with window units. Coordinate installation with wall flashings and other components of the work.

3.9.1.8 Adjusting

Adjust operating sash and hardware to provide a tight fit at contact points and at weatherstripping for smooth operation and a weathertight closure.

3.9.1.9 Cleaning

Clean aluminum surfaces promptly after installation of windows. Exercise care to avoid damage to protective coatings and finishes. Remove excess glazing and sealant compounds, dirt, and other substances. Lubricate hardware and other moving parts.

3.9.2 DOORS

All doors shall be heavy duty 16 gauge metal doors with 44 mm steel metal frames. Interior door shall be hollow metal doors with hollow metal frames conforming to ASTM A-366 cold rolled 3-piece knock down or equal. All glazed doors shall have 6 mm laminated glazing in the upper half of the door. Commercial duty lock sets and hardware shall be used on all doors. Provide (3) hinges on all doors. Hinges shall be the 5 knuckle type or equivalent. Provide door handles and locksets that can be locked with a key on all doors. Coordinate the final keying schedule with Contracting Officer prior to ordering lock sets. Generally each building should have 8 master keys fitting all locks, 8 sub-master keys fitting all exterior doors and 3 keys each for each interior door. Include 25% spare key blanks for the amount of keys provided per building. Provide numbering system identifying key to associated room door. All glazing in or adjacent to doors shall be tempered per IBC. Provide weather stripping system for all exterior doors.

Paint doors and frames (all surfaces) with 1 coat (primer) and 1 coat Alkyd Primer Sealer and then 2 coats Interior Alkyd, Semi-Gloss paint.

3.9.2.1 Steel Doors

SDI A250.8, except as specified otherwise. Prepare doors to receive specified hardware. Undercut where indicated. Exterior doors shall have top edge closed flush and sealed to prevent water intrusion. Doors shall be 44.5 mm thick, unless otherwise indicated. Doors shall be constructed using heavy gauge steel with minimum thickness of 1.2 mm.

3.9.2.1.1 Accessories

3.9.2.1.2 Astragals

For pairs of exterior steel doors which will not have aluminum astragals or removable mullions, provide

overlapping steel astragals with the doors. For interior pairs of fire rated and smoke control doors, provide stainless steel astragals complying with NFPA 80 for fire rated assemblies and NFPA 105 for smoke control assemblies.

3.9.2.1.3 Moldings

Provide moldings around glass of interior and exterior doors. Provide non-removable moldings on outside of exterior doors and on corridor side of interior doors. Other moldings may be stationary or removable. Secure inside moldings to stationary moldings, or provide snap-on moldings. Moldings shall interlock at intersections and shall be fitted and welded to stationary moldings.

3.9.2.1.4 Standard Steel Frames

SDI A250.8, except as otherwise specified. Form frames to sizes and shapes indicated, with welded corners or knock-down field-assembled corners. Provide steel frames for doors, transoms, sidelights, mullions, cased openings, and interior glazed panels, unless otherwise indicated.

3.9.2.1.5 Welded Frames

Continuously weld frame faces at corner joints. Mechanically interlock or continuously weld stops and rabbets. Grind welds smooth.

3.9.2.1.6 Mullions and Transom Bars

Mullions and transom bars shall be closed or tubular construction and shall member with heads and jambs butt-welded thereto or knock-down for field assembly. Bottom of door mullions shall have adjustable floor anchors and spreader connections.

3.9.2.1.7 Stops and Beads

Form stops and beads from 0.9 mm thick steel. Provide for glazed and other openings in standard steel frames. Secure beads to frames with oval-head, countersunk Phillips self-tapping sheet metal screws or concealed clips and fasteners. Space fasteners approximately 300 to 400 mm on centers. Miter molded shapes at corners. Butt or miter square or rectangular beads at corners.

3.9.2.1.8 Door Closers

Provide and install one A156.4 Grade 1. LCN Series 4010 or equal, with metal cover painted aluminum color at all exterior doors.

3.9.2.1.8 Door Hinges

Provide and install 1 ½ Pair of Hinges per American National Standards Institute (ANSI) A8111 at each door. Provide Stanley 061346-Fbb168 4-1 ½ "X 4" 26D Ball Bearing Hinge or equal.

3.9.2.1.9 Threshold

Provide and install Pemko threshold Number 237 (clear anodized finish) or equal.

3.9.2.2 Fire and Smoke Doors and Frames

The requirements of NFPA 80 and NFPA 105 respectfully shall take precedence over details indicated or specified.

3.9.2.1.8 Weather-stripping, Integral Gasket

Black synthetic rubber gasket with tabs for factory fitting into factory slotted frames, or extruded neoprene foam gasket made to fit into a continuous groove formed in the frame, may be provided in lieu of head and jamb seals. Insert gasket in groove after frame is finish painted.

3.9.2.1.9 Hardware Preparation

Provide minimum hardware reinforcing gages as specified in ANSI A250.6. Drill and tap doors and frames to receive finish hardware. Prepare doors and frames for hardware in accordance with the applicable requirements of SDI A250.8 and ANSI A250.6. For additional requirements refer to BHMA A115. Drill and tap for surface-applied hardware at the project site. Build additional reinforcing for surface-applied hardware into the door at the factory. Locate hardware in accordance with the requirements of SDI A250.8, as applicable. Punch door frames, with the exception of frames that will have weather-stripping or lightproof or soundproof gasketing, to receive a minimum of two rubber or vinyl door silencers on lock side of single doors and one silencer for each leaf at heads of double doors. Set lock strikes out to provide clearance for silencers.

3.9.2.1.10 Finishes

All surfaces of doors and frames shall be thoroughly cleaned, chemically treated and factory primed with a rust inhibiting coating as specified in SDI A250.8, or paintable A25 galvanized steel without primer. Where coating is removed by welding, apply touchup of factory primer.

3.9.2.1.11 Fabrication and Workmanship

Finished doors and frames shall be strong and rigid, neat in appearance, and free from defects, waves, scratches, cuts, dents, ridges, holes, warp, and buckle. Molded members shall be clean cut, straight, and true, with joints coped or mitered, well formed, and in true alignment. Dress exposed welded and soldered joints smooth. Design door frame sections for use with the wall construction indicated. Corner joints shall be well formed and in true alignment. Conceal fastenings where practicable. Design other frames in exposed masonry walls or partitions to allow sufficient space between the inside back of trim to receive caulking compound.

3.9.2.1.12 Installation

3.9.2.1.12.1 Frames

Set frames in accordance with SDI 105. Plumb, align, and brace securely until permanent anchors are set. Anchor bottoms of frames with expansion bolts or powder-actuated fasteners or welded. Build in or secure wall anchors to adjoining construction.

3.9.2.1.12.2 Doors

Hang doors in accordance with clearances specified in SDI A250.8. After erection and glazing, clean and adjust hardware.

3.9.2.1.12.3 Fire and Smoke Doors and Frames

Install fire doors and frames, including hardware, in accordance with NFPA 80.

3.9.2.1.13 Protection and Cleaning

Protect doors and frames from damage. Repair damaged doors and frames prior to completion and acceptance of the project or replace with new, as directed. Wire brush rusted frames until rust is removed. Clean thoroughly. Apply an all-over coat of rust-inhibitive paint of the same type used for shop coat. Upon completion, clean exposed surfaces of doors and frames thoroughly. Remove mastic smears and other unsightly marks.

ASTM C 1036, or ASTM C 1172 or equal.

3.9.2.2 Glazing Accessories

3.9.2.2.1 Sealant

Sealant shall be elastomeric conforming to ASTM, DIN, BS, or EN standards. Type S or M, Grade NS, Class 12.5, Use G, of type chemically compatible with setting blocks, preformed sealing tape and sealants used in manufacturing insulation glass. Color of sealant shall be as selected from manufacturer's full range of standard colors by Contracting Officer.

3.9.2.2.2 Glazing Gaskets

Glazing gaskets shall be extruded with continuous integral locking projection designed to engage into metal glass holding members to provide a watertight seal during dynamic loading, building movements and thermal movements. Glazing gaskets for a single glazed opening shall be continuous one-piece units with factory-fabricated injection-molded corners free of flashing and burrs. Glazing gaskets shall be in lengths or units recommended by manufacturer to ensure against pull-back at corners.

3.9.2.2.3 Fixed Glazing Gaskets

Fixed glazing gaskets shall be closed-cell (sponge) smooth extruded compression gaskets of cured elastomeric virgin neoprene compounds conforming to ASTM, DIN, BS, Or EN standards.

3.9.2.2.4 Wedge Glazing Gaskets

Wedge glazing gaskets shall be high-quality extrusions of cured elastomeric virgin neoprene compounds, ozone resistant, conforming to ASTM, DIN, BS, or EN standards.

3.9.2.2.5 Putty and glazing Compound

Glazing compound shall conform to ASTM, DIN, BS, or EN standards for face-glazing metal sash. Putty shall be linseed oil type conforming to DIN, BS, or EN standards for face-glazing primed wood sash. Putty and glazing compounds shall not be used with insulating glass or laminated glass.

3.9.2.2.6 Setting and Edge Blocking

Neoprene setting blocks shall be dense extruded type conforming to ASTM, DIN, BS, or EN standards. Silicone setting blocks shall be required when blocks are in contact with silicone sealant. Profiles, lengths and locations shall be as required and recommended in writing by glass manufacturer.

3.9.2.2.7 Preparation

Openings and framing systems scheduled to receive glass shall be examined for compliance with glass manufacturer's recommendations including size, squareness, offsets at corners, presence and function of weep system, face and edge clearance requirements and effective sealing between joints of glass-framing members. Detrimental materials shall be removed from glazing rabbet and glass surfaced and wiped dry with solvent. Glazing surfaces shall be dry and free of frost.

3.9.2.2.8 Installation

Glass and glazing work shall be performed in accordance with, glass manufacturer's instructions and warranty requirements. Glass shall be installed with factory labels intact and removed only when instructed. Edges and corners shall not be ground, nipped or cut after leaving factory. Springing, forcing or twisting of units during installation will not be permitted.

3.9.2.2.9 Cleaning

Upon completion of project, outside surfaces of glass shall be washed clean and the inside surfaces of glass shall be washed and polished in accordance with glass manufacturer's recommendations.

3.9.2.3 Protection

Glass work shall be protected immediately after installation. Glazed openings shall be identified with suitable warning tapes, cloth, or paper flags, attached with non-staining adhesives. Reflective glass shall be protected with a protective material to eliminate any contamination of the reflective coating. Protective material shall be placed far enough away from the coated glass to allow air to circulate to reduce heat buildup and moisture accumulation on the glass. Glass units which are broken, chipped, cracked, abraded, or otherwise damaged during construction activities shall be removed and replaced with new units.

3.10 FINISHES

All finishes, colors and materials in existing building and new buildings shall match. See Section 01335 for color submittals required. Provide color boards with all materials for COR approval prior to ordering materials.

3.10.1 The exterior of all buildings shall be metal. All exterior color finish shall be match the existing adjacent building color. Color to be selected by the Contracting Officer from the color board provided by the Contractor.

3.10.2 Interior walls and ceilings shall be made of gypsum board. Paint with 2 coats of semi-gloss off-white with less than .06% lead by weight color to be selected by the Contracting Officer from the color board provided by the Contractor.

3.10.3 Ceilings. Paint ceiling with 2 coats of flat white, with less than .06% lead by weight. Gypsum board may be used in lieu of plaster but framing supports for Gypsum board shall be as follows: For ½" thick gypsum board structural fastener supports shall be not further apart than 400 mm. If gypsum board is thicker follow guidelines in ASTM C 840 for supports and fastener frequency.

3.10.4 Paint all exposed wood fascia, soffit, and doors with 2 coats of gloss enamel, white.

3.10.5 Exposed exterior steel trim, frames, doors and pipe railings: Paint with one coat oil-based primer, with 2 coats of oil-based alkyd gloss enamel, color to be selected by the Contracting Officer from the color board provided by the Contractor.

3.10.6 Exposed wood trim, frames and doors: Paint with one coat oil-based primer, 2 coats of gloss enamel, color to be selected by the Contracting Officer from the color board provided by the Contractor

3.10.6.1 Floors in office areas and the connecting walkway shall be 300 mm x 300 mm terrazzo tile with thin set mortar. Joints shall be 2-3 mm. Waterproof gray grout shall be applied the full depth of the tile. Color of tile shall be selected by the Contracting Officer from samples provided by the Contractor.

3.10.6.2 All other floors are to be completely cleaned and painted with floor enamel. Color to be selected by the Contracting Officer from samples provided by the Contractor.

3.10.7 Modular Connex Containers

Provide three (3) 8ft x40ft x9.5ft high ft Modular Connex Container, see Plan Appendix D, for plans. Provide Modular Connex Containers with a concrete foundation stack and bolt together with corridor etc. as indicated in Appendices. The minimum size for modular room is 2400 mm wide X 5000 mm long. Minimum clear ceiling height shall be 2400 mm. Contracting Officer Representative (COR) reserves the right to inspect and reject any Modular Connex Containers not in good condition. All Modular Connex Containers shall be inspected and accepted by Architect prior to leaving factory. See plans and these technical requirements for extent of work. Exterior walls shall be insulated with a minimum of R-19

insulation, and provide insulation R-30 in floor and R-38 in all ceilings. Insulation in areas next to concrete or earth shall be rigid foam board insulation. Exterior metal Color: off white semi gloss to match adjacent building. Doors and corridor shall be one (1) hour rated. All glazing shall 6mm laminate glass. The windows shall have screens and be capable of being opened from the inside.

3.10.8 Concrete Stoop

Provide concrete stoop at each exterior doors with metal grate boot mud removals.

3.11 STANDARDS

The Contractor should use the following American standards to provide sound structural design if local standards are not available, relevant, or applicable. The Contractor shall follow American Concrete Institute Standards for design and installation of all concrete structures.

Concrete	240.0 kg./sq.cm (f'c) cylinder strength @ 28 days (ASTM-. C 31M)
Steel Reinforcement	4218.0 kg./sq.cm(Fy= 60.0 ksi),yield strength.
Welded Wire Fabric	ASTM A185
Anchor Bolts	ASTM A307 using A36 steel.
Concrete Masonry Units	ASTM C90, Type I (normal wt, moisture Cntrl).
Mortar	ASTM C270, Type S (Ultimate compressive strength of 130.0 kg/sq. cm.)
Proportion	1 part cement, 0-1/2 part lime and 4-1/2 parts aggregate
Grout	ASTM C476 (Slump between 200 mm to 250 and Compressive
Strength	14 MPa (2000 psi) at 28 days.
Joint Reinforcement	Standard 9 gage minimum, Ladder Type
Structural Steel	ASTM A36: 2530.0 kg./sq.cm (Fy = 36,000psi)
Welding	AWS (American Welding Society) D1.1-2002.

4. STRUCTURAL

GENERAL

The Modular Connex Containers shall be supported on reinforced concrete footings all footings shall be placed a minimum of 800 mm below grade, or the maximum frost depth, which ever is greater. Anchoring of the Modular Connex Containers to the foundations and to each other shall be provided with grade 8 anchor bolts to resist overturning of the Modular Connex Containers due to wind or seismic forces.

4.1 DESIGN

Design shall be performed and design documents signed by a registered professional architect and/or engineer. Calculations shall be in SI (metric) units of measurements. All components of the building shall be designed and constructed to support safely all loads without exceeding the allowable stress for the materials of construction in the structural members and connections. All building exterior walls shall be constructed with reinforced CMU, shotcrete 3-D panels, or reinforced concrete unless otherwise stated in sections 1010 or 1015.

4.2 DEAD AND LIVE LOADS

Dead loads consist of the weight of all materials of construction incorporated in the buildings. Live loads used for design shall be in accordance with the American Society of Civil Engineers, ASCE STANDARD, and Minimum Design Loads for Buildings and Other Structures, ASCE 7, edition as referenced herein.

4.3 WIND LOADS

Wind loads shall be calculated in accordance with ASCE 7 using a "3-second gust" wind speed of 125 km/hr.

4.4 SEISMIC

The building and all parts thereof shall be designed for the seismic requirements as defined by the International Building Code referenced herein. Spectral ordinates shall be $S_s = 1.65g$ and $S_1 = 0.75g$.

4.5 STRUCTURAL CONCRETE

Concrete structural elements shall be designed and constructed in accordance with the provisions of the American Concrete Institute, Building Code Requirements for Structural Concrete, ACI 318, latest edition. A minimum cylinder 28 day compressive strength of 21 MPa (3000 psi) shall be used for design and construction of all concrete, except that 24 MPa (3500 psi) shall be used for sprayed concrete applications. Reinforcing steel shall be deformed bars conforming to American Society for Testing and Materials (ASTM) publication ASTM A 615, Deformed and Plain Billet-Steel Bars for Concrete Reinforcement. Concrete at or below grade shall have maximum water-cement ratio of 0.40. No concrete shall be placed when the ambient air temperature exceeds 32 degrees C (90 degrees F) unless an appropriate chemical retardant is used. In all cases when concrete is placed at 32 degrees C (90 degrees F) or hotter it shall be covered and kept continuously wet for a minimum of 48 hours. Concrete members at or below grade shall have a minimum concrete cover over reinforcement of 75 mm (3 inch).

4.6 STRUCTURAL STEEL

Structural steel shall be designed and constructed in accordance with the provisions of American Institute of Steel Construction (AISC), Specifications for Structural Steel Buildings, 9th Edition. Design of cold-formed steel structural members shall be in accordance with the provisions of American Iron and Steel Institute (AISI), Specifications for Design of Cold-Formed Steel Structural Members.

4.7 METAL DECK

Deck units shall conform to SDI Pub. No. 29. Panels of maximum possible lengths shall be used to minimize end laps. Deck units shall be fabricated in lengths to span three or more supports with flush, telescoped or nested 50 mm (2 inch) laps at ends, and interlocking, or nested side laps. Metal deck units shall be fabricated of steel thickness required by the design and shall be galvanized.

4.8 OPEN WEB STEEL JOIST

Open web steel joists shall conform to SJI Specifications and Tables. Joists shall be designed to support the loads given in the standard load tables of SJI Specifications and Tables.

4.9 WALL OPENINGS AND PENETRATIONS

The Contractor shall cut wall openings so as not to deteriorate the structural integrity of the wall system. A structural engineer shall be consulted. In either case, the recommendations of the engineer shall be strictly adhered to. Wall penetrations shall have trim plates or escutcheons both sides painted to match adjacent finish.

5. GEOTECHNICAL

Existing geotechnical information is not available at the project site. Any site-specific geotechnical data required to develop foundations, materials, earthwork, and other geotechnical related design and construction activities for this project shall be the Contractor's responsibility. The Contractor shall develop all pertinent geotechnical design and construction parameters by appropriate field and laboratory investigations and analyses.

6. MECHANICAL

6.1 GENERAL

The work covered by this section consists of design, supply, fabrication and installation of new building heating, ventilation and air-conditioning (HVAC) systems. It also includes the delivery to site, erection, setting to work, adjusting, testing, balancing and handing over in perfect operating and running condition all of the HVAC equipment including all necessary associated mechanical works.

6.2 SPECIALIST SUB-CONTRACTORS QUALIFICATIONS

The heating/ventilation and air-conditioning works shall be executed by an air-conditioning specialist sub-contractor experienced in the design and construction of these types of systems.

6.3 CODES, STANDARDS AND REGULATIONS

The equipment, materials and works covered under the heating, ventilation and air-conditioning services shall conform to the referenced standards, codes and regulations where applicable except where otherwise mentioned under each particular clause.

6.4 DESIGN CONDITIONS

6.4.1 Outside Design Conditions

Kabul area:

Latitude – (approx.) 34 deg. North

Longitude – (approx.) 69 deg. East

Elevation – (approx.) 1790 M (5874 ft.)

Summer - 35 deg C (95 deg F) Dry Bulb (DB)

Winter – (-12.8 deg C/9 deg F)

Daily Range – data unknown

6.4.2 INDOOR DESIGN CONDITIONS

Summer – 23.9 deg C (75 deg F) & 50% RH

Winter – 21.1 deg C (70 deg F)

6.4.3 NOISE LEVEL

Noise levels inside occupied spaces generated by HVAC systems shall not exceed NC 40.

6.4.4 INTERNAL LOADS

- a. Occupancy: refer to Section 01010.
- b. Lighting (Fluor.): 21.5 W/m² (2 W/Ft²) maximum (however lighting levels shall meet minimum requirements)
- c. Outdoor Air: 34 CMH/Person (20 CFM) or "51 CMH/bedroom (30 CFM/bedroom)";
Latrine – 85 CMH/WC or Urinal (50 CFM) exhaust. Maintain negative pressure in latrine areas where mechanical HVAC is required.
- d. Building Pressurization: 1.3 mm W.G. (0.05 in W.G.)

6.4.5 THERMAL PERFORMANCE

Assemblies shall meet the requirements of TI-800, Design Criteria, UFC 3-400-01 Design: Energy Conservation, and ASHRAE Standard 90.1, latest editions, but shall meet the following minimum

requirements:

Assembly	Minimum Thermal Value
exterior walls (above grade)	RSI 3.344 (R 19)
ceilings/roof	RSI 6.688(R 38)
floor (over unheated space)	RSI 5.28 (R 30)
exterior doors	RSI 0.25 (R 1.43)
exterior windows/ (glazing within doors)	RSI 0.308(R 1.75)

6.5 NEW AIR CONDITIONING EQUIPMENT

Heating/Refrigeration Equipment:

Environmental control of the facilities shall be achieved by HVAC equipment proposed by the contractor and approved by the U.S. Government. Cooling in the facilities shall be achieved using ductless-type split direct-expansion air conditioning units. Cooling in the toilet/shower module (as required) may be accomplished using ductless type split direct-expansion air-conditioning units or packaged air conditioning units (roof or perimeter mounted) however, any specifics within Section 01010 or elsewhere herein regarding heating and cooling requirements shall be adhered to. Heating shall be achieved by electric heating as part of the air-conditioner and/or supplemented by electric baseboard type convactor heating. Unless otherwise noted, the Contractor may choose any combination of equipment to achieve the inside design conditions specified for the floor plans.

6.5.1 Unitary (ductless split) DX Air Conditioning Units

Ductless split units shall be unitary in design and factory manufactured ready for installation. Evaporator unit shall consist of a DX evaporator cooling coil, blower, electric heater and washable filter all mounted in a housing finished for exposed installation. Cooling coil condensate piping shall route to and discharge to the sanitary sewer system. The condensing unit will contain compressor, condenser coil, and all internal controls/fittings complete to include a weatherized housing constructed and mounted on a 300 mm (12 inch) high steel stand on roof on the upper module. Copper refrigerant suction and liquid piping shall be sized, insulated and installed in accordance to unit manufacture recommendations. Unit temperature control shall include wall mounted adjustable thermostat, blower on-off-auto switch and heating-cooling change over control. Provide angled bracing to support weight of units. Also provide a sloped cover at top of unit to shed water and to prevent accumulation of snow. **Provision shall be made for the use of outside air through an automatically controlled damper for full economizer cycle or mix thereof.**

6.5.2 Packaged Terminal Air Conditioners

Packaged Terminal Air Conditioners shall be self-contained thru-the-wall type unit consisting of a completely self-contained, electrically operated unit, equipped with a factory assembled refrigeration system. The units shall consist of compressor, condenser, evaporator fans, motors, evaporator, heating and condenser coils/sections and all necessary appurtenances. The unit shall be provided with a steel/metal sleeve or shall which can be permanently installed within the wall opening. The chassis of the unit shall be easily removable from the shell from inside the conditioned space. Adequate condenser air shall enter louvered openings. Provision of fresh air shall discharge through movable louvers. These units shall be mounted high on the wall to prevent infiltration of ground dust and in locations so as not to impede flow and function of the module. Provide angled bracing to support weight of units. Also provide a sloped cover at top of unit to shed water and to prevent accumulation of snow. **Provision shall be made for the use of outside air through an automatically controlled damper for full economizer cycle or mix thereof.**

6.5.3 Wall Penetrations

Building wall penetrations shall be carefully made so as not to deteriorate the structural integrity of the wall system. The Contractor shall consult with the building manufacturer, if possible, to determine the best way to penetrate the wall. If the building manufacturer is not available, a structural engineer shall be consulted. In either case, the recommendations of the engineer shall be strictly adhered to.

6.5.4 Control Wiring and Protection Devices

Control wiring and protection of the air conditioning units being offered must be the manufacturer's standard, pre-wired, installed in the unit at the factory or as recommended. Thermostats shall be located near the unit return. For units serving more than one area, the thermostat shall be located near the return of the space with the highest heat generation.

6.5.5 Air Filtration

All supply air shall be filtered using manufacturer's standard washable filters mounted inside the unit. In addition, all outdoor air intakes where required shall be equipped with 50 mm (2 inch) thick washable filters.

6.5.6 Submittals

The Contractor shall submit the following for the equipment to be provided under this section of the specification: manufacturer's data including performance characteristics at design conditions, dimensions, performance data, electrical requirements, and compliance with standards as stated in paragraph CODES, STANDARDS AND REGULATIONS; drawings indicating location of each piece of equipment, routing and size of refrigerant piping.

6.6 VENTILATION AND EXHAUST SYSTEMS

All fans shall be used for building ventilation and pressurization with capacities to be selected for minimum noise level generated. Unit mounted fans either used for supply or exhaust shall be centrifugal forward curved, backward inclined, or airfoil fans with non-overloading characteristics of high efficiency and quiet running design. The fans shall be of the heavy-duty type with durable construction and proved performance in a desert environment. Each exhaust fan shall be provided with shut-off dampers which close automatically when the fan is not running. Also, each fan shall be complete with vibration isolator, external lubricators, and all accessories and sound attenuators as necessary.

6.6.1 Submittals

The Contractor shall submit the following for the equipment to be provided under this section of the specification: manufacturer's data including performance characteristics at design conditions; catalog cuts showing dimensions, performance data, electrical requirements, compliance with standards as stated in paragraph CODES, STANDARDS AND REGULATIONS; drawings indicating location and installation details.

6.7 NOT USED

6.8 TEST ON COMPLETION

6.8.1 After completion of the work, the Contractor shall demonstrate to the Contracting Officer that the installation is adjusted and regulated correctly to fulfill the function for which it has been designed. The Contractor shall test, adjust, balance and regulate the section or sections of concern as necessary until the required conditions are obtained. Include tests for all interlocks, safety cutouts and other protective device to ensure correct functioning. All such tests shall be carried out and full records of the values obtained shall be prepared along with the final settings and submitted to the Contracting Officer in writing.

6.8.2 The following tests and readings shall be made by the Contractor in the presence of the Contracting Officer and all results shall be recorded and submitted in a tabulated form.

a. Room Inside Conditions:

1. Inside room DB & WB temperatures
2. Air flow supply, return and/or exhaust

b. Air Handling Equipment: Air quantities shall be obtained by anemometer readings and all necessary adjustments shall be made to obtain the specified quantities of air indicated at each inlet and outlet. Following readings shall be made:

1. Supply, return and outside air CMH (CFM) supplied by each air conditioning system.
2. Total CMH (CFM) exhausted by each exhaust fan
3. Motor speed, fan speed and input ampere reading for each fan
4. Supply, return and outside air temperature for each air-conditioning system.

c. Electric Motors:

For each motor: (1) Speed in RPM

(2) Amperes for each phase

(3) Power input in KW

6.9 ELECTRICAL REQUIREMENTS FOR HVAC EQUIPMENT

a. Note that electrical requirements for all HVAC systems shall be designed and installed to operate on the secondary power standard required herein.

b. All thermostats shall be wall mounted near the return grilles in the room with the highest heat load generation and mounted 1.5 meters (5 feet) above the floor. In lieu of a thermostat, a temperature sensor may be located in the same location and connected to a thermostat located near the unit return. Thermostat shall be mounted 1.5 meters (5 feet) above the finished floor and be easily accessible. Thermostats for the latrine facilities shall be located near the unit return and mounted 1.5 meters (5 feet) above the finished floor. Operation of the control system shall be at the manufacturer's standard voltage for the unit.

c. The following are the minimum requirements for motors regarding enclosure, insulation and protection:

1. Compressor Hermetic: Provide inherent (internal) overload protection.
2. Condenser: Provide internal thermal overload protection.
3. Evaporator (Open Class "A") fan motor type provides internal thermal overload protection.

7.0 PLUMBING

7.1 SYSTEM REQUIREMENTS

There are no domestic water and waste systems in this project .

8.0 FIRE PROTECTION

8.1 GENERAL

Facility construction and fire protection systems shall be installed in accordance with the publications listed herein and the publications referenced therein. Where a conflict occurs among various criteria, the more stringent requirement shall take precedence.

8.2 BUILDING CONSTRUCTION

Building construction shall conform to fire resistance requirements, allowable floor area, building height

limitations and building separation distance requirements of the building code.

8.3 LIFE SAFETY

Facilities features will be provided in accordance with NFPA 101, among other references, to assure protection of occupants from fire or similar emergencies.

8.4 FIRE PROTECTION EQUIPMENT

All fire protection equipment shall be listed by Underwriters' Laboratories (UL) or approved by Factory Mutual (FM) or equivalent and shall be listed in the current UL Fire Protection Equipment Directory or Factory Mutual Approval Guide or equivalent.

8.5 FIRE ALARM AND DETECTION (NOT USED)

8.6 WATER SUPPLY FOR FIRE PROTECTION

A dedicated fire protection water supply is unavailable. Therefore, alternate methods of design and construction are being instituted.

8.7 PORTABLE FIRE EXTINGUISHERS

Portable fire extinguishers shall be provided inside all facilities and at exterior locations as required in accordance with NFPA 10. Generally, extinguishers will be of the multi-purpose dry chemical type except for occupancies requiring a special type extinguisher (e.g., carbon dioxide portable fire extinguishers for electrical rooms).

9. ELECTRICAL

9.1 GENERAL

Contractor shall design and construct all electrical systems for the modular housing structures, and shower and toilet buildings. This includes design, construction, all necessary labor, equipment, and material for a fully functional system. Contractor to insure the secondary electrical system is 220/380 volt, 3-phase, 4 wire, 50 hertz for this project. Design of the electrical system within facilities shall include, but is not limited to (a) interior secondary power distribution system, (b) lighting and power branch circuit and devices, and (c) fire detection and alarm system. All systems shall be designed for the ultimate demand loads, plus 25% spare capacity.

9.2 Design Criteria

9.2.1 Applicable Standards

- a. Design shall be in the required units as stipulated herein.
- b. Conflicts between criteria and/or local standards shall be brought to the attention of the Contracting Officer for resolution. In such instances, all available information shall be furnished to the Contracting Officer for approval.
- c. All electrical systems and equipment shall be installed in accordance with NFPA code requirements.
- d. Acceptance Testing: Contractor shall develop and submit for approval complete acceptance test procedures on all systems provided. As a minimum the testing procedures shall comply with the requirements of NFPA 70 (NEC) and International Electrical Testing Association Inc. (NETA).
- e. Any other applicable references listed herein, including the following:

ANSI/IEEE Std 81-1983

ANSI/NETA ETT-2000
ANSI/NETA MTS 7.2.2-2001
ANSI/TIA/EIA-568 Commercial Building Telecommunications Cabling Standard
ANSI/TIA/EIA-569 Commercial Building Standard for Telecommunication Pathways and Spaces
EIA ANSI/TIA/EIA-607: (1994) Commercial Building Grounding/Bonding Requirement Standard.
ETL 1110-3-412 Transformer Application Guide
ETL 1110-3-502, Telephone and Network Distribution System Design and Implementation Guide.
Factory Mutual (FM) Approval Guide-Fire Protection (2002).
IBC - International Building Code
IMC – International Mechanical Code
IPC – International Plumbing Code
IEEE C2 National Electrical Safety Code (NESC)
IEEE 48 IEEE Standard Test Procedures and Requirements for Alternating- Current Cable Terminations
2.5 kV Through 765 Kv
IEEE Std 62™-1995 (R2005)
IEEE Std 81.2-1991
IEEE 100
IEEE 241 - 1990
IEEE 242 - 2001
IEEE standard 400-1991
IEEE standard 519-1992
IEEE C57.12.22
IEEE C57.12.34
IEEE C57.12.28
IEEE C57.12.80
IESNA Lighting Handbook
International Electrical Testing Association Inc. (NETA) Acceptance Testing Specifications for Electrical
Power Distribution Equipment and Systems
NFPA 10, Portable Fire Extinguishers
NFPA 70, National Electrical Code
NFPA 90A, Air Conditioning and Ventilating Systems, 2002 edition
NFPA 101, Life Safety Code, 2003 edition
NFPA 780, Lightning Protection
TM 5-811-1 Design: Electrical Power Supply and Distribution
TM 5-811-3 Electrical Design: Lightning and Static Electricity Protection
UFC 3 410-01FA Heating, Ventilating and Air Conditioning
UFC 3 410-02A Heating, Ventilation and Air Conditioning (HVAC) Control Systems
UFC 3-520-01 Interior Electrical Systems, 10 June 2002
UFC 3-530-01AN Design: Interior and Exterior Lighting and Controls 19 Aug 2005
UFC 3-550-03FA Electrical Power Supply and Distribution
Underwriters' Laboratories (UL) Fire Protection Equipment Directory (2002).

9.3 Material:

9.3.1 General:

Unless noted otherwise, all material used shall be in compliance with the requirements of UL standards. In the event that UL compliant materials are not available, Contractor may then select applicable British Standards (BS), IEC, CE, CSA, GS, DIN listed material (or equivalent), but the contractor must prove equivalence and must provide the government with a full copy of the relevant specification(s)/standard(s). Material and equipment installed under this contract shall be for the appropriate application and installed in accordance with manufacturers recommendations.

Equipment enclosure types shall be in compliance with the National Electrical Manufacturer's Association (NEMA) or the International Electro-Technical Committee (IEC) standards.

Material and equipment installed under this contract shall be for the appropriate application. Materials and equipment shall be installed in accordance with recommendations of the manufacturer. Major components of equipment shall have the manufacturer's name, address, type or style, voltage and current rating, and catalog number on a non-corrosive and non-heat sensitive plate, securely attached to the equipment. All equipment delivered and placed in storage, prior to installation, shall be protected from the weather, humidity and temperature variation, dirt and dust, and any other contaminants. All equipment shall be in new condition, undamaged and unused.

9.3.2 Standard Product:

All material and equipment shall be a standard product of a manufacturer regularly engaged in the manufacture of the product and shall essentially duplicate items that have been in satisfactory use for at least two (2) years prior to bid opening.

9.3.3 Design Conditions: All equipment shall be rated and designed for 49 degrees Celsius (120 degrees Fahrenheit) and minimum elevation of 800 meters above sea level.

Comment [DJK1]: Elevation of Kabul is approx 1800m or 6000ft. Edit for other locations.

9.3.4 Restrictions: Aluminum conductors shall not be specified or used. Aluminum windings shall not be used in transformers.

Transformer(s) shall be ANSI-style, pad-mounted, dead front type. "Pad mount", "dead front" and "pad mount, dead front transformer" are defined and described in the IEEE standards listed above in the standards section

9.4 Design Requirements

9.4.1 Electrical Distribution System

Contractor shall perform a load calculation to determine the number of required transformers to feed all facilities in this project. In the event the existing transformer(s), if present, cannot support the load of the entire facilities package, the contractor shall notify the Contracting Officer. In such instances the contractor shall provide all the information regarding the required number of the new transformers to the Contracting Officer. Design and installation of any additional feeders required from any new ATS(s) will be the responsibility of the contractor. Contractor shall coordinate power needs with the Contracting Officer relative to needs met by each transformer, and to limit power interruption to other services already connected.

Transformers shall be provided with back-up generators and Automatic Transfer Switches (ATS) by the contractor. The scope of work covered by this proposal begins at each ATS. The contractor shall provide and install properly sized service entrance feeder from each ATS to the service entrance equipment located inside of each facility. Service entrance equipment shall include a distribution panel board properly sized to feed each facility. Contractor shall coordinate with the Contracting Officer in locating the main distribution panel board(s) as close as possible to the corresponding ATS. All panel boards shall be circuit breaker 'bolt-on' type panels. Minimum size circuit breaker shall be rated at no less than 20-amperes. Circuit breakers shall be connected to bus bar(s) within the panel boards. Daisy chain (breaker-to-breaker) connection(s) are not acceptable. Indoor distribution panels shall be flush mounted in finished areas and surface mounted in unfinished areas. All circuit breakers shall be labeled with an identification number corresponding to the panel schedule. A 3-pole circuit breaker shall be a single unit and not made up of 3 single pole circuit breakers connected with a wire or bridged to make a 3-pole breaker. All wiring shall be copper, minimum # 12 AWG (or equivalent mm sq wire) installed in metal conduit. Wiring shall be recessed in finished areas and surface mounted in unfinished areas. Flush mounted panels shall be provided with spare empty conduits from panel to unfinished area for future use. All panels shall be provided with a minimum of 25% spare capacity for future load growth. Power receptacles (outlets) shall be duplex type 220 V, 50 hertz, type CEE 7/7 with Earth Ground rated for 16A or better and shall be compatible with the required secondary power. All splicing and terminations of wires shall be performed in a junction or device boxes. Proper wire nuts/connectors shall be used for splicing wire. No twist-wire connections with electrical tape wrapped around it shall be

acceptable. All electrical installation shall be in accordance with NFPA 70 (National Electric Code). For large panels (225 Ampere and above) provide an ammeter, voltmeter and kilowatt-hour meter to monitor energy usage. Selector switch shall be provided for reading all 3 phases. Circuits shall be provided for all mechanical equipment and final connections made. Receptacle locations shall be coordinated with architectural requirements.

Contractor shall provide (design and install) circuits for all mechanical equipment and any other equipment that requires power and make the final connections.

All loads shall be coordinated to provide balanced loading. Phase imbalance at each panel shall not exceed 5%.

Voltage Drop for branch circuits shall be limited to no more than 3%; voltage drop for branch and feeder circuits combined shall be limited to no more than 5%.

All circuit breakers shall use down-stream coordination to ensure the breaker nearest a fault or overload is the first to trip.

9.4.2 Lighting

Design levels shall be per IES standards as a minimum. For convenience, the following lighting level table is listed. Note: all spaces listed below may not be within the work required within this contract.

Corridors and Stairways	20 FC (200 Lux)
Offices (private)	50 h/5 v FC (500 h/50 v Lux)
Offices (open)	30 h/5 v FC (300 h/50 v Lux)
Reading (in chair-casual)	30 h/5 v FC (300 h/50 v Lux)
Reading (in chair-serious)	50 h/10 v FC (500 h/100 v Lux)
Reading (at desk-casual)	30 h/3 v FC (300 h/30 v Lux)
Reading (at desk-serious)	50 h/10 v FC (500 h/100v Lux)
Egress path (incl. exterior)	10 Lux
Areas adjacent to egress path	0.5 Lux

FC = footcandle
H = horizontal component
V = vertical component

Indoor lighting for all areas shall consist of fluorescent surface mounted light fixtures. Exterior lighting will be installed as referenced. Moisture resistant/waterproof fluorescent light fixtures shall be provided in high humidity and wet areas such as latrines and showers. Battery powered 'emergency' and 'exit' lights shall be provided within each building, as applicable, for safe egress during a power outage. All light fixtures shall be factory finished, complete and operational, to include but not be limited to, lens, globe, lamp, ballast etc. Industrial type fluorescent light fixtures shall not be used. Every room shall be provided with a minimum of one light switch. Light fixtures shall be mounted approximately 2.5-meters (8 feet) above finished floor (AFF), minimum. Fixtures may be pendant or ceiling mounted, depending on the ceiling type and height.

9.4.3 Light Fixtures

Lighting fixtures shall be a standard manufacturer's product. Fluorescent surface mounted light fixtures shall be power factor corrected and equipped with standard magnetic ballast(s). All light fixtures shall properly operate using standard lamps available locally. Fixtures shall be fully factory wired and designed for appropriate application i.e. appropriate for that location where installed.

9.4.4 Emergency "EXIT" Light Fixtures

Emergency "EXIT" light fixture shall be provided in accordance with NFPA requirements. Fixtures shall be single side and for wall/ceiling mounting. Unit shall illuminate continuously and be provided with self-contained nickel cadmium battery pack, to operate on floated-battery or trickle charge circuit. Fixture shall operate satisfactorily for 90 minutes during a power outage. Unit shall have test/re-set and lamp failure indication buttons. Primary operating voltage shall be 120 volts. Lettering "EXIT" shall be color red and not less than 6 inches (150 mm) in height and on matte white background. Illuminations shall be with LEDs.

9.4.5 Above Mirror Lights

Above mirror lights shall be provided in toilet rooms.

9.4.6 Emergency Lighting

Battery powered emergency lights shall be provided within each building per NFPA for safe egress during power outage. Fixtures shall be provided with self-contained nickel cadmium battery pack to operate on stand-by circuit for 90-minute minimum. Unit shall have test/re-set and lamp failure indication buttons. Primary operating voltage shall be 220 volts.

9.4.7 Light Switches

Light switch shall be single pole. Minimum of one light switch shall be provided in every room. Lighting in large rooms/areas may be controlled from multiple switches. Three-way or Four-way lighting shall be provided in all rooms / areas with multiple entrances.

9.4.8 Receptacles

General-purpose receptacles shall be as required herein. All receptacles shall be duplex, unless otherwise specified in this section, section 01010, the NEC, or other referenced standard.

Receptacles shall be placed at 3-meter (10 feet) intervals (maximum) in general. Areas with computer work-stations or similar equipment will have additional receptacles. Total number of duplex receptacles shall be limited to six (6) per 20-ampere circuit breaker.

9.4.9 Conductors

All cable and wire conductors shall be copper. Conductor jacket or insulation shall be color coded to satisfy NEC requirements. The use of 75 or 90 degree C (minimum) terminals and insulated conductors is required. Use of 75 degree C conductors on circuits with protective device terminals rated for 60 degree C is inappropriate.

9.4.10 Grounding and Bonding

Grounding and bonding shall comply with the requirements of NFPA 70. Underground connections shall be exothermal welded. All exposed non-current carrying metallic parts of electrical equipment in the electrical system shall be grounded. Insulated grounding conductor (separate from the electrical system neutral conductor) shall be installed in all feeder and branch circuit raceways. Grounding conductor shall be green-colored, unless the local authority requires a different color-coded conductor. Ground rods shall be copper-clad steel. Final measurement of the ground resistance shall be in compliance with the requirements of the local authority but shall not exceed 25 ohms when measured less than 48 hours after rainfall.

9.4.11 Enclosures

Enclosures for exterior and interior applications shall be NEMA Type 3S (IEC Classification IP54) and NEMA Type 1 (IEC Classification IP10), respectively.

9.4.12 Fire Detection & Alarm System (NOT USED)

9.4.13 Transient Voltage Surge Suppression (TVSS) (NOT USED)

9.4.14 Conduit Raceway System

Metal conduit system shall be complete, to include but not limited to, necessary junction and pull-boxes. Smallest conduit size shall be no less than 20mm (0.75 inch) in diameter. All empty conduits shall be furnished with pull-wire. System design and installation shall be per NFPA 70 requirements. Exterior conductors shall be installed in PVC conduit at a depth of 48-inches.

9.4.15 Cable Tray Raceway System (NOT USED)

9.4.16 Identification Nameplates

Major electrical equipment, such as transformers, panel boards, and load centers, etc. shall be provided with permanently installed engraved identification nameplates.

9.4.17 Schedules

All panel boards and load centers shall be provided with a panel schedule. Schedule shall be typed written in English.

9.4.18 Single Line Diagram

Complete single line diagrams shall be provided for all systems installed. All major items in each system shall be identified and labeled for respective rating. Single line diagrams for each system, installed in a clear plastic frame, shall be provided.

10.0 COMMUNICATIONS - Telephone and Data Distribution

- 10.1** General: The Contractor shall provide a building telephone and data cabling system. The system shall provide cable connection from the location identified on the drawings for the communications equipment. The telephone and data equipment is to be provided by others. The incoming communications cabling connection to the building is to be provided by others. The Contractor's system shall be fully capable of interface with the future equipment and future connection to the site telephone and data systems.
- 10.2** Telephone/Data Cabling Distribution System for each building. The Contractor shall provide two telephone/data boxes per bedroom, one box on each of the long interior walls. The Contractor shall provide two telephone/data boxes per workstation. Conference rooms shall have two telephone/data boxes on each interior wall, three interior walls per conference room. Each box shall have dual RJ-45 outlets, one for telephone and one for data. Interior copper cable to each outlet shall be 4 pair, unshielded twisted pair (UTP), Category 5e or better which is currently defined in TIA/EIA-568-B Provides performance of up to 100 MHz and is frequently used for both 100 Mbit/s and gigabit Ethernet networks. . Each telephone/data junction box shall be fitted with two RJ-45 jacks (1-voice / 1-data). Two runs of Category 5e (UTP) or better data cable shall be installed from each junction box back to the patch panel in the communications room and labeled on both ends with room number and jack number. Contractor shall be responsible for providing one enclosed 480 mm wide, 1 800 mm tall communications equipment rack with

top-mounted cooling fans and front & rear closing doors. Contractor shall provide two 480 mm 48-port patch-panel mounted in the rack. Contractor shall coordinate the location of the communications rack (first or second floor) with the Contracting Officer Representative (COR). Corps of Engineers Representative (COR) shall punch-down the Category 5e cabling at both the patch panel and at the data/communications jacks in the bedrooms/offices/workstations/conference rooms. Termination configuration shall be EIA/TIA T568B. A Corps of Engineers representative shall test each cable run and data jack after it have been installed. Two 100 mm empty conduits shall be provided from the room to the outside for to facilitate future telephone cabling installation into the building. Two additional 100 mm empty conduits shall be provided between the communications rooms of both buildings. Provide all empty conduits with a pull rope. Incoming telephone and data service is to be provided by others. Properly sized metallic/PVC conduit and cable tray shall be used as appropriate to distribute the telephone/data cabling throughout the building. Minimum conduit size shall be 20 mm inside diameter. Data/communications face plates shall be surface mounted to the wall.

END OF SECTION

SECTION: 01060

**SECTION 01060
SPECIAL CLAUSES**

PART 1 GENERAL

1.1 PRECONSTRUCTION CONFERENCE

1.1.1 Schedule of Meeting

At the earliest practicable time, prior to commencement of the work, the Contractor and any Subcontractors whose presence is necessary or requested, shall meet in conference with representatives of the Contracting Officer to discuss and develop a mutual understanding relative to the details of the administration and execution of this contract. This will include but not necessarily be limited to the Contractor's Quality Control (CQC) Program, the Contractor's Accident Prevention Program, submittals, correspondence, schedule, access to the work site, security requirements, interface requirements, temporary facilities and services, hazards and risks, working after normal hours or on weekends or holidays, assignment of inspectors, representations, special requirements, phasing and other aspects of this project that warrant clarification and understanding.

1.1.2 Meeting Minutes

It shall be the responsibility of the Contractor's CQC System Manager to prepare detailed minutes of the Preconstruction Conference meeting and submit same to the Contracting Officer for approval within three (3) work days. Any corrections deemed necessary by the Contracting Officer shall be incorporated and resubmitted within two

(2) calendar days after receipt. Upon approval of the minutes by the Contracting Officer, the Contractor shall distribute the minutes to all parties present or concerned.

1.2 AREA USE PLAN

The Contractor shall submit to the Contracting Officer, within ten (10) calendar days after Notice to Proceed (NTP), an Area Use Plan designating intended use of all areas within the project boundaries. This plan shall include, but not necessarily be limited to the following: the proposed location and dimensions of any area to be fenced and used by the Contractor; construction plant, plans, building, installations/the number of trailers and facilities to be used; avenues of ingress/egress to the fenced areas and details of the fence installation; drawings showing temporary electrical installations; temporary water and sewage disposal installations; material storage areas; hazardous storage areas. Any areas which may have to be graveled shall also be identified. The plan shall also include a narrative description of the building structural system, the site utility system; and the office or administration facilities. The Contractor shall also indicate if the use of a supplemental or other staging area is desired. The Contractor shall not begin construction of the mobilization facilities prior to approval by the Contracting Officer of the Area Use Plan described herein.

1.3 CONTRACTOR'S MOBILIZATION AREAS

1.3.1 General

1.3.1.1 Facilities Within the Mobilization Site

All facilities within the Contractor's mobilization site shall be of substantial construction suitable for the local weather conditions. Housing, messing and sanitary facilities shall meet the requirements of Corps of Engineers Safety and Health Requirements Manual EM 385-1-1. The Contractor shall provide all utilities required to make the site self-sufficient.

1.3.1.2. Trash Disposal: The Contractor shall be responsible for collection and disposal of trash from the work areas and from the mobilization areas. All trash shall be disposed of off base in accordance with Host Nation requirements. Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Loose debris capable of being windblown, shall be immediately placed in sealed or covered containers to prevent it from being blown onto helio pad. Any dirt or soil which is tracked onto surfaced roadways shall be cleaned daily. Materials resulting from demolition activities, which are salvageable, shall be stored within the fenced area described above. Stored material not indoors, whether new or salvaged, shall be neatly stacked when stored.

1.3.2 CONTRACTOR'S MOBILIZATION AREA (ON-BASE)

The Contractor will be permitted to use the area designated by the Contracting Officer within the contract limits for operation of his construction equipment and plants, shops, warehouses, and offices. The Contractor may provide living accommodations for his

work force on the site. The Contractor is responsible for obtaining any required additional mobilization area above that designated. On completion of the contract, all facilities shall be removed from the mobilization area by the Contractor and shall be disposed of in accordance with applicable Host Government Laws and Regulations. The site shall be cleared of construction debris and other materials and the area restored to its final grade.

1.3.2.1 Administrative Field Offices

The Contractor may provide and maintain administrative field office facilities within the mobilization area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

1.3.2.2 Storage Area

The Contractor shall construct a temporary 1.8 meter high chain link fence around trailers and materials. The fence shall include plastic strip inserts, colored green or brown, so that visibility through the fence is obstructed. Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Trailers, materials, or equipment shall not be placed or stored outside the fenced area unless approved in writing by the Contracting Officer.

1.3.2.3 Plant Communication

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone or other suitable devices. The devices shall be made available for use by Government personnel.

1.3.2.4 Appearance of Mobilization Site Facilities and/or Trailers Mobilization Site Facilities and/or Trailers utilized by the Contractor for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers or other transportable structures which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on the construction site until such work or maintenance has been performed to the satisfaction of the Contracting Officer.

1.3.2.5 Maintenance of Storage Area

Fencing shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse with construction equipment or other vehicles unpaved areas which are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of soil onto paved or established roadways; gravel gradation shall be at the Contractor's discretion.

1.3.2.6 Security Provisions

Adequate outside security lighting shall be provided at the Contractor's temporary facilities. The Contractor shall be responsible for the security of its own personnel, facilities and equipment.

1.3.2.7 Sanitation

Sanitary Facilities: The Contractor shall provide and maintain within the construction area minimum field-type sanitary facilities in accordance with the requirements of EM 385-1-1 Safety and Health Requirements Manual and approved by the Contracting Officer. Government toilet facilities will not be available to Contractor's personnel.

1.3.2.8 Telephone

The Contractor shall make arrangements to install and pay all costs for telephone facilities desired.

1.3.2.9 Restoration of Storage Area

Upon completion of the project and after removal of mobilization facilities, trailers, materials, and equipment from within the fenced area, the fence shall be removed and will become the property of the Contractor. Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse unpaved areas shall be removed and all such areas restored to their original conditions.

1.3.2.10 Protection and Maintenance of Traffic

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the Host Nation and/or base authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with Host Nation and/or base traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

1.3.2.11 Haul Roads

The Contractor shall, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. Haul roads shall be constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control shall be in accordance with the Special Clause entitled DUST CONTROL. Location, grade, width, and alignment of construction and hauling roads shall be subject to approval by the Contracting Officer. Lighting shall be adequate to assure full and clear visibility for full width of haul road and work areas

during any night work operations. Upon completion of the work, haul roads designated by the Contracting Officer shall be removed.

1.3.2.12 Use of Existing Roads as Haul Routes

The Contractor shall be responsible for coordinating with the Host Nation Government and the base authorities for use of any existing roads as haul routes. Construction, and routing of new haul roads, and/or upgrading of existing roads to carry anticipated construction traffic shall be coordinated with the Host Nation and Base authorities and is the sole responsibility of the Contractor.

1.3.2.13 Employee Parking

Contractor employees shall park vehicles in an area approved by the Contracting Officer. Contractor employee parking shall not interfere with existing and established parking requirements of the military installation.

1.3.2.14 Temporary Project Safety Fencing and Barricades

The Contractor shall impose all measures necessary to limit public access to hazardous areas and to ensure the restriction of workers to the immediate area of the construction and mobilization site. The Contracting Officer may require in writing that the Contractor remove from the work any employee found to be in violation of this requirement.

1.3.2.15 Barricades

Barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night. Travel to and from the project site shall be restricted to a route approved by the Contracting Officer.

1.4 RESPONSIBILITY FOR PHYSICAL SECURITY

Prior to mobilization, the Contractor shall submit his proposed means of providing project security to prevent unauthorized access to equipment, facilities, materials and documents, and to safeguard them against sabotage, damage, and theft. The Contractor shall provide perimeter force protection security for the developing site. Security may include but is not limited to fence and private security guards. Perimeter security shall prevent unauthorized site access and provide safety protection to the Contractor work force and government personnel for the duration of the project. The Contractor is solely responsible for security however local police shall be coordinated with regarding security. The Contractor shall be responsible for physical security of all materials, supplies, and equipment of every description, including property which may be Government-furnished or owned, for all areas occupied jointly by the Contractor and the Government, as well as for all work performed.

1.5 DUST CONTROL

The Contractor shall be required to control objectional dust in the work areas, access roadways, and haul roads by means of controlled vehicle speeds or dust palliatives. Vehicles transporting sand, cement, gravel or other materials creating a dust problem shall be covered, as directed by the Contracting Officer, or in accordance with local Laws, codes, and regulations.

1.6 CONNECTIONS TO EXISTING UTILITIES

1.6.1 General

Any outage of any utility service shall be requested in writing at least fifteen (15) days in advance of the date requested for the commencement of the outage. The Contractor shall provide a request, detailing the type of outage needed (water, sewer, electrical, steam, etc.), the time needed to perform the work, the reason for the outage, and the known affected facilities. The Contracting Officer shall be contacted prior to the outage to confirm the time and date. If the Contractor fails to initiate work at the approved time, the Contracting Officer may cancel the approved outage and may direct the Contractor to resubmit a new request. No part of the time lost due to the Contractor's failure to properly schedule an outage shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

1.6.1.1 Performance of Work During Non-Standard Hours

To minimize outage impact to the mission of the Base, all outages shall be scheduled on weekends or from 2100 - 0530 hours on duty days. The period proposed for performance of the outage shall include sufficient contingencies to preclude impact to the peak working hours 0530 - 1800 hours during the work week.

1.6.1.2 Exterior Night Lighting

Exterior night lighting shall be provided in conformance with EM-385-1-1 entitled Safety and Health Requirements Manual.

1.6.2 Existing Underground Utilities

The Contractor shall exercise the utmost care in researching locations of existing utility lines by implementing control measures to eliminate, or reduce to a level acceptable to the Contracting Officer, the chance of damaging or destroying existing utilities.

1.6.2.1 Use of Underground Utility Detecting Device

Prior to any excavation, a metal and/or cable detecting device shall be used along the route of the excavation. All underground utilities discovered by this method will be flagged a minimum distance of one-half (1/2) meter on each side of the location.

1.6.2.2 Hand Excavation

Hand excavation methods and special supervisory care shall be used between any flagged markers, in areas of known or suspected hazards, and in areas known or suspected to have multiple and/or concentrated utility lines or

connections.

1.6.3 Repair of Damaged Utilities

The Contractor shall be responsible to repair any utilities damaged by him. The method of repair and schedule for performance of the repair shall be coordinated with, and subject to the approval of, the Contracting Officer. The repair work and any temporary work required to keep the system operational while repairs are being completed, shall be performed at no cost to the Government.

1.7 WATER (CONTRACTOR PROVIDED)

The Contractor shall provide and maintain water at his own expense for his use for construction and domestic consumption, and shall install and maintain necessary supply connections and piping for same, but only at such locations and in such manner as may be approved by the Contracting Officer. Before final acceptance of systems, or facilities, all temporary connections and piping installed by the Contractor shall be removed at his expense in a manner satisfactory to the Contracting Officer.

1.8 ELECTRICITY (CONTRACTOR PROVIDED)

Electrical service is not available for use under this contract, therefore all electric current required by the Contractor shall be the responsibility of the Contractor, furnished at his own expense. All temporary connections for electricity shall be subject to the approval of the Contracting Officer and shall comply with Corps of Engineers manual EM 385-1-1 entitled Safety and Health Requirements Manual. All temporary lines shall be furnished, installed, connected and maintained by the Contractor in a workmanlike manner satisfactory to the Contracting Officer. Before final acceptance of systems, or facilities, all temporary connections installed by the Contractor shall be removed at his expense in a manner satisfactory to the Contracting Officer.

1.9 USE OF EXPLOSIVES

The Contractor shall make necessary arrangements as may be required by applicable codes, rules, regulations and laws and shall be responsible for compliance therewith for all phases of blasting operations. When blasting is required for removal of rock or other material, the Contractor shall notify the Contracting Officer prior to application for any use of explosives and take all necessary precautions for the protection of individuals and property exposed to his operation.

1.9.1 Handling, Storage, and Use of Explosives

The handling, storage, and use of explosives shall be governed by the applicable provisions of the following: the "BLASTING" section of the Corps of Engineers Manual EM 385-1-1, entitled Safety and Health Requirements Manual, a copy of which may be obtained from the Contracting Officer's Representative at the jobsite, and Technical Section 02201 entitled BLASTING

1.9.2 Blasting Permits

The Government assumes no liability for changes that may be imposed by the

Afghanistan Government.

1.10 WORK OUTSIDE REGULAR HOURS

If the Contractor desires to carry on work outside regular Base duty hours, or on holidays, he shall submit an application to the Contracting Officer. The Contractor shall allow ample time to enable satisfactory arrangements to be made by the Government for inspecting the work in progress. At night, exterior lighting shall be provided in conformance with EM-385-1-1 entitled "Safety and health Requirements Manual".

1.11 SCHEDULING OF WORK IN EXISTING FACILITIES

As soon as practicable, but in any event not later than fifteen (15) calendar days after receipt of Notice to Proceed, the Contractor shall meet in conference with the Contracting Officer, or his duly authorized representatives, to discuss and develop mutual understanding relative to the scheduling of work in and access to the existing facilities where work has to be performed under this contract, so that the Contractor's proposed construction schedule is coordinated with the operating and security requirements of the installation.

1.12 Use of Afghan Workforce

Private sector Afghan subcontractors and workers (to include, but not limited to, laborers and skilled tradesmen) will be used to the extent that each is capable of performing required work and that locally-produced Afghan materials and equipment be used to the extent that each can satisfy contract requirements, including all technical or other specifications.

1.13 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

1.13.1 General

This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the Contract Clause 52.249-10 entitled DEFAULT (FIXED-PRICE CONSTRUCTION) APR 1984. The listing below defines the anticipated monthly unusually severe weather for the contract period and is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the geographic location of the project. The schedule of anticipated unusually severe weather will constitute the baseline for determining monthly weather time evaluations. Upon award of this task order and continuing throughout the contract each month, actual unusually severe weather days will be recorded on a calendar day basis (including weekends and holidays) and compared to the monthly anticipated unusually severe weather in the schedule below. The term "actual unusually severe weather days" shall include days actually impacted by unusually severe weather. The Contractor's schedule must reflect the anticipated unusually severe weather days on all weather dependent activities.

MONTHLY ANTICIPATED UNUSUALLY SEVERE WEATHER CALENDAR DAYS

January	4 Days
February	2 Days
March	2 Days
April thru December	0 Days

1.13.2 Time Extensions

The number of actual unusually severe weather days shall be calculated chronologically from the first to the last day in each month. Unusually severe weather days must prevent work for fifty percent (50%) or more of the Contractor's workday and delay work critical to the timely completion of the project. If the number of actual unusually severe weather days exceeds the number of days anticipated in the paragraph above, the Contracting Officer will determine whether the Contractor is entitled to a time extension. The Contracting Officer will convert any qualifying delays to calendar days and issue a modification in accordance with the Contract Clause 52.249-10 entitled DEFAULT (FIXED-PRICE CONSTRUCTION) APR 1984.

1.14 SPECIAL FACILITIES AND SERVICES TO BE FURNISHED BY THE CONTRACTOR

The Contractor shall furnish the facilities and services listed in this clause for Corps of Engineers personnel and other persons as designated by the Contracting Officer at each project site location. All facilities, furnishings, materials, and equipment shall be new or like new when furnished at the site. The Contractor shall fully maintain and repair all facilities, furnishings, equipment, and vehicles listed below until task order completion (at that location). All facilities furnished and/or installed by the Contractor (with the exception of vehicles) under this clause shall remain the property of the Contractor during the performance period of the task order (at that location) and shall be turned over to the Government upon task order completion (at that location). The vehicles furnished by the Contractor remain the Contractor's property during and after task order performance.

1.15 STANDARDIZATION

Where two or more items of the same type or class of product, system or equipment furnished in this project are required, the units shall be products of the same manufacturer and shall be interchangeable when of the same size, capacity, internal parts, performance characteristics, finish, and rating. The only exception to this requirement is where the items are interchangeable due to conformance with industry standards (valves, fittings, etc.); they need not be by the same manufacturer. This requirement applies to all manufactured items in the project that normally require repair or replacement during the life of the equipment.

1.16 COMPLIANCE WITH HOST COUNTRY RULES AND CUSTOMS

The laws of Host Country may prohibit access to certain areas of the country that are under military control. The Contractor shall furnish the Contracting Officer the names of personnel, type, and amounts of equipment, dates and length of time required at the

site, and the purpose of entering the host country. It is understood that areas to which rights of entry are provided by the Host Government are to be used only for work carried out under the contract and no destruction or damages shall be caused, except through normal usage, without concurrence of the Host Government.

1.17 PREPARATION OF AS-BUILT DRAWINGS (BY CONTRACTOR)

1.17.1 General

Upon completion of each facility under this contract, the Contractor shall prepare and furnish as-built drawings to the Contracting Officer. The as-built drawings shall be a record of the construction as installed and completed by the Contractor. They shall include all the information shown on the contract set of drawings, and all deviations, modifications, or changes from those drawings, however minor, which were incorporated in the work, including all additional work not appearing on the contract drawings, and all changes which are made after any final inspection of the contract work. In the event the Contractor accomplished additional work which changes the as-built conditions of the facility after submission of the final as-built drawings, the Contractor shall furnish revised and/or additional drawings and drawing files as required to depict final as-built conditions. The requirements for these additional drawings shall be the same as for the as-built drawings specified in this paragraph.

1.17.2 Preliminary As-Built Drawings

The Contractor shall maintain a full-size set of contract drawings for depicting a daily record of as-built conditions. These drawings shall be maintained in a current, reproducible condition at all times during the entire contract period and shall be readily available for review by the Contracting Officer's Representative at all times. The as-built drawings shall be updated daily by the Contractor showing all changes from the contract plans which are made in the work, or additional information which might be uncovered in the course of construction. This information shall be recorded on the prints accurately and neatly by means of details and notes. Changes and additional information marked on the contract plans should be made in red or green color for highlighting purposes. The drawings shall show the following information, but not be limited thereto:

- a. The location and description of any utility lines or other installations of any kind or description known to exist within the construction area. The location includes dimensions to permanent features.
- b. The location and dimensions of any changes within the building or structure, and the accurate location and dimension of all underground utilities and facilities.
- c. Correct grade or alignment of roads, structures, or utilities if any changes were made from contract plans.
- d. Correct elevations if changes were made in site grading.
- e. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

- f. The topography and grades of all drainage installed or affected as part of the project construction.
- g. All changes or modifications of the original design including those which result from the final inspection.
- h. Where contract drawings or specifications allow options, only the option actually used in the construction shall be shown on the as-built drawings. The option not used shall be deleted.
- i. In development of as-built drawings, the Contractor shall not substitute shop drawings for original contract drawings. All necessary information for as-built conditions shall be incorporated into contract drawings.
- j. One (1) copy of the preliminary as-built marked prints shall be delivered to the Contracting Officer at the time of final inspection of each facility for review and approval. Changes and additional information marked on the contract plans should be made in red or green color for highlighting purposes. If upon review of the preliminary as-built drawings, errors or omissions are found, the drawings will be returned to the Contractor for corrections. The Contractor shall complete the corrections in red or green color, and return the as-built marked prints to the Contracting Officer within ten (10) calendar days.

1.175.3 Final As-Built Drawings

The Contractor shall update the digital contract drawing files to reflect the approved final as-built conditions and shall furnish those updated drawing files and plots of the final as-built drawings to the Contracting Officer.

- a. Only personnel proficient in the use of Computer Assisted Design and Drafting (CADD) for the preparation of drawings shall be employed to modify the contract drawing files or prepare new drawing files.
- b. Existing digital drawing files shall be updated to reflect as-built conditions. Independent drawing files containing only as-built information are not acceptable. The modifications shall be made by additions and deletions to the original drawing files, and where additional drawings are necessary, they shall be developed in individual digital files for each new drawing. All additions and corrections to the contract drawing files shall be clear and legible, and shall match the adjacent existing line work and text in type, size, weight, and style. New or revised information placed into the design files shall be placed on the levels and in the colors used for placement of the corresponding initial data. Similarly, the drawing size, title block, and general format of new drawings shall be consistent with the format established by the original drawings.
- c. In the preparation of as-built drawings, the Contractor shall remove "Bubbles" used by the Government to highlight drawing changes made during design/construction. Triangles associated with those earlier drawing changes shall be left on the drawings and the Contractor shall not add triangles to designate modifications associated with representation of the as-built condition. The revision block identification of the drawing modifications shall be left intact and the date of completion and the words "REVISED AS-BUILT" shall be placed in the revision block above the latest existing notation. Each drawing shall have the words "DRAWING OF WORK AS-BUILT" in letters 4.5 mm (3/16") high placed below the drawing title portion of the drawing title block; between the border and the trim line.

- d. The Contractor shall check all final as-built drawing files for accuracy, conformance to the initial drawing scheme and the above instructions. The Contracting Officer will review the drawings and drawing files for conformance to these standards.
- e. The Contractor shall furnish the digital as-built drawing files in the format to the 2005 or latest version in common use of Autodesk, AUTOCADD. The Government will only accept the final product for full operation, without conversion or reformatting, in this format.
- f. Digital drawing files shall be furnished to the Contracting Officer on CDROM or other media and format as approved by the Contracting Officer. A transmittal sheet containing the name of the files, the date of creation, the CD-ROM number, and a short description of the contents, shall accompany the CD-ROM. Provide an index in each disk cover of contents.
- g. A sample drawing shall be furnished to the Contracting Officer before delivery of final as-built drawings as a test to demonstrate compliance with the above instructions and file format compatibility with the described CADD software.
- h. One (1) complete set of the updated final Record Copy digital drawing files and one (1) paper plot or copy of the final Record drawings shall be delivered to the Contracting Officer within 30 calendar days of approval of the preliminary as-built drawings. If upon review of the final as-built drawings, errors or omissions are found, the drawings and drawing files will be returned to the Contractor for corrections. The Contractor shall complete the corrections and return both the digital files and the as-built prints to the Contracting Officer within ten (10) calendar days.

1.18 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in accordance with Section 01335 SUBMITTAL PROCEDURES FOR DESIGN/BUILD PROJECT. Each certificate shall be signed by an official authorized to certify in behalf of the manufacturing company involved and shall contain the name and address of the Contractor, the project name and location, description and the quantity of the items involved, and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material.

1.19 ACCIDENT PREVENTION

The Contractor shall comply with all applicable Host Country laws and with such additional measures as the Contracting Officer may find necessary in accordance with CONTRACT CLAUSE 52.236-13 entitled ACCIDENT PREVENTION (NOV 1991)-ALTERNATE 1 (APR 1984). Applicable provisions of the Corps of Engineers manual entitled Safety and Health Requirements Manual EM 385-1-1, will be applied to all work under this contract. The referenced manual may be obtained from the Contracting Officer's Representative at the jobsite or from the Transatlantic Programs Center at Winchester, Virginia.

1.19.1 Accident Prevention Program

Within fifteen (15) days after receipt of Notice to Proceed, and at least ten (10) days prior to the accident prevention pre-work conference, four (4) copies of the Accident Prevention Plan required by the CONTRACT CLAUSE 52.236-13 entitled ACCIDENT PREVENTION (NOV 1991)- ALTERNATE I shall be submitted for review by the Contracting Officer. The Contractor shall not commence physical work at the site until the Accident Prevention Plan (APP) has been reviewed and accepted by the Contracting Officer or his authorized representative. The APP shall meet the requirements listed in Appendix "A" of EM385-1-1. The program shall include the following: TAC Form 61 " Accident Prevention Program Hazard Analysis (Activity Hazard Analysis)" fully completed and signed by an executive officer of the company in Block No. 13. The Activity Hazard Analysis is a method in which those hazards likely to cause a serious injury or fatality are analyzed for each phase of operations. Corrective action is planned in advance which will eliminate the hazards. An analysis is required for each new phase of work. On large or complex jobs, the first phase may be presented in detail with the submittal of the Accident Prevention Plan rather than presenting the complete analysis. If the plan is to be presented in phases, a proposed outline for future phases must be submitted as a part of the initial Accident Prevention Plan submittal. Accident Prevention Plans will be reviewed for timeliness and adequacy at least monthly with a signature sheet signed and dated documenting that these reviews took place. Provide a copy of company policy statement of Accident Prevention and any other guidance as required by EM 385-1-1, Appendix A.

1.19.2 Ground Fault Circuit Interrupter (GFCI) Requirement – Overseas Construction

The Corps of Engineers Health and Safety Manual, EM 385-1-1, section 11.C.05.a. states: "The GFCI device shall be calibrated to trip within the threshold values of 5 ma +/- 1 ma as specified in Underwriters Laboratory (UL) Standard 943." A variance from USACE has been granted allowing 10 ma, in lieu of 5 ma, for overseas activities that use 220 Volts(V)/50 hertz(hz) electrical power.

1.19.3 Temporary Power - Electrical Distribution Boxes

EM 385-1-1 section 11.A.01.a. states "All electrical wiring and equipment shall be a type listed by a nationally recognized testing laboratory for the specific application for which it is to be used." This includes temporary electrical distribution boxes. Locally manufactured electrical boxes will not be allowed. Only manufactured electrical distribution boxes that meet the European CE requirements, with 10 ma CE type GFCIs installed shall be allowed. Contractors shall:

- Make no modifications that might void any CE or manufacturer certification.
- Test the installed systems to demonstrate that they operate properly and provide the 10 ma earth leakage protection.
- Ensure GFCIs will have an integral push-to-test function. The testing shall be performed on a regular basis.

d. Check that proper grounding is checked regularly and flexible cords, connectors, and sockets inspected before each use.

1.20 HAZARDOUS MATERIALS

Should the Contractor encounter asbestos or other hazardous materials, during the construction period of this contract, he shall immediately stop all work activities in the area where the hazardous material is discovered. The Contractor shall then notify the Contracting Officer; identify the area of danger; and not proceed with work in that area until given approval from the Contracting Officer to continue work activities. Hazardous material is considered to be asbestos, explosive devices, toxic waste, or material hazardous to health and safety. The Contractor shall secure the area from daily traffic until it is safe to resume normal activities.

1.21 OPERATION AND MAINTENANCE (O&M) DATA FOR EQUIPMENT AND SYSTEMS

1.21.1 General

The requirements contained herein are in addition to all shop drawing submission requirements (e.g., SD-19) stated in other sections of the specification. The Contractor shall include provisions for obtaining the data required below in all purchase orders and sub-contract agreements issued under this contract. The Contractor shall obtain that data which is required to operate and maintain all items of equipment and all systems/subsystems under either normal or emergency operating conditions. See items listed under paragraph EQUIPMENT FOR WHICH O&M DATA MUST BE SUBMITTED for example.

1.21.2 O&M Data for Equipment

1.21.2.1 Equipment for Which O&M Data Must be Submitted

The Contractor shall provide all data necessary to operate and maintain all equipment purchased and/or installed under this contract. The data will consist of any O&M instructions not normally the common knowledge of a Journeyman Level Technician in the applicable trade. Provided below are examples of the general types of equipment for which the Contractor is required to submit O&M data. The examples provided are not definitive for this contract, but are provided to indicate the general types of equipment for which O&M data is required.

Control Devices Chillers
Lighting Fixtures Motor Generator Sets
Valves Cooling Towers
Water Heaters Exhaust Fans
Compressors Plumbing Fixtures

1.21.2.2 Data to be Provided for Each Equipment Item

For each equipment item O&M data shall be submitted as described below. For

identical pieces of equipment installed within any one system, only one (1) file of O&M data for that equipment item will be required for maintenance purposes. Deviation from these requirements will require approval of the Contracting Officer. The data as a minimum will include for each equipment item, the following:

- a. Equipment O&M Data Sheet: Equipment O&M data sheet shall include the equipment name, manufacturer's name and address, model number, (including characteristics and any special remarks), and the serial number(s), tag number(s) or any user assigned identification number(s), and installed location(s) of the equipment. This sheet shall be the first page of each item of equipment O&M data package and shall contain a checklist covering paragraphs 1.32.2.2.b thru 1.32.2.2.j hereinafter.
- b. Equipment Description: Equipment description shall include item name, model number, serial number, equipment price (FOB Manufacturer), electrical and/or mechanical characteristics, manufacturer's name and address, order number and all other data found on the equipment name plates. Include local/regional representative of manufacturer, name, address, telephone number, and telex number.
- c. Component and Assembly Drawings/Master Parts List: Component and assembly drawings/master parts list shall contain exploded views and a master parts list clearly identifying all parts and subassemblies by manufacturer's part number. Master Part's list shall also include the price for each part (FOB Manufacturer) and effective date.
- d. Control Diagrams and Sequences of Operations: Control diagrams and sequences of operations shall include operating instructions (including normal start-up, normal shut-down and emergency shut-down as applicable).
- e. Performance Characteristics: Performance characteristics shall include performance curves for full range of operation, and data pertinent to characteristics of equipment provided.
- f. Installation Instructions: Installation instructions shall include adjustment and alignment procedures, checkout procedures and test procedures.
- g. Preventive Maintenance Procedures: Preventive maintenance procedures shall include inspection, cleaning, adjustment, service and lubrication instructions. A schedule shall be furnished for each piece of equipment listing manufacturer's recommended maintenance routine of specific tasks to be performed at specific intervals such as daily, weekly, monthly, quarterly, or based on the number of operating hours. Preventive maintenance schedules shall take into account operating conditions in Afghanistan.
- h. Corrective Maintenance Procedures: Corrective maintenance procedures shall include instructions for troubleshooting, repair, overhaul and calibration.
- i. Special Items: The Contractor shall prepare a list of special tools, test equipment, and safety precautions when specified in the Technical Provisions and special items that are normally provided by the manufacturer with the equipment. The list shall also include the current unit price and date for each item (FOB MANUFACTURER).
- j. Recommended Spare Parts List: List shall contain the manufacturer's recommendation for five (5) years, two (2) years, and one (1) year spare parts stock levels in Afghanistan. Current unit price and effective date, lead time, shelf life for each individual part, and total cost of all recommended parts shall be furnished.

1.21.2.3 Preparation of O&M Data for Each Equipment

At least two (2) sets of the final approved O&M Data shall be composed of original copies. No other form of printed and prepared data shall be acceptable unless approved in writing by the Contracting Officer. All data shall be prepared in the English language covering data described in paragraph EQUIPMENT FOR WHICH O&M DATA MUST BE SUBMITTED, and shall be furnished in the number of submittals (number of sets of volumes) specified in Section 01335 SUBMITTAL PROCEDURES FOR DESIGN/BUILD PROJECT of the Technical Provisions. Each item of equipment shall be cross-referenced in the equipment O&M Data and Systems Manuals, to include installation location using the Contractor's system of identification as approved by the Contracting Officer. All data shall be presented on 8-1/2 x 11 inch sheets to the greatest possible extent. Foldouts will normally be limited to 11 x 17 inch sheets. For other sets of data, reproductions shall be clear, legible, re-reproducible, and not subject to fade. Extraneous information on inapplicable models or components shall be removed or suitably marked through. O&M data shall be contained in a volume consisting of multi-ring binders of good commercial quality. Each volume shall be identified by the equipment name as shown on the Equipment O&M Data Sheet, and sequentially numbered. Each volume shall include an index of items included in the binder and the index shall be the first sheet in the binder, and all remaining data shall be taped accordingly. Volume binders shall be packed (maximum) 2/3 full to allow easy access to contents.

1.21.2.4 O&M Data Submittal Procedure for Each Equipment Item

The initial submittal of O&M Data for each item of equipment shall include all data required in paragraph DATA TO BE PROVIDED FOR EACH EQUIPMENT ITEM above, and as required by the technical specifications. Each O&M Data Package shall be submitted in two (2) copies to the Contracting Officer for approval of format and content, not later than ninety (90) calendar days following equipment item selection approval. After approval the two (2) copies will be returned to the Contractor to maintain for incorporation into the final submittal of the full set of O&M Manuals. The Contractor shall allow a minimum period of forty-five (45) calendar days from receipt by the Government (exclusive of mailing time) for the Government review and approval/disapproval of O&M data.

1.21.2.5 Payment for Preparation and Submittal of O&M Data for Individual Equipment Items For payment purposes, preparation and submittal of required O&M data shall be considered as part of the price for the individual item of equipment.

1.21.3 O&M Data for Systems

The Contractor shall develop and provide the data beyond separate equipment items necessary to operate and maintain all civil, mechanical and electrical systems for each building, each central plant, and/or each distribution or collection system. A system is defined as a group of equipment items related in purpose and which share electrical power or communication circuits as in a fire alarm system or which share mechanical piping or ductwork as in an HVAC system. O&M data for systems shall be submitted as described below.

1.21.3.1 Preparation and Organization of Systems O&M Manuals

At least two (2) sets of the final approved systems O&M manuals shall be composed of original copies. For each location and for each system installed, the Contractor shall prepare and provide the required number of sets of separate complete system O&M Manuals, bound in loose leaf three ring binders. These manuals will provide the basic information and direction needed by journeymen operators to effectively operate each system and by journeymen maintenance technicians to perform Preventive Maintenance (PM) and Corrective Maintenance (CM) routines on systems components. The following identification shall be printed on the cover and spine of each binder, the words "OPERATING AND MAINTENANCE INSTRUCTIONS", plus name of the system, the location of the building(s). When two or more binders are required for the data, for an individual system, the binder shall be marked 1 of n, 2 of n, 3 of n, etc. (where n equals the total number of binders). Each manual shall have a complete index page(s), which shall be inserted after the title page of the first volume of that system. Title page shall include name of project and project number. Each binder shall have a complete index that lists all the information and data contained in the binder(s).

All systems O&M Manuals shall include the following:

- a. Each piece of equipment will have a divider and tab properly identified.
- b. Each section for each piece of equipment will have a divider and tab properly identified.
- c. Narrative description of principles of operation.
- d. Systems flow diagrams showing point-to-point connections, sequence of operation, control diagrams and identification of each system component.
- e. Electrical single line and three (3) line diagrams in sufficient detail to define the system and operation of related parts.
- f. Final balancing reports for air, water and other systems as applicable. (These may be added to the manual after installation testing is completed and accepted.)
- g. Systems test reports and certification.
- h. Operating procedures including pre-start, start-up, and normal operation, emergency operation, normal and emergency shut-down.
- i. Schedules including valve schedules, circuit breakers schedules, equipment schedules, etc.
- j. List of special tools and test and calibration equipment.
- k. List of systems components cross referenced to the O&M equipment data volume number.
- l. System preventive maintenance procedures and schedules.
- m. System troubleshooting guides.
- n. System corrective maintenance procedures.
- o. Folded-up copy of the system's wall charts (Training instructions).

1.21.3.2 Submittal of Systems O&M Manuals

Submittal of Systems O&M Manuals for each system installed shall include all

data required in paragraphs 1.32.2.2.a thru 1.32.2.2.j hereinbefore. Two (2) copies shall be submitted to the Contracting Officer for approval not later than 30 calendar days prior to the construction completion date. If disapproved, the two (2) copies will be returned to the Contractor for correction and re-submittal. Final submittals of all Systems O&M Manuals must include and be simultaneous with all O&M Data Manuals for equipment associated with that system, and must be in Pashto, English and Dari. Upon completion of systems check out and acceptance tests, the Contractor shall submit a supplemental submittal containing any addition, deletion or correction found appropriate due to these tests performed in the field or during training.

1.21.4 Framed Instructions for Systems

For each system, the Contractor shall provide framed instructions mounted on the wall of each mechanical and electrical equipment room, which contains a portion of the system. The size of the framed instructions will be governed by the content to be framed plus room for a minimum of two (2) inch border. The framed instructions shall include drawings and typed narrative descriptions as required to provide the following information:

1.21.4.1 Drawings

Drawings containing flow, piping, instrumentation and control diagrams of mechanical systems and wiring and control schematics of electrical systems contained within or controlled from that equipment room.

1.21.4.2 Equipment and System Narrative

Narrative containing equipment and system normal pre-start, start-up, operating and shut-down procedures.

1.21.4.3 Emergency Shut-Down Narrative

Narrative of emergency shut-down instructions and safety precautions.

1.21.4.4 Preparation and Installation of Framed Instructions

All material prepared for use as framed instructions to meet the requirements of paragraph EQUIPMENT AND SYSTEM NARRATIVE above shall be prepared in the English language. All material prepared for use as framed instructions to meet the requirement of paragraph EMERGENCY SHUT-DOWN NARRATIVE above shall be prepared in Pashto, Dari and English. Drawings and narratives prepared for use as framed instructions shall be submitted to the Contracting Officer for approval prior to posting. Framed instructions shall be mounted using frames with glass or rigid plastic covers as approved by the Contracting Officer.

All framed instructions must be posted before final acceptance testing of the equipment and systems.

1.21.5 Contractor Responsibility for Updating O&M Information

The Contractor shall be responsible for the accuracy of all information furnished in accordance with the above requirements. The Contractor shall be responsible for updating or supplementing all O&M data, including data which has been previously

submitted, to reflect changes in the contract or to correct errors discovered by any other means. The O&M data for separate equipment items, the systems O&M Manuals, and the framed instructions prepared by the Contractor shall be utilized and verified during installation and testing of the equipment and/or systems and shall be updated and corrected as required. Errors found during systems testing and validation shall be corrected within fourteen (14) calendar days of completion of each test and validation.

Drawings, pages of text, etc. of systems O&M Manuals shall be complete in final form. Marked-up drawings or pages are not acceptable.

1.22 INSTRUCTIONS AND TRAINING FOR OPERATION AND MAINTENANCE

1.22.1 General

The Contractor shall be responsible for the instruction and training of operating and maintenance personnel as specified below and in the Technical Provisions of the specifications. Unless otherwise indicated in the Technical Provisions, operating and maintenance instructions shall be given for a minimum period as follows:

Title Duration of Training

Power System: **Provide 40 Hours Training.**

1.22.2 Operation and Maintenance Training

The Contractor shall provide competent instructors for training of personnel designated by the Contracting Officer to operate mechanical and electrical building systems and equipment, perform the required preventive maintenance to minimize breakdown, and to perform necessary repairs when malfunction or breakdown of equipment occurs. Such training shall consist of classroom and on-the-equipment training for the periods specified, which shall be completed prior to acceptance of a system or equipment, as applicable. The instructor(s) shall have no other duties during the period of training. Classroom instruction shall not exceed fifty percent (50%) of the total training time, with the balance devoted to on-the-equipment demonstration and familiarization. Emphasis will be given to both electrical and mechanical features, in accordance with approved training plans. The Contractor shall be prepared to offer training in Pashto, Dari and English.

1.22.3 Arrangements

The training shall be for not less than the periods of time specified, five (5) days per week, and eight (8) hours per day, subject to review and approval by the Contracting Officer. Each individual training session shall be presented one time only, shall be video taped in a television system compatible with the local area, and be scheduled in a manner acceptable to the Contracting Officer. At the completion of training, the video tapes shall become the property of the Government. In addition to the Contractor's requirements to video tape each training section, the Government reserves the right to record, in any manner, the subject training material, or training sessions given by the Contractor, without additional cost to the Government. Recordings obtained will be

used in future training by the Government. The operating and maintenance manual data, as specified to be furnished in these Special Clauses, shall be used as the base material for training.

1.22.4 Scheduling

The Contractor shall contact the Contracting Officer for the purpose of preliminary planning, scheduling, and coordination of training, to maximize effectiveness of the training program for available operating and maintenance personnel. The Contractor shall initiate and make arrangements for such contact within 30 calendar days after receipt of notification of award of contract; and shall include all significant times in scheduling and completing training in his PROJECT SCHEDULE. The Contractor shall provide a draft training outline sufficient in detail to provide a broad indication and the type of scope of training to be given. It shall include but not be limited to; (a) a list of subjects to be presented; (b) estimated amounts of classroom and on-the-equipment instruction for each subject; (c) a list of minimum qualifications for instructors; and (d) discussions concerning the types and amounts of visual aids, reference materials, tools and test equipment, mock-up and other training materials that will be employed during training.

1.22.5 Preliminary Plan

The Contractor shall submit seven (7) copies of an outline of his proposed training plan to the Contracting Officer for review and approval not later than 45 calendar days after Notice to Proceed. The plan will be reviewed and coordinated with the content of the O&M manuals.

1.22.6 Plan

The Contractor shall submit seven (7) copies of his proposed training plan to the Contracting Officer for approval not later than ninety (90) calendar days prior to start of any training. The plan shall include the following; (a) a weekly outline showing overall form and design of training presentation; (b) a day-by-day schedule showing time intervals, the major and subordinate subjects to be covered in each, the name of the instructor(s) and qualification summary of each, and identification of related handouts; (c) summary of the number of hours of classroom and on-the-equipment training; (d) a list of reference materials to be provided by the Contractor to the trainees; and (e) a list and description of the training materials to be used, such as text, visual aids, mock-up, tools, etc. The Contractor shall be responsible for furnishing all training materials except the following: The Government will provide space, chairs, and tables for classroom training, and three (3) sets of the O&M Manuals required by the Contractor per Section 01335 SUBMITTAL PROCEDURES of the specifications. Provision of these manuals is solely for reference purposes, and in no way relieves the Contractor from providing all instruction and materials necessary for training personnel designated by the Government. All costs for resubmission of training plans, training materials, etc., as requested by the Contracting Officer shall be borne by the Contractor. Re-submittals shall be made within twenty (20) days of notice from the Contracting Officer.

1.22.7 Attendance Roster/TAC Form 356

The Contractor shall develop an attendance roster or a similar documents indicating each students attendance, prior to the start of each class, subject and/or topic. This includes both "Hands-On" and classroom training. It is strongly recommended that each student trained be required to sign this document at the beginning of each class day for each and every class, subject and/or topic taught on that day. The Contractor's failure to have student attendance verified in writing may be cause for the Government to order the Contractor to repeat schooling where evidence of attendance can not be verified. No part of the time lost due to such repeat instruction shall be made the subject of claim for extension of time or for excess costs or damage by the Contractor. Within ten (10) working days after completion of Operation and Maintenance Training conducted in accordance with this clause and/or applicable Technical Provision section, the Contractor shall complete and submit TAC Form 356 "Operation and Maintenance Training Validation Certificate". The attendance roster shall be included as an attachment to TAC Form 356.

1.23 LOCALLY AVAILABLE SERVICE FOR EQUIPMENT

All equipment furnished under this contract, regardless of country of manufacture or purchase, must have in-country service availability. In the event that the Contractor proposed to provide equipment for which in-country service is not available, the Contractor must provide written justification for the Contracting Officer's approval. This justification shall be submitted for each product or material for which a waiver is sought concurrently with the submittal required by the Technical Provisions. Submission of group or "blanket" waivers is unacceptable.

1.24 CONTRACTOR FURNISHED EQUIPMENT LISTS

The Contractor shall furnish a list of all items, other than integral construction type items, furnished under the contract. Items such as furniture, drapes, rugs, vehicles, office machines, computers, appliances, etc., shall fall under this category. The Contractor's list shall describe the item; give the unit price and total quantities of each. Model and serial numbers for equipment shall be provided when applicable. The Contractor shall keep an up-to-date register of all covered items and make this information available to the Contracting Officer or his representative at all times. Prior to acceptance, the Contractor shall submit the complete register to the Contracting Officer.

1.25 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

1.25.1 General

This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the Contract Clause 52.249-10 entitled DEFAULT (FIXED-PRICE CONSTRUCTION) APR 1984. The listing below defines the anticipated unusually severe weather for the contract period and is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the geographic location of the project. The schedule of anticipated unusually severe

weather will constitute the baseline for determining weather time evaluations. Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract period, actual unusually severe weather days will be recorded on a calendar day basis (including weekends and holidays) and compared to the anticipated unusually severe weather in the schedule below. The term "actual unusually severe weather days" shall include days actually impacted by unusually severe weather. The Contractor's schedule must reflect the anticipated unusually severe weather days on all weather dependent activities.

UNUSUALLY SEVERE WEATHER CALENDAR DAYS

Kabul: December to February – 4 days

1.25.2 Time Extensions

The number of actual unusually severe weather days shall be calculated chronologically from the first to the last day in each month. Unusually severe weather days must prevent work for fifty percent (50%) or more of the Contractor's work day and delay work critical to the timely completion of the project. If the number of actual unusually severe weather days exceeds the number of days anticipated in the paragraph above, the Contracting Officer will determine whether the Contractor is entitled to a time extension. The Contracting Officer will convert any qualifying delays to calendar days and issue a modification in accordance with the Contract Clause 52.249-10 entitled DEFAULT (FIXED-PRICE CONSTRUCTION) APR 1984.

1.26 STANDARDIZATION

Where two or more items of the same type or class of equipment furnished in this project are required, the units shall be products of the same manufacturer and shall be interchangeable when of the same size, capacity, performance characteristics, and rating. The only exception to this requirement is where the items are interchangeable due to conformance with industry standards (valves, fittings, etc.), they need not be by the same manufacturer. This requirement applies to all manufactured items in the project, which normally require repair or replacement during the life of the equipment.

1.27 RESIDUAL CONSTRUCTION MATERIAL

All Contractor purchased materials and equipment intended for incorporation into the completed facilities and which are later determined excess to the actual construction requirements, will become the property of the Government. The residual materials and equipment shall be tagged (giving the area where like type material and equipment were installed), and stored in an orderly manner in a designated area as directed and approved by the Contracting Officer.

1.28 MILITARY BASE RULES AND REGULATIONS

The Contractor and his employees and subcontractors shall become familiar

with and obey all Base rules and regulations including fire, traffic and security regulations. All personnel employed on the Base shall keep within the limits of the work (and avenues of ingress and egress), and shall not enter any Restricted Areas unless required to do so and prior clearance for such entry is obtained. The Contractor's equipment shall be conspicuously marked for identification.

1.29 IDENTIFICATION OF EMPLOYEE'S PERSONNEL AND VEHICULAR ACCESS TO THE PROJECT SITES

The Base Security maintains the ultimate authority for establishing, monitoring, and enforcing security requirements for the Base Security Office. All contractors, subcontractors, or vendor personnel and vehicles at any tier working at any location on the Base are subject to a thorough search upon entering, departing, or at any time deemed necessary by the Base Security Personnel. The Contractor shall be responsible for compliance with all the Base Security requirements. The Government reserves the right to deny access or to require the Contractor to remove any personnel or equipment deemed to be a threat to the security of the Base Security Office or the Base personnel. The Contractor shall work through the Contracting Officer to ensure that the Base Security Regulations are followed.

1.29.1 Employee Identification

The Contractor shall be responsible for furnishing to each employee and for requiring each employee engaged on the work, to display identification as approved and directed by the Contracting Officer. Prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon release of any employee. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

1.29.2 Identification of Contractor Vehicles

The Contractor shall be responsible for requiring each vehicle engaged in the work to display permanent vehicular identification as approved and directed by the Contracting Officer. If acceptable to the Base Security Office and approved by the Contracting Officer, the Contractor may institute a system of non-permanent temporary identification for one-time delivery and transit vehicles. Each Contractor vehicle, machine, piece of equipment, or towed trailers, shall show the Contractor's name such that it is clearly visible on both front doors of the vehicle and both sides of a towed trailer. A valid license plate shall be displayed at all times. Contractor vehicles operated on Government property shall be maintained in a good state of repair, shall be insured, and shall be registered in accordance with Afghan Law.

1.29.3 Security Plan

The Contractor shall submit to the Contracting Officer, within fifteen (15) calendar days after Notice to Proceed, his proposed personnel and vehicular access plan. This plan shall cover all elements for issuance of the access passes, safeguarding of unissued passes, construction security operations,

lost passes, temporary vehicle passes, and collection of passes for employee's and vehicles on 1)- temporary absence; 2)- termination or release; and 3)- termination or completion of contract. The plan shall address in detail the Contractor's proposed procedures, and organization necessary to produce and maintain effective security within the contract limits twenty four (24) hours a day seven (7) days a week.

1.30 ON-BASE PHOTOGRAPHY PROHIBITION

The Contractor shall not engage in any form of photography without prior written approval from the Contracting Officer.

1.31 PUBLIC RELEASE OF INFORMATION

1.31.1 Prohibition

There shall be no public release of information or photographs concerning any aspect of the materials or services relating to this bid, contract, purchase order, or other documents resulting there from without the prior written approval of the Contracting Officer.

1.31.2 Subcontract and Purchase Orders

The Contractor agrees to insert the substance of this clause in all purchase orders and subcontract agreements issued under this contract.

1.32 ATTACHMENTS

TAC FORM 61 - Accident Prevention Program Hazard Analysis

TAC FORM 356 - Operation and Maintenance Training Validation Certificate

-- End of Section --

SECTION: 01312

SECTION 01312 QUALITY CONTROL SYSTEM (QCS)

PART 1: GENERAL

1.1 GENERAL

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit

various information throughout the contract period. The Contractor module, user manuals, updates, and training information can be downloaded from the RMS web site: the Contractor can obtain the current address from the Government. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

Administration
Finances
Quality Control
Submittal Monitoring
Scheduling
Import/Export of Data

01312 -111

1.1.1 Correspondence and Electronic Communications

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format. Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

1.1.2 Other Factors

Particular attention is directed to specifications "SUBMITTAL PROCEDURES", "CONTRACTOR QUALITY CONTROL", "PROJECT SCHEDULE", and Contract Clause, "Payments", which have a direct relationship to the reporting to be accomplished through QCS. Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Any program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available. It shall be the responsibility of the contractor to maintain the QCS software and install updates as they become available.

1.3 SYSTEM REQUIREMENTS

The following listed hardware and software is the minimum system configuration that the Contractor shall have to run QCS. No separate payment shall be made for updating or maintaining the necessary hardware configurations necessary to run QCS: Hardware

- IBM-compatible PC with 1000 MHz Pentium or higher processor
- 256+ MB RAM for workstation / 512+ MB RAM for server
- 1 GB hard drive disk space for sole use by the QCS system
- Digital Video Disk (DVD)-Compact Disk (CD) Reader-Writer (RW/ROM)
- Monitor with a resolution of AT LEAST 1024x768, 16bit colors
- Mouse or other pointing device
- Windows compatible printer. (Laser printer must have 4 MB+ of RAM)
- Connection to the Internet, minimum 56k BPS

Software

- MS Windows 2000 or higher
- QAS-Word Processing software: MS Word 2000 or newer
- Internet browser supporting HTML 4.0 or higher
- Electronic mail (E-mail) MAPI compatible
- Virus protection software regularly upgraded with all issued manufacturer's updates

1.4 RELATED INFORMATION

1.4.1 QCS User Guide

After contract award, the Contractor shall download instructions for the installation and use of QCS from the Government RMS Internet Website; the Contractor can obtain the current address from the Government. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

1.4.2 Contractor Quality Control (CQC) Training

The use of QCS will be discussed with the Contractor's QC System Manager during the mandatory CQC Training class. The government will provide QCS training if requested by the contractor.

1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government shall provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by files attached to E-mail or via CD-ROM. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

1.6 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the QCS database throughout the duration of the contract. Data updates to the Government shall be submitted via either E-mail or electronic media with printed/file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer. The QCS database typically shall include current data on the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

1.6.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver subcontractor administrative data in electronic format via E-mail.

1.6.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office shall be prefixed with "S". Letters initiated by the Contractor's home (main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

1.6.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet,

QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

1.6.2 Finances

1.6.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

1.6.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

1.6.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report.

1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by specification 01451 "CONTRACTOR QUALITY CONTROL".

1.6.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC punch list items. The Contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

1.6.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

1.6.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the

Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports.

1.6.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

1.6.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing, transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work progresses, and shall promptly provide this information to the Government via QCS.

1.6.4 Submittal Management

The Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update, ENG Form 4288, shall be produced using QCS. RMS will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

1.6.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Specification Section Project Schedule. This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF). The updated schedule data shall be included with each pay request submitted by the Contractor.

1.6.6 Requests for Information (RFI)

The Contractor shall use the two-way RFI system contained in QCS for tracking all RFI's generated during the contract. Hard copies of all RFI's shall be provided to the government, and will govern in the event of a discrepancy between electronic and printed mediums.

1.6.7 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data using SDEF.

1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

1.8 DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM

The Government-preferred method for Contractor's submission of updates, payment requests, correspondence and other data is by E-mail with file attachment(s). For locations where this is not feasible, the Contracting Officer may permit use of computer diskettes or CD-ROM for data transfer. Data on the disks or CDs shall be exported using the QCS built-in export function.

1.9 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least monthly, the Contractor shall generate and submit an export file to the Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the Contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions. The Contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification.

- End of Section -

SECTION: 01321

SECTION 01321

PROJECT SCHEDULE

PART 1 GENERAL

1.1 SUBMITTALS

The following shall be submitted for Government approval in accordance with Section 01335
SUBMITTAL PROCEDURES: SD-07 Schedules Project Schedule. Horizontal Bar Chart and Periodic Payment Request Updates. Projected Earnings Curve and Periodic Payment Request Updates. Revisions to the Project Schedule and Projected Earnings Curve for Modifications Issued to this Contract shall be coordinated with the Contracting Officer.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall furnish a Project Schedule as described below. The scheduling of construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project should also contribute in developing and maintaining an accurate Project Schedule. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.2 BASIS FOR PAYMENT

The schedule shall be the basis for measuring Contractor progress. Lack of an approved schedule or scheduling personnel shall result in an inability of the Contracting Officer to evaluate Contractor progress for the purposes of payment. Failure of the Contractor to provide all information, as specified below, shall result in the disapproval of the entire Project Schedule submission and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. In the case where Project Schedule revisions have been directed by the Contracting Officer and those revisions have not been included in the Project Schedule, then the Contracting Officer may hold retainage up to the maximum allowed by contract, each payment period, until revisions to the Project Schedule have been made.

3.3 PROJECT SCHEDULE

3.3.1 Schedule of Construction

Within seven (7) calendar days after award of the task order, the Contractor shall prepare and submit a Construction Schedule to the Contracting Officer for approval. This schedule shall address each payment line item and/or sub-line item listed in the Proposal Schedule separately.

3.3.2 Non-Compliance

Failure of the Contractor to comply with the requirements of the Contracting Officer shall be grounds for determination by the Contracting Officer that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this contract.

3.3.3 Horizontal Bar Chart

The required schedule shall utilize an automated scheduling program and shall be in the form of a horizontal bar chart. The line or sub-line item schedule of activities shall be listed down the left side of the page. A time scale shall run across the bottom of the page. Each work item shall be represented by a bar starting with the schedule start date and running continuously to the completion date.

3.3.4 Cost

Listed with each work item shall be a corresponding cost representing the total cost, such as material, labor, equipment, and overhead associated with that item. The total cost of the work items shall be equal to the Bid Price for that sub-line item of the Proposal Schedule.

3.3.5 Scheduled Project Completion

The schedule interval shall extend from Notice-To-Proceed to the contract completion date.

3.3.6 Projected Earning Curve

Submitted with the Construction Schedule shall be a Projected Earning Curve. The Projected Earning Curve is a plot of the Contractor's earnings on the vertical axis and the contract duration on the horizontal axis. The earnings figure shall relate to the complete value of the contract and need not reflect each facility separately.

3.3.7 Construction Schedule

The Construction Schedule shall be on one page with a maximum dimension of 90 cm by 120 cm. The Contractor shall submit the Projected Earnings Curve on the same page. The initial submittal shall include one (1) reproducible and four (4) copies, one (1) copy of which will be returned to the Contractor when approved.

3.3.8 Submission With Partial Payment Estimate

Each time the Contractor submits a payment request under this contract he shall also submit three (3) copies of the Bar Chart. The Bar Chart shall be annotated by indicating the percent complete for each activity directly on the bar. The Projected Earnings Curve shall be annotated by plotting actual earnings versus time on the same graph. Those work items reflecting performance which is behind schedule by fifteen (15) calendar days or more shall be fully explained in detail giving the reason for delay and the Contractor's plan for timely completion within the schedule.

3.3.9 Modifications

The Construction Schedule and Projected Earning Curve shall be revised to reflect any and all modifications issued to this contract as they are issued. Format and numbers of copies as defined in paragraph CONSTRUCTION SCHEDULE shall be submitted for approval by the Contracting Officer.

3.4 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment shall include a monthly on-site meeting or shall be conducted at other regular intervals mutually agreed to at the preconstruction conference. During this meeting the Contractor shall describe, on an activity-by-activity basis, all proposed revisions and adjustments to the project schedule required to reflect the current status of the project. The Contracting Officer will approve activity progress, proposed revisions, and adjustments as appropriate.

3.4.1 Update Submission Following Progress Meeting

A complete update of the project schedule containing all approved progress, revisions, and adjustments, based on the regular progress meeting, shall be submitted not later than four (4) working days after the monthly progress meeting.

3.4.2 Progress Meeting Contents

Update information, including Actual Start Dates, Actual Finish Dates, Remaining Durations, and Cost to Date, shall be subject to the approval of the Contracting Officer.

3.4.3 Earnings Report

A compilation of the Contractor's Total Earnings on the project from the Notice-to-Proceed until the most recent Monthly Progress Meeting. This report shall reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and the Contracting Officer at the most recent Monthly Progress Meeting. Provided that the Contractor has provided a complete schedule update, this report shall serve as the basis of determining Contractor Payment. This report shall: sum all activities and provide a percent complete by individual activity and total project percent complete. The report shall contain, for each activity: activity identification, activity description, original budgeted amount, total quantity, quantity to date, percent complete (based on cost), and earnings to date.

3.4.4 Cost Completion

The earnings for each activity started shall be reviewed. Payment shall be based on earnings for each in-progress or completed activity. Payment for individual activities shall not be made for work that contains quality defects. A portion of the overall project amount may be retained based on delays of activities.

3.4.5 Network Analysis System

The Contractor may, as an option, submit to the Contracting Officer for approval, a time related network analysis in lieu of the previously specified bar chart.

-- End of Section --

SECTION: 01335

SECTION 01335

SUBMITTAL PROCEDURES FOR DESIGN-BUILD PROJECTS

PART 1 GENERAL

1.1 REFERENCE

The publication listed below forms a part of this specification to the extent referenced. The publication is referenced to in the text by basic designation only.

CONSTRUCTION SPECIFICATIONS INSTITUTE

Manual of Practice

Construction Specifications Institute

http://www.csinet.org/s_csi/index.asp

601 Madison Street

Alexandria, Virginia

22314-1791

AFGHANISTAN ENGINEER DISTRICT

AFGHANISTAN ENGINEER DISTRICT

<http://www.aed.usace.army.mil>

U.S. Army Corps of Engineers

Attn.: Qalaa House

APO AE 09356

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 DESIGN SUBMITTALS

Contractor Furnished design submittals are the various design documents which primarily consist of specifications, drawings and design analysis and calculations. The

Design-Build Contractor shall not begin construction work until the Government has reviewed the Design-Build Contractor's final design and has cleared it for construction. Clearance for construction shall not be construed as meaning Government approval. Unless otherwise indicated, the risk for the design is the sole responsibility of the Design-Build Contractor.

1.2.2 CONSTRUCTION SUBMITTALS

1.2.3 Contractor Furnished Government Approved Construction Submittals
Government approved construction submittals are primarily related to plans (Contractor Quality Control, Accident Prevention, Resident Management System, Area Use, etc.) schedules (Project Schedule/Network Analysis), and certificates of compliance. They may also include proposed variations to approved design documents in accordance with the paragraph entitled "VARIATIONS".

1.2.4 For Information Only Construction Submittals (FIO)

All submittals not requiring Designer of Record or Government approval will be for information only.

1.3 SUBMITTAL CERTIFICATION

The CQC organization shall be responsible for certifying that all submittals and deliverables have been reviewed in detail for completeness, are correct, and are in strict conformance with the contract drawings, specifications, and reference documents.

1.3.1 Effective Quality Control System

The Design-Build Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with Contract Clause 52.236-21 SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION - ALTERNATE I and specification section 01451 CONTRACTOR QUALITY CONTROL.

1.3.1.1 Organizational Responsibility

The quality control system shall cover all design, construction, subcontractor, manufacturer, vendor, and supplier operations at any tier, both onsite and offsite.

1.3.1.2 CQC System Manager Review and Approval

Prior to submittal, all items shall be checked and approved by the Design-Build Contractor's Quality Control (CQC) System Manager. If found to be in strict conformance with the contract requirement, each item shall be stamped, signed, and

dated by the CQC System Manager. Copies of the CQC organizations review comments indicating action taken shall be included within each submittal.

1.3.1.3 Determination of Compliance

Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements by the Contracting Officer. The contractor shall submit all required documentation with submittals. The U.S. Army Corps of Engineer (USACE) will not accept partial submittals.

1.3.2 Responsibility for Errors or Omissions

It is the sole responsibility of the Design-Build Contractor to ensure that submittals do or do not comply with the contract documents. Government review, clearance for construction, or approval by the Contracting Officer shall not relieve the Design-Build Contractor from responsibility for any errors or omissions in such drawings, nor from responsibility for complying with the requirements of this contract.

1.3.2.1 Government Review

Government review, clearance for construction, or approval of post design construction submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory.

1.3.3 Substitutions

After design submittals have been reviewed and cleared for construction by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless justified as indicated in the paragraph entitled VARIATIONS.

1.3.4 Additional Submittals

The Contracting Officer may request additional submittals in conjunction with Contract Clause 52.236-5 MATERIAL AND WORKMANSHIP, In addition to those specified when deemed necessary to adequately describe the work.

1.3.5 Untimely and Unacceptable Submittals

If the Design-Build Contractor fails to submit submittals in a timely fashion, or repetitively submits submittals that are incomplete or not in strict conformance with the contract documents, no part of the time lost due to such actions shall be made the subject of claim for extension of time or for excess costs or damages by the Design-Build Contractor.

1.3.6 Stamps

Stamps shall be used by the Design-Build Contractor on all design and post design construction submittals to certify that the submittal meets contract requirements and shall be similar to the following:

Design-Build Contractor (Firm Name)
Contract Number
Contract Name

I certify that this submittal accurate, is in strict conformance with all contract requirements, has been thoroughly coordinated and cross checked against all other applicable disciplines to prevent the omission of vital information, that all conflicts have been resolved, and that repetition has been avoided and, it is complete and in sufficient detail to allow ready determination of compliance with contract requirements by the Contracting Officer.

Name of CQC System Manager: _____

Signature of CQC System Manager: _____

Date: _____

1.4 ENGLISH LANGUAGE

All specifications, drawings, design analysis, design calculations, shop drawings, catalog data, materials lists, and equipment schedules submitted shall be in the English language.

1.5 UNITS OF MEASUREMENT

Design documents shall be prepared in accordance with the guidance offered in SECTION 01415 METRIC MEASUREMENTS.

The metric units used are the International System of Units (SI) developed and maintained by the General Conference on Weights and Measures (CGPM); the name International System of Units and the international abbreviation SI were adopted by the 11th CGPM in 1960.

1.5.1 Drawings

1.5.1.1 All site layout data shall be dimensioned in meters or coordinates, as appropriate. All details and pipe sizes shall be dimensioned in millimeters.

1.5.1.2 All site plans shall be georeferenced using the WGS 1984 coordinate system, specifically the following: WGS 1984 UTM one 42 N. If the designer is not able to use the stated coordinate system the coordinate system used shall be correlated to the stated coordinate system. A table shall be provided within the site drawing set cross referencing the WGS84 system to that utilized. This is required to allow AED to incorporate the plans into GIS for storage, map production, and possible geospatial analysis of the different work sites.

1.5.2 Design Calculations

Calculations shall be in SI units to meet the requirements of the design. Quantities on the contract drawings stated in SI units, shall also be stated in SI units in the design analysis to match the drawings.

1.5.3 Specifications

All equipment and products shall be specified according to U.S. standards and described by appropriate units as required herein.

1.6 WITHHOLDING OF PAYMENT FOR SUBMITTALS

1.6.1 Design Submittals

Payment for Design work will not be made in whole or in part until the Government has reviewed and cleared the design for construction.

1.6.2 Construction Submittals

Payment for materials incorporated in the work will not be made if required approvals have not been obtained. In event under separate clause of the contract, the Design-Build Contractor is allowed partial or total invoice payment for materials shipped from the Continental United States (CONUS), and/or stored at the site, the Design-Build Contractor shall with his request for such payment, submit copies of approvals (ENG Form 4025) certifying that the materials that are being shipped and/or stored have been approved and are in full compliance with the contract technical specifications.

PART 2 PRODUCTS

2.1 GENERAL

The following are contract deliverables which expound upon and finalize the design parameters/requirements outlined within the contract documents. They shall be prepared in such a fashion that the Prime Contractor is responsible to the Government

and not as an internal document between the Prime Contractor and its Subcontractors, Vendors, Suppliers, etc.

2.2 DESIGN ANALYSIS

2.2.1 A design analysis, written in the English Language with SI units of measure shall be submitted for review by the Government. The design analysis is a written explanation of the project design which is expanded and revised (updated) as the design progresses. The design analysis shall contain all explanatory material giving the design rationale for any design decisions which would not be obvious to an engineer reviewing the final drawings and specifications. Provide sufficient information to permit manual checks of the results. The design analysis contains the criteria for and the history of the project design, including criteria furnished by the Government, letters, codes, references, conference minutes, and pertinent research. Design calculations, computerized and manual, are included in the design analysis. Narrative descriptions of design solutions are also included. Written material may be illustrated by diagrams and sketches to convey design concepts. Catalog cuts and manufacturer's data for all equipment, hardware, and items, shall be submitted. Copies of all previous design phase review comments and the actions assigned to them shall be included with each submission of the design analysis. Specific requirements for the design analysis, listed by submittal phase, are contained herein.

2.2.2 Architectural Code Analysis

Provide Code Analysis for each building based on the following items and code sections. The following analysis information is required for all buildings submitted in this proposal.

Analysis Items	Code References
1. Occupancy Classification	IBC Chapter 3 and Table 302.3.2
2. Type of Construction	IBC Chapter 6
3. Actual Allowable Area	IBC 503, 505-508 & Table 503
4. Actual Allowable Height	IBC 504 & Table 503
5 Occupant Load (per use)	IBC 1004 & Table 1004.1.2
6. Exits Required/Provided	IBC 1004 & Table 1004.1.2 IBC 1014, 1018, and 1018.2
7. Required Opening Protection	IBC Table 602
8. Fire Resistive Construction	IBC Table 601

2.3 DESIGN CALCULATIONS

When they are voluminous, they shall be bound separately from the narrative part of the design analysis. The design calculations shall be presented in a clean and legible form incorporating a title page and index for each volume. A table of contents, which shall be an index of the indices, shall be furnished when there is more than one volume. The source of loading conditions, supplementary sketches, graphs, formulae, and references shall be identified. Assumptions and conclusions shall be explained. Calculation sheets shall carry the names or initials of the computer and the checker and the dates of calculations and checking. No portion of the calculations shall be computed and checked by the same person.

2.3.1 Automatic Data Processing Systems (ADPS)

When ADPS are used to perform design calculations, the design analysis shall include descriptions of the computer programs used and copies of the ADPS input data and output summaries. When the computer output is large, it may be divided into volumes at logical division points.

2.3.1.1 Computer Printouts

Each set of computer printouts shall be preceded by an index and by a description of the computation performed. If several sets of computations are submitted, they shall be accompanied by a general table of contents in addition to the individual indices.

2.3.1.2 Preparation of the Description

Preparation of the description which must accompany each set of ADPS printouts shall include the following.

- a. Explain the design method, including assumptions, theories and formulae.
- b. Include applicable diagrams, adequately identified.
- c. State exactly the computation performed by the computer.
- d. Provide all necessary explanations of the computer printout format, symbols, and abbreviations.
- e. Use adequate and consistent notation.

2.4 SPECIFICATIONS

Specifications shall be prepared in accordance with the Construction Specifications Institute (CSI) format. The Design-Build Contractor prepared specifications shall include as a minimum, all applicable specification sections referenced by the CSI for each product supplied and used for project. Where the CSI does not reference a specification section for specific work to be performed by this contract, the Design-Build Contractor shall be responsible for creating the required specification.

Construction Specifications Institute
http://www.csinet.org/s_csi/index.asp
601 Madison Street
Alexandria, Virginia
22314-1791

2.4.1 Preparation of Proprietary Non-Generic Design Documents

During the course of design, the designer shall specify specific proprietary materials, equipment, systems, and patented processes by trade name, make, or catalog number. The subsequent use of construction submittals to supplant and/or supplement incomplete design effort is unacceptable. Design submittals containing non-proprietary and/or generic design criteria where proprietary items are available, will be returned for resubmission.

2.4.2 Use of Unified Facilities Guide Specifications (UFGS)

If UFGS are used, it is the sole responsibility of the Design-Build Contractor to prepare these specifications in strict conformance with the paragraph entitled PREPARATION OF PROPRIETARY NON-GENERIC DESIGN DOCUMENTS. UFGS containing non-proprietary and/or generic design criteria, where proprietary items are available, will be returned for resubmission. If the UFGS contains a "SUBMITTALS" paragraph, the Design-Build Contractor shall delete it and incorporate all required information directly into the design documents. Under no circumstances will the Design-Build Contractor be permitted to use submittals and shop drawings to finalize an incomplete design. UFGS (Uniform Federal Guide Specifications) are required for this project when U.S. products and systems are required or used. Current UFGS information may be obtained at the following location: http://www.wbdg.org/ccb/browse_org.php?o=70.

Specifications for UFGS are in SpecsIntact format. SpecsIntact is government sponsored software used to edit specifications for government contracts. The software is available at the following link: <http://specsintact.ksc.nasa.gov/index.asp>.

2.4.3 Quality Control and Testing

Specifications shall include required quality control and further indicate all testing to be conducted by the Design-Build Contractor, its subcontractors, vendors and/or suppliers.

2.4.4 Ambiguities and indefinite specifications

Ambiguities, indefinite specification requirements (e.g., highest quality, workmanlike manner, as necessary, where appropriate, as directed etc) and language open to interpretation is unacceptable.

2.4.5 Binding

All volumes of specifications shall be 8.5 inches X 11 inches, and firmly bound, covers shall be of a heavier bond than the drawing sheets. All specifications shall be bound in sets with Chicago Screws to fasten sheets together, the drilled holes on the bond edges of the sheets shall be on 100 mm centers maximum, and 40 mm maximum from edges.

2.4.5 Industry Standards

2.4.5.1 U.S. Industry Standards

The Specifications shall be based on internationally accepted U.S. industry Standards. Customarily accepted publications may be found in the UNIFIED MASTER REFERENCE LIST (UMRL) which may be located at the following URL: <http://www.hnd.usace.army.mil/techinfo/UFGS/UFGSref.htm>.

To access the UMRL select the "Unified Facilities Guide Specifications" tab and scroll down to Unified Master Reference List (UMRL) (PDF version).

Examples of U.S. standards are: National Fire Protection Association (NFPA), International Building Code (IBC), American Concrete Institute (ACI), American Water Works Association (AWWA), ADAAG (ADA Accessibility Guidelines) for Buildings and Facilities, etc. Standards referenced shall be by specific issue; the revision letter, date or other specific identification shall be included.

This document lists publications referenced in the Unified Facilities Guide Specifications (UFGS) of the Corps of Engineers (USACE), the Naval Facilities Engineering Command (NAVFAC), the Air Force Civil Engineer Support Agency (AFCEA), and the guide specifications of the National Aeronautics and Space Administration (NASA). This document is maintained by the National Institute of Building Sciences (NIBS) based on information provided by the agencies involved and the standards producing organizations. The listing is current with information available to NIBS on the date of this publication.

Standards referenced in specifications and drawings prepared by the Design-Build Contractor shall be by specific issue; the revision letter, date or other specific identification shall be included.

2.4.5.2 Non U.S. Industry Standards

The Codes, Standards, and Regulations listed below shall be used in the construction of this project. The publications shall be the most recent editions. Standards specified shall be ASTM or equivalent DIN, BS, or EN. Standards other than those mentioned may be accepted provided they meet the minimum requirements and the Contractor shall submit proof of equivalency to the Contracting Officer for approval. It shall be the contractor's responsibility to show equivalency requirements are met if the Standard is not per specified format. Any time two or more Codes or standards conflict, the most stringent shall apply.

2.4.6 Incorporation of Government review comments

Subsequent to submission to the Government, the specifications shall be finalized by the incorporation of Government review comments.

2.5 DRAWINGS

Drawings, prepared in the English language with SI units of measure, are a part of each submittal. The working drawings shall be adequately labeled and cross-referenced for review. Complete, thoroughly checked and coordinated contract drawings shall be submitted. The contract drawings submitted for final review shall include the drawings previously submitted which have been revised and completed as necessary. The Design-Build Contractor shall have incorporated any design review comments generated by previous design review(s), have completed all of his constructability and coordination checks, and have the drawings in a Ready-to-Build condition. The drawings shall be complete at this time and contain all the details necessary to ensure a clear understanding of the work throughout construction.

2.5.1 Drawing Size

If project is required to be in (SI) Metric units, all drawings shall be prepared in size "A1" sheets (594mm by 841mm). If project is required to be in English units, all drawings shall be modified Architectural D size (24 inches by 36 inches) sheets. Design submissions may be prepared in half size (11 inches by 17 inches) to save paper and for ease of review. All final contract drawing sets shall be prepared with full size sheets. Drawings shall be trimmed to size if necessary.

2.5.2 Computer Assisted Design and Drafting (CADD)

Computer Assisted Design and Drafting (CADD) is required for all work related to this contract. The CADD deliverables shall meet the requirements of the AEC CAD Standard Release 2.0. Emphasis is on drawings meeting sheet layout standards, level/layer naming standards and sheet naming conventions. CAD standards may be found at the following link: <https://tsc.wes.army.mil/products/standards/aec/aecstdweb.asp>. Transatlantic Programs Center Design Instructions Manual, Chapter 22 entitled COMPUTER ASSISTED DESIGN AND DRAFTING. The Contractor shall furnish the digital as-built drawing files in .DWG file format utilizing AutoDesk AutoCAD revision 2005 or later. Drawings shall not be prepared in another Cad format and converted into AutoCAD.

2.5.3 Plotter Prepared Original Drawings

Plotter prepared original drawings shall be prepared on 20 pound bond paper, unless otherwise approved and shall be plotted on the matte side. Raster plotters must provide a minimum resolution of 400 dpi while vector plotters shall provide a minimum resolution of 0.0010 inch with an accuracy of +0.1% of the move and a repeatability error of not more than 0.005 inch. Drawings produced from dot matrix plotters are not acceptable. Plots accompanied by the digital design file may be prepared on vellum: translucent bond is not acceptable. Line density shall be equivalent to that produced by black India ink: half-tones and gray scale plots are not acceptable unless otherwise approved. Manual changes to plotted originals are not acceptable.

2.5.4 Half-Size Reduction

Preparation of all work shall accommodate half size reduction unless project is required to meet SI units or shall be instructed otherwise by the Contracting Officer.

2.5.5 Symbols and Abbreviations

Symbols and abbreviations shall be in accordance with AEC CAD Standard Release 2.0 or later /or conform to the symbols used with a CADD program such AutoDesk AutoCAD release 2000 or greater.

2.5.6 Design Discipline Designation Format

Referencing AEC CAD Standard Release 2.0, the drawing package shall be divided into the following proposed divisions:

Discipline

Designation Discipline

Use the following for AEC CAD Standard Release 2.0:

CCivil

S Structural

A Architectural

F	Fire Protection
P	Plumbing
M	Mechanical
E	Electrical

Each drawing for the particular facility shall be designated by the discipline designation and sheet number and shall be consecutive within each discipline. AEC CAD Standard, referenced herein, shall be adhered to, especially with regard to sheet naming, numbering and level/layer naming standards. Copies of level/layer naming standards are available at the following locations (in comma delimited format - .CSV) and may be imported into Microstation and/or AutoCAD release 2000 or later:

Public FTP site:

ftp://anonymous@ftp.usace.army.mil/pub/aed/Standards/AEC_Nat_CAD_Std/level_libs/

Share Point site:

https://aedsharepoint.tac.usace.army.mil/C16/Drawings/Document%20Library/AEC_CAD_level_templates.ZIP

2.5.7 Grouping Drawings

A building or individual facility design shall, except for site development drawings, be grouped in the design drawing package so that a single building may be withdrawn by deleting or removing a consecutive block of sheets.

2.5.8 Title and Revision Block

Title and revision block shall match FIGURES 1 through 5 furnished in the paragraph entitled ATTACHMENTS.

2.5.9 Drawing Scales

The scales indicated on the following list shall, in general, be used for all drawings. The Contractor may, at its option, make exceptions to scales indicated, if approved in writing by the Contracting Officer.

Site, Grading and Utility Plans - 1:500, if in SI units

Key Plans as large as practical

Cross Sections/elevations (as large scale as possible to adequately show required detail) - 1:100, if in SI units

Details - 1:10 minimum, if in SI units

2.5.10 Binding

All volumes of drawing prints shall be firmly bound and shall have covers of heavier bond than the drawing sheets. All drawings shall be bound in sets with Chicago Screws to fasten sheets together, the drilled holes on the bond edges of the sheets shall be on 200 mm centers maximum, and 50 mm maximum from edges. Maximum thickness of each set of drawings shall be 40 mm.

2.5.11 Typical Sheets

Typical sheets of standard details uniformly used on all buildings are authorized and encouraged. Sheets of standard details may be prepared so that they can be reused if the design package must be divided into separate construction packages. Each typical detail drawing sheet may be limited to a particular design discipline. Standard detail sheets shall be organized by discipline as are the other drawing sheets. Details peculiar to one facility shall not be shown in the standard details but with the group of drawings for the facility to which it pertains.

2.5.12 Index Sheet(s)

The first sheet of each volume in a project shall be a cover sheet. In general, the second sheet shall be the first index. The third sheet shall be a legend with all symbols and abbreviations used in drawings listed. Multiple index sheets may be required, depending on the project size. All index sheets shall be included with each volume of drawings and shall be an index of all the individual drawings in all volumes. The index shall list sequentially the site development drawings, each facility's drawings, and the standard details drawings (if any), and shall locate them by volume and file number. Each index sheet shall be signed and stamped by a principal of the Design-Build Contractor.

2.5.13 Drawing File Number

The File Number is unique to each drawing and is a combination of a project location code, project number, facility designator and the CADD file name. Unassigned numbers or skipped sheets shall be labeled as "Not Used" on the index sheets. Cover sheets are not numbered.

2.5.14 Specifications Placed on the Drawings

Details of standard products or items which are adequately covered by specifications shall not be included on the drawings.

2.5.15 Legends

For each submittal, legends of symbols and lists of abbreviations shall be placed on the drawings. They shall include all of the symbols and abbreviations used in the drawing set, but shall exclude any symbols and abbreviations not used. Since many symbols are limited to certain design disciplines, there is a definite advantage to the use of separate legends on the initial sheet of each design discipline or in the Standard Details package for each discipline. If legends have not been shown by discipline, a legend shall be placed on the third drawing.

2.5.16 Location Grid

To facilitate the location of project elements and the coordination of the various disciplines' drawings, all plans shall indicate a column line or planning grid, and all floor plans (except structural plans) shall show room numbers.

2.5.17 Composite and Key Plans

If the plan of a large building or structure must be placed on two or more sheets in order to maintain proper scale, the total plan shall be placed on one sheet at a smaller scale. Appropriate key plans and match lines shall appear on segmented drawings. Key plans shall be used not only to relate large scale plans to total floor plans but also to relate individual buildings to complexes of buildings. Key plans shall be drawn in a convenient location and shall indicate the relative location of the represented plan area by crosshatching.

2.5.18 Revisions

Drawing revisions shall be prepared only on the original CADD files. A revision area is required on all sheets.

PART 3 EXECUTION

3.1 GENERAL

3.1.1 Design Concept Coordination Meeting

In addition to regular meetings with the Government the Contractor shall conduct formal status briefings on a bi-weekly basis, as a minimum, to provide a management overview of design development. Shortly after contract award the Government may choose to conduct meetings with the Design-Build Contractor to refine proposal concept features. The purpose of the meeting is to assure attention to project requirements and to suggest ways of improving the design prior to tentative level submissions.

3.1.2 Government Design Changes

Government design changes which do not increase construction costs shall be made at no charge to the Government. The Contracting Officer may request design submittals in addition to those listed when deemed necessary to adequately describe the work covered in the contract documents. Submittals shall be made in the respective number of copies and to the respective addresses set forth in the paragraph entitled SUBMITTAL PROCEDURE. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

3.2 SUBMITTAL REGISTERS

3.2.1 Contractor-Furnished Design Documents Submittal Register (TAC Form 122-E)

3.2.1.1 General

The Contractor shall submit as part of his Project Schedule, information regarding the submittal and clearance for construction of Contractor furnished design documents. In addition, the Contractor shall provide a complete submittal register in the sample format (TAC Form 122-E - Contractor Furnished Design Documents Submittal Register) which is attached to this section. The Contractor shall, within fifteen (15) calendar days after approval of the Project Schedule, submit 3 copies of his finalized Contractor Furnished Design Document Submittal Register to the Contracting Officer for approval. The submittal register shall consist of a tabulation of all the Contractor furnished design documents with the indicated dates integrated into the Design Progress Schedule. The Contractor shall post all actual dates of submittal actions (including clearance for construction) as they occur. Revisions shall be made at minimum on a monthly basis to keep the submittal register in agreement with the scheduled dates shown in the network mathematical analysis.

3.2.1.2 Additions or Revisions

Any additions or changes required to be made to the TAC Form 122-E as a result of the Contracting Officer's review shall be incorporated into the TAC Form 122-E by the Contractor and (3) copies shall be affected within five (5) calendar days after receipt of the Contracting Officer's review comments.

3.2.1.3 Submission Requirements

A copy of the initial TAC Form 122-E and each monthly update prepared by the Contractor, shall be submitted to

AFGHANISTAN ENGINEER DISTRICT

(1) DHL, FEDEX, UPS or any other courier service:
U.S. Army Corps of Engineers
Afghanistan Engineer District

House # 1, St. #1 West
West Wazir Akbar High School
Behind Amani High School
Kabul, Afghanistan

(2) U.S. Postal Service:
USACE AED
ATTN: QALAA House
APO AE 09356

3.2.2 Construction Submittal Register (ENG Form 4288)

Attached to this section is ENG Form 4288 which the Contractor is responsible for developing for this contract. All construction submittals shall be shown on this register. The submittal register shall be the controlling document and will be used to control all construction submittals throughout the life of the contract. The Contractor shall maintain and update the register on a monthly basis for the Contracting Officer's approval.

3.3 TRANSMITTAL FORM (ENG Form 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both design and construction submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care will be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.4 PROGRESS SCHEDULE

The Contractor shall prepare and submit a design progress schedule to the Contracting Officer. The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The progress schedule shall show, as a percentage of the total design price, the various items included in the contract and the order in which the Contractor proposes to carry on the work, with dates on which he will start the features of the work and the contemplated dates for completing same. Significant milestones such as review submittals shall be annotated. The Contractor shall assign sufficient technical, supervisory and administrative personnel to insure the prosecution of the work in accordance with the progress schedule. The Contractor shall correct the progress schedule at the end of each month and shall deliver Submittal section AED (3) copies to the Contracting Officer. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.5 SCHEDULING

3.5.1 Design Submittals

Note: all design submittal phases shall consist of Designs, Specifications, Design analysis, 2 Half size sets of drawings bound with a CD-ROM electronic files of all the listed here in.

Adequate time a minimum of fifteen (15) calendar days exclusive of mailing time shall be allowed for review and clearance for construction. If the Contractor fails to submit design submittals in a timely fashion, or repetitively submits design submittals that are not in strict conformance with the contract documents, no part of the time lost due to such actions shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3.5.2 Post Design Construction Submittals

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time a minimum of fifteen (15) calendar days exclusive of mailing time) shall be allowed for review and approval. If the Contractor fails to submit post design construction submittals in a timely fashion, or repetitively submits submittals that are not in strict conformance with the contract documents, no part of the time lost due to actions shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3.5.3 Incorporation of Government Review Comments

The Contractor shall use DrChecks_{SM}, as the communication mechanism for the Government's review comments. The review will be for conformance with the technical requirements and parameters of the contract documents. The Contractor shall either incorporate each comment or, if the Contractor disagrees technically and does not intend to comply with the comment(s), the Contractor shall clearly outline, with ample justification, its reasons for its noncompliance within five (5) days after receipt of the comment(s) in DrChecks_{SM}. Additionally, the Contractor is cautioned in that if it believes the action required by any comment exceeds the requirements of this contract, that he should take no action and notify the Contracting Officer in writing immediately. The DR Checks review comments and the submittal material for each design review will become the basis for any ensuing design work. Copies of the DrChecks_{SM}, design review comments with the action taken on each comment noted shall be bound in all succeeding volumes of the design analysis.

3.6 SUBMITTAL PROCEDURE

3.6.1 Design Submittals

3.6.1.1 Afghanistan Engineer District (AED)

Two (2) hard copies and one soft copy (1) copies of all design submittals shall be transmitted to the Government at the following address by means of ENG Form 4025:
AFGHANISTAN ENGINEER DISTRICT

(1) DHL, FEDEX, UPS or any other courier service:

U.S. Army Corps of Engineers
Afghanistan Engineer District
House # 1, St. #1 West
West Wazir Akbar High School
Behind Amani High School
Kabul, Afghanistan

(2) U.S. Postal Service:

USACE AED
ATTN: QALAA House
APO AE 09356

One (1) set of designs (3) copies of all design submittals shall be transmitted to the Government at the following address by means of ENG Form 4025:

The drawings shall be submitted in full size and half size formats unless otherwise noted.

For the Afghanistan Engineer District and/or field office, the Contractor shall submit two (1) full size and one (2) half size sets of drawings and a complete set of specification, design analysis and a soft copy on CD-ROM of all of the listed herein.

3.6.1.2 Resident/Area Engineer Office

Two (2) half size copies and one (1) full size additional copy of each design submittal shall be transmitted to the overseas field office administering the construction portion of the contract at the following address:

3.6.1.3 Deliverables "Cleared for Construction"

Once the Design Documents have been "Cleared for Construction" by the Contracting Officer, the Design-Build Contractor shall clearly identify each document by annotating it as "Cleared for Construction". One (1) complete hardcopy and CD set of all finalized design documents shall be submitted to the Government as follows:

AFGHANISTAN ENGINEER DISTRICT

(1) DHL, FEDEX, UPS or any other courier service:

U.S. Army Corps of Engineers
Afghanistan Engineer District
House # 1, St. #1 West
West Wazir Akbar High School
Behind Amani High School
Kabul, Afghanistan

(2) U.S. Postal Service:

USACE AED
ATTN: QALAA House
APO AE 09356

Resident Area Engineer Office AED

Field office or site location of design project.

This is a Design-Build project and in accordance with Contract Clause 52.227-7022 GOVERNMENT RIGHTS (UNLIMITED), the Government has non-exclusive rights to use the design on other projects. Therefore, the As-Builts furnished to the Government must be in an editable format.

3.6.1.4 Editable CADD Format As-Builts

One (1) set of the Government approved As-Builts shall be submitted to the following address in an editable CADD format:

AFGHANISTAN ENGINEER DISTRICT

(1)

DHL, FEDEX, UPS or any other courier service:

U.S. Army Corps of Engineers
Afghanistan Engineer District
House # 1, St. #1 West
West Wazir Akbar High School
Behind Amani High School
Kabul, Afghanistan

(2) U.S. Postal Service:

USACE AED
ATTN: QALAA House
APO AE 09356

This requirement is in addition to all other submission requirements stated elsewhere in the contract.

3.6.1.5 Digital Transmission of Design Submittals

The Design-Build Contractor shall submit design deliverables addressed by this specification in digital format. The following procedure shall be followed:

a. **USE OF FILE TRANSFER PROTOCOL (FTP) SERVER.** The Design-Build contractor will download all design files on either its own File Transfer Protocol (FTP) Server, the Corps FTP Server or as otherwise directed. Afghanistan Engineer District (AED) prefers that the contractor provide the soft copy of design submittals be burned to CD-ROM and submitted as such. Files shall be arranged on a CD with each facility clearly identified as a separate subdirectory, with all files for that facility contained in that subdirectory. Each disk shall have an adhered printed label listing contents. Hand writing unacceptable. The procedure to be followed will be established at the Pre-Construction Conference and the appropriate log-in and password information will be exchanged between the Government and the Design-Build Contractor.

NOTE: AED accepts AutoCAD release 2005 or higher drawing file format as the standard due to the fact that the local region does not support Microstation

b. **TRANSLATED OR CONVERTED FILES DRAWING FILES.** Digital drawing files shall be prepared as indicated in the paragraph entitled COMPUTER ASSISTED DESIGN AND DRAFTING (CADD). Under NO circumstances shall the Design-Build Contractor translate (or convert) the files from Bentley Microstation to AutoDesk AutoCAD.

c. **NOTIFICATION.** The Design-Build Contractor shall notify all recipients by email that the Design submittal has been downloaded to the designated FTP server or electronically provided on a CD and is ready for Government review. This email shall include a scanned copy of the ENG Form 4025 signed by the Design-Build Contractor's Contractor Quality Control (CQC) Organization. It shall also include an updated digital copy of TAC Form 122-E. The Government will use the digital submittal as an advance copy pending receipt of an official hardcopy version in accordance with the paragraph entitled SUBMITTAL PROCEDURE. Subsequent to a period of demonstrated successful performance, the Government may elect to eliminate the requirement to submit an official hardcopy version.

The TAC Form 122-E shall be prepared in a spread sheet software that readily allows the file to be saved as a *.CSV file that can subsequently be imported into the Corps of Engineers Resident Management System (RMS) software.

d. RETURN OF GOVERNMENT REVIEWED SUBMITTALS. Subsequent to the Government review, the Eng Form 4025 with comments (if applicable) will be returned to the Design-build Contractor digitally by email. Hardcopies of these documents will subsequently be submitted to the Design-Build Contractor via the United States Postal Service (USPS). The Government may elect to stop sending hardcopies if it deems that digital transmission of design submittals is progressing satisfactorily.

e. SUPPLEMENTAL ACTIONS. All supplemental actions, resubmittals, and subsequently scheduled submissions shall be performed by the Design-Build contractor as indicated within this paragraph.

AED: As-builts shall be prepared and submitted in .DWG format utilizing AutoDesk AutoCAD release 2000 or higher format.

3.6.2 Post Design Construction Submittals

Three (3) copies of all post design construction submittals shall be transmitted to the overseas district office administering the construction portion of the contract at the following address:

AFGHANISTAN ENGINEER DISTRICT

(1) DHL, FEDEX, UPS or any other courier service:
U.S. Army Corps of Engineers
Afghanistan Engineer District
House # 1, St. #1 West
West Wazir Akbar High School
Behind Amani High School
Kabul, Afghanistan

(2) U.S. Postal Service:
USACE AED
ATTN: QALAA House
APO AE 09356

Submittal area of the AED engineering section

One (1) additional copy of each Post Design Construction submittal shall be transmitted to the Government at the following stateside address by means of ENG Form 4025:

Submittals of Operations and Maintenance (O & M) Manuals in sets of (3) three copies shall be as follows:

AFGHANISTAN ENGINEER DISTRICT

(1) DHL, FEDEX, UPS or any other courier service:

U.S. Army Corps of Engineers
Afghanistan Engineer District
House # 1, St. #1 West
West Wazir Akbar High School
Behind Amani High School
Kabul, Afghanistan

(2) U.S. Postal Service:

USACE AED
ATTN: QALAA House
APO AE 09356

3.6.3 Submittal Numbering System

An instruction on the numbering system to be used for construction submittals follows:

3.6.3.1 Submittals

Shop drawings and materials are listed on the Submittal Register (ENG Form 4288) as follows:

- a. List is prepared according to contract specifications and drawings, picking up all items involved in the project.
- b. This list is divided into sections as indicated in the specifications for example:

Sec. 01015	"Technical Requirements"
Sec. 02831	"Chain-Link Fence"
Sec. 02710	"Sub drainage System"
Sec. 03300	"Concrete For Building Construction"
Sec. 04200	"Masonry"

3.6.3.2 Numbering procedures for transmittal on ENG FORM 4025

- a. Each section, may include a list of items. All these items will then be listed with a progressive number within the sections they belong to, for example:

Sec. 01015	will have 01015.00 (Basic number)
Item x	" " 01015.01
Item y	" " 01015.02

Item z " " 01015.03

Sec. 02710 will have 02710.00 (Basic number)

Item x " " 02710.01

Item y " " 02710.02

Item z " " 02710.03

Sec. 02600 will have 02600.00 (Basic number)

Item x " " 02600.01

Item y " " 02600.02

Sec. 03300 will have 03300.00 (Basic number)

Item x " " 03300.01

Item y " " 03300.02

etc.

b. It is evident a transmittal will never show a Section number i.e., 02831.00, 03300.00, etc., since these are only the basic numbers of the system. Numbers on transmittals will be the item numbers, i.e., 01015.01, 02710.01, 02710.02, 02710.03, 03300.01, 03300.02, etc. All items, as listed on the Submittal Register, will be submitted via a separate transmittal form ENG FORM 4025 thus avoiding getting together more than one item (as listed) and more than one number. There are items, on the other hand, which may be submitted all together on the same transmittal form. This must be established before submission is made.

c. Sec. 10800 "Toilet Accessories" - this section will have basic number 10800.00 - all items relative to it will be listed one by one on separate lines. ONLY one transmittal number will then be given for all of these "10800.01" which will include i.e., robe hook, toilet paper holder, mirror, soap holder, cabinet for paper towels, etc. Each one of these items will be listed on the same Transmittal Number 10800.01 as item 1, item 2, item 3, etc.

For design reviews the standard Corps of Engineers method of review is through DrChecks_{SM}, through Projnet <https://www.projnet.org/projnet/binKornHome/index.cfm> All of AED design submittal reviews shall be done through DrChecks.

3.6.3.3 Resubmittals

Should the Contractor be required to resubmit any transmittal, it will be accomplished by utilizing the same transmittal number followed by the number "-1" for the first resubmittal, "-2" for the second resubmittal, "-3" for the third resubmittal, etc. For example, a first resubmittal would be "SUBMITTAL PROCEDURES FOR DESIGN BUILD PROJECT" 01335.01-1, a second resubmittal 01335.01-2, etc. The purpose of this system is to avoid deviations from Submittal Register and, to avoid confusion arising from the use of more than one number on transmittal when more than one item

is submitted on the same form. This system will also facilitate the use, wherever required, on machine printouts.

3.6.4 Variations

If design documents or construction submittals show variations from the contract parameters and/or requirements, the Contractor shall justify such variations in writing, at the time of submission. Additionally, the Contractor shall also annotate block "h" entitled "variation" of ENG FORM 4025. After design submittals have been reviewed and cleared for construction by the Contracting Officer, no resubmittal for the purpose of substituting materials, equipment, systems, and patented processes will be considered unless accompanied by the following:

- a. Reason or purpose for proposed variation, substitution, or revision.
- b. How does quality of variation compare with quality of the specified item? This shall be in the form of a technical evaluation tabulating differences between the item(s) originally specified and what is proposed.
- c. Provide a cost comparison. This shall include an acquisition and life cycle cost comparison.
- d. For proprietary materials, products, systems, and patented processes a certification signed by an official authorized to certify in behalf of the manufacturing company that the proposed substitution meets or exceeds what was originally specified.
- e. For all other actions, a certification signed by a licensed professional engineer or architect certifying that the proposed variation or revision meets or exceeds what was originally specified.
- f. Advantage to the Government, if variation is approved, i.e. Operation and Maintenance considerations, better product, etc.
- g. Ramifications and impact, if not approved.

If the Government review detects any items not in compliance with contract requirements or items requiring further clarification, the Contractor will be so advised. Lack of notification by the Contracting Officer of any non-complying item does not relieve the Contractor of any contractual obligation.

3.6.5 Non-Compliance

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the worksite, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3.7 REVIEW OF CONTRACTOR PREPARED DESIGN DOCUMENTS

3.7.1 General

The work under contract will be subject to continuous review by representatives of the Contracting Officer. Additionally, joint design review conferences with representation by all organizations having a direct interest in the items under review may be held. The Design-Build Contractor shall furnish copies of all drawings and related documents to be reviewed at the review conference on or before the date indicated by the Government. Additional conferences pertaining to specific problems may be requested by the Design-Build Contractor or may be directed by the Contracting Officer as necessary to progress the work. The Design-Build Contractor shall prepare minutes of all conferences and shall furnish two copies to the Contracting Officer within seven (7) days after the conference.

Note: All design submittal reviews shall be reviewed and comments entered in DrChecks_{SM}, located on the web at:
<https://www.projnet.org/projnet/binKornHome/index.cfm>

3.7.2 Independent Design Review

The Design-Build Contractor shall have someone other than the Designer or Design Team perform an independent review of all specifications, drawings, design analysis, calculations, and other required data prior to submission to the Government. Upon completion of this review, the Design-Build Contractor shall certify that each design submittal is complete, accurate, is in strict conformance with all contract requirements, that repetition has been avoided, that all conflicts have been resolved, and that the documents have thoroughly coordinated and cross checked against all the applicable disciplines to prevent the omission of vital information.

3.7.3 Contractor's Quality Control Organization Review

This review shall be for the purposes of eliminating errors, interferences, and inconsistencies, and of incorporating design criteria, review comments, specifications, and any additional information required. Design submittals submitted to the Contracting officer without evidence of the Contractor's certified approval will be

returned for resubmission. No part of the time lost due to such resubmissions shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

Action Code on Eng Form 4025 the "G – Other (specify)" Code must be used. ENG Forms 4025 and 4026 will be annotated as follows:

- A – Cleared for Construction
- B – Cleared for Construction, except as noted in attached comments
- D – Cleared for Construction, except as noted in attached comments, resubmission required
- E -- NOT Cleared for Construction, see attached comments, resubmission required
- FX – Receipt acknowledged, does not comply as noted with contract requirements.

NOTE: Cleared for construction does not relieve the Design-Build Contractor from the responsibility for any errors or omissions in the design, nor from responsibility for complying with the requirements of this contract.

3.7.4 Government Review

Within 14 days after Notice to Proceed, the Contractor shall submit, for approval, a complete design schedule with all submittals and review times indicated in calendar dates. The Contractor shall update this schedule bi-weekly. After receipt, the Government will be allowed fifteen (15) days to review and comment on each 35%, and 65% design submittal and fifteen (15) days to review and comment on each 99% design and 100% submittal, except as noted below. For each design review submittal, comments from the various design sections and from other concerned agencies involved in the review process will be made in the on-line review management system DrChecks_{SM}, (<https://www.projnet.org/projnet/binKornHome/index.cfm>). Contractor shall coordinate with the Contracting Officer and/or Representative(s) to register for DrChecks_{SM}, use. Contractor shall be responsible for accessing DrChecks_{SM} on a daily basis during Government Review period for comments pertaining to package submitted. The review will be for conformance with the technical requirements of the solicitation and the Successful Offeror's (Contractor's) RFP proposal.

If a design submittal is deficient, it will be returned for correction and resubmission. The review time will begin when the corrected submittal is received.

See table of submittals and meetings at the end of this section..

The contractor shall not begin construction work until the Government has reviewed

the contractor's design and has cleared it for construction. Clearance for construction does not mean Government approval. Government review shall not be construed as a complete check but will evaluate the general design approach and adherence to contract parameters. The Government Review is often limited in time and scope. Therefore, the Contractor shall not consider any review performed by the Government as an excuse for incomplete work. Upon completion of the review, all comments will be forwarded to the Contractor. The Contracting Officer will indicate whether the design submittal has or has not been cleared for construction using the following action codes:

- A – Cleared for Construction
- B – Cleared for Construction, except as noted in attached comments
- C – Cleared for Construction, except as noted in attached comments, resubmission required
- E - NOT Cleared for Construction, see attached comments, resubmission required
- FX – Receipt acknowledged, does not comply as noted with contract requirements.

These codes shall NOT be used by the Design-Build Contractor. Design-Build Contractor's Quality Control Organization will annotate Block "g" entitled "FOR CONTRACTOR USE CODE" of Eng Form 4025-R using the action codes listed on the reverse side of the form.

Design submittals Cleared for Construction by the Contracting Officer shall not relieve the Contractor from responsibility for any design errors or omissions and any liability associated with such errors, nor from responsibility for complying with the requirements of this contract.

3.7.4.1 Incorporation of Government Review Comments

If the Contractor disagrees technically with any comment or comments and does not intend to comply with the comment, he must clearly outline, with ample justification, the reasons for noncompliance within five (5) days after close of review period in order that the comment can be resolved. The Contractor shall furnish disposition of all comments in DrChecks_{SM}, with the next scheduled submittal. The disposition shall identify action taken with citation of location within the relevant design document. Generalized statements of intention such as "will comply" or "will revise the specification" are not acceptable. The Contractor is cautioned that if he believes the action required by any comment exceeds the requirements of this contract, that he should flag the comment in DrChecks_{SM} as a scope change, and notify the COR in

writing immediately. If a design submittal is over one (1) day late in accordance with the latest design schedule, the Government review period may be extended 7 days. Submittals date revisions must be made in writing at least five (5) days prior to the submittal. During the design review process, comments will be made on the design submittals that will change the drawings and specifications. The Government will make no additional payments to the Contractor for the incorporation of comments. Review comments are considered part of the design-build process.

The Contractor will be furnished comments from the various design sections of the Corps of Engineers, Afghanistan Engineer District (AED) as well as from other concerned agencies involved in the review process. The review will be for conformance with the technical requirements and parameters of the contract documents. The Contractor shall either incorporate each comment or, if the Contractor disagrees technically and does not intend to comply with the comment(s), the contractor shall clearly outline, with ample justification, its reasons for its noncompliance within five (5) days after receipt of the comment(s). Additionally, the Contractor is cautioned in that if it believes the action required by any comment exceeds the requirements of this contract, that he should take no action and notify the Contracting Officer in writing immediately. The disposition of all comments shall be furnished in writing with the next scheduled submittal. The review comments and the submittal material for each design review will become the basis for any ensuing design work. Copies of the design review comments with the action taken on each comment noted, shall be bound in all succeeding volumes of the design analysis.

3.7.4.2 Conferences

As necessary, conferences will be conducted between the Design-Build contractor and the Government to resolve review comments.

One review conference will be held for each design submittal as necessary. The review conference will be held at the will be held at the Corps District Office in Kabul, Afghanistan. The Contractor shall bring the personnel that developed the design submittal to the review conference. These conferences when required will take place the week after the fifteen (15) day review periods respectively.

3.7.4.3 Design Deficiencies

Design deficiencies noted by the Government shall be corrected prior to the start of design for subsequent features of work which may be affected by, or need to be built upon, the deficient design work.

3.7.5 Design Discrepancies

The Design-Build Contractor shall be responsible for the correction of incomplete design data, omissions, and design discrepancies which become apparent during

construction. The Design-Build Contractor shall provide the Contracting Officer with a proposed recommendation for correcting a design error, within three (3) calendar days after notification by the Contracting Officer. The Contracting Officer will notify the Design-Build Contractor of any detected noncompliance with the foregoing requirements. The Design-Build Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Design-Build Contractor at the worksite, shall be deemed sufficient for the purpose of notification. If the Design-Build Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Design-Build Contractor. Should extensions of design, fabrication plans and/or specific manufacturer's details be required as a result of a Government issued Change Order, the Government will make an equitable adjustment in accordance with Contract Clause 52.243-4 entitled CHANGES.

3.8 PHASED OR "FAST-TRACK" DESIGN

3.8.1 General

If approved by the Government, design and construction sequencing may be effected on an incremental basis as each approved phase or portion (e.g., demolition, geotechnical, site work, exterior utilities, foundations, substructure, superstructure, exterior closure, roofing, interior construction, mechanical, electrical, etc.) of the design is completed.

3.8.1.1 Design Phases

Complete or partial design phasing may or may not have been specified by the Government elsewhere in this contract. For construction sequencing or phasing that the Government has not specifically mandated, the Design-Build Contractor may submit a proposed phasing plan. Design phasing proposed by the Design-Build Contractor shall be submitted to the Government for approval in accordance with TAC Form 122-E CONTRACTOR FURNISHED DESIGN DOCUMENTS.

3.8.2 Sequence of Design-Construction (Fast-Track)

After receipt of the Contract Notice to Proceed (NTP) the Contractor shall initiate design, comply with all design submission requirements and obtain Government review of each submission. The contractor may begin construction on portions of the work for which the Government has reviewed the final design submission and has determined satisfactory for purposes of beginning construction. The Contracting Officer will notify the Contractor when the design is cleared for construction. The Government will not grant any time extension for any design resubmittal required when, in the

opinion of the Government, the initial submission failed to meet the minimum quality requirements as set forth in the contract.

3.8.3 Notice-to-Proceed for Limited Construction

If the Government allows the Contractor to proceed with limited construction based on pending minor revisions to the reviewed Final Design submission, no payment will be made for any in-place construction related to the pending revisions until they are completed, resubmitted and are satisfactory to the Government.

3.8.4 In-Place Construction Payment

No payment will be made for any in-place construction until all required submittals have been made, reviewed and are satisfactory to the Government.

3.8.5 Commencement of Construction

Construction of work may begin after receipt of the clearance for construction (Notice to Proceed) for each design phase. Any work performed by the Contractor prior to receipt of the clearance for construction, shall be at the Contractor's own risk and expense. Work cleared for construction that does not conform to the design parameters and/or requirements of this contract shall be corrected by the Contractor at no additional cost or time to the Government.

3.9 DESIGN STAGES

The Contractor shall schedule the number and composition of the design submittal phases. Design submittals are required at the Concept (35%), Preliminary (65%) and Final (99%) design stages and at the "Cleared for Construction" (100%) phase. The requirements of each design stage are listed hereinafter. The number and contents of the design submittals phases shall be reflected in TAC Form 122-E as well as in the Contractor's design progress schedule.

3.9.1 DESIGN SUBMITTAL (35%)

The review of this submittal is primarily to ensure that the Contractor has taken an inventory of the existing conditions at proposed site, has incorporated all requirements from the Design Charette, has established the most desirable functional relationships between the various project elements, has provided the technical solution to how the functional and technical requirements will be met, and to show Contractor compliance (or justify noncompliance) with the design parameters and/or requirements. Refer to requirements herein for specific submittal requirements.

The following documents shall be submitted:

a. 35% Design Analysis. The Design Analysis shall be in outline form Listing Executive Summary, Building Types, complete Code Analysis, all codes and standards to be incorporated in design. It shall include all backup material previously submitted and revised as necessary; The Design Analysis shall contain all explanatory material giving the design rationale for any design decisions which would not be obvious to an engineer reviewing.

b. 35% Construction Specifications. A Draft Outline of all Specifications to be used in project.

c. 35% Construction Drawings. The Contract Drawings submitted for 35% Review shall include Site Plan, Building Plans, and one each of Section thru each Building, and Exterior Elevations of building. The Contractor is expected to have completed all of his coordination checks and have the drawings at a 35% design level.

3.9.2 PRELIMINARY (65%)

a. Design Analysis, developed to a 65% design stage. The Design Analysis shall be near final form. It shall include all backup material previously submitted and revised as necessary. Half of the design calculations shall be included. The Design Analysis shall contain all explanatory material giving the design rationale for any design decisions which would not be obvious to an engineer.

b. 65% Complete Construction Specifications. The Draft Specifications on all items of work submitted for 65% Review shall consist of marked-up proprietary specifications with 65% of specification edited.

c. 65% Complete Construction Drawings. The Contract Drawings submitted for Final Review shall include the drawings previously submitted which have been revised and completed as necessary. The Contractor is expected to have completed all of his coordination checks and have the drawings in a design complete condition. The drawings shall be finalized at this time including the incorporation of any design review comments generated by the Preliminary design review.

d. The Contractor shall incorporate Government's 35% Design Review Comments with the Contractor's annotation to each comment.

e. The Contractor may at this time submit for approval the following drawings 1. thru 3. for approval to begin 3.8 PHASED OR "FAST-TRACK" DESIGN.

1. 100% drawings for site plan, grading, utilities, roads, and foundation
2. Geotechnical report
3. Site topographic survey

3.9.3 FINAL DESIGN REVIEW SUBMITTAL 99%

b. 99% Complete Construction Specifications. The Specifications on all items of work submitted for Final Review shall consist of a complete 99 % edited set of specifications.

c. 99% Complete Construction Drawings. The Contract Drawings submitted for Final Review shall include the drawings previously submitted which have been revised and completed as necessary. The Contractor is expected to have completed all of his coordination checks and have the drawings in a design complete condition. The drawings shall be finalized at this time including the incorporation of any design review comments generated by the Preliminary design review. The drawings shall contain all the details necessary to assure a clear understanding of the work throughout construction.

d. The Contractor shall incorporate Government's 35% and, 65% Design Review Comments with the Contractor's annotation to each comment.

3.9.4 "Cleared for Construction" Design Review Submittal (100%)

After the FINAL DESIGN REVIEW SUBMITTAL review, the Contractor shall revise the Contract Documents by incorporating any comments generated during the FINAL DESIGN REVIEW SUBMITTAL and shall prepare final hard copy Construction Specifications. The Contractor shall submit the following documents for the design complete submittal:

a. Complete Design Analysis

b. Construction Specifications

c. Construction Drawings

d. A soft copy (CD) of the design drawings, specifications, and design analysis shall be submitted at this stage and all other subsequent stages of the design process. Files shall be arranged on a CD with each facility clearly identified as a separate subdirectory, with all files for that facility contained in that subdirectory. Each disk shall have an adhered printed label listing contents. Hand writing unacceptable.

e. The Contractor shall incorporate Government's 99% Design Review Comments with the Contractor's annotation to each comment.

f. Once the design documents have been "Cleared for Construction" by the Contracting Officer, the Design-Build Contractor shall clearly identify each document by annotating it as "Cleared for Construction."

3.9.5 Partial Design Submittals

In the interest of expediting construction, the Contracting Officer may approve partial design submittals, procurement of materials and equipment, as well as issue the Notice To Proceed (NTP) for construction of those elements of the design which have been cleared for construction. Such partial notices to proceed shall be solely at the discretion of the Contracting Officer.

3.9.6 Design Submittals not in compliance with the contract documents

The Contractor shall, without additional compensation, correct or revise any errors or deficiencies in its design analysis, specifications, and drawings, and promptly furnish a corrected submittal in the form and number of copies as specified for the initial submittal. No part of the time lost due to such resubmissions shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice shall be given promptly to the Contracting Officer.

3.10 GENERAL DESIGN INSTRUCTIONS

3.10.1 Responsibility of the Design-Build Contractor

3.10.1.1 Professional Quality, Technical Accuracy, and Coordination

The Design-Build Contractor shall be responsible for the professional quality, technical accuracy, and the coordination of all design specifications, drawings, and other services furnished under this contract. Work must be organized in a manner that will assure thorough coordination between various details on drawings, between the various sections of the specifications, and between the drawings and specifications. The Design-Build Contractor shall thoroughly cross-check and coordinate all work until he is professionally satisfied that no conflicts exist, vital information has not been omitted, and that indefinite language open to interpretation has been resolved.

3.10.1.2 Deviating From the "Cleared-For-Construction" Design

(a.) The Contractor must obtain the approval of the Designer of Record (DOR) and the Government's concurrence for any Contractor proposed revision to the professionally stamped and sealed design reviewed and Cleared for Construction by the Government, before proceeding with the revision.

(b.) The Government reserves the right to non-concur with any revision to the design, which may impact furniture, furnishings, equipment selections or operations decisions that were made, based on the reviewed and cleared for construction design.

(c.) Any revision to the design, which deviates from the contract requirements (i.e., the RFP and the accepted proposal), will require a modification, pursuant to the Changes clause, in addition to Government concurrence. The Government reserves the right to disapprove such a revision.

(d.) Unless the Government initiates a change to the contract requirements, or the Government determines that the Government furnished design criteria are incorrect and must be revised, any Contractor initiated proposed change to the contract requirements, which results in additional cost, shall strictly be at the Contractor's expense.

(e.) The Contractor shall track all approved revisions to the reviewed and cleared for construction design and shall incorporate them into the as-built design documentation. The Designer of Record shall document its professional concurrence on the As-Builts for any revisions by affixing its stamp and seal on the drawings and specifications.

3.10.1.3 Government Oversight

The extent and character of the work to be done by the Design-Build Contractor shall be subject to the general oversight, supervision, direction, control, and review by the Contracting Officer.

3.10.1.4 Unlimited Drawing Rights

The Government shall have unlimited rights in all drawings, designs, specifications, notes and all other works developed in the performance of this contract, including the right to use same on any other Government design or construction without additional compensation to the Design-Build Contractor. The Design-Build Contractor hereby grants to the Government a paid-up license throughout the world to all such works to which he may assert or establish any claim under design patent or copyright laws.

3.10.1.5 Conflicts

Any conflicts, ambiguities, questions or problems encountered by the Design-Build Contractor in following the criteria shall be immediately submitted in writing to the Contracting Officer with the Design-Build Contractor's recommendations. Prior to submission to the Government the Design-Build Contractor shall take appropriate measures to obtain clarification of design criteria requirements, to acquire all pertinent design information, and to incorporate such information in the work being performed.

3.10.1.6 Design Specialists

Whenever a design specialist is required, the Design-Build Contractor shall submit for the approval by Contracting Officer, the name of the designated specialist along with

the individual's educational background, experience, and licenses or registrations held, before design work commences. The design specialists shall be registered architects, registered professional engineers, or recognized consultants with a background of at least five (5) years design experience in the appropriate specialty. Services of design specialists may be required for the following specialties:

Landscape Design
Fire Protection
Medical Design
Acoustical Design
Security
Telecommunications
Geotechnical Design
Audio Visual, PA, TV, etc.

3.10.2 Conduct of Work

In the performance of contract the Design-Build contractor shall:

3.10.2.1 Performance

Perform the work diligently and aggressively, and promptly advise the Contracting Officer of all significant developments.

3.10.2.2 Telephone Conversations

Prepare a summary, and promptly furnish a copy thereof to the Contracting Officer, of all telephone conversations relating to the design work under this contract.

3.10.2.3 Cooperation with Others

Cooperate fully with other firms, consultants and contractors performing work under the program to which this contract pertains, upon being advised by the Contracting Officer that such firms or individuals have a legitimate interest in the program, have need-to-know status, and proper security clearance where required.

3.10.2.4 Technical Criteria

All designs, drawings, and specifications shall be prepared in accordance with the contract documents and with the applicable publications referenced therein. As soon as possible, the Design-Build Contractor shall obtain copies of all publications applicable to this contract. Availability of publications (where to purchase) is contained in Specification Section 01420 entitled: SOURCES FOR REFERENCE PUBLICATIONS. Any deviations from the technical criteria contained in the contract

documents or in the applicable publications, including the use of criteria obtained from the user or other sources, must receive prior approval of the Contracting Officer. Where the technical criteria contained or referred to herein are not met, the Design-Build Contractor will be required to conform his design to the same at his own time and expense.

3.10.3 Design Priorities

The design of this project shall consider the remote location and harsh environment of this project and the impact this will have on sources of technical supply, the cost of construction, the low level of maintenance, and the difficulty of obtaining replacement parts. Unless stated otherwise in this contract, the following design priorities shall be followed:

3.10.3.1 CONSTRUCTION LIFE-SPAN LEVEL

Permanent Construction. Buildings and facilities shall be designed and constructed to serve a life expectancy of more than 25 years, to be energy efficient, and to have finishes, materials, and systems that are low maintenance and low life-cycle cost.

3.10.3.2 Operability

Systems including but not necessarily limited to mechanical, electrical, communications, etc., must be simple to operate and easy to maintain.

3.10.3.3 Standardization

Use of standardized materials, products, equipment, and systems is necessary to minimize the requirements for replacement parts, storage facilities, and service requirements.

3.10.3.4 Overseas Work

Use of construction materials or techniques shall be utilized which are suitable for overseas work in harsh climates and environments.

3.10.4 Topographic Surveys, Easements, and Utilities

Unless otherwise stated in the contract, the Design-Build Contractor will be responsible for detailed topographic mapping, available easements, and utility information for the project.

3.10.4.2 Topography Requirements

A sufficient quantity of horizontal and vertical control shall be established to provide a detailed topographic survey at 1:500 scale with one quarter meter contour intervals minimum. Intermediate elevations shall be provided as necessary to show breaks in grade and changes in terrain.

The contours shall accurately express the relief detail and topographic shapes. In addition, 90 percent of the elevations or profiles interpolated from the contours shall be correct to within one-half of the contour interval and spot elevations shall be correct within plus or minus 20 millimeters.

Spot elevations affecting design of facilities shall be provided. Specifically, break points or control points in grades of terrain such as tops of hills, bottoms of ditches and gullies, high bank elevations, etc.

All surface and sub-surface structures features within the area to be surveyed shall be shown and identified on the topographic maps. In addition, these features shall be located by sufficient distance ties and labeled on the topographic sheets to permit accurate scaling and identification.

The location and sizes of potable, sanitary, electrical and mechanical utilities within the survey site shall be shown on the survey map. Sanitary manholes and appurtenances shall show top elevations and invert elevations.

3.10.5 Geotechnical Investigation

Design-Build Contractor will be responsible for Geotechnical investigation, including subsurface explorations, sampling, field and laboratory testing.

3.10.6 Cathodic Protection and Earth Resistance

Unless otherwise stated in the contract, the Design-Build Contractor will be responsible for determining whether cathodic protection on buried structures and underground utility systems are needed for special electrical grounding and counterpoise systems, and for gathering the field data necessary for design.

3.10.7 Not Used

3.10.8 Occupational Safety and Health Act

The facilities, systems, and equipment designed under this contract shall comply with the Occupational Safety and Health Act (OSHA), Code of Federal Regulations, Title 29, Chapter XVII, Parts 1910 and 1926. Any problems in incorporating these standards due to conflicts with other technical criteria shall be submitted to the Contracting Officer for resolution.

3.10.9 Asbestos Containing Materials

Asbestos containing material (ACM) will not be used in the design of new structures or systems. In the event no other material is available which will perform the required function or where the use of other material would be cost prohibitive, a waiver for the use of asbestos containing materials must be obtained from CETAC.

3.11 VALUE METHODOLOGY/VALUE ENGINEERING

The Design-Build Contractor during the course of his design shall be alert for and shall identify those high-cost low-value items or areas which he considers may be accomplished in different ways that will increase the value of the project at the same or less cost. Potential value engineering study items shall be reported to the Value Engineer through the Contracting Officer.

3.11.1 Performance Oriented Value Engineering Change Proposal (VECP)

In reference to Contract Clause 52.248-3, "Value Engineering - Construction", the Government may refuse to entertain a "Value Engineering Change Proposal" (VECP) for those "performance oriented" aspects of the Contract Documents which were addressed in the Design-Build Contractor's accepted contract proposal and which were evaluated in competition with other Proposers for award of this contract. For purposes of this clause, the term "performance oriented" refers to those aspects of the design criteria or other contract requirements which allow the Proposer or the Design-Build Contractor certain latitude, choice of and flexibility to propose in its accepted contract offer a choice of design, technical approach, design solution, construction approach or other approach to fulfill the contract requirements. Such requirements generally tend to be expressed in terms of functions to be performed, performance required or essential physical characteristics, without dictating a specific process or specific design solution for achieving the desired result.

3.11.2 Prescriptive Oriented Value Engineering Change Proposal (VECP)

The Government may consider a VECP for those "prescriptive" aspects of the Solicitation documents, not addressed in the Design-Build Contractor's accepted contract proposal or addressed but evaluated only for minimum conformance with the Solicitation requirements. For purposes of this clause, the term "prescriptive" refers to those aspects of the design criteria or other Solicitation requirements wherein the Government expressed the design solution or other requirements in terms of specific materials, approaches, systems and/or processes to be used. Prescriptive aspects typically allow the Proposers little or no freedom in the choice of design approach, materials, fabrication techniques, methods of installation or other approach to fulfill the contract requirements.

3.12 SUBMITTAL OF CONTRACTOR FURNISHED DESIGN DOCUMENTS

The requirements of this paragraph pertain to the submittal of design documents, specifications, design calculations, surveys, testing reports and other documents prepared by the Design-Build Contractor to meet the design requirements of this project.

3.12.1 Geo-technical

3.12.1.1 Design Analysis

The Design-Build Contractor shall submit in the design analysis catalog cuts, manufacturer's data for the following:

3.12.1.2 Specifications

Specifications for all civil utilities shall include:

3.12.1.3 Design Drawings

1 ea. 2 ea. Half-Size Design drawings shall be submitted for the following:

Afghanistan Engineer District (AED)

3.12.1.4 Manufacturer's recommendations, instructions, and certifications

Shall be submitted for the following:

Afghanistan Engineer District (AED)

3.12.1.5 Samples

Samples shall be submitted for the following:

Afghanistan Engineer District (AED)

3.12.1.6 Schedules

Schedules shall be submitted for the following:

Afghanistan Engineer District (AED)

3.12.1.7 Reports

Reports shall be submitted for the following:

Afghanistan Engineer District (AED)

3.12.1.8 Records

Records shall be submitted for the following:

Afghanistan Engineer District (AED)

Engineering Studies. Occasionally, in addition to the items previously mentioned, engineering studies that relate to specific problems or surveys may be required. The necessary instructions regarding the preparation of such reports must be added by the Specification Writer as appropriate.

3.12.2 Civil, Site Planning and Layout

3.12.3 Wastewater and Solid Waste Systems

3.12.4 Architectural/Interior Design

3.12.5 Structural

3.12.6 Force Protection Design Procedures for the Protection of United States Forces

3.12.7 Fire Protection and Life Safety

3.12.8 Heating, Ventilating, and Air Conditioning

3.12.9 Plumbing

3.12.10 Special Mechanical Systems and Equipment

3.12.11 Electrical

3.12.12 Power Generation

3.12.13 Power Transmission and Distribution

3.12.14 Communications

3.12.15 Corrosion Prevention and Control

3.13 SUBMITTAL OF CONTRACTOR FURNISHED DESIGN DRAWINGS

- 3.13.1 Geo-technical
- 3.13.2 Civil, Site Planning and Layout
- 3.13.3 Wastewater and Waste Systems
- 3.13.4 Architectural/Interior Design
- 3.13.5 Structural
- 3.13.6 Force Protection Design Procedures for the Protection of United States Forces
- 3.13.7 Fire Protection and Life Safety
- 3.13.8 Heating, Ventilating, and Air Conditioning
- 3.13.9 Plumbing
- 3.13.10 Special Mechanical Systems and Equipment
- 3.13.11 Electrical
- 3.13.12 Power Generation
- 3.13.13 Power Transmission and Distribution
- 3.13.14 Communications
- 3.13.15 Accident Prevention and Safety
- 3.14 GOVERNMENT APPROVED CONSTRUCTION SUBMITTALS (Required During Construction)

- 3.14.1 General

Since this contract requires that the drawings and specifications specify specific proprietary materials, equipment, systems, and patented processes by trade name, make, or catalog number, it is anticipated that construction shop drawings will primarily be limited to testing, construction plans (e.g., Contractor Quality Control, Accident Prevention, Resident Management System, Area Use etc), schedules (Project Schedule/Network Analysis), certificates of compliance, reports, records/statements and variations.

- 3.14.1.1 Variations

After design submittals have been reviewed and cleared for construction by the Contracting Officer, no submittal for the purpose of substituting materials, equipment, systems, and patented processes will be considered by the Government unless submitted in accordance with the paragraph entitled VARIATIONS.

3.14.1.2 Additional Shop Drawings and Submittals

In accordance with the paragraph entitled DESIGN DISCREPANCIES, the Government may request the Design-Build Contractor to provide additional shop drawing and submittal type data subsequent to completion of the design.

3.14.2 Incomplete Design

The Design-Build Contractor shall not use construction submittals as a means to supplant and/or supplement an incomplete design effort.

3.14.3 Government Approval of Construction Submittals

The approval of construction submittals by the Contracting Officer shall not be construed as a complete check, but will indicate only that the general method of design construction, materials, detailing and other information are satisfactory. Approval will not relieve the Design-Build Contractor of the responsibility for any error which may exist, as it is the sole responsibility of the Design-Build Contractor to certify that each submittal has been reviewed in detail and is in strict conformance with all the contract documents and design criteria referenced therein.

Virtually all design related construction submittals can and must be incorporated directly into the design specifications and drawings prepared by the Design-Build Contractor. Since the Design-Build Contractor has sole responsibility for the design, procurement, and construction, impediments do not exist which would impair his ability to specifically identify what is being furnished to the Government prior to the start of construction. Generic/non-proprietary specifications are indicative of an incomplete design effort and as such must be rejected as unacceptable

3.14.4 Submittals

Submittals (other than shop drawings) shall be limited to items such as Plans (e.g., Quality Control Plan, Accident Prevention Plan, Area Use Plan etc.), Certificates of Compliance, Installation Instructions, Manufacturer's Catalog Data, Descriptive Literature/Illustrations, Factory and Field Test Reports, Performance and Operational Test Data Reports, Records, Operation and Maintenance Manuals, and required variations.

3.14.5 Government Review

Upon completion of review of construction submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. Two (2) copies of the submittal will be retained by the Contracting Officer and one (1) copy of the submittal will be returned to the Design-Build Contractor.

3.15 FOR INFORMATION ONLY SUBMITTALS

These submittals shall be checked, stamped, signed and dated by the Design-Build Contractor's Quality Control Engineer, certifying that such submittal complies with the contract requirements. All Contractor submittals shall be subject to review by the Government at any time during the course of the contract. Any Contractor submittal found to contain errors or omissions shall be resubmitted as one requiring "approval". No adjustment for time or money will be allowed for corrections required as a result of noncompliance with plans or specifications. Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. These submittals will be used for information purposes. The Government reserves the right to require the Design-Build Contractor to resubmit any item found not to comply with the contract. This does not relieve the Design-Build Contractor from the obligation to furnish material conforming to the plans and specifications and will not prevent the Contracting Officer from requiring removal and replacement if nonconforming material is incorporated in the work.

3.16 ATTACHMENTS

The following attachments form an integral part of this specification:

ENG FORM 4025 - Transmittal of Shop Drawings, Equipment Data, Material Samples, or Manufacturer's Certificate of Compliance (2 pages)

TAC FORM 122-E - Contractor Furnished Design Documents Submittal Register

ENG FORM 4288 - Submittal Register

Select one of the following:
AED projects:

Figure 1 - sheet/number description; AED title block per AEC CADD standards

Figure 2 - A-E logo/designed by/submitted my; AED title block per AEC CADD standards

Figure 3 - revision block; AED title block per AEC CADD standards

Figure 4 - Finished Format Size per AEC CADD standards

-- End of Section -

SECTION: 01415

**SECTION 01415
METRIC MEASUREMENTS**

1.1 REFERENCES

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.

ASTM INTERNATIONAL (ASTM)

- | | |
|------------|--|
| ASTM E 621 | (1994; R 1999e1) Use of Metric (SI) Units in Building Design and Construction (Committee E-6 Supplement to E380) |
| ASTM SI 10 | (2002) American National Standard for Use of the International System of Units (SI): The Modern Metric System |

1.2 GENERAL

This project includes metric units of measurements. The metric units used are the International System of Units (SI) developed and maintained by the General Conference on Weights and Measures (CGPM); the name International System of Units and the international abbreviation SI were adopted by the 11th CGPM in 1960. A number of circumstances require that both metric SI units and English inch-pound (I-P) units be included in a section of the specifications. When both metric and I-P measurements are included, the section may contain measurements for products that are manufactured to I-P dimensions and then expressed in mathematically converted metric value (soft metric) or, it may contain measurements for products that are manufactured to an industry recognized rounded metric (hard metric) dimensions but are allowed to be substituted by I-P products to comply with the law. Dual measurements are also included to indicate industry and/or Government standards, test values or other controlling factors, such as the code requirements where I-P values are needed for clarity or to trace back to the referenced standards, test values or codes.

1.3 USE OF MEASUREMENTS IN SPECIFICATIONS

Measurements in specifications shall be either in SI or I-P units as indicated, except for soft metric measurements or as otherwise authorized. When only SI or I-P measurements are specified for a product, the product shall be procured in the specified units (SI or I-P) unless otherwise authorized by the Contracting Officer. The Contractor shall be responsible for all associated labor and materials when authorized to substitute one system of units for another and for the final assembly and performance of the specified work and/or products.

1.3.1 Hard Metric

A hard metric measurement is indicated by an SI value with no expressed correlation to an I-P value. Hard metric measurements are often used for field data such as distance from one point to another or distance above the floor. Products are considered to be hard metric when they are manufactured to metric dimensions or have an industry recognized metric designation.

1.3.2 Soft Metric

a. A soft metric measurement is indicated by an SI value which is a mathematical conversion of the I-P value shown in parentheses (e.g. 38.1 mm (1-1/2 inches)). Soft metric measurements are used for measurements pertaining to products, test values, and other situations where the I-P units are the standard for manufacture, verification, or other controlling factor. The I-P value shall govern while the metric measurement is provided for information.

b. A soft metric measurement is also indicated for products that are manufactured in industry designated metric dimensions but are required by law to allow substitute I-P products. These measurements are indicated by a manufacturing hard metric product dimension followed by the substitute I-P equivalent value in parentheses (e.g., 190 x 190 x 390 mm (7-5/8 x 7-5/8 x 15-5/8 inches)).

1.3.3 Neutral

A neutral measurement is indicated by an identifier which has no expressed relation to either an SI or an I-P value (e.g., American Wire Gage (AWG) which indicates thickness but in itself is neither SI nor I-P).

1.4 COORDINATION

Discrepancies, such as mismatches or product unavailability, arising from use of both metric and non-metric measurements and discrepancies between the measurements in the specifications and the measurements in the drawings shall be brought to the attention of the Contracting Officer for resolution.

1.5 RELATIONSHIP TO SUBMITTALS

Submittals for Government approval or for information only shall cover the SI or I-P products actually being furnished for the project. The Contractor shall submit the required drawings and calculations in the same units used in the contract documents describing the product or requirement unless otherwise instructed or approved. The Contractor shall use ASTM SI 10 and ASTM E 621 as the basis for establishing metric measurements required to be used in submittals.

- End of Section -

SECTION: 01451

SECTION 01451 CONTRACTOR QUALITY CONTROL

PART 1: GENERAL

1.1 REFERENCES

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.

U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 1110-1-12 (1993)	Quality Management
EM 385-1-1	Safety and Health Requirements Manual

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTIONS

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clauses and this

specification section. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The site project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the contract. The site project superintendent in this context shall be the highest level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer, and shall be responsible for all construction and construction related activities at the site.

3.2 QUALITY CONTROL PLAN

The Contractor shall furnish for review by the Government, not later than five (5) days after receipt of Notice-to-Proceed (NTP) the proposed Contractor Quality Control (CQC) Plan. The plan shall identify personnel, procedures, control, instructions, records, and forms to be used.

3.2.1 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both on site and off-site, including work by subcontractors, fabricators, suppliers and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, consultants, and purchasing agents. These procedures shall be in accordance with Specification 01335 SUBMITTAL PROCEDURES.

- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test.
- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.2 Additional Requirements for Design Quality Control (DQC) Plan

The following additional requirements apply to the Design Quality Control

(DQC) plan:

(1) The Contractor shall provide and maintain a Design Quality Control (DQC) Plan as an effective quality control program which will assure that all services required by this design contract are performed and provided in a manner that meets professional architectural and engineering quality standards. As a minimum, all documents shall be technically reviewed by competent, independent reviewers identified in the DQC Plan. The same element that produced the product shall not perform the independent technical review (ITR). The Contractor shall correct errors and deficiencies in the design documents prior to submitting them to the Government.

(2) The Contractor shall include the design schedule in the master project schedule, showing the sequence of events involved in carrying out the project design tasks within the specific contract period. This should be at a detailed level of scheduling sufficient to identify all major design tasks, including those that control the flow of work. The schedule shall include review and correction periods associated with each item. This should be a forward planning as well as a project monitoring tool. The schedule reflects calendar days and not dates for each activity. If the schedule is changed, the Contractor shall submit a revised schedule reflecting the change within 7 calendar days. The Contractor shall include in the DQC Plan the discipline-specific checklists to be used during the design and quality control of each submittal. These completed

checklists shall be submitted at each design phase as part of the project documentation. Example checklists can be found in ER 1110-1-12.

(3) The DQC Plan shall be implemented by a Design Quality Control Manager who has the responsibility of being cognizant of and assuring that all documents on the project have been coordinated. This individual shall be a person who has verifiable engineering or architectural design experience and is a registered professional engineer or architect. The Contractor shall notify the Contracting Officer, in writing, of the name of the individual, and the name of an alternate person assigned to the position.

The Contracting Officer will notify the Contractor in writing of the acceptance of the DQC Plan. After acceptance, any changes proposed by the Contractor are subject to the acceptance of the Contracting Officer.

3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in the CQC plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.4 Notification of Changes

Notification of Changes. After acceptance of the QC plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Pre-construction Conference, before start of construction, and prior to acceptance by the Government of the Quality Control Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 5 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both on-site and off-site work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures, which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager, and sufficient number of additional qualified personnel to ensure safety and contract compliance. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff shall maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure contract compliance. The CQC staff shall be subject to acceptance by the Contracting Officer. The Contractor shall provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Complete records of all letters, material submittals, shop drawing submittals, schedules and all other project documentation shall be promptly furnished to the CQC organization by the Contractor. The CQC organization shall be responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify an individual within his organization at the site of the work who shall be responsible for overall management of the CQC and have the authority to act in all CQC matters for the Contractor. The CQC system manager shall be a graduate engineer, graduate architect, or a graduate construction manager, with experience on construction projects similar in type to this contract OR a construction person with a minimum of ten (10) years in related work. The CQC System Manager shall be on the site at all times during construction and shall be employed by the Contractor. The CQC System Manager shall be assigned no other duties. An alternate for the CQC System Manager will be identified in the plan to serve in the event of the CQC system manager's absence. The requirements for the alternate will be the same as for the designated CQC manager.

3.4.3 Not Used.

3.4.4 Additional Requirement

In addition to the above experience and/or education requirements, the CQC System Manager shall have completed the course entitled "Construction Quality Management for Contractors". This course is periodically offered by the government, and inquiries as to the next course offering may be directed to the local construction field office.

3.4.5 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in the STR titled SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of the construction work as follows:

3.6.1 Preparatory Phase.

This phase shall be performed prior to beginning work on each definable feature of work, after all required documents and materials are approved/accepted, and after copies are at the work site. This phase shall include:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards, in the English language unless specifically approved otherwise by the Contracting Officer, applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.
- b. A review of the contract drawings.
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. A check to assure that provisions have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to verify that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. Reviews of the appropriate activity hazard analysis to ensure safety requirements are met.
- h. Discussion of procedures for constructing the work including repetitive deficiencies, construction tolerances and workmanship standards for that feature of work.

- i. A check to ensure that the Contracting Officer has accepted the portion of the plan for the work to be performed.
- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 24 hours in advance of beginning any of the required action of the preparatory phase. This phase shall include a meeting conducted by the CQC system manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC system manager and attached to the daily QC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase.

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of preliminary work to ensure that it is in compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verification of full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The Government shall be notified at least 24 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC system manager and attached to the daily QC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- g. The initial phase should be repeated for each new crew to work on-site, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase.

Daily checks shall be performed to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up

checks shall be conducted, and all noted deficiencies corrected, prior to the start of additional features of work that may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases may be required by the Contracting Officer on the same definable features of work if the quality of on-going work is unacceptable; if there are changes in the applicable QC staff or in the on-site production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform tests specified or required to verify that control measures are adequate to provide a product that conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Costs incidental to the transportation of samples or materials shall be borne by the Contractor.

Testing includes operation and/or acceptance tests when specified. A list of tests to be performed shall be furnished as a part of the CQC plan. The list shall give the test name, frequency, specification paragraph containing the test requirements, the personnel and laboratory responsible for each type of test, and an estimate of the number of tests required. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Results of all tests taken, both passing and failing tests, shall be recorded on the Quality Control report for the date taken. Specification paragraph/item reference, location where tests were taken, and the sequential control number identifying the test will be given. Actual test reports may be submitted later, if approved by the Contracting Officer, with a reference to the test number and date taken. An information copy of tests performed by an off-site or commercial test facility will be provided directly to the Contracting Officer. Failure to submit timely test reports, as stated, may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the SPECIAL CONTRACT REQUIREMENTS Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include

the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.
- g. Offsite surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/or specifications.
- j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within forty-eight (48) hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

In accordance with Specification 01312 QUALITY CONTROL SYSTEM, the contractor shall use the forms produced by and printed from QCS. Samples of any forms required to meet the requirements of this section which are not produced by that system shall be included in the contractors Quality Control Plan.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- End of Section --

SECTION: 01525

SPECIFICATION SECTION 01525

SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS

PART 1 GENERAL

For contractor safety on projects associated with this program, compliance with EM 385-1-1 safety requirements will be the long-term goal reached by growing a safety culture. This compliance will, by necessity, be achieved through a phased-in process. In the Commander's letter at the preface of the EM 385-1-1, he acknowledges that in OCONUS locations, strict compliance with the manual may not be possible – and through the hazard analysis process, safety measures can be developed to attain the same degree of safety.

This specification consists of two parts:

- 1) Sections 1.1 through 3.12.1, which are the standard safety specifications for work in Europe District and;
- 2) Appendix A, Phasing approach for safety in emerging countries where there is little or no national safety standards.

1.1 REFERENCES

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.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A10.32	Personal Fall Protection - Safety Requirements for Construction and Demolition Operations
ANSI Z359.1 (1992; R 1999)	Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components
ANSI/ASSE A10.34 (2001)	Protection of the Public on or Adjacent to Construction Sites
ASME B30.3 (1996)	Construction Tower Cranes

ASME INTERNATIONAL (ASME)

ASME B30.22 (2000)	Articulating Boom Cranes
ASME B30.5 (2004)	Mobile and Locomotive Cranes

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10(2002)	Portable Fire Extinguishers
NFPA 241(2000)	Safeguarding Construction, Alteration, and Demolition Operations
NFPA 51B(2003)	Fire Prevention During Welding, Cutting, and Other Hot Work
NFPA 70(2005)	National Electrical Code
NFPA 70E (2004)	Electrical Safety in the Workplace

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1(2003) Safety	Safety and Health Requirements
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards (OSHA)
29 CFR 1910.146	Permit-required Confined Spaces
29 CFR 1915	Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment
29 CFR 1919	Gear Certification
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 1926.500	Fall Protection

1.2 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 SR SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G, ACC

Activity Hazard Analysis (AHA); G, ACC

Crane Critical Lift Plan; G, ACC

Proof of qualification for Crane Operators; G, ACC

SD-06 Test Reports

Reports: Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."

Accident Reports

Monthly Exposure Reports

Crane Reports

Regulatory Citations and Violations

SD-07 Certificates

Confined Space Entry Permit

Contractor Safety Self-Evaluation Checklist; G, ACC

Submit one copy of each permit/certificate attached to each Daily Quality Control Report.

1.3 DEFINITIONS

- a. Competent Person for Fall Protection. A person who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as their application and use with related equipment, and has the authority to take prompt corrective measures to eliminate the hazards of falling.
- b. High Visibility Accident. Any mishap which may generate publicity and/or high visibility.
- c. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.
- d. Qualified Person for Fall Protection. A person with a recognized degree or professional certificate, extensive knowledge, training and experience in the field of fall protection who is capable of performing design, analysis, and evaluation of fall protection systems and equipment.
- e. Recordable Injuries or Illnesses. Any work-related injury or illness that results in:
 - (1) Death, regardless of the time between the injury and death, or the length of the illness;
 - (2) Days away from work (any time lost after day of injury/illness onset);
 - (3) Restricted work;

- (4) Transfer to another job;
- (5) Medical treatment beyond first aid;
- (6) Loss of consciousness; or
- (7) A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.

f. "USACE" property and equipment specified in USACE EM 385-1-1 should be interpreted as Government property and equipment.

1.4 DRUG PREVENTION PROGRAM

Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site. Ensure that no employee uses illegal drugs or consumes alcohol during work hours. Ensure there are no employees under the influence of drugs or alcohol during work hours. After accidents, collect blood, urine, or saliva specimens and test the injured and involved employees for the influence of drugs and alcohol. A copy of the test shall be made available to the Contracting Officer upon request.

1.5 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this contract, work performed shall comply with USACE EM 385-1-1, and in particular, the requirements of the European Union Council Directive 92/57/EEC of 24 June 1992 on the implementation of minimum safety and health requirements at temporary or mobile construction sites. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply.

1.6 SITE QUALIFICATIONS, DUTIES AND MEETINGS

1.6.1 Personnel Qualifications

1.6.1.1 Site Safety and Health Officer (SSHO)

Site Safety and Health Officer (SSHO) shall be provided at the work site at all times to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The Contractor Quality Control (QC) person can only be the SSHO on this project if approved by the Contracting Officer. Any project exceeding 1 Million US dollars in value shall have a full time SSHO. The SSHO shall meet the following requirements: A minimum of 5 years safety work on similar projects; 30-hour OSHA construction safety class or European Union equivalent within the last 5 years; an average of at least 24 hours of formal safety training each year for the past 5 years. Competent person training as needed.

1.6.1.2 Competent Person for Confined Space Entry

Provide a competent person meeting the requirements of EM 385-1-1 who is assigned in writing by the Government Designated Authority (GDA) to assess confined spaces and who possesses demonstrated knowledge, skill and ability to:

- a. Identify the structure, location, and designation of confined and permit-required confined spaces where work is done;

- b. Calibrate and use testing equipment including but not limited to, oxygen indicators, combustible gas indicators, carbon monoxide indicators, and carbon dioxide indicators, and to interpret accurately the test results of that equipment;
- c. Perform all required tests and inspections specified in Section 06.I of EM 385-1-1;
- d. Assess hazardous conditions including atmospheric hazards in confined space and adjacent spaces and specify the necessary protection and precautions to be taken;
- e. Determine ventilation requirements for confined space entries and operations;
- f. Assess hazards associated with hot work in confined and adjacent space and determine fire watch requirements; and,
- g. Maintain records required.

1.6.1.3 Crane Operators

Crane operators shall meet the requirements in USACE EM 385-1-1, Section 16 and Appendix G. In addition, crane operators shall be designated as qualified by a source that qualifies crane operators (i.e., union, a government agency, or and organization that tests and qualifies crane operators). Proof of current qualification shall be provided.

1.6.2 Personnel Duties

1.6.2.1 Site Safety and Health Officer (SSHO)/Superintendent

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Safety inspection logs shall be attached to the Contractors' daily quality control report.
- b. Conduct mishap investigations and complete required reports. Maintain an accident/injury log such as the OSHA Form 300 or host nation equivalent, and Daily Production reports for prime and sub-contractors.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic in-progress meetings.
- e. Implement and enforce accepted APPS and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. A list of unresolved safety and health deficiencies shall be posted on the safety bulletin board.
- g. Ensure sub-contractor compliance with safety and health requirements.

Failure to perform the above duties will result in dismissal of the superintendent and/or SSHO, and a project work stoppage. The project work stoppage will remain in effect pending approval of a suitable replacement.

1.6.3 Meetings

1.6.3.1 Preconstruction Conference

a. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).

b. The Contractor shall discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer's representative as to which phases will require an analysis. In addition, a schedule for the preparation, submittal, review, and acceptance of AHAs shall be established to preclude project delays.

c. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Work shall not begin until there is an accepted APP.

d. The functions of a Preconstruction conference may take place at the Post-Award Kickoff meeting for Design Build Contracts.

1.6.3.2 Safety Meetings

Shall be conducted and documented as required by EM 385-1-1. Minutes showing contract title, signatures of attendees and a list of topics discussed shall be attached to the Contractors' daily quality control report.

1.7 TRAINING

1.7.1 New Employee Indoctrination

New employees (prime and sub-contractor) will be informed of specific site hazards before they begin work. Documentation of this orientation shall be kept on file at the project site.

1.7.2 Periodic Training

Provide Safety and Health Training in accordance with USACE EM 385-1-1 and the accepted APP. Ensure all required training has been accomplished for all onsite employees.

1.7.3 Training on Activity Hazard Analysis (AHA)

Prior to beginning a new phase, training will be provided to all affected

1.8 ACCIDENT PREVENTION PLAN (APP)

The Contractor shall use a qualified person to prepare the written site-specific APP in both English and in the host nation language. Prepare the APP in accordance with the format and requirements of USACE EM 385-1-1 and as supplemented herein. Cover all paragraph and subparagraph elements in USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Accident Prevention Plan". Specific requirements for some of the APP elements are described below. The APP shall be job-specific and shall address any unusual or unique aspects of the project or activity for which it is written. The APP shall interface with the Contractor's overall safety and health program. Any portions of the Contractor's overall safety and health program referenced in the APP shall be included in the

applicable APP element and made site-specific. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP.

Once accepted by the Contracting Officer, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified.

Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO and quality control manager. Should any hazard become evident, stop work in the area, secure the area, and develop a plan to remove the hazard. Notify the Contracting Officer within 24 hours of discovery. In the interim, all necessary action shall be taken to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment.

Copies of the accepted plan will be maintained at the Contracting Officer's office and at the job site.

The APP shall be continuously reviewed and amended, as necessary, throughout the life of the contract. Unusual or high-hazard activities not identified in the original APP shall be incorporated in the plan as they are discovered.

1.8.1 EM 385-1-1 Contents

In addition to the requirements outlines in Appendix A of USACE EM 385-1-1, the following is required:

- a. Names and qualifications (resumes including education, training, experience and certifications) of all site safety and health personnel designated to perform work on this project to include the designated site safety and health officer and other competent and qualified personnel to be. The duties of each position shall be specified.
- b. Qualifications of competent and of qualified persons. As a minimum, competent persons shall be designated and qualifications submitted for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; personal protective equipment and clothing to include selection, use and maintenance.
- c. Confined Space Entry Plan. Develop a confined space entry plan in accordance with USACE EM 385-1-1, Section 06.i, and any other federal, state and local regulatory requirements identified in this contract. Identify the qualified person's name and qualifications, training, and experience. Delineate the qualified person's authority to direct work stoppage in the event of hazardous conditions. Include procedure for rescue by contractor personnel and the coordination with emergency responders. (If there is no confined space work, include a statement that no confined space work exists and none will be created.)
- d. Crane Critical Lift Plan. Prepare and sign weight handling critical lift plans for lifts over 75 percent of the capacity of the crane or hoist (or lifts over 50 percent of the capacity of a barge

mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane or hoist; lifts of personnel; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. The plan shall be submitted 15 calendar days prior to on-site work and include the requirements of USACE EM 385-1-1, paragraph 16.C.18. and the following:

- (1) For lifts of personnel, the plan shall demonstrate compliance with the requirements of EM 385-1-1, Section 22.F.
 - (2) For barge mounted mobile cranes, barge stability calculations identifying barge list and trim based on anticipated loading; and load charts based on calculated list and trim. The amount of list and trim shall be within the crane manufacturer's requirements.
- e. Fall Protection and Prevention (FP&P) Plan. The plan shall be site specific and address all fall hazards in the work place and during different phases of construction. It shall address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 1.8 m (6 feet). A qualified person for fall protection shall prepare and sign the plan. The plan shall include fall protection and prevention systems, equipment and methods employed for every phase of work, responsibilities, assisted rescue, self-rescue and evacuation procedures, training requirements, and monitoring methods. Fall Protection and Prevention Plan shall be revised every six months for lengthy projects, reflecting any changes during the course of construction due to changes in personnel, equipment, systems or work habits. The accepted Fall Protection and Prevention Plan shall be kept and maintained at the job site for the duration of the project. The Fall Protection and Prevention Plan shall be included in the Accident Prevention Plan (APP).

1.9 ACTIVITY HAZARD ANALYSIS (AHA)

The Activity Hazard Analysis (AHA) format shall be in accordance with USACE EM 385-1-1, and shall be written in both English and the host nation language. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHAs as amendments to the APP. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

The AHA list will be reviewed periodically (at least monthly) at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.

The activity hazard analyses shall be developed using the project schedule as the basis for the activities performed. Any activities listed on the project schedule will require an AHA. The AHAs will be developed by the contractor, supplier or subcontractor and provided to the prime contractor for submittal to the Contracting Officer.

1.10 DISPLAY OF SAFETY INFORMATION

Within 1 calendar day after commencement of work, erect a safety bulletin board at the job site. The safety bulletin board shall include information and be maintained as required by EM 385-1-1, section 01.A.06.

1.11 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project. Maintain applicable equipment manufacturer's manuals.

1.12 EMERGENCY MEDICAL TREATMENT

Contractors will arrange for their own emergency medical treatment. The Government has no responsibility to provide emergency medical treatment. Military medical clinics may provide emergency treatment for serious injuries; the contractor is responsible for coordination with the local military medical clinic prior to mobilization.

1.13 REPORTS

1.13.1 Accident Reports

For recordable injuries and illnesses, and property damage accidents resulting in at least \$2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the USACE Accident Report Form 3394 and provide the report to the Contracting Officer within 5 calendar day(s) of the accident. The Contracting Officer will provide copies of any required or special forms.

1.13.2 Accident Notification

Notify the Contracting Officer as soon as practical, but not later than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than \$2,000. Information shall include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (to include type of construction equipment used, PPE used, etc.). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted.

1.13.3 Monthly Exposure Reports

Monthly exposure reporting to the Contracting Officer is required to be attached to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. The Contracting Officer will provide copies of any special forms.

1.13.4 Crane Reports

Submit crane inspection reports required in accordance with USACE EM 385-1-1, Appendix H and as specified herein with Daily Reports of Inspections.

1.14 HOT WORK

Prior to performing "Hot Work" (welding, cutting, etc.) or operating other flame-producing/spark producing devices, a written permit shall be requested from the Installation. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. The Contractor will provide at least two (2) six kilogram ABC rated extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch shall be trained in fire fighting techniques and remain on-site for a minimum of 120 minutes after completion of the task or as specified on the hot work permit.

When starting work in the facility, Contractors shall require their personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency phone numbers. ANY FIRE, NO MATTER HOW SMALL, SHALL BE REPORTED TO THE RESPONSIBLE FIRE DIVISION/DEPARTMENT IMMEDIATELY.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 CONSTRUCTION AND/OR OTHER WORK

Before initiation of work at the job site, an accident prevention plan, written by the Contractor for the specific work and hazards of the contract and implementing in detail the pertinent requirements of EM 385-1-1, will be reviewed and found acceptable by designated Government personnel. Specific requirements for development of the accident prevention plan are found in sections 01.A and Appendix A of EM 385-1-1.

Before beginning each activity involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or subcontractor is to perform the work, activity hazard analysis (AHA) shall be prepared by the Contractor performing the work activity. See paragraph 01.A.09 of EM 385-1-1.

The Contractor shall require subcontractors to submit their plan of operations showing methods they propose to use in accomplishing major phases of work.

The Contractor shall be prepared to discuss the plans in conferences convened by the Contracting Officer prior to starting work on each major phase of operation. Plans shall include all pertinent information such as layout of haul roads, access roads, storage areas, electrical distribution lines, methods of providing minimum exposure to overhead loads, and methods of access to work areas. The plan for accomplishing the initial work phase shall be submitted within 15 calendar days after award of the contract. Plans for subsequent major phases of work shall be submitted not later than 15 calendar days prior to initiation of work on each major phase.

All areas where construction, demolition, alteration, building, or similarly related activities take place, all workers shall have the following minimum personal protective clothing and equipment:

1. Short sleeve shirt.
2. Long trousers.
3. Steel-toed safety boots.
4. Hard hat.

3.1.1 Falling Object Protection

All areas must be barricaded to safeguard employees. When working overhead, barricade the area below to prevent entry by unauthorized employees. Construction warning tape and signs shall be posted so they are clearly visible from all possible access points. When employees are working overhead all tools and equipment shall be secured so that they will not fall. When using guardrail as falling object protection, all openings shall be small enough to prevent passage of potential falling objects.

3.1.2 Hazardous Material Use

Each hazardous material must receive approval prior to being brought onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material. Any work or storage involving hazardous chemicals or materials must be done in a manner that will not expose Government or Contractor employees to any unsafe or unhealthful conditions. Adequate protective measures must be taken to prevent Government or Contractor employees from being exposed to any hazardous condition that could result from the work or storage. The Prime Contractor shall keep a complete inventory of hazardous materials brought onto the work-site. Approval by the Contracting Officer of protective measures and storage area is required prior to the start of the work.

3.1.3 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with USACE EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials.

3.1.4 Unforeseen Hazardous Material

The design should have identified materials such as PCB, lead paint, and friable and non-friable asbestos. If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

3.2 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

The Contractor shall establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. The program shall include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures.

3.2.1 Training

The Contractor shall institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, the Contractor shall provide training for each employee who might be exposed to fall hazards. A competent person for fall protection shall provide the training. Training requirements shall be in accordance with USACE EM 385-1-1, section 21.A.16.

3.2.2 Fall Protection Equipment and Systems

The Contractor shall enforce use of the fall protection equipment and systems designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee is exposed to a fall hazard. Employees shall be protected from fall hazards as specified in EM 385-1-1, section 21. In addition to the required fall protection systems, safety skiff, personal floatation devices, life rings etc., are required when working above or next to water in accordance with USACE EM 385-1-1, paragraphs 05.H. and 05.I. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall arrest systems are required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, or travel. Fall protection must comply with USACE EM 385-1-1 and host nation requirements, whichever is more stringent.

3.2.2.1 Personal Fall Arrest Equipment

Personal fall arrest equipment, systems, subsystems, and components shall meet ANSI Z359.1 or European Union equivalent. Only a full-body harness with a shock-absorbing lanyard or self-

retracting lanyard is an acceptable personal fall arrest body support device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 1.8 m (6 feet). The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall shall always be taken into consideration when attaching a person to a fall arrest system.

3.2.3 Fall Protection for Roofing Work

Fall protection controls shall be implemented based on the type of roof being constructed and work being performed. The roof area to be accessed shall be evaluated for its structural integrity including weight-bearing capabilities for the projected loading.

a. Low Sloped Roofs:

- (1) For work within 1.8 m (6 feet) of an edge, on low-slope roofs, personnel shall be protected from falling by use of personal fall arrest systems, guardrails, or safety nets. A safety monitoring system is not adequate fall protection and is not authorized.
- (2) For work greater than 1.8 m (6 feet) from an edge, warning lines shall be erected and installed in accordance with USACE EM 385-1-1.

b. Steep-Sloped Roofs: Work on steep-sloped roofs requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also includes residential or housing type construction.

3.2.4 Existing Anchorage

Existing anchorages, to be used for attachment of personal fall arrest equipment, shall be certified (or re-certified) by a qualified person for fall protection in accordance with ANSI Z359.1 or European Union equivalent. Existing horizontal lifeline anchorages shall be certified (or re-certified) by a registered professional engineer with experience in designing horizontal lifeline systems.

3.2.5 Horizontal Lifelines

Horizontal lifelines shall be designed, installed, certified and used under the supervision of a qualified person for fall protection as part of a complete fall arrest system which maintains a safety factor of 2.

3.2.6 Guardrails and Safety Nets

Guardrails and safety nets shall be designed, installed and used in accordance with EM 385-1-1 or Host Nation requirements, whichever is more stringent.

3.2.7 Rescue and Evacuation Procedures

When personal fall arrest systems are used, the contractor must ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. A Rescue and Evacuation Plan shall be prepared by the contractor and include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. The Rescue and Evacuation Plan shall be included in the Activity Hazard Analysis (AHA) for

the phase of work, in the Fall Protection and Prevention (FP&P) Plan, and the Accident Prevention Plan (APP).

3.3 SCAFFOLDING

Employees shall be provided with a safe means of access to the work area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Access to scaffold platforms greater than 6 m in height shall be accessed by use of a scaffold stair system. Vertical ladders commonly provided by scaffold system manufacturers shall not be used for accessing scaffold platforms greater than 6 m in height. The use of an adequate gate is required. Contractor shall ensure that employees are qualified to perform scaffold erection and dismantling. Do not use scaffold without the capability of supporting at least four times the maximum intended load or without appropriate fall protection as delineated in the accepted fall protection and prevention plan. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward. Special care shall be given to ensure scaffold systems are not overloaded. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material is prohibited. The first tie-in shall be at the height equal to 4 times the width of the smallest dimension of the scaffold base. Work platforms shall be placed on mud sills. Scaffold or work platform erectors shall have fall protection during the erection and dismantling of scaffolding or work platforms that are more than six feet. Delineate fall protection requirements when working above six feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

3.4 EQUIPMENT

3.4.1 Material Handling Equipment

- a. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.
- b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.
- c. Operators of forklifts or power industrial trucks shall be trained/licensed in accordance with Host Nation requirements.

3.4.2 Weight Handling Equipment

- a. Cranes and derricks shall be equipped as specified in EM-385-1-1 section 16.
- b. The Contractor shall notify the Contracting Officer 15 days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Contractor's operator shall remain with the crane during the spot check.
- c. The Contractor shall comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Erection shall be performed under the supervision of a designated person. All testing shall be performed in accordance with the manufacturer's recommended procedures.
- d. Under no circumstance shall a Contractor make a lift at or above 90% of the cranes rated capacity in any configuration.
- e. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of USACE EM 385-1-1 section 11.

- f. Crane suspended personnel work platforms (baskets) shall not be used unless the Contractor proves to the satisfaction of the Contracting Officer that using any other access to the work location would provide a greater hazard to the workers or is impossible. Personnel shall not be lifted with a line hoist or friction crane.
- g. Portable fire extinguishers shall be inspected, maintained, and recharged.
- h. All employees shall be kept clear of loads about to be lifted and of suspended loads.
- i. The Contractor shall use cribbing when performing lifts on outriggers.
- j. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.
- k. A physical barricade must be positioned to prevent personnel from entering the counterweight swing (tail swing) area of the crane.
- l. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by Contracting Officer personnel.
- m. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.
- n. Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).
- o. Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. Prior to conducting lifting operations the contractor shall set a maximum wind speed at which a crane can be safely operated based on the equipment being used, the load being lifted, experience of operators and riggers, and hazards on the work site. This maximum wind speed determination shall be included as part of the activity hazard analysis plan for that operation.

3.5 EXCAVATIONS

The competent person for excavations performed as a result of contract work shall be on-site when excavation work is being performed, and shall inspect, and document the excavations daily prior to entry by workers. The competent person must evaluate all hazards, including atmospheric, that may be associated with the work, and shall have the resources necessary to correct hazards promptly.

3.5.1 Utility Locations

Prior to any excavation, all underground utilities in the work area must be positively identified by the contractor utilizing a) a private utility locating service in addition to any station locating service, and/or b) a metal and/or cable-detecting device along the route of the excavation. All underground utilities discovered will be flagged a distance of one-half (1/2) meter on each side of the location, and any markings made during the utility investigation must be maintained throughout the contract.

Damage occurring to existing utilities, when the above procedures are not followed, will be repaired at the Contractor's expense.

3.5.2 Utility Location Verification

The Contractor must physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of

the underground system. Digging within 0.61 m (2 feet) of a known utility must not be performed by means of mechanical equipment; hand digging shall be used. If construction is parallel to an existing utility the utility shall be exposed by hand digging every 30.5 m (100 feet) if parallel within 1.5 m (5 feet) of the excavation.

3.5.3 Shoring Systems

Trench and shoring systems must be identified in the accepted safety plan and AHA. Manufacture tabulated data and specifications or registered engineer tabulated data for shoring or benching systems shall be readily available on-site for review. Job-made shoring or shielding shall have the registered professional engineer stamp, specifications, and tabulated data. Extreme care must be used when excavating near direct burial electric underground cables.

3.5.4 Trenching Machinery

Trenching machines with digging chain drives shall be operated only when the spotters/laborers are in plain view of the operator. Operator and spotters/laborers shall be provided training on the hazards of the digging chain drives with emphasis on the distance that needs to be maintained when the digging chain is operating. Documentation of the training shall be kept on file at the project site.

3.6 UTILITIES WITHIN CONCRETE SLABS

Utilities located within concrete slabs or pier structures, bridges, and the like, are extremely difficult to identify due to the reinforcing steel used in the construction of these structures. Whenever contract work involves concrete chipping, saw cutting, or core drilling, the existing utility location must be coordinated with station utility departments in addition to a private locating service. Outages to isolate utility systems shall be used in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the contractor from meeting this requirement.

3.7 ELECTRICAL

3.7.1 Conduct of Electrical Work

Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables that will be cut must be positively identified and de-energized prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with the Contracting Officer and Station Utilities for identification. The Contracting Officer will not accept an outage request until the Contractor satisfactorily documents that the circuits have been clearly identified. Perform all high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator will be allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method. When working in energized substations, only qualified electrical workers shall be permitted to enter. When work requires Contractor to work near energized circuits as defined by the NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. In addition, provide electrical arc flash protection for personnel as required by NFPA 70E. Insulating blankets, hearing protection, and switching suits may also be required, depending on the specific job and as delineated in the Contractor's AHA.

3.7.2 Portable Extension Cords

Portable extension cords shall be sized in accordance with manufacturer ratings for the tool to be powered and protected from damage. All damaged extension cords shall be immediately removed from service. Portable extension cords shall meet the requirements of NFPA 70 or European Union equivalent.

3.8 WORK IN CONFINED SPACES

The Contractor shall comply with the requirements in Section 06.I of USACE EM 385-1-1. Any potential for a hazard in the confined space requires a permit system to be used.

a. Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. (See Section 06.I.06 of USACE EM 385-1-1 for entry procedures). All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.

b. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.

c. Ensure the use of rescue and retrieval devices in confined spaces greater than 1.5 m (5 feet) in depth. Conform to Sections 06.I.08, 06.I.09 and 06.I.10 of USACE EM 385-1-1.

d. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

e. Include training information for employees who will be involved as entrants and attendants for the work. Conform to Section 06.I.07 of USACE EM 385-1-1.

f. Daily Entry Permit. Post the permit in a conspicuous place close to the confined space entrance.

3.9 CRYSTALLINE SILICA

Grinding, abrasive blasting, and foundry operations of construction materials containing crystalline silica, shall comply with USACE EM 385-1-1, Appendix C. The Contractor shall develop and implement effective exposure control and elimination procedures to include dust control systems, engineering controls, and establishment of work area boundaries, as well as medical surveillance, training, air monitoring, and personal protective equipment.

3.10 DEMOLITION

3.101.1 Demolition Plan

The Contractor shall submit a written demolition plan for all demolition work to be carried on the site. In addition, the demolition plan shall be signed by a Professional Registered Engineer and meet the requirements of the Corps of Engineers Safety and Health Manual, EM 385-1-1, section 23. The demolition plan shall be submitted to the COR at least 1 week before the beginning of the work, including structural calculations for the demolition, if necessary. The demolition work shall not begin before the Contractor has received a written approval from the COR.

3.12.1 Protection of Personnel

During the demolition work the Contractor shall continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the demolition site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other

structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workers remove debris or perform other work in the immediate area.

3.10.1 Protection of Structures

Floors, roofs, walls, columns, pilasters, and other structural components that are designed and constructed to stand without lateral support or shoring, and are determined to be in stable condition, shall remain standing without additional bracing, shoring, or lateral support until demolished, unless directed otherwise by the COR. The Contractor shall ensure that no elements determined to be unstable are left unsupported and shall be responsible for placing and securing bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, or demolition work performed under this contract.

Interior concrete or masonry walls shall be demolished from the top down unless a Registered Engineer can demonstrate that an alternate method poses no additional safety hazards

3.11 HOUSEKEEPING

3.11.1 Clean-Up

The Contractor shall be responsible for cleaning up. The Contractor shall require his personnel to keep the immediate work site clean of all dirt and debris resulting from work under this contract. Accumulated dirt and debris shall be hauled off and disposed of in accordance with local law and at least once a week by the Contractor. Additionally, all debris in work areas shall be cleaned up daily or more frequently if necessary. Construction debris may be temporarily located in an approved location; however garbage accumulation must be removed each day.

Stairwells used by the Contractor during execution of work shall be cleaned daily. Cloths, mops, and brushes containing combustible materials shall be disposed of or stored outside of the buildings in tight covered metal containers. Paints and thinners shall not be poured into inlets of the interior or exterior sewage system. Paint, stains, and other residues on adjacent surfaces or fixtures caused by the Contractor shall be carefully removed and cleaned to original finish. Upon completion of the work, the Contractor shall remove all construction equipment, materials and debris resulting from the work. The entire work site and the area used by Contractor personnel shall be left clean.

ATTACHMENT

STR 015250 – SAFETY AND OCCUPATIONAL HEALTH PHASING PLAN

- End of Section -

A. PURPOSE AND RESPONSIBILITIES:

1. The purpose of this SOH Phasing Plan is to establish controls and procedures to reduce the safety and occupational health risks on associated projects to an acceptable level. This SOH Phasing Plan is not intended to address all program SOH requirements, but provides general emphasis to certain procedures and requirements addressed in: EM 385-1-1, U.S. Army Corps of Engineers Safety and Health Requirements Manual

2. For contractor safety on projects associated with this program, compliance with EM 385-1-1 safety requirements will be the long-term goal reached by growing a safety culture. This compliance will, by necessity, be achieved through a phased-in process. In the Commander's letter at the preface of the EM 385-1-1, he acknowledges that in OCONUS locations, strict compliance with the manual may not be possible – and through the hazard analysis process, safety measures can be developed to attain the same degree of safety.

a. The exact timeline and methods of compliance, based generally on the Phase plan below will be determined by in-theater Project Delivery Team (PDT) partners responsible for safety, to include USACE Field Engineering/Construction/ Safety personnel, Prime Contractors and Local Subcontractors. The Prime Contractor, in partnership with the USACE and subcontractors, will develop a Safety and occupational Health Plan (SOHP) consisting of a specific Accident Prevention Plan (APP) and Activity Hazard Analysis for each project.

b. Each project SOHP will evolve as a living document, starting by dividing into phases to provide a goal with a timeline. Focus for the project safety program areas will be based on the following time-based phases.

Phase I: "Saving Lives". Establish achievable compliance methods and basic worker safety education to eliminate or reduce to an acceptable level the life-threatening conditions associated with high hazard construction activities.

- The initial high-hazard focus areas shall include:
 - Excavations
 - Fall Hazards
 - Electrical Work
 - Mobile Construction Equipment
 - Machinery
 - Confined Spaces
- Develop a basic worker safety and health practices manual/ guide and associated mandatory training for each Focus area listed above. These will be in English and local language, based on local conditions and practices and targeted at high-hazard activities.
- On all contract sites, the basic life-support will include First Aid Kits, and emergency communication.
- Contractor Accident Prevention Plans, Activity Hazard Analyses, and other safety-related systems under development with assistance by PDT

Phase II: "Building A Safety Culture" (Approximately one year, beginning at end of Phase I) Advanced safety education of local contractors and LN work force. Full contractor compliance with USACE safety standards related to high-hazard situations, increased application of standards on all work.

- Workforce education and training to include all applicable requirements of EM 385-1-1 and International Safety Standards
- All required Personal Protective Equipment (PPE) available and used by workers in applicable work practices, as outlined in the EM 385-1-1.

- Contractor Accident Prevention Plans, Activity Hazard Analyses, and other safety-related systems refined to meet standard USACE expectations with assistance by PDT
- Standard Contractor Safety administrative responsibilities required, i.e.: Accident reporting, man-hour tracking, training documentation, First Aid personnel certification, fire protection, etc.

Phase III, "Full Performance" (beginning at end of Phase II) Full performance in compliance with EM 385-1-1 and other applicable laws, regulations, design codes and standards. Where standard compliance is not possible, local methods may be used in accordance with implementing letter of EM 385-1-1 or through formal waiver process.

3. The PDT shall employ the "Plan, Do, Check, Act" process for implementing this SOHP as a living document. Each PDT member is responsible for planning for safety and health management within their area of responsibility, implementing agreed-on mitigation, checking to assure that the SOHP is being implemented and acting to adjust plans and implementation with a goal of continuous improvement. This plan will be reviewed and revised as needed at the initiation of each Phase listed above.

4. The PDT members shall cooperate in developing a listing of potential hazards associated with each project.

B. GOALS AND OBJECTIVES:

1. Goals. The safety and health goals of all projects are:
 - a. Be accident free
 - b. Detect and address safety and health problems early in the life of each project
 - c. Do not accept unnecessary risk
 - d. Every team member, to include contractors shall contribute to the safety and health of their fellow team members and assure that the product is free of inherent hazards to the user.
 - e. Educate the workforce and promote Safety as a new way of doing business, show how the project and the employee benefit from Safety.
2. Objectives. The safety and health objectives of this program are:
 - a. Managers, supervisors, and workers shall be held accountable, based on the current Phase, for safety and health.
 - b. Safety and health expectations shall be communicated with the work force in their native language through the use of banners, flyers, and periodic safety meetings
 - c. The work force shall have the safety and health training needed to perform the work at hand, based on the Phase.
 - d. Injury and property damage shall be avoided through early detection and management of hazards

Phase I Interim Safety and Occupational Health Work Practices for USACE Contractor Projects

Phase I Safety Program

1. Contractors shall strive to maintain full compliance with the USACE Safety Requirements Manual, EM 385-1-1. This may not be easily achieved during this Phase, due to a number of factors. The focus for safety and health efforts during this Phase is Saving Lives – the prevention of deaths, permanently disabling injuries, and major property loss. The goal during this period is to provide the equipment and methods needed to save lives and to train the workforce in working safely and using the correct personal Protective Equipment (PPE).
 2. In order to assist in achieving this goal immediately, the following interim standards shall be used (as a minimum acceptable standard) when full compliance with the EM 385-1-1 is not possible. Contractors shall provide these standards in to their workforce in the local language and shall provide training as needed to ensure worker awareness.
-

Basic Safety and Health Standards for Construction

- A. USACE and the contractors must form a team to assure safety on every job site and prevent serious accidents. All unsafe conditions must be reported and the hazard reduced before work may proceed.
- B. Personal Protective Equipment (PPE) may not always be available to every worker during this Phase. Where the equipment required by the USACE Safety Manual, EM 385-1-1, cannot be provided in a timely manner, the contractor shall develop methods that will provide a similar degree of safety (as accepted by USACE) and not expose the workers to serious risk. The mandatory minimum standards for all PPE are:
- Footwear: Closed-toe durable shoes or boots shall be worn by all workers on the project site. No sandals or sports shoes will be allowed, at no time will workers be allowed on the project site with bare feet. Safety footwear (steel-toe or other protection) should be worn by workers using steel rollers, tampers, jack hammers or carrying heavy objects (metal, concrete, stone)
 - Head Protection: When they are available, hard hats should be worn by all construction workers when they are at the project. Hard Hats must be worn in overhead hazard areas including material hoisting/ lifting operations, areas below scaffolds and other elevated work, in excavations, and low ceiling areas that have sharp or hazardous projections. If they are not available, then workers must be kept away from these and other overhead hazard areas.
 - Respirators: Workers exposed to toxic chemicals, vapors, gases and dusts must wear proper respiratory protection. Such exposure is expected in asbestos removal/ repair work, working with paints and solvents in rooms or enclosed spaces, and fuel production facilities. The employer must train the workers in the uses of the respirator and how to properly wear it. The minimum acceptable respirator is a negative pressure filter or cartridge half-face respirator that is correctly equipped for the hazard. Contractors shall consult and follow the ACGIH guidance for length of allowable exposure to the contaminant and workers shall not exceed the recommended time for exposure. Dust Masks will be worn when the work is producing visible dust.
 - Eye Protection: Workers shall wear protective glasses, goggles, or visors when exposed to eye hazards. These hazards include concrete dust, stone and concrete chips from hammering, sandblasting, and power tool cutting or milling. Workers performing welding and cutting with torches or arc-welding equipment shall wear the proper shaded lenses in face shields and/ or goggles.
 - Hearing Protection: Protective ear plugs shall be worn when workers are exposed to potentially damaging noise including jack hammers, flight line operations, power saws and grinders, and combustion engines without mufflers.
 - Gloves: All workers shall have protective gloves appropriate to the task.
 - Clothing: Workers shall wear clothing that protects their skin from damage – shirts and long pants at a minimum. Workers exposed to welding operations, chemicals, abrasive blasting, wet concrete, asbestos, and other hazardous contaminants will wear appropriate clothing for the hazard. Workers using power tools or operating equipment shall not wear very loose or flowing clothing that may get caught in the equipment.
- C. Work Methods for Highly Hazardous Work: The following types of work and hazards are recognized as the leading cause of serious injuries and deaths in construction work. Each type of work has specific PPE and safety equipment that is required to do the work and also specific procedures that must be followed every time the work is done. These interim measures are the minimum acceptable precautions. For each project, an Activity Hazard Analysis (AHA) shall be

completed and, when possible, compliance with more restrictive methods of the EM 385-1-1 shall be achieved.

Workers shall be trained on the following safety precautions, the nature of the hazards involved, and any additional work methods used before performing each type of work

- Excavations
 - The Site Safety and Health Officer will be contacted for inspection of the work prior to digging. The SSHO will assist in any safety equipment or techniques that are required to avoid injury. They will also provide a safety check on the location to assure there are no underground hazards at the site.
 - All excavations or unsafe areas will be marked with barricades or warning tape. These warnings must be maintained and visible until the area is restored to a safe condition.
 - When workers will enter trenches, the walls shall be sloped according to the type of soil or shoring, trench boxes, or other structures will be used to protect workers from collapsing walls
 - Soil removed from trenches will not be placed at the edge of the trench – it must be placed back at least 1 meter from the edge.
 - Vehicles and construction equipment must not be parked closer than 2 meters from the edge of an excavation.
 - Excavation walls shall be inspected regularly during each day to check for cracks, bulges, large stones, sandy areas, and failure of the wall. If these conditions are found, nobody may enter the excavation and the damaged area must be dug out or braced.

- Fall Hazards
 - When working above 2 meters from the ground or another level, all workers shall be protected from falling. The SSHO will inspect prior to beginning work to be sure the work methods are safe. Inspection will include work on ladders, scaffolds, and other elevated work areas.
 - Protection systems shall be sturdy railings, walls, or other structures
 - If there are no structures to protect workers, body belts or harnesses shall be used along with lanyards.
 - Body belts should be mainly be used only to prevent a worker from falling over an edge or off a structure.
 - Body belts and harnesses can both be used as fall protection (stopping a falling worker). The lanyard shall be rope strong enough to withstand the shock of stopping the worker's weight, and they shall be as short as possible, to limit the shock force. Lanyards shall never allow a worker to fall more than 2 meters. It is recommended that lanyards without shock absorber devices be no longer than 1 meter.

- Electrical Work
 - All circuits, wires, and electrical devices shall be tested with a volt meter and found to be de-energized before workers touch the energized parts
 - Controls, switches, and other means for energizing the circuit or equipment shall be tagged "do not operate"
 - Workers shall not work closer to energized systems than the distances listed in the USACE manual.
 - Temporary electrical systems shall be grounded and tested for good ground resistance before use.

- Power tools shall be protected from water and damage, and their cords must be insulated. Cords must be factory installed or equivalent replacements, including safety grip plug and cord boot.
- Extension cords will be in safe, good working order.
- Mobile Construction Equipment
 - If equipment, particularly cranes, are damaged the repairs shall be done by a competent repair person and verified by the SSHO prior to being brought back into service.
 - Nobody may ride outside the cab of construction equipment. Specifically, no riders may ever be in loader buckets, bulldozer blades, on forklift forks, or suspended by a crane.
 - When workers are nearby, construction equipment must have reverse signal alarms or shall use a spotter standing away from the equipment. The spotter must be visible by the driver and positioned to see the area behind the equipment.
 - Construction equipment must work a safe distance from electrical systems, based on the voltage.
 - Cranes must be used according to the manufacturer. If no manufacturer data is available, a load chart shall be developed by a qualified engineer.
 - Workers should stay out of the radius of the crane boom during a lift.
 - Lifting ropes shall be inspected daily for breaks and failure of hardware and fittings.
 - Nobody shall ever ride the hook or load of a crane.
- Machinery
 - Rotating shafts, wheels, blades, and other hazardous parts shall have guards to prevent workers from being injured.
 - Fuel-powered machinery must not be operated indoors or near enclosed areas without using powered ventilation to prevent toxic CO build-up.
 - Metal housings of electrically powered equipment must be grounded
- Confined Spaces
 - The SSHO will pre-approve any work in a confined space, such as in a tank, sewer, manhole or any other enclosed area. The SSHO will inspect the work and assist with any safety equipment or techniques that are required.
 - All permit-required confined spaces (PRCS) on a project shall have signs prohibiting entry.
 - Entrants, supervisors, and attendants for PRCS shall be properly trained.
 - When available, oxygen/flammable/toxic gas meters shall be used for all PRCS. This equipment must be used to evaluate the air in all spaces known or suspected to have contained flammable or toxic chemicals or contain sewage, rotting vegetation or other organic matter.
 - For spaces not meeting the above criteria, mechanical ventilation fans shall be used to clear the air in the space when meters are not available. Based on the air flow of the fan, it shall exhaust the total volume of the space a minimum of seven times prior to entry.
 - All entrants shall wear a harness, body belt, or other device attached to a rope sufficient to retrieve the worker in an emergency.
 - Permits should be used during PRCS entry. If not possible, then some visible means, such as flags or tags outside the entrance, shall be used so supervisors can see when workers are in the space.
- Gas Cylinders
 - Pressurized gas cylinders, such as Oxygen and Acetylene tanks will be stored in a holding stand/ cart to prevent them from falling over. Cylinders will not be placed free on the ground or standing free. If the bottle is not in use the valve will be removed.

- D. Child Labor. Minors under the age of 18 may not perform any of the above hazardous work. Additionally, these minors can not perform any hazardous work such as operating dangerous power tools (circular saws, jack hammers, lathes, etc), driving vehicles, be exterior assistants for vehicle operators or operating mobile construction equipment, explosives work, work at heights over 2 meters without standard railings, electrical work, entering excavations, and work with toxic substances.

-- End of Section --

SECTION: 01770

SPECIFICATION SECTION 01770

CLOSEOUT PROCEDURES

PART 1: GENERAL

1.1 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 01335 SUBMITTAL PROCEDURES:

SD-10 Operation and Maintenance Data
Equipment/Product Warranty List; G
Submit Data Package 1 in accordance with Section 01781 OPERATION AND MAINTENANCE DATA.

SD-11 Closeout Submittals
As-Built Drawings; G
Record Of Materials; G
Equipment/Product Warranty Tag; G

1.2 PROJECT RECORD DOCUMENTS

1.2.1 As-Built Drawings

As built drawings shall be submitted in accordance with Section 01015 SPECIAL CONDITIONS

1.2.2 As-Built Record of Materials

Furnish a record of materials.

Where several manufacturers' brands, types, or classes of the item listed have been used in the project, designate specific areas where each item was used. Designations shall be keyed to the areas and spaces depicted on the contract drawing. Furnish the record of materials used in the following format:

MATERIALS DESIGNATION	SPECIFICATION	MANUFACTURER	MATERIALS USED (MANUFACTURER'S	WHERE USED
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			DESIGNATION)	

1.3 EQUIPMENT/PRODUCT WARRANTIES

1.3.1 Equipment/Product Warranty List

The Contractor shall develop a warranty management plan which shall contain information relevant to the clause Warranty of Construction. At least 30 days before the planned pre-warranty conference, the Contractor shall submit the warranty management plan for Government approval. The warranty management plan shall include all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan shall be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below shall include due date and whether item has been submitted or was accomplished. Warranty information made available during the construction phase shall be submitted to the Contracting Officer for approval prior to each monthly pay estimate. Approved information shall be assembled in a binder and shall be turned over to the Government upon acceptance of the work. The construction warranty period shall begin on the date of project acceptance and shall continue for the full product warranty period. A joint 4 month and 9 month warranty inspection shall be conducted, measured from time of acceptance, by the Contractor, Contracting Officer and the Customer Representative. Information contained in the warranty management plan shall include, but shall not be limited to, the following:

- a. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subcontractors, manufacturers or suppliers involved.
- b. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.
- c. A list for each warranted equipment, item, feature of construction or system indicating:
 - 1. Name of item.
 - 2. Model and serial numbers.
 - 3. Location where installed.
 - 4. Name and phone numbers of manufacturers or suppliers.
 - 5. Names, addresses and telephone numbers of sources of spare parts.
 - 6. Warranties and terms of warranty. This shall include one-year overall warranty of construction. Items which have extended warranties shall be indicated with separate warranty expiration dates.
 - 7. Cross-reference to warranty certificates as applicable.
 - 8. Starting point and duration of warranty period.
 - 9. Summary of maintenance procedures required to continue the warranty in force.
 - 10. Cross-reference to specific pertinent Operation and Maintenance manuals.
 - 11. Organization, names and phone numbers of persons to call for warranty service.
 - 12. Typical response time and repair time expected for various warranted equipment.
- d. The Contractor's plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.
- e. Procedure and status of tagging of all equipment covered by extended warranties.
- f. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.3.2 Performance of Warranty Work

In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others, and after completion of the work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.

Following oral or written notification of required construction warranty repair work, the Contractor shall respond in a timely manner. Written verification will follow oral instructions. Failure of the Contractor to respond will be cause for the Contracting Officer to proceed against the Contractor.

1.3.3 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, the Contractor shall meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. Communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty shall be established/reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, the Contractor shall furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contact will be located within the local service area of the warranted construction, shall be continuously available, and shall be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

1.3.4 Warranty Tags

At the time of installation, each warranted item shall be tagged with a durable, oil and water resistant tag approved by the Contracting Officer. Each tag shall be attached with a copper wire and shall be sprayed with a silicone waterproof coating. The date of acceptance and the QC signature shall remain blank until project is accepted for beneficial occupancy. The tag shall show the following information.

- a. Type of product/material _____
- b. Model number _____
- c. Serial number _____
- d. Contract number _____
- e. Warranty period _____ from _____ to _____
- f. Inspector's signature _____
- g. Construction Contractor _____
Address _____
Telephone number _____
- h. Warranty contact _____
Address _____
Telephone number _____
- i. Warranty response time priority code _____
- j. **WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.**

1.4 MECHANICAL TESTING AND BALANCING

All contract requirements for testing/adjusting/balancing shall be fully completed, including all testing, prior to contract completion date. The time required to complete all testing/adjusting/balancing is included in the allotted calendar days for completion.

1.5 FINAL CLEANING

The premises shall be left broom clean. Stains, foreign substances, and temporary labels shall be removed from surfaces. Carpet and soft surfaces shall be vacuumed. Equipment and fixtures shall be cleaned to a sanitary condition. Filters of operating equipment shall be replaced. Debris shall be removed from roofs, drainage systems, gutters, and downspouts. Paved areas shall be swept and landscaped areas shall be raked clean. The site shall have waste, surplus materials, and rubbish removed. The project area shall have temporary structures, barricades, project signs, and construction facilities removed. A list of completed clean-up items shall be submitted on the day of final inspection.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

- End of Section -

SECTION: 01780

SECTION 01780 CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. 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 01335 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

As-Built Drawings

Drawings showing final as-built conditions of the project. The final CADD as-built drawings shall consist of one set of electronic CADD drawing files in the specified format, one set of Mylar drawings, 2 sets of blue-line prints of the Mylar's, and one set of the approved working as-built drawings.

SD-03 Product Data

As-Built Record of Equipment and Materials

Two copies of the record listing the as-built materials and equipment incorporated into the construction of the project.

Warranty Management Plan

One set of the warranty management plan containing information relevant to the warranty of materials and equipment incorporated into the construction project, including the starting date of warranty of construction. The Contractor shall furnish with each warranty the name, address, and telephone number of each of the guarantor's representatives nearest to the project location.

Warranty Tags

Two record copies of the warranty tags showing the layout and design.

Final Cleaning

Two copies of the listing of completed final clean-up items.

1.2 PROJECT RECORD DOCUMENTS

1.2.1 As-Built Drawings

This paragraph covers as-built drawings complete, as a requirement of the contract. The terms "drawings," "contract drawings," "drawing files," "working as-built drawings" and "final as-built drawings" refer to contract drawings which are revised to be used for final as-built drawings.

1.2.1.1 Government Furnished Materials

One set of electronic CADD files in the specified software and format revised to reflect all bid amendments will be provided by the Government at the preconstruction conference for projects requiring CADD file as-built drawings.

1.2.1.2 Working As-Built and Final As-Built Drawings

The Contractor shall revise 2 sets of paper drawings by red-line process to show the as-built conditions during the prosecution of the project. These working as-built marked drawings shall be kept current on a weekly basis and at least one set shall be available on the jobsite at all times. Changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes. Final as-built drawings shall be prepared after the completion of each definable feature of work as listed in the Contractor Quality Control Plan

(Foundations, Utilities, Structural Steel, etc., as appropriate for the project). The working as-built marked prints and final as-built drawings will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay estimate. If the Contractor fails to maintain the working and final as-built drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining the as-built drawings. This monthly deduction will continue until an agreement can be reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of updated drawings. The working and final as-built drawings shall show, but shall not be limited to, the following information:

a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, the as-built drawings shall show, by offset dimensions to two permanently fixed surface features, the end of each run including each change in direction. Valves, splice boxes and similar appurtenances shall be located by dimensioning along the utility run from a reference point. The average depth below the surface of each run shall also be recorded.

b. The location and dimensions of any changes within the building structure.

c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

d. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

e. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

f. Changes or modifications which result from the final inspection.

g. Where contract drawings or specifications present options, only the option selected for construction shall be shown on the final as-built prints.

h. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, the Contractor shall furnish a contour map of the final borrow pit/spoil area elevations.

i. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.

j. Modifications (change order price shall include the Contractor's cost to change

working and final as-built drawings to reflect modifications) and compliance with the following procedures.

- (1) Directions in the modification for posting descriptive changes shall be followed.
- (2) A Modification Circle shall be placed at the location of each deletion.
- (3) For new details or sections which are added to a drawing, a Modification Circle shall be placed by the detail or section title.
- (4) For minor changes, a Modification Circle shall be placed by the area changed on the drawing (each location).
- (5) For major changes to a drawing, a Modification Circle shall be placed by the title of the affected plan, section, or detail at each location.
- (6) For changes to schedules or drawings, a Modification Circle shall be placed either by the schedule heading or by the change in the schedule.
- (7) The Modification Circle size shall be 12.7 mm 1/2 inch diameter unless the area where the circle is to be placed is crowded. Smaller size circle shall be used for crowded areas.

1.2.1.3 Drawing Preparation

The as-built drawings shall be modified as may be necessary to correctly show the features of the project as it has been constructed by bringing the contract set into agreement with approved working as-built prints, and adding such additional drawings as may be necessary. These working as-built marked prints shall be neat, legible and accurate. These drawings are part of the permanent records of this project and shall be returned to the Contracting Officer after approval by the Government. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at no expense to the Government.

1.2.1.4 Computer Aided Design and Drafting (CADD) Drawings

Only personnel proficient in the preparation of CADD drawings shall be employed to modify the contract drawings or prepare additional new drawings. Additions and corrections to the contract drawings shall be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols shall be the same as the original line colors, line weights, lettering, layering conventions, and symbols. If additional drawings are required, they shall be prepared using the specified electronic file format applying the same graphic standards specified for original drawings. The title block and drawing border to be used for any new final as-built drawings shall be identical to that used on the contract drawings. Additions and corrections to the contract drawings shall be accomplished using CADD files. The

Contractor will be furnished "as-designed" drawings in AutoCAD Release 2005. The electronic files will be supplied on compact disc, read-only memory (CD-ROM). The Contractor shall be responsible for providing all program files and hardware necessary to prepare final as-built drawings. The Contracting Officer will review final as-built drawings for accuracy and the Contractor shall make required corrections, changes, additions, and deletions.

a. CADD colors shall be the "base" colors of red, green, and blue. Color code for changes shall be as follows:

(1) Deletions (red) - Deleted graphic items (lines) shall be colored red with red lettering in notes and leaders.

(2) Additions (Green) - Added items shall be drawn in green with green lettering in notes and leaders.

(3) Special (Blue) - Items requiring special information, coordination, or special detailing or detailing notes shall be in blue.

b. The Contract drawing files shall be renamed in a manner related to the contract number (i.e., 98-C-10.DGN) as instructed in the Pre-Construction conference. Marked-up changes shall be made only to those renamed files. All changes shall be made on the layer/level as the original item. There shall be no deletions of existing lines; existing lines shall be over struck in red. Additions shall be in green with line weights the same as the drawing. Special notes shall be in blue on layer#63.

c. When final revisions have been completed, the cover sheet drawing shall show the wording "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in letters at least 5 mm 3/16 inch high. All other contract drawings shall be marked either "AS-Built" drawing denoting no revisions on the sheet or "Revised As-Built" denoting one or more revisions. Original contract drawings shall be dated in the revision block.

d. Within 20 days for contracts \$5 million and above after Government approval of all of the working as-built drawings for a phase of work, the Contractor shall prepare the final CADD as-built drawings for that phase of work and submit two sets of blue-lined prints of these drawings for Government review and approval. The Government will promptly return one set of prints annotated with any necessary corrections. Within 10 days for contracts \$5 million and above the Contractor shall revise the CADD files accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within 20 days for contracts \$5 million and above of substantial completion of all phases of work, the Contractor shall submit the final as-built drawing package for the entire project. The submittal shall consist of one set of electronic files on compact disc, read-only memory (CD-ROM), one set of mylars, two sets of blue-line prints and one set of the approved working as-built drawings. They shall be complete in all details and identical in form and function to the contract

drawing files supplied by the Government. Any transactions or adjustments necessary to accomplish this is the responsibility of the Contractor. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CADD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit final as-built drawing files and marked prints as specified shall be cause for withholding any payment due the Contractor under this contract. Approval and acceptance of final as-built drawings shall be accomplished before final payment is made to the Contractor.

1.2.1.5 Payment

No separate payment will be made for as-built drawings required under this contract, and all costs accrued in connection with such drawings shall be considered a subsidiary obligation of the Contractor.

1.2.2 As-Built Record of Equipment and Materials

The Contractor shall furnish one copy of preliminary record of equipment and materials used on the project 15 days prior to final inspection. This preliminary submittal will be reviewed and returned 2 days after final inspection with Government comments. Two sets of final record of equipment and materials shall be submitted 10 days after final inspection. The designations shall be keyed to the related area depicted on the contract drawings. The record shall list the following data:

RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA

Description	Specification Section	Manufacturer and Catalog, Model, and Serial Number	Composition and Size	Where Used
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1.2.3 Final Approved Shop Drawings

The Contractor shall furnish final approved project shop drawings 30 days after transfer of the completed facility.

1.2.4 Construction Contract Specifications

The Contractor shall furnish final as-built construction contract specifications, including modifications thereto, 30 days after transfer of the completed facility.

1.2.5 Real Property Equipment

The Contractor shall furnish a list of installed equipment furnished under this contract. The list shall include all information usually listed on manufacturer's name plate. The "EQUIPMENT-IN-PLACE LIST" shall include, as applicable, the following for each piece of equipment installed: description of item, location (by room number), model

number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty. A draft list shall be furnished at time of transfer. The final list shall be furnished 30 days after transfer of the completed facility.

1.3 WARRANTY MANAGEMENT

1.3.1 Warranty Management Plan

The Contractor shall develop a warranty management plan which shall contain information relevant to the clause Warranty of Construction. At least 30 days before the planned pre-warranty conference, the Contractor shall submit the warranty management plan for Government approval. The warranty management plan shall include all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan shall be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below shall include due date and whether item has been submitted or was accomplished. Warranty information made available during the construction phase shall be submitted to the Contracting Officer for approval prior to each monthly pay estimate. Approved information shall be assembled in a binder and shall be turned over to the Government upon acceptance of the work. The construction warranty period shall begin on the date of project acceptance and shall continue for the full product warranty period. A joint 4 month and 9 month warranty inspection shall be conducted, measured from time of acceptance, by the Contractor, Contracting Officer and the Customer Representative. Information contained in the warranty management plan shall include, but shall not be limited to, the following:

a. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, sub-Contractors, manufacturers or suppliers involved.

b. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.

c. A list for each warranted equipment, item, feature of construction or system indicating:

1. Name of item.
2. Model and serial numbers.
3. Location where installed.
4. Name and phone numbers of manufacturers or suppliers.
5. Names, addresses and telephone numbers of sources of spare parts.
6. Warranties and terms of warranty. This shall include one-year overall warranty of construction. Items which have extended warranties shall be indicated with

separate warranty expiration dates.

7. Cross-reference to warranty certificates as applicable.
8. Starting point and duration of warranty period.
9. Summary of maintenance procedures required to continue the warranty in force.
10. Cross-reference to specific pertinent Operation and Maintenance manuals.
11. Organization, names and phone numbers of persons to call for warranty service.
12. Typical response time and repair time expected for various warranted equipment.

d. The Contractor's plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.

e. Procedure and status of tagging of all equipment covered by extended warranties.

f. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.3.2 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, the Contractor shall meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. Communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty shall be established/reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, the Contractor shall furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contact will be located within the local service area of the warranted construction, shall be continuously available, and shall be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

1.3.3 Contractor's Response to Construction Warranty Service Requirements

Following oral or written notification by the Contracting Officer, the Contractor shall respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the three categories of priorities listed below. The Contractor shall submit a report on any warranty item that has been repaired during the warranty period. The report shall include the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within the timeframes specified, the Government will perform the work and back charge the construction warranty payment item established.

- a. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.
- b. Second Priority Code 2. Perform on-site inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.
- c. Third Priority Code 3. All other work to be initiated within 3 work days and work continuously to completion or relief.
- d. The "Construction Warranty Service Priority List" is as follows:

Code 1-Air Conditioning Systems

- 1) Recreational support.
- 2) Air conditioning leak in part of building, if causing damage.
- 3) Air conditioning system not cooling properly.

Code 1-Doors

- 1) Overhead doors not operational, causing a security, fire, or safety problem.
- 2) Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors

- 1) Overhead doors not operational.
- 2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical

- 1) Power failure (entire area or any building operational after 1600 hours).
- 2) Security lights
- 3) Smoke detectors

Code 2-Electrical

- 1) Power failure (no power to a room or part of building).
- 2) Receptacle and lights (in a room or part of building).

Code 3-Electrical

Street lights.

Code 1-Gas

- 1) Leaks and breaks.
- 2) No gas to family housing unit or cantonment area.

Code 1-Heat

- 1) Area power failure affecting heat.
- 2) Heater in unit not working.

Code 2-Kitchen Equipment

- 1) Dishwasher not operating properly.
- 2) All other equipment hampering preparation of a meal.

Code 1-Plumbing

- 1) Hot water heater failure.
- 2) Leaking water supply pipes.

Code 2-Plumbing

- 1) Flush valves not operating properly.
- 2) Fixture drain, supply line to commode, or any water pipe leaking.
- 3) Commode leaking at base.

Code 3 –Plumbing

Leaky faucets.

Code 3-Interior

- 1) Floors damaged.
- 2) Paint chipping or peeling.
- 3) Casework.

Code 1-Roof Leaks

Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks

Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

Code 2-Water (Exterior)

No water to facility.

Code 2-Water (Hot)

No hot water in portion of building listed.

Code 3-All other work not listed above.

1.3.5 Warranty Tags

At the time of installation, each warranted item shall be tagged with a durable, oil and water resistant tag approved by the Contracting Officer. Each tag shall be attached with a copper wire and shall be sprayed with a silicone waterproof coating. The date of acceptance and the QC signature shall remain blank until project is accepted for beneficial occupancy. The tag shall show the following information.

- a. Type of product/material_____.

- b. Model number_____.
- c. Serial number_____.
- d. Contract number_____.
- e. Warranty period_____ from_____ to_____.
- f. Inspector's signature_____.
- g. Construction Contractor_____.
Address_____.
Telephone number_____.
- h. Warranty contact_____.
Address_____.
Telephone number_____.
- i. Warranty response time priority code_____.
- j. WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.

1.4 MECHANICAL TESTING, ADJUSTING, BALANCING, AND COMMISSIONING

Prior to final inspection and transfer of the completed facility; all reports, statements, certificates, and completed checklists for testing, adjusting, balancing, and commissioning of mechanical systems shall be submitted to and approved by the Contracting Officer as specified in applicable technical specification sections.

1.5 OPERATION AND MAINTENANCE MANUALS

Operation manuals and maintenance manuals shall be submitted as specified. Operation manuals and maintenance manuals provided in a common volume shall be clearly differentiated and shall be separately indexed.

1.6 FINAL CLEANING

The premises shall be left broom clean. Stains, foreign substances, and temporary labels shall be removed from surfaces. Carpet and soft surfaces shall be vacuumed. Equipment and fixtures shall be cleaned to a sanitary condition. Filters of operating equipment shall be replaced. Debris shall be removed from roofs, drainage systems, gutters, and downspouts. Paved areas shall be swept and landscaped areas shall be raked clean. The site shall have waste, surplus materials, and rubbish removed. The project area shall have temporary structures, barricades, project signs, and construction facilities removed. A list of completed clean-up items shall be submitted on the day of final inspection.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

- End of Section -

SECTION: 01781

**SPECIFICATION SECTION 01781
OPERATION AND MAINTENANCE DATA**

PART 1 GENERAL

1.1 SUBMISSION OF OPERATION AND MAINTENANCE DATA

Submit Operation and Maintenance (O&M) Data specifically applicable to this contract and a complete and concise depiction of the provided equipment, product, or system. Organize and present information in sufficient detail to clearly explain O&M requirements at the system, equipment, component, and subassembly level. Include an index preceding each submittal. Submit in accordance with this section and Section 01335 SUBMITTAL PROCEDURES.

1.1.1 Package Quality

Documents must be fully legible. Poor quality copies and material with hole punches obliterating the text or drawings will not be accepted.

1.1.2 Package Content

Data package content shall be as shown in the paragraph titled "Schedule of Operation and Maintenance Data Packages." Comply with the data package requirements specified in the individual technical sections, including the content of the packages and addressing each product, component, and system designated for data package submission.

1.1.3 Changes to Submittals

Manufacturer-originated changes or revisions to submitted data shall be furnished by the Contractor if a component of an item is so affected subsequent to acceptance of the O&M Data. Changes, additions, or revisions required by the Contracting Officer for final acceptance of submitted data, shall be submitted by the Contractor within 30 calendar days of the notification of this change requirement.

1.2 TYPES OF INFORMATION REQUIRED IN O&M DATA PACKAGES

1.2.1 Operating Instructions

Include specific instructions, procedures, and illustrations for the following phases of operation:

1.2.1.1 Safety Precautions

List personnel hazards and equipment or product safety precautions for all operating conditions.

1.2.1.2 Operator Prestart

Include procedures required to set up and prepare each system for use.

1.2.1.3 Startup, Shutdown, and Post-Shutdown Procedures

Provide narrative description for Startup, Shutdown and Post-shutdown operating procedures including the control sequence for each procedure.

1.2.1.4 Normal Operations

Narrative description of Normal Operating Procedures. Include Control Diagrams with data to explain operation and control of systems and specific equipment.

1.2.1.5 Emergency Operations

Include Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment. Include Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of all utility systems including required valve positions, valve locations and zones or portions of systems controlled.

1.2.1.6 Operator Service Requirements

Include instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gage readings.

1.2.1.7 Environmental Conditions

Include a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each product, component or system. Describe conditions under which the item equipment should not be allowed to run.

1.2.2 Preventive Maintenance

Include the following information for preventive and scheduled maintenance to minimize corrective maintenance and repair.

1.2.2.1 Lubrication Data

Include preventative maintenance lubrication data, in addition to instructions for lubrication provided under paragraph titled "Operator Service Requirements":

- a. A table showing recommended lubricants for specific temperature ranges and applications.
- b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities.
- c. A Lubrication Schedule showing service interval frequency.

1.2.2.2 Preventive Maintenance Plan and Schedule

Include manufacturer's schedule for routine preventive maintenance, inspections, tests and adjustments required to ensure proper and economical operation and to minimize corrective maintenance. Provide manufacturer's projection of preventive maintenance work-hours on a daily, weekly, monthly, and annual basis including craft requirements by type of craft. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

1.2.3 Corrective Maintenance (Repair)

Include manufacturer's recommended procedures and instructions for correcting problems and making repairs.

1.2.3.1 Troubleshooting Guides and Diagnostic Techniques

Include step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or requires replacement.

1.2.3.2 Wiring Diagrams and Control Diagrams

Wiring diagrams and control diagrams shall be point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and control work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.

1.2.3.3 Maintenance and Repair Procedures

Include instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.

1.2.3.4 Removal and Replacement Instructions

Include step-by-step procedures and a list required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Instructions shall include a combination of text and illustrations.

1.2.3.5 Spare Parts and Supply Lists

Include lists of spare parts and supplies required for maintenance and repair to ensure continued service or operation without unreasonable delays. Special consideration is required for facilities at remote locations. List spare parts and supplies that have a long lead-time to obtain.

1.2.4 Corrective Maintenance Work-Hours

Include manufacturer's projection of corrective maintenance work-hours including requirements by type of craft. Corrective maintenance that requires completion or participation of the equipment manufacturer shall be identified and tabulated separately.

1.2.5 Appendices

Provide information required below and information not specified in the preceding paragraphs but pertinent to the maintenance or operation of the product or equipment. Include the following:

1.2.6 Parts Identification

Provide identification and coverage for all parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing shall show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Parts shown in the listings shall be grouped by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master parts catalog

1.2.6.1 Warranty Information

List and explain the various warranties and include the servicing and technical precautions prescribed by the manufacturers or contract documents in order to keep warranties in force. Include warranty information for primary components such as the compressor of air conditioning system.

1.2.6.2 Personnel Training Requirements

Provide information available from the manufacturers that is needed for use in training designated personnel to properly operate and maintain the equipment and systems.

1.2.6.3 Testing Equipment and Special Tool Information

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components.

1.2.6.4 Contractor Information

Provide a list that includes the name, address, and telephone number of the General Contractor and each Subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 TRAINING

Unless provided for elsewhere, the Contractor shall provide operational and maintenance training for all systems furnished under this contract in accordance with this section. The training shall not take place until the operation and maintenance manuals are submitted and approved.

Training will be given to personnel responsible for the operation and maintenance of the system at the installation. Orient training to the specific system being installed under this contract. Use operation and maintenance manual as the primary instructional aid in contractor provided activity personnel training. Manuals shall be delivered for each trainee with two additional sets delivered for archiving at the project site. Submit a training course schedule, syllabus, and training materials 14 days prior to the start of training. Obtain approval of the training course before beginning that phase of training. Furnish a qualified instructor approved by the system manufacturer to conduct training for the specific system.

Training manuals shall include an agenda, defined objectives and a detailed description of the subject matter for each lesson. Furnish audio-visual equipment and all other training materials and supplies. A training day is defined as 8 hours of classroom or lab instruction, including two 15 minute breaks and excluding lunch time, Monday through Friday, during the daytime shift in effect at the training facility. For guidance, the Contractor should assume the attendees will have a high school education.

The Contractor shall videotape the training session on VHS tapes and provide the tapes to the Government.

-- End of Section --

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

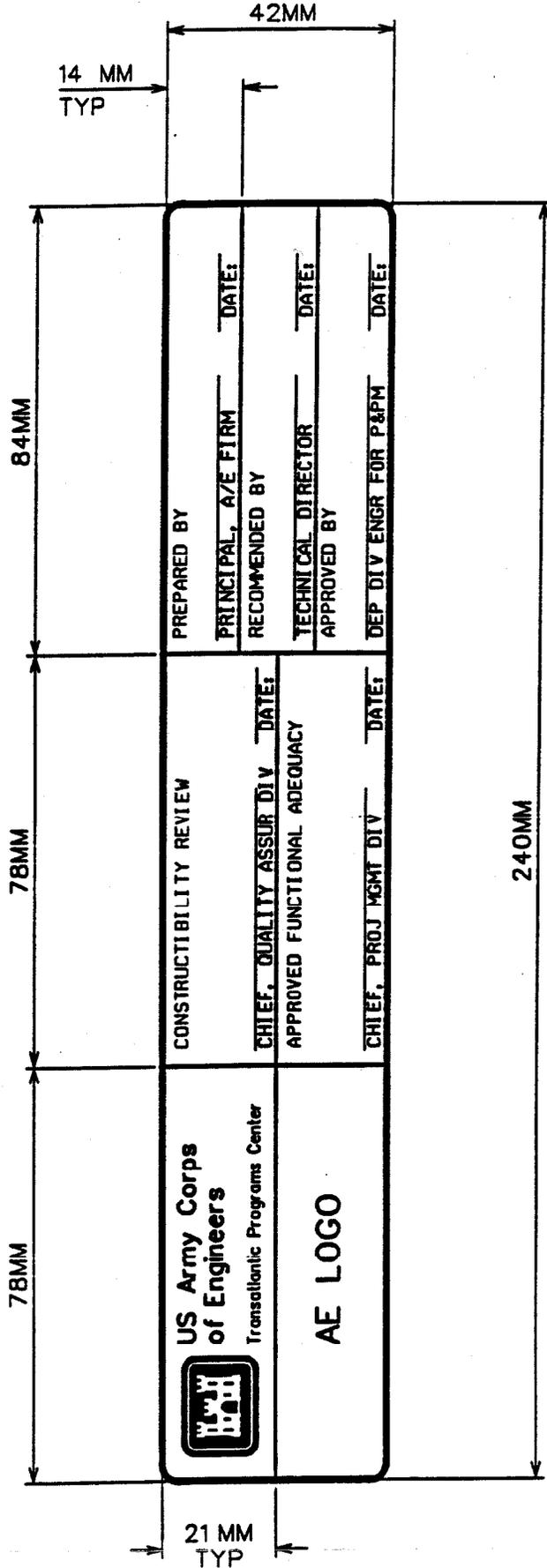
- | | |
|---|---|
| A -- Approved as submitted. | E -- Disapproved (See attached). |
| B -- Approved, except as noted on drawings. | F -- Receipt acknowledged. |
| C -- Approved, except as noted on drawings.
Refer to attached sheet resubmission required. | FX -- Receipt acknowledged, does not comply
as noted with contract requirements. |
| D -- Will be returned by separate correspondence. | G -- Other (<i>Specify</i>) |

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

(Reverse of ENG Form 4025-R)

Contractor - Furnished Design Documents Submittal Register		Contract Title & Location:			
		Contractor:		Contract m.:	
Submittal Identification Nº.	NAS Activity Code	Description of Document (s)	Contractor Submittal Date	Government Action	
				Receipt Date	Construction Clearance Date

INDEX SHEET LOGO/SIGNATURE BLOCK (A-E)



21 MM
TYP

14 MM
TYP

42MM

84MM

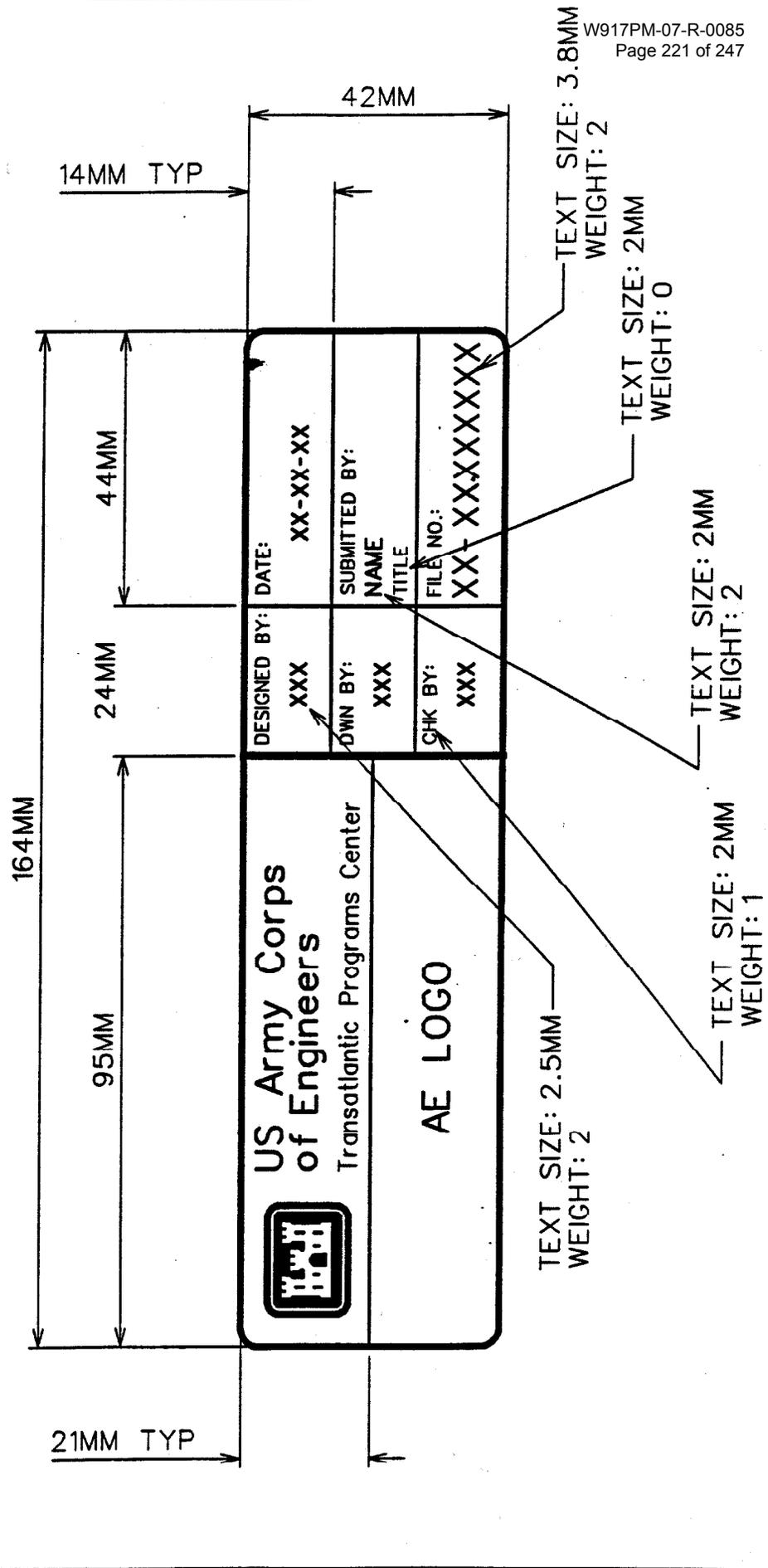
78MM

78MM

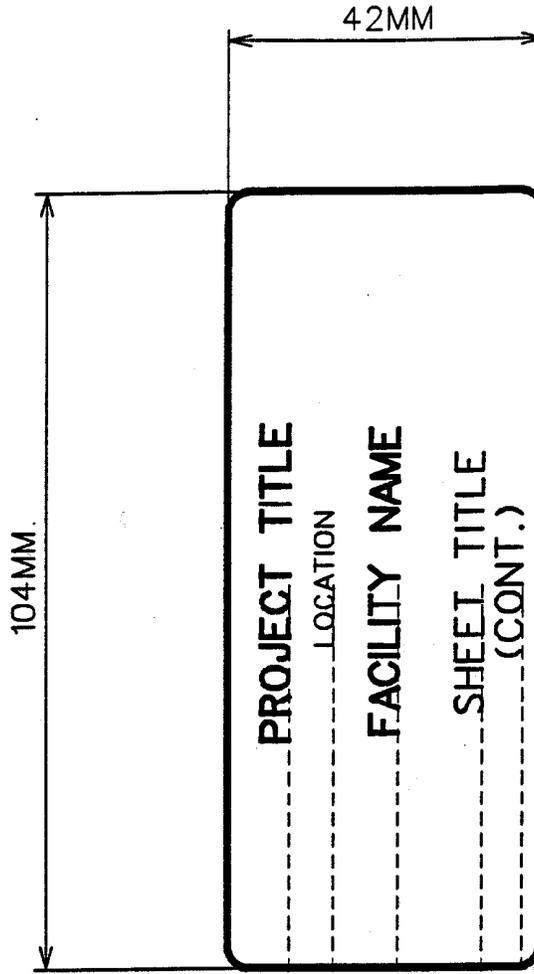
240MM

 US Army Corps of Engineers Transatlantic Programs Center	CONSTRUCTIBILITY REVIEW	PREPARED BY
	CHIEF, QUALITY ASSUR DIV DATE:	PRINCIPAL, A/E FIRM DATE:
APPROVED FUNCTIONAL ADEQUACY	RECOMMENDED BY	TECHNICAL DIRECTOR DATE:
CHIEF, PROJ MGMT DIV DATE:	APPROVED BY	DEP DIV ENGR FOR P&PM DATE:

CONTINUATION SHEET LOGO/SIGNATURE BLOCK (A-E)

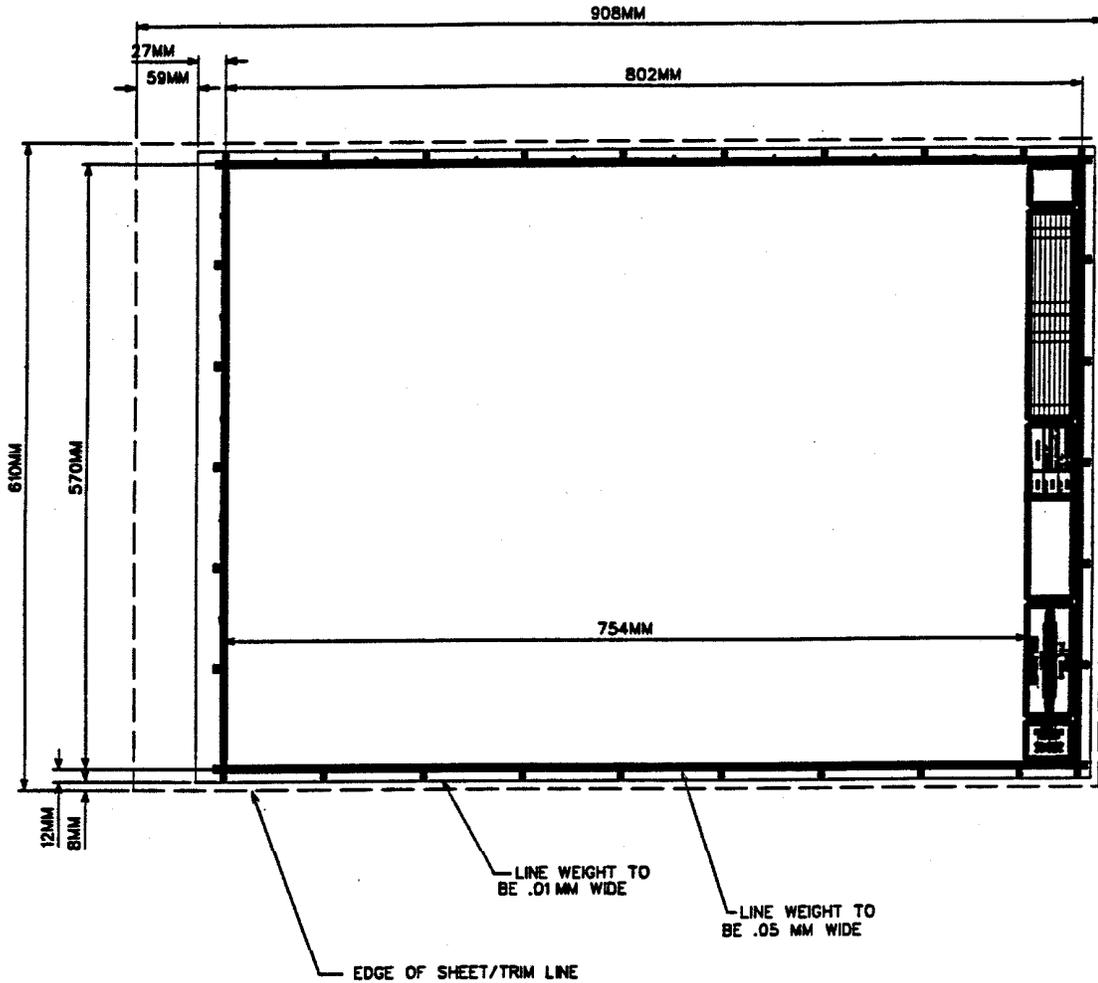


TITLE BLOCK FOR CONTINUATION SHEETS



TEXT SIZE	WEIGHT
36MM	4
25MM	1
36MM	4
36MM	2
36MM	2

FINISHED FORMAT SIZE



NOTES:

1. SEE FIGURES 6 THRU 9 FOR TITLE BLOCK DEFINITIONS.

FIGURE 6

TRANSATLANTIC PROGRAMS CENTER
U.S. ARMY CORPS OF ENGINEERS
AFGHANISTAN ENGINEER DISTRICT
(CEAED)

SCOPE OF WORK TO DEVELOP WORK PLAN

FOR

DESIGN/CONSTRUCT ANA BRIGADE
AFGHANISTAN

PROJECT NAME: DESIGN/CONSTRUCT ANA BRIGADE

1. **LOCATION:** Afghanistan

2. **PROJECT NUMBER:** Not applicable

3. **POC for Design:** TBD **PHONE:** Fax:

E-MAIL:

POC for Construction: TBD **PHONE:**

E-MAIL:

PROJECT Manager : Gary Headley

PHONE: 540-665-3466

E-MAIL: gary.headley@tac01.usace.army.mil

4. **DESIGN EFFORT** (Related to preparation of plans and specs):

4.1 The Design-Build Contractor shall review the provided preliminary drawings and layout of the area with requirements of Army Corps of Engineer publications, ADA, NFPA, API and other listed requirements and documents in the attachments of this scope. Design-Build Contractor shall verify measurements and information on all drawings provided by the Government. The Design-Build Contractor shall provide a design based on compliance with these standards. The design shall contain the site layout based on, but not limited to the following:

4.1.1 A demolition plan.

4.1.2 The design shall provide for a complete set of plans and drawings to construct the Brigade footprint.

4.1.3 The work plan shall contain the site layout.

4.1.4 All buildings to be constructed will be shown on the plan.

4.1.5 All electrical and mechanical work will be shown on plans.

4.1.6 All major construction, including site work, shall be shown.

4.1.7 tabulate all major life safety requirements to be incorporated into the project. Include these requirements on separate life safety plan.

4.2 The Design-Build Contractor is responsible for field verifying all drawings during the design phase.

4.3 The Design-Build Contractor will provide full design specifications for material and equipment.

4.5 The Design-Build Contractor shall provide a construction sequence of work that is in accordance with the required completion dates for the buildings included in the footprint.

4.6 Plan-In-Hand Inspection held at 99% Submittal Review Phase: Make a "Plan-in-Hand" field inspection during the final design review phase to determine that the project plans and specifications reflect true site conditions and

the needed requirements for construction. Any corrections needed to the project plans or specifications shall be incorporated in the Certified Final Submittal. Notify the Corps of Engineers field office at Kandahar, Afghanistan when the inspection will be made.

4.7 The Design-Build Contractor is responsible for preparing "Meeting Minutes for all design review meetings." The final version of the minutes will be provided to attendees within 5 days of the meeting and recorded in the design analysis.

5 **Quality Control Plan (QCP):** The Design-Build Contractor will submit a draft QCP for the design portion of the project within 14 calendar days after Notice To Proceed. The completed QCP that contains as a minimum the following features:

- Purpose
- Identification and discussion of all organizational and technical interfaces.
- Design/Study Team to include assignment of all areas of responsibility.
- Identification Designer of Record and team members responsible for checking the design
- Plans, specifications, and calculations shall be signed by designer and checker
- Project Schedule showing key milestones and review periods.
- Identification of the methods to be used for management of review comments
- QC procedures for assuring end product native CADD Files are acceptable for use by the customer.

The contractor is responsible for the product development, internal Quality Control, and technical review for all products provided under this contract. The QCP may be developed while work commences on other portions of the contract. However, the plan must be submitted and approved in final form within 30 days after award of the task order.ust

6 ANALYSES AND OTHER SUBMITTALS

6.1 Design Analyses: Prepare a Design Analysis for each discipline. This shall include all meeting minutes, structural, mechanical, and electrical calculations for the project.

6.2 Designer Instructions to Field: Put in writing any aspect of the design intent, the drawings and specifications or the construction which may require special awareness or attention by U.S. Government field personnel during supervision and inspection of construction. If none, a negative response is required.

6.3 Design Support During Project Construction: (Compensation for this effort is to be included in the price proposal.)

"Extension of Design" Shop Drawing Review: Review for approval all shop drawings that are "extensions of design" by the contractor. Such shop drawing extensions of design, for which the Design/Build Contractor must remain the Engineer of Record, shall include structural details, reinforcing details, and supports or hangers for mechanical and electrical equipment.

6.4 Responding to Review Comments: The Government will review submittals and make comments. Notify the Project Engineer immediately of any comments that are not understood or are disputed. Respond to all comments verbally at any review meetings, and then in writing in the next submittal. Include all comments and annotations in the design analysis. Provide a certification signed by the project principal, certifying that all pertinent review comments have been incorporated into the Certified Final documents.

7.0 DRAWINGS :

7.1 Drawings; Prepare in accordance with specification section 01335. Drawings in English with Metric units of measure are required for each submittal.

7.2 AUTOCAD Files: AUTOCAD designs shall be developed to provide complete project information that will enable the end users to utilize AUTOCAD to its fullest. To accommodate this, it is required that the following will be done:

7.2.1 The software used to be used shall be Autocad 2000 version.

8.0 SPECIFICATIONS:

8.1 Prepare technical specifications as needed. Specifications shall be prepared in accordance with the Construction Specifications Institute (CSI) format. The Design-Build Contractor prepared specifications shall include as a minimum, all applicable specifications referenced by the CSI. Where the CSI does not reference a specification section for specific work to be performed by this contract, the Design-Build Contractor shall be responsible for creating the required specification.

8.2 During the course of design, the designer, shall specify specific proprietary materials, equipment, systems, and patented processes by trade name, make, or catalog number. The subsequent use of construction submittals to supplant and/or supplement incomplete design effort is unacceptable. Design submittals containing non-proprietary and/or generic design criteria where proprietary items are available, will be returned for resubmission.

8.3 If the Corps of Engineers Unified Facility Guide Specifications (UFGS) are used, it is the sole responsibility of the Design-Build Contractor to prepare these specifications in strict conformance with the paragraph regarding preparation of proprietary non-generic design documents. UFGS containing non-proprietary and/or generic design criteria where proprietary items are available, will be returned for resubmission. If the UFGS contains a "SUBMITTALS" paragraph, the Design-Build Contractor shall delete it and incorporate all required information directly into the design documents. Under no circumstances will the Design-Build Contractor be permitted to use submittals and shop drawings to finalize an incomplete design. UFGS are available for direct download via the internet <http://www.hnd.usace.army.mil/techinfo/cegs/cegstoc.htm>.

9. ATTACHMENTS:

Attachment #1	General Design Guidance and Criteria
Attachment #2	Submittal Matrix – 35% Work Plan Submittal
Attachment #3	Submittal Matrix - 99% Work Plan Submittal
Attachment #4	Submittal Matrix - Certified 100% Submittal
Attachment #5	Address List

Attachment #1:

General Design Guidance and Criteria

Design and construction of this project shall adhere to the following:

ER 1110-2-1200 Plans and Specifications

ARMS User Manual "A/E Response Package".

Index of Corps of Engineers Unified Facility Guide Specs (UFGS), current listing.

Fire Protection for Facilities, UFC 3-600-01, 17 April 2003

International Building Code, 2000

NFPA 101, Life Safety Code, 2003

NFPA 70, National Electric Code, latest edition.

OCE Std. Dwg. Booklet No. 40-06-04, Lighting Fixtures.

TM 402-02, Masonry structural design for buildings.

TI 800-03, Technical Requirements for Design Build, July 98.

Systems Operation and Maintenance Documentation, ER 25-345-1, dated 31 January 1991.

EM 1110-1-1807, Corps CADD Standards Manual, with diskettes.

PAM 420-11, Project Definition and Work Classification.

TI 800-03 Technical Requirements for Design-Build located at url:

<http://www.hnd.usace.army.mil/techinfo/ti/800-03.pdf>

Design-Build Instructions (DBI) for Military Construction at url:

<http://www.hnd.usace.army.mil/techinfo/misc/dbi.pdf>

Applicable references listed in specification section 01420 SOURCES FOR REFERENCE PUBLICATIONS

Attachment #2
Submittal Matrix – 35% Work Plan Submittal

Addressee	(1)	(2)	(3)	(4)	(5)
Afghanistan Engineer District*	3	3	3	2	
Resident (Field) Office	2	2	2	2	
Transatlantic Program Center	0	1	1	1	1
Total Copies	5	6	6	5	1

35% Work Plan Items

I

- (1) Drawing prints, full size
 - (2) Design Analysis
 - (3) Specifications
 - (4) Drawing prints, half size
 - (5) CD containing electronic version of drawings, specifications and design analysis
- * Add 2 CDs for electronic submittals to the Afghanistan Engineer Office, Kabul

Attachment #3

Submittal Matrix – 99% Work Plan Submittal

Addressee	(1)	(2)	(3)	(4)	(5)
Afghanistan Engineer District*	3	3	3	2	
Resident (Field) Office	2	2	2	2	
Transatlantic Programs Center	0	1	1	1	1
Total Copies	5	6	6	5	1

99% Work Plan Items
I

- (1) Drawing prints, full size
 - (2) Design Analysis, updated from 35%
 - (3) Specifications, updated from 35%, including submittal register
 - (4) Drawing prints, half size
 - (5) CD containing electronic version of drawings, specifications and design analysis
- *Add 2 CDs for electronic submittals to the Afghanistan Engineer Office, Kabul

Attachment #4:
100%(Certified) Final Design

Addressee	(1)	(2)	(3)	(4)	(5)	(6)
Afghanistan Engineer District*	3	3	3	3	3	
Resident (Field) Office	2	2	2	2	2	
Transatlantic Programs Center	0	0	1	1	1	1
Total Copies	5	5	6	6	6	1

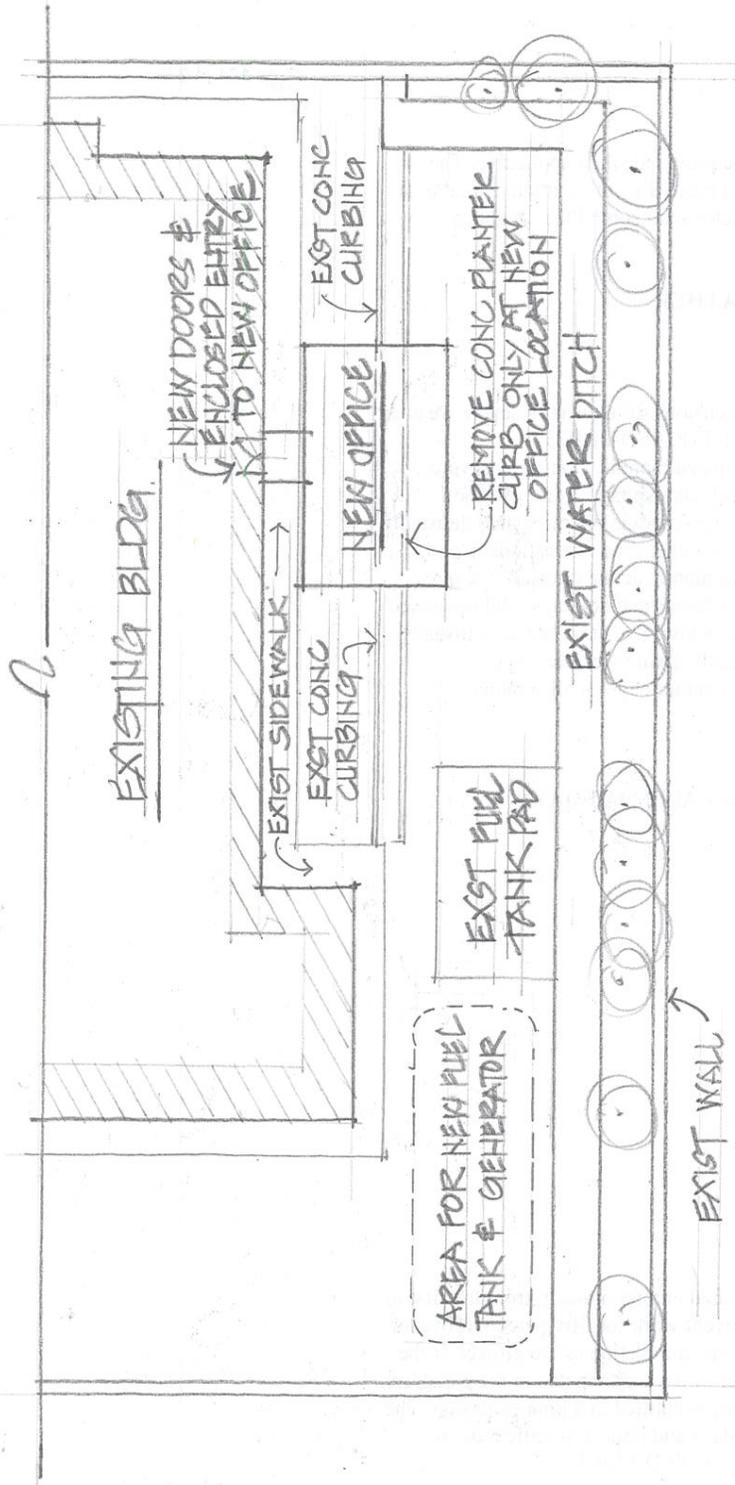
100% Submittal Items

- (1) Set of prints and specs on disk.
 - (2) Full size drawing prints
 - (3) 1/2 size drawings prints
 - (4) Specifications, updated from 99%, including submittal register
 - (5) Design Analyses Book, updated from 99%.
Narrative design analyses and calculations
 - (6) CD containing electronic version of drawings, specifications and design analysis
- *Add 2 CDs for electronic submittals to the Afghanistan Engineer Office, Kabul

Attachment #5:

Address List

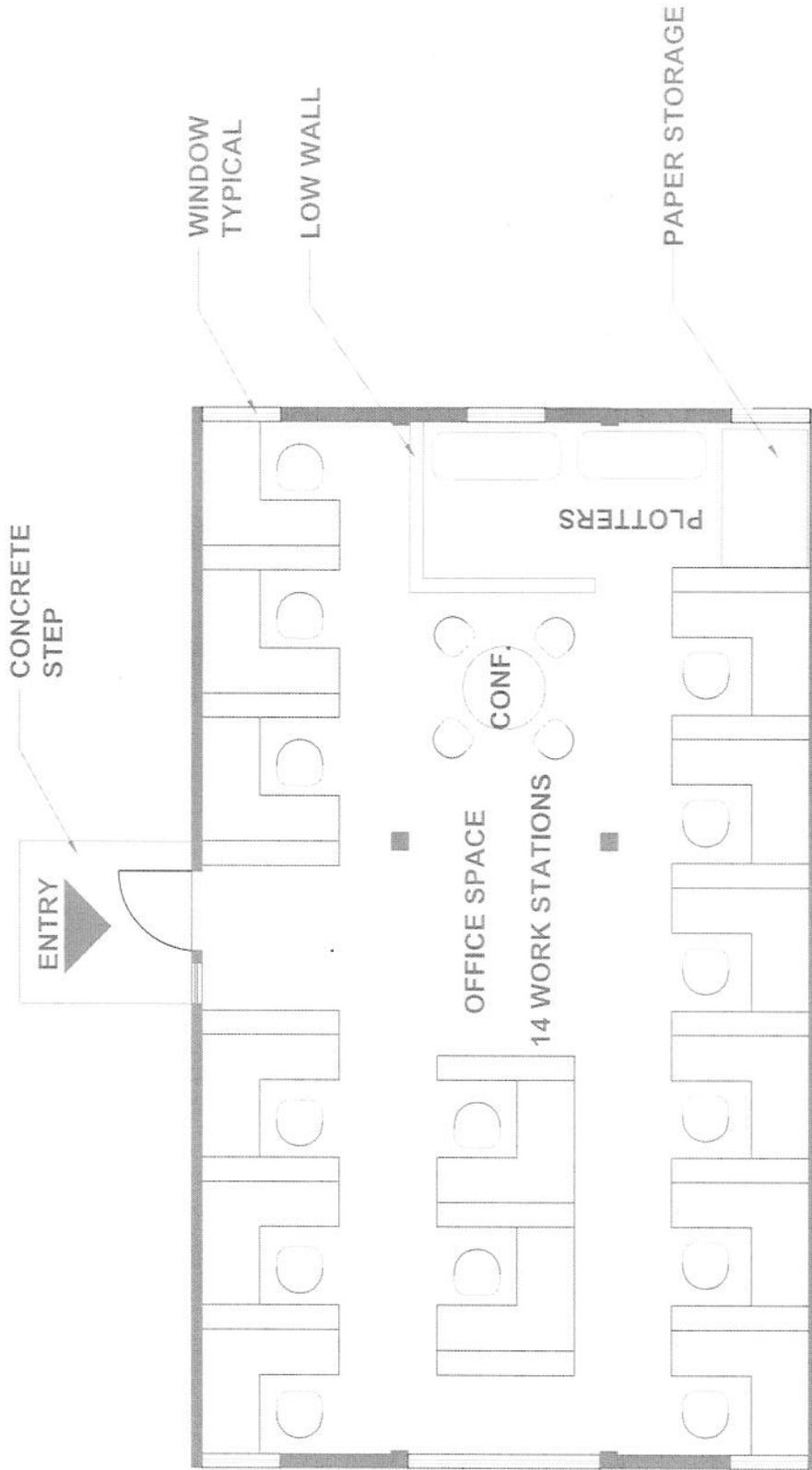
<u>Office Symbol/Phone</u>	<u>Address</u>
CETAC (CETAC-EC-TT) 540-665-3980	U.S. Army Corps of Engineers Transatlantic Programs Center Attn: H. Spaulding 201 Prince Frederick Drive Winchester, VA 22602 (for DHL, FEDEX or UPS)
Afghanistan Area Office 540-665-3475	U.S. Army Corps of Engineers Afghanistan Engineer District TAC-House, Chara-E-Shirpar Next to the former UNAMA Compound A Kabul, Afghanistan
Resident (Field) Office	Address to be Provided after Award



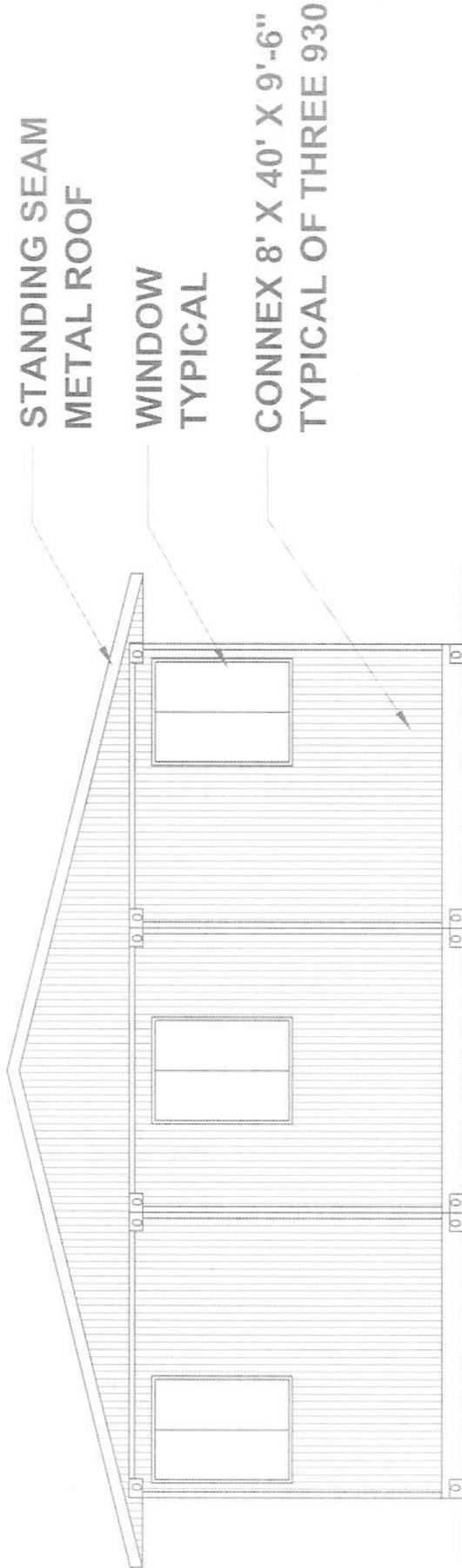
SITE PLAN SCALE: 1" = 32'-0"







AFGHANISTAN GEODESY FLOOR PLAN



AFGHANISTAN GEODESY ELEVATION

TEMPLATE FORMAT GUIDANCE ONLY

FACTOR 1

PAST EVALUATIONS/ PERFORMANCE

The following projects are to be the same projects submitted under Factor 2 Experience.

1. Project Name & Location:
2. Customer Point of Contact: (Note: the Government may contact this customer to verify the information provided on this form)
Name:
Address:
Phone number:
Email Address:
3. Problems encountered and corrective actions taken:
4. List Change Orders and their circumstances:
5. Project scheduled Completion date Actual Completion date:
IF the above dates are different, explain reason for the change:
6. Initial Project Budget (US Dollars)
Final Actual Project cost (US Dollars)
IF the above dates are different, explain reason for the change:
7. Safety record and accident reports:
8. References: Submit the following, Customer Satisfaction letters, Letters of Appreciation, Performance Evaluations, Certification of Achievements, Letters of Recommendations.

(Note: A neutral rating with unknown risk will be assigned IF no past performance is submitted)

TEMPLATE FORMAT GUIDANCE ONLY

FACTOR 2

EXPERIENCE

- a. Project Name & Location:
- b. Contract Number if applicable:
- c. Project type: Construction: (Y/N) Design: (Y/N) Design/Build: (Y/N)
- d. Project owner's name:
Address:
Telephone:
eMail:
- e. Prime Contractor: (Y/N) Sub-Contractor: (Y/N)
- f. Project completion Date:
- g. Construction Cost:
- h. Brief explanation that illustrates your design/build capabilities and relevant experiences:

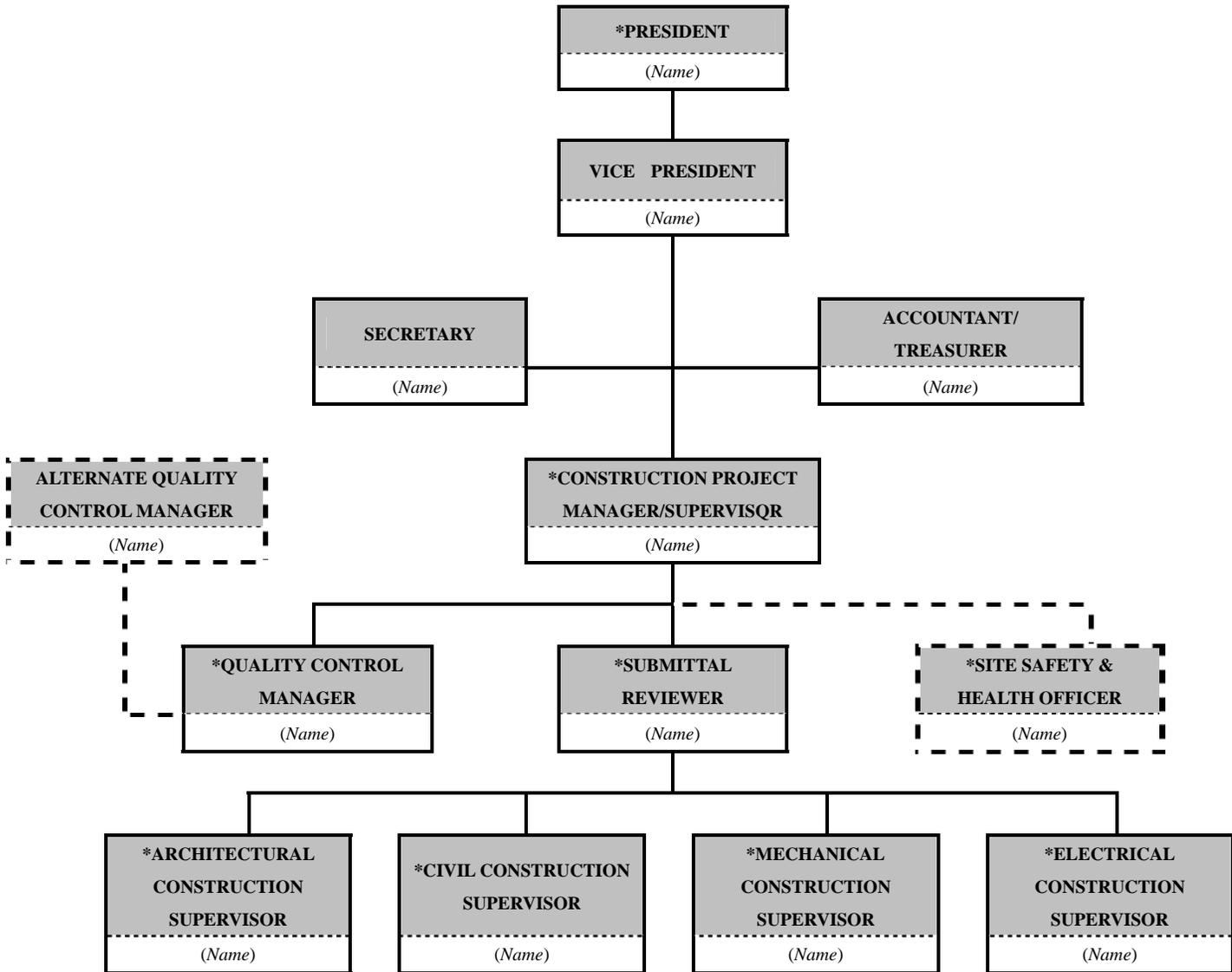
TEMPLATE FORMAT GUIDANCE ONLY

FACTOR 3

PROJECT MANAGEMENT PLAN

1. Provide an Organizational Chart: (include key personnel Names and their titles see atch 4)
 - a. Show the key design personnel
 - b. Show the key construction personnel
 - c. Show other firms involved such as partnerships and sub-contractors if applicable
 - d. Show the relationship between the quality control and health & safety personnel, project level management and corporate management
2. Explain the quality control process for design:
3. Explain quality control management throughout the construction process including;
 - a. Testing
 - b. Inspection
 - c. Safety
4. Explain the interactions with the Corps of Engineers and the roles that different team members will play when dealing with;
 - a. Resolving problems with modifications to the contract (design and/or construction)
 - b. Resolving potential design and/or construction delays
 - c. Reviewing and approving submittals
 - d. Attending progress meetings
 - e. Facilitating contract completion and closeouts
 - f. Explain process to control cost over runs while maintaining the project budget during design and construction.

CONTRACTOR'S ORGANIZATIONAL CHART



- Notes:*
- This is only a sample of Organizational Chart. Actual personnel, assignments, and flow chart shall be adapted and provided by the Offeror. As a minimum requirement, assignments with asterisk (*) are considered as "Key Personnel".*
 - Additional Charts from Sub-Contractor(s), and/or Partnership or Joint Venture from other Contractor(s) may be submitted in separate sheet(s).*

TEMPLATE FORMAT GUIDANCE ONLY

FACTOR 4

PESONNEL & EQUIPMENT RESOURCES PLAN

SUB-FACTOR 1: PERSONNEL for the following:

- Project Manager for design and for construction
- Quality Control Manager
- Project Architect
- Senior Structural Engineer
- Senior Civil Engineer
- Senior Mechanical Engineer
- Senior Electrical Engineer
- Safety Officer
- Construction Superintendent or Manager
- Construction Foreman (if different from above)
- Safety Manager

All key personnel shall have a minimum of **five** years of professional experience. The following information is required for each of the key personnel below: Information to be provided for key personnel should be limited to no more than **one page** per person.

- a. Name:
- b. Project Title:
- c. Project Responsibilities:
- d. Years of Experience: with this Company:with other firms:
- e. Education: Degree(s) Year:Specialization:
- f. Active Registration:First year Registered:
- g. Other relevant experiences & qualifications:
 - How many or the percentage of the Afghan ktrs & laborers who will be working on this project:

SUB-FACTOR 2: EQUIPMENT

List of equipment, facilities and other resources available for this project:

Economic Surveillance- Section I

SAFETY EXPOSURE REPORT

DATE

(USACE Supplement 1 to AR 385-40)

INSTRUCTIONS

This report is due to the Contracting Officers' Representative (COR) no later than the 25th of each month. Contractor progress payments will not be processed until this report has been submitted.

Be sure to include the complete Contract Number including task order number.

FROM AED:

- RESIDENT ENGINEER
- PROJECT ENGINEER
- PROJECT MANAGER

SIGNATURE

TO AED:

SAFETY & OCCUPATIONAL HEALTH OFFICE

PRIME CONTRACTOR NAME

SUB-CONTRACTORS NAME

CONTRACT NUMBER AND SHORT TITLE:

SITE LOCATION (nearest city and province or latitude and longitude)

MANHOURS THIS MONTH

MONTH

TOTAL MANHOURS YEAR TO DATE

Prepared by (TYPE NAME and TITLE)

SIGNATURE

**CERTIFIED CONTRACTOR PROJECT
MANAGER**

SIGNATURE

Economic Surveillance-Section II

INJURY AND ILLNESS LOG

DATE:

(USACE Supplement 1 to AR 385-40)

CONTRACT NUMBER AND SHORT TITLE:

This report is due to the Contracting Officers' Representative (COR) no later than the 25th of each month. Contractor progress payments will not be processed until this report has been submitted.

Attach an additional sheet if more space is needed.

List all recordable injury cases during the month where medical treatment was administered.

	Name	Type Injury	Date of Injury	Date ENG Form 3394 Submitted to COR
1				
2				
3				
4				
5				

1st Aid cases during the month. List all non-recordable injuries where first aid was administered.

	Name	Type Injury	Date of Injury	Return to Duty	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

18					
19					
20					

Economic Surveillance-Section III

ECONOMIC ANALYSIS REPORT

DATE:

CONTRACT NUMBER AND SHORT TITLE:

SITE LOCATION (nearest city and province or latitude and longitude)

Employment	Average Number of Employees per Day		Average Salary per Day	
	Afghan Employees	International Employees	Afghan Employees	International Employees
Unskilled Labor				
Semi Skilled Labor				
Skilled Labor				
Technical				
Supervisory				
Management				
Total				

Expenditures (include Prime and Subcontractors)

	Local Expenditures (US\$) per Month	International Expenditures (US\$) per Month
Sub Contracts		
Life Support		
Building Materials		
Equipment		
Security		
Total		