



**US Army Corps
of Engineers®**

Fort Worth District

Design-Build Request For Proposal

REPUBLIC OF SINGAPORE AIR FORCE (RSAF)
FACILITY RENOVATIONS FOR F-16 AND F-35 EBBING
NGB
Fort Smith, Arkansas

W9126G24R10BP
July 2024

Vertical MATOC Unrestricted Pool SWD Area of Responsibility - W9126G24D0007, 0008, 0010, 0011,
0012, 0025, 0026, 0027

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DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, FORT WORTH DISTRICT
P.O. BOX 17300
FORT WORTH, TX 76102-0300

23 July 2024

SUBJECT: Request for Proposal (RFP) W9126G24R10BP for the FY24, Republic of Singapore Air Force (RSAF) Facility Renovations for F-16 and F-35 Ebbing NGB, Fort Smith, Arkansas.

W9126G24D0007

MA Mortenson
Attn: Allen Troshinsky
700 Meadow LN N
Minneapolis, Minnesota 55422
FederalContracting@mortenson.com

W9126G24D0008

Gilbane Federal JV
Attn: Rob Clark
7 Jackson Walkway
Providence, RI 02903
FtWorthVerticalMATOC@GilbaneCo.com

W9126G24D0010

MW Builders Inc.
Attn: Todd Winnerman
3712 Helios WAY
Pflugerville, Texas 78660
twinnerman@mwbuilders.com

W9126G24D0011

Sauer Construction
Attn: Gary Weeks
6621 Southpoint DR N STE 200
Jacksonville, Florida 32216-0952
gweeks@sauer-inc.com

W9126G24D0012

Walsh Construction Company II, LLC
Attn: Sean Walsh
929 West Adams Street
Chicago, Illinois 60607
swalsh@walshgroup.com

W9126G24D0025

Hensel Phelps Construction Co.
Attn: Mark Clarke
8326 Cross Park Dr.
Austin, Texas 78754
mclarke@henselphelps.com

W9126G24D0026

W.G. Yates & Sons Construction
Attn: Brandon Dunn
104 Gully Ave.
Philadelphia, Mississippi 39350
bdunn@wgates.com

W9126G24D0027

Zodiack-Poettker HBZ JV II LLC.
Attn: Baskar Subbarao
7305 Marietta Ave.
Saint Louis, Missouri 63143
baskar@zodinc.com

Dear MATOC Contractors,

Enclosed is the RFP for W9126G24R10BP for the FY24, Republic of Singapore Air Force (RSAF) Facility Renovations for F-16 and F-35 Ebbing NGB, Fort Smith, Arkansas.

Proposals are due **22 August 2024 at 1000 CT** and must include a completed bid

schedule and all required documents as described under 00 21 16. Electronic copies of each volume shall be submitted through the Solicitation Module of the Procurement Integrated Enterprise Environment (PIEE) suite at <https://piee.eb.mil/>. Proposals submitted by mail or hand carried will not be evaluated. Proposals sent through proprietary or third-party File Transfer Protocol (FTP) sites or DoD SAFE will not be retrieved. It is the responsibility of the Offeror to confirm receipt of proposals. All proposals received after the exact time specified for receipt shall be treated as late submissions and will not be considered except under facts and circumstances allowed by the Federal Acquisition Regulation (FAR).

The magnitude of construction is \$25,000,000 and \$100,000,000.

Please NOTE this solicitation requires offerors to enter a National Institute of Standards and Technology (NIST) score in the Supplier Performance Risk System (SPRS) prior to award of the task order.

Offers providing less than 90 calendar days for Government acceptance after the date offers are due, will not be considered.

Please contact lindsay.m.chvilicek@usace.army.mil if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Nicholas Johnston". The signature is written in a cursive, flowing style.

Nicholas Johnston
Contracting Officer

Ebbing RSAF Facility Renovations for F-16 and F-35
Fort Smith, AR

CONTRACT LINE ITEM SCHEDULE

No.	Description	Quantity	Unit	Price	Amount
BASE OFFER: All work required by the Contract exclusive of other work listed separately.					
0001	All work required for design of building 201 in accordance with the project scope requirements.	1	JA	\$ ***	\$ _____
0002	All work required for construction of building 201 in accordance with the project scope requirements	1	JA	\$ ***	\$ _____
0003	All work required for design of building 202 in accordance with the project scope requirements.	1	JA	\$ ***	\$ _____
0004	All work required for construction of building 202 in accordance with the project scope requirements	1	JA	\$ ***	\$ _____
0005	All work required for design of building 214 in accordance with the project scope requirements.	1	JA	\$ ***	\$ _____
0006	All work required for construction of building 214 in accordance with the project scope requirements	1	JA	\$ ***	\$ _____
0007	All work required for design of building 216 in accordance with the project scope requirements. (See Note 10)	1	JA	\$ ***	\$ _____
0008	All work required for construction of building 216, excluding the DV Meeting Room addition, in accordance with the project scope requirements. (See Note 10)	1	JA	\$ ***	\$ _____
0009	All work required for construction DV Meeting Room addition (1,410 GSF) of building 216 in accordance with the project scope requirements. The proposed price of this CLIN shall not exceed \$3.5 Million. (See NOTE 4, 10, and 11)	1	JA	\$ ***	\$ _____

Ebbing RSAF Facility Renovations for F-16 and F-35
Fort Smith, AR

CONTRACT LINE ITEM SCHEDULE

No.	Description	Quantity	Unit	Price	Amount
0010	All work required for design of building 218 in accordance with the project scope requirements.	1	JA	\$ ***	\$ _____
0011	All work required for construction of building 218, excluding the small addition, in accordance with the project scope requirements	1	JA	\$ ***	\$ _____
0012	All work required for construction of the small addition (1,029 GSF) to Building 218 in accordance with the project scope requirements. The proposed price of this CLIN shall not exceed \$3.5 Million. (See NOTE 4 and 11)	1	JA	\$ ***	\$ _____
0013	Hazardous Material Abatement and Disposal Allowance. (See NOTE 12)	1	JA	\$ ***	\$ <u>\$50,000</u>
TOTAL OFFER					\$ _____

Contract Duration in Calendar Days After the Notice to Proceed is received. * _____ DAYS

*Note: Contract duration for all work shall NOT exceed the duration specified in Section 01 00 00.00 44 DESIGN AND CONSTRUCTION SCHEDULE.
See Note No. 4

Ebbing RSAF Facility Renovations for F-16 and F-35
Fort Smith, AR

CONTRACT LINE ITEM SCHEDULE

NOTES:

NOTE NO. 1 To better facilitate the receipt and proposal process, all modifications to proposals are to be submitted on copies of the latest Contract Line Item (CLIN) schedules as published in the solicitation or the latest amendment thereto. In lieu of indicating additions/deductions to line items, all Offerors should state their revised prices for each item.

NOTE NO. 2 Offerors must insert a price on all numbered items of the CLIN Schedule. Failure to do so may result in the offer being unacceptable.

NOTE NO. 3 CLIN 0001, 0003, 0005, 0007, and 0010, design includes costs for efforts related to the design of the complex, as well as any related costs for the contractor's coordination during design (see UAI 5152.236-9011 Design-Build Construction Contracts). In general, include engineering and designer costs for efforts after the Design Complete or Issued for Construction documents in the construction CLIN's.

NOTE NO. 4 The Offeror must propose a total integrated contract duration in number of calendar days after the Notice to Proceed (NTP) is received by the Contractor. The total number of proposed calendar days for contract completion, must not exceed the number of calendar days specified in Section 01 00 00.00 44 *Design and Construction Schedule*. The proposed duration shall become the required contract duration. Day number 1 is the day after the date of receipt of the NTP.

NOTE NO. 5 Responders are advised that this requirement may be delayed, cancelled, or revised at any time during the solicitation, selection, evaluation, negotiation and/or final award process based on decisions related to DOD changes in force structure and disposition of the Armed Forces.

NOTE NO. 6 The Army will procure this facility in accordance with the provisions set forth in this Request for Proposals (RFP). When awarded, it will be a "Firm Fixed Price Contract."

NOTE NO. 7 Any proposal that is materially unbalanced may be rejected. An unbalanced proposal is one that is based on prices significantly less than the cost for some work and prices that are significantly overstated for other work and can also exist where only overpricing or underpricing exists.

NOTE NO. 8 ABBREVIATIONS

For the purpose of this solicitation, the units of measure are represented as follows:

JA (Job)

NOTE NO. 9 Profit will not be paid on bonds or insurance.

NOTE NO. 10 Construction Completion of Building 216, CLINs 0008 and 0009, required by 30 June 2026

NOTE NO. 11 The proposed price for new additions, CLINs 0009 and 0012, shall not exceed \$3.5M each.

NOTE NO. 12 A sum, not to exceed \$50,000, has been identified as an allowance to be included in the Contractor's proposal to cover the abatement of all hazardous materials [if found] during the renovations required for this project and includes all work within this CLIN. The Contractor shall assume full responsibility and liability for compliance with all standards regarding work practices; hauling and disposal; and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor shall hold the Owner and Designer harmless for failure to comply with any applicable standard on the part of him/herself, employees, or subcontractors.

Ebbing RSAF Facility Renovations for F-16 and F-35
Fort Smith, AR

CONTRACT LINE ITEM SCHEDULE

NOTE NO. 12 CONTINUED The hazardous materials survey for suspect material is a part of the Base Bid for design-construction and all costs for performing the survey and reporting the results shall be included there. The sum allowance for Hazardous Material Abatement is a Limitation of Cost for this work. Upon completion of the survey and exercising this CLIN, provide competitive bids from a minimum of three (3) hazardous abatement specialty subcontractors for all work to include final hazmat disposal, clearances, and cleanup. Provide the results of the bids (to include G&A, profit, insurance and bond costs), a contractor-performed analysis of the bids received, verification of responsiveness of bids, identification of strengths and weaknesses of each bid, any deficiencies or omissions in the bids, recommended means & methods of abatement, and recommendation of the best value bid for Government review and acceptance.

The scope of work within this CLIN covers the filing of required notifications; transportation and landfill charges; and supplying of all labor, tools, materials, equipment, services, and appurtenances to accomplish the work below. The work shall be performed to the complete satisfaction of the Owner, Owner's Independent Environmental Consultant, and the testing agency, in accordance with the current the United States Environmental Protection Agency (EPA) and the Occupational Health and Safety Administration (OSHA) regulations, the District of Columbia Department of Energy & Environment (DOEE) regulations, and any other applicable Local Government regulations. There must be a state licensed asbestos abatement supervisor present and working during the scheduled shifts. This person is the Abatement Contractor's representative responsible for compliance with all applicable Federal, State, and local regulations, particularly those relating to asbestos-containing materials.

The Period of Performance includes time for hazardous material abatement and no additional time or general conditions will be granted for the work. Prior to start of work, the Contractor shall submit an Abatement Plan and anticipated work schedule to be approved by the Government. Based on the results of the hazardous materials survey and competitive bids for abatement, this CLIN allowance shall be adjusted up or down by a contract modification to a final value.

END OF CLIN SCHEDULE

Section 00 21 00 – Clauses and Provisions

CLAUSES AND/OR PROVISIONS INCORPORATED BY REFERENCE

52.204-16	Commercial and Government Entity Code Reporting	AUG 2020
52.225-12	Notice of Buy American Requirement – Construction Materials Under Trade Agreements	MAY 2014
252.204-7008	Compliance With Safeguarding Covered Defense Information Controls	OCT 2016
252.204-7019	Notice of NIST SP 800-171 DoD Assessment Requirements	NOV 2023

CLAUSES AND/OR PROVISIONS INCORPORATED BY FULL TEXT

52.211-14 NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE, EMERGENCY PREPAREDNESS, AND ENERGY PROGRAM USE (APR 2008)

Any contract awarded as a result of this solicitation will be DX rated order; DO rated order certified for national defense, emergency preparedness, and energy program use under the Defense Priorities and Allocations System (DPAS) (15 CFR700), and the Contractor will be required to follow all of the requirements of this regulation.

(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 provision)

52.228-1 BID GUARANTEE (SEP 1996)

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The bidder shall furnish a bid guarantee in the form of a firm commitment, e.g., bid bond supported by good and sufficient surety or sureties acceptable to the Government, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractual documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.-

(c) The amount of the bid guarantee shall be 20% percent of the bid price or \$3,000,000.00, whichever is less.-

(d) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or furnish executed bond(s) within 10 days after receipt of the forms by the bidder, the Contracting Officer may terminate the contract for default.-

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference.

(End of provision)

52.236-27 SITE VISIT (CONSTRUCTION) (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: Refer to Section 00 21 30 for Site Visit Information

(End of provision)

End of Section 00 21 00

Section 00 21 16 - Instructions, Conditions, and Notices to Offerors

PART I – GENERAL INFORMATION

A. INQUIRIES

OFFEROR'S QUESTIONS AND COMMENTS

Questions and/or comments relative to these documents should be submitted via e-mail to:

Contract Specialist – Primary POC

Lindsay Chvilicek

Email: lindsay.m.chvilicek@usace.army.mil

Phone: (817) 408-5319

With a courtesy copy to the Contracting Officer

Nicholas Johnston

Email: nicholas.i.johnston@usace.army.mil

Phone: (817) 866-1006

BIDDER INQUIRY

Technical inquiries and questions relating to proposal procedures or bonds are to be submitted via:

Bidder Inquiry in ProjNet at <http://www.projnet.org/projnet>

To submit and review bid inquiry items, bidders will need to be a current registered user or self-register into system. To self-register go to web page, click BID tab select Bidder Inquiry, select agency USACE, enter Key for this solicitation listed below, and your e-mail address, click login.

Fill in all required information and click create user. Verify that information on next screen is correct and click continue.

From this page you may view all bidder inquiries or add inquiry.

Bidders will receive an acknowledgement of their question via email, followed by an answer to their question after it has been processed by our technical team.

The Solicitation Number is: **W9126G24R10BP**

The Bidder Inquiry Key: **M2UXXU-X44Q2X**

Last day to submit ProjNet questions is seven (7) calendar days prior to proposal due date in order to ensure adequate time is allotted to form an appropriate response and

amend the solicitation, if necessary. If the system is not closed in a timely manner, an inquiry posted within seven calendar days of the receipt of proposals will still be regarded as untimely and will not be afforded a substantive response.

Offerors are requested to review the specification in its entirety, review the Bidder Inquiry System for answers to questions prior to submission of a new inquiry. The call center operates weekdays from 8AM to 5PM U.S. Central Time Zone. The telephone number for the Call Center is 800-428-HELP.

Offers will NOT be publicly opened. Information concerning the status of the evaluation and/or award will NOT be available after receipt of proposals.

Oral explanations or instructions are not binding. Any information given to an Offeror which impacts the solicitation and/or offer will be given in the form of a written amendment to the solicitation.

As this is a competitive negotiation acquisition, there is no public bid opening, and no information will be given out as to the number of Offerors or the results of the competition until all awards are made.

B. DIRECTIONS FOR SUBMITTING PROPOSALS

1. Electronic copies of each volume shall be submitted through the Solicitation Module of the Procurement Integrated Enterprise Environment (PIEE) suite at <https://piee.eb.mil/>.

Proposals submitted by mail or hand carried will not be evaluated. Proposals sent through proprietary or third-party File Transfer Protocol (FTP) sites or DoD SAFE will not be retrieved. It is the responsibility of the Offeror to confirm receipt of proposals. All proposals received after the exact time specified for receipt shall be treated as late submissions and will not be considered except under facts and circumstances allowed by the Federal Acquisition Regulation (FAR). There are 10 general steps a vendor must follow in order to use PIEE application modules. A complete list can be viewed at the following site:

<https://piee.eb.mil/xhtml/unauth/web/homepage/vendorGettingStartedHelp.xhtml#step5>

For instructions on how to post an offer, please refer to the Posting Offer demo: https://pieetraining.eb.mil/wbt/sol/Posting_Offer.pdf.

It is the Offeror's responsibility to obtain written confirmation of receipt of all electronic files of the full proposal by the Fort Worth District Contracting office. In the event that the Solicitation Module is down, the alternate method for proposal submission is via email to: lindsay.m.chvilicek@usace.army.mil or the PCO, nicholas.i.johnston@usace.army.mil.

The Offeror must obtain prior approval from the Contracting Officer:

nicholas.i.johnston@usace.army.mil to use the alternate submission method. Offerors are responsible for ensuring electronic copies are virus-free and shall run an anti-virus scan before submission.

Electronic copies of each volume shall be compatible with the following software products: Adobe Acrobat Reader 11 and Microsoft Office Suite 2016. Narrative portions of the proposal shall be in Adobe Acrobat portable document file (pdf) searchable text format. The Offeror shall not embed sound or video (e.g., MPEG) files into the proposal files. Electronic files shall be clearly identified for each volume, section, and item.

2. DELIVERY of hard copies and/or CD-ROMs of offers, modifications thereto, or cancellations of offers will NOT be accepted.

3. FACSIMILE OFFERS, modifications thereto, or cancellations of offers will NOT be accepted.

Only the PIEE submitted proposals will be accepted and evaluated by the Government.

C. NIST GUIDANCE: Please NOTE this solicitation requires offerors to enter a National Institute of Standards and Technology (NIST) score in the Supplier Performance Risk System (SPRS) prior to award of this solicitation.

D. PROPOSAL EXPENSES AND PRE-CONTRACT COSTS: This Request for Proposal (RFP) does not commit the Government to pay as a direct charge any costs incurred by the Offeror in the preparation and submission of its proposal or revisions. A stipend is not authorized for unsuccessful offerors.

E. SITE VISIT: Pursuant to Contract Clause "FAR 52.236-3, Site Investigation and Conditions Affecting the Work," prospective offerors will be permitted to inspect the site where services are to be performed and to satisfy themselves as to all general and local conditions that may affect the cost of performance of the Contract to the extent such information is reasonably obtainable. Offerors are urged and expected to inspect the site where the work will be performed. Reference Section 00 21 30 for site visit details.

PART II – PROPOSAL INSTRUCTIONS

A. PROPOSAL SUBMISSION REQUIREMENTS AND INSTRUCTIONS

1. PROPOSAL FORMAT & GENERAL INSTRUCTIONS

a. Submit only the electronic files specifically authorized and/or required elsewhere in this section. Do not submit excess information, to include audio-visual materials, electronic media, etc. All pages shall be numbered.

b. Although hard copies are not accepted, each file shall be clearly indexed, and logically assembled. Font size shall be 12 or larger. An unusual font style, such as script or condensed print, shall not be used for any submission. All page margins shall be at least one (1) inch wide, but may include headers and footers of the solicitation, project title, and company. Pages shall be formatted to print on 8 ½ by 11 inch paper, unless another paper size is specifically authorized elsewhere in this section for a particular submission. Spreadsheets, drawings, and schedule diagrams must fit to 11x17 inch paper size unless specifically authorized in this section for a particular submission. Offerors shall prepare proposals in the English language. Proposals shall be in a narrative format, organized and titled so that each section of the proposal follows the order and format of the factors. Information presented should be organized so as to pertain to only the evaluation factor in the section that the information is presented. Information pertaining to more than one evaluation factor should be repeated in each section for each applicable factor. Electronic files shall be Microsoft Windows compatible. Files shall be submitted in their native format (i.e., doc, xls, ppt, etc.), or if in pdf format, shall be in searchable text. If the electronic files are of a size at which they must be compressed (zipped), they shall be compressed into one zipped folder.

c. Interested parties shall submit responses no later than the date specified on the solicitation document. The time & date of proposal receipt will be the delivery time & date recorded within PIEE. Do not assume that electronic submission will occur instantaneously. Large files may take some time to upload. Offerors should time their upload effort with prudence by not waiting until the last few minutes—this will allow for unexpected delays in the transmittal process and troubleshooting. Proposal submission difficulties should be coordinated with the PIEE Service Desk at 1-866-618-5988. Offerors are encouraged to keep a copy of the upload confirmation for their record. Submissions received after the deadline will be considered late.

d. “Confidential” projects cannot be submitted to demonstrate capability unless all the information required for evaluation as specified herein can be provided to the Government as part of the Offeror’s technical proposal. Offerors that include in their proposals information that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, must be clearly marked in accordance with the instructions at FAR 52.215-1, Instructions to Offerors—Competitive Acquisition”, paragraph (e), “Restriction on disclosure and use of data”.

e. Proposal revisions shall be submitted as page replacements with revised text readily identifiable, e.g., bold face print or underlining. The source of the revision or

amendment, e.g., Error, Omission or Clarification shall be included and be annotated for each revision. Proposal replacement pages shall be numbered and clearly marked “REVISED”, with the date of revision.

f. All offerors are required to bookmark their proposal in order to assist with the evaluation of proposals.

g. The following volumes of material shall be submitted:

Volume	Title	Digital Copies	Maximum Pages
I	Technical	1	See below
	Factor 1	1	<ul style="list-style-type: none"> - 3 projects with one double sided each (total of 3 double sided) - Supplemental Narrative – 1 double sided - TOTAL of 4 double sided as noted above for this factor
	Factor 2	1	- 4 double sided
	Factor 3	1	- 6 double sided
	Factor 4	1	- 4 double sided
	Factor 5	1	- 8 double sided
	Factor 6	1	- No page limit
II	Offeror’s Certifications and Price	1	- No page limit

NOTE: Page limitations, where specified in the RFP, shall be considered a maximum. Pages that exceed the required page limitations will not be evaluated. Additional pages over the maximum allowed will be removed or not read and will not be evaluated by the Government.

h. Proposal Formats/sections

(1) Cover Page. Include the title of the solicitation, solicitation number, offeror name and date of the submittal.

(2) Table of Contents. Each volume of the proposal shall contain a detailed table of contents. If more than one Adobe PDF file is used for a volume, the complete table of contents shall be included in each. Any materials submitted but not required by this solicitation (such as company brochures) shall be relegated to appendices.

(3) All information intended to be evaluated as part of the Technical Proposal must be submitted as part of Volume I. Do not cross-reference similar material in the Technical & Price Proposal, or vice versa. **No dollar amounts from Volume II are to**

be included in Volume I.

(4) Offerors are advised to follow the PIEE instructions for uploading files. Additional instructions/guidance can be found at https://pieetraining.eb.mil/wbt/sol/Posting_Offer.pdf

(5) Interested parties shall submit responses no later than the date specified on the solicitation document. **The time & date of proposal receipt will be the delivery time & date recorded within PIEE suite at <https://piee.eb.mil/>.** Do not assume that electronic submission will occur instantaneously. Large files may take some time to upload. Offerors should time their upload effort with prudence by not waiting until the last few minutes—this will allow for unexpected delays in the transmittal process and troubleshooting. It is the offeror's responsibility to obtain written confirmation of receipt of all electronic files of the full proposal by the Fort Worth District Contracting office. In the event that the Solicitation Module is down, the alternate method for proposal submission is via email to: lindsay.m.chvilicek@usace.army.mil ONLY. The Offeror must obtain prior approval from the Contracting Officer: nicholas.i.johnston@usace.army.mil to use the alternate submission method. Offerors are responsible for ensuring electronic copies are virus-free and shall run an anti-virus scan before submission.

i. Joint Venture and LLC Proposal Requirements

(1) A copy of the joint venture agreement shall be submitted with the proposal. Failure to comply with the foregoing requirements may eliminate the proposal from further consideration. If this is an 8(a) or HUBZone joint venture, the Offeror shall ensure that it complies with the applicable requirements of 13 CFR Part 124 and 13 CFR Part 126, respectively.

(2) A small business joint venture offeror must submit, with its offer, the representation required in Section 00 45 00, Representations and Certifications, and paragraph (c) of FAR solicitation provision 52.219-1, Small Business Program Representations, in accordance with 52.204-8(d) for the following categories:

- (a) Small business;
- (b) Service-disabled veteran-owned small business;
- (c) Women-owned small business (WOSB) under the WOSB Program;
- (d) Economically disadvantaged women-owned small business under the WOSB Program; or
- (e) Historically underutilized business zone small business

(3) When proposing as an LLC, the offeror must submit a copy of the operating agreement which clearly demonstrates the authority to bind the LLC.

j. Bonds Format: Offerors shall submit bid bonds (Standard Form 24) in electronic format. Electronic copies of bid bonds shall be included in Volume II: Offerors

Certifications and Price under Tab F. Hard copies of bid bonds with the raised seal are no longer required to be mailed in at this time and are not to be sent to the contracting office. Verification of Bid Bonds with sureties will be completed during the evaluation process and before award. Bid bond submissions shall be due by the proposal due date and time. Offerors are responsible for the accurate submission of the Bid Bonds with all signatures and seals applied.

2. PROPOSAL FILES

a. **Format:** The submission shall be clearly indexed and logically assembled. Each volume shall be clearly identified and shall begin at the top of a page. All pages of each volume shall be appropriately numbered and identified by the complete company name, date and Request for Proposal (RFP) number in the header and/or footer.

b. The following additional restrictions apply:

File Packaging: Files submitted to PIEE shall be named as follows:

W9126G24R10BP_ *COMPANY NAME*_ VOLUME I

W9126G24R10BP_ *COMPANY NAME*_ VOLUME II

c. Content Requirement.

(1) All volumes must be submitted as separate volumes/files as outlined in paragraph 2b above. Do not cross-reference similar material in the Technical and Price Proposals, or vice versa.

(2) Both volumes of the proposal must be received by the closing date and time set for receipt of proposals.

(3) Do not include exceptions to the terms and conditions of the solicitation in either the Technical, or Price Proposals. Should the offer include any standard company terms and conditions that conflict with the terms and conditions of the solicitation, the offer may be determined “unacceptable” and thus ineligible for award. Should the offeror have any questions related to specific terms and conditions, these should be resolved prior to the submission of the offer.

(4) The data criteria specified for each factor identified herein, shall be submitted as part of the proposal.

3. BID GUARANTEE. A Bid Guarantee will be required with this proposal:

52.228-1 BID GUARANTEE (SEP 1996) – See above.

4. DISCUSSIONS. The Government intends to evaluate proposals and award a contract without discussions with Offerors, in accordance with FAR 52.215-1, Instructions to Offerors—Competitive Acquisitions. The Government reserves the right

to conduct discussions if the Contracting Officer later determines them to be necessary.

If discussions are held, the Government may engage in a broad give and take with each Offeror in the competitive range, in accordance with FAR 15.306 (d). The Government will provide the Offeror an advance agenda for the discussions. During discussions, the Government may ask the Offeror to further explain its proposal and to answer questions about it.

Upon conclusion of discussion, those Offerors will be afforded an opportunity to submit their proposal revisions for final evaluation and selection.

In addition to the other proposal information, the Contracting Officer shall use this information in making an affirmative responsibility determination for award to the Successful Offerors, in accordance with FAR Part 9. Failure to achieve an affirmative responsibility determination will make the Offeror ineligible for award.

5. COST OR PRICING DATA. Offerors are not required to submit Cost or Pricing Data with their offers.

End of Section 00 21 16

Section 00 21 30 – Site Visits

PART 1 GENERAL

1.1 SITE VISITS

(a) Pursuant to Contract Clause "FAR 52.236-3, Site Investigation and Conditions Affecting the Work," and the Site Visit Clause in Section 00 21 00 INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS prospective offerors will be permitted to inspect the site where services are to be performed and to satisfy themselves as to all general and local conditions that may affect the cost of performance of the Contract to the extent such information is reasonably obtainable. Offerors are urged and expected to inspect the site where the work will be performed. Site visits will be arranged during normal duty hours.

(b) Site visit information. The site visit will be:

Date: 31 July 2024

Time: 0900 Central time zone

Location: 5300 Airport Blvd, Fort Smith, AR 72903

POC: Richard Bowles

EMAIL: richard.l.bowles@usace.army.mil

Phone: 409-370-8020

Offerors will provide to the referenced POC, at least 3 working days prior to the site visit, a complete listing of all attendees and subcontractors to attend the site visit. Include all information requested in the attached Entry Authorization List (EAL) form (para 1 a-d). See Section 00 21 30 Attachment 1.

(c) In no event will a failure to inspect the site constitute grounds for withdrawal of a proposal after receipt of proposal or for a claim after award of the contract.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

End of Section 00 21 30

CUI



188th Security Forces Squadron Entry Authorization List (EAL) Request



Sponsor Please Complete Below

EAL REQUIREMENTS:

1. Submit this form and a typed guest list (hand written lists will **not** be accepted). **Do not** include Military/DOD ID Card holders on list, **only** non-military and non-DOD ID card holders. The guest list must contain the following information for each guest in attendance:
 - a. Name: (Last, First, MI) (As shown on Driver's License/ID Card)
 - b. Date of Birth
 - c. Driver's License number and State of Issue (or *SSAN if no driver's license)
 - d. ***(If a person doesn't submit a SSAN or a DL # then they must come to the Pass & Registration Office in person for vetting prior to receiving a pass (479)573-5106)**

The guest list will be in **alphabetical order** and **MUST BE TURNED IN TO THE PASS & REGISTRATION OFFICE NO LATER THAN 10 DUTY DAYS PRIOR TO THE EVENT.**

Unescorted Visit request eligibility must be 2 days or more not to exceed 60 days. You will be notified of any guests not allowed to enter the installation due to derogatory information found during the vetting process. Visitors must Pre-Enroll on the DBIDS website (<https://dbids-global.dmdc.mil/home/>) prior to arrival.

DBIDS Pre-Enrollment is not required for Escorted visitors.

2. Ensure all guests have some form of a valid photo identification (i.e. Driver's License, State ID) to present to the entry controller upon arriving at the designated gate. **All event attendees must use the Designated Gate for access onto 188th WG.** Guest list will be submitted to WESTLEY.WAGNER@US.AF.MIL via a .mil email address (encrypted).
3. If you don't have access to email you must submit the guest list in person to Bldg 102, RM 103 Pass & Registration Office.
4. **Signature of Sponsor/Authorizing Official:** _____

Event Title	Start Date/Time	End Date/Time	Location of Event
Sponsor Rank/Name/Unit		Sponsor Duty Phone	Contact # During Event
Comments			

SECURITY FORCES COMPLETE BELOW

SF Personnel receiving/authenticating EAL Date/Time:

Entrance Gate: MAIN GATE

CUI

Entry Authority List Request (Spreadsheet)

Event Title	Start Date/Time	End Date/Time	Location/Name of Event		
Personal Information		Driver's License		Vetted Unescorted DBIDS Visitor Pass	
Full Name (L, F, MI)	DOB (yyyymmdd) (i.e. 19860204)	DL# (without dashes)	State	POC Requests Visitor Pass Y/N	SFS Internal Use Only

Section 00 22 16 – Selection Procedures

PART I. EVALUATION AND RATING SYSTEM

The Government will evaluate the proposals in accordance with the evaluation criteria described herein, using the evaluation rating systems outlined in this section. Price information will be evaluated for fairness, reasonableness, and for material unbalancing, as described herein. This evaluation will be conducted in accordance with FAR Part 15.

Keep in mind that mere promises to comply with contractual requirements are insufficient basis for a favorable rating; evidence is required in support of any statements relating to promised performance.

A. DEFINITIONS

Significant Strength. An aspect of an Offeror's proposal with appreciable merit or will exceed specified performance or capability requirements to the considerable advantage of the Government during contract performance.

Strength. An aspect of an offeror's proposal with merit or will exceed specified performance or capability requirements to the advantage of the Government during contract performance.

Weakness. A flaw in the proposal that increases the risk of unsuccessful contract performance. See FAR 15.001.

Significant Weakness. A flaw in the proposal that appreciably increases the risk of unsuccessful contract performance. See FAR 15.001.

Deficiency. A material failure of a proposal to meet a government requirement or a combination of significant weaknesses in a proposal that increases the risk of unsuccessful contract performance to an unacceptable level. See FAR 15.001.

Uncertainty. Any aspect of a non-cost/price factor proposal for which the intent of the offeror is unclear (e.g., more than one way to interpret the offer or inconsistencies in the proposal indicating that there may have been an error, omission or mistake).

B. BASIS OF AWARD

The Contracting Officer will award a firm fixed-price contract to the responsible Offeror whose proposal the Source Selection Authority determines conforms to the solicitation, is fair and reasonable with regard to pricing, and whose proposal offers the best overall value to the Government, considering the price and non-price factors described herein. All evaluation factors, other than price, when combined, are considered significantly more important than the price; however, the Contract award may not exceed the cost limitation described in the solicitation. The intent of this solicitation is to obtain the best value proposal within the contract cost limitation.

There is no obligation to approach or match the contract cost limitation in the offer. As part of the evaluation, the Government will evaluate proposals relative to the minimum standards in the RFP to determine if they offer additional value to the Government. In

addition, innovations in proposals will be evaluated to determine if creative ideas of the Offeror are a better value to the Government compared to the minimum criteria. After the Government evaluates and rates each proposal, the Source Selection Authority (SSA) will compare proposals to determine which proposal represents the best value for award.

The Government reserves the right to accept other than the lowest priced offer or to reject all offers. The Government will not award a contract to an Offeror whose proposal contains a deficiency, as defined in FAR 15.001. If there is a lower priced, conforming offer(s), the SSA must determine that the added value of a more expensive proposal would justify award to that Offeror.

VOLUME I: TECHNICAL PROPOSAL

This volume shall be organized into the following sections:

Location	Factor	Description	Relative Importance
TAB A		COVER PAGE	NOT RATED
TAB B	Factor 1	PAST PERFORMANCE	Most Important Factor, more important than all other factors
TAB C	Factor 2	DESIGN TECHNICAL	2nd Most Important Factor, less important than Factor 1
TAB D	Factor 3	TECHNICAL SOLUTIONS	3rd Most Important Factor, less important than Factors 1 and 2
TAB E	Factor 4	SUSTAINABILITY	4 th Most Important Factor, less important than Factors 1, 2 & 3
TAB F	Factor 5	SUMMARY SCHEDULE	5 th Most Important Factor, less important than Factors 1, 2, 3, & 4
TAB G	Factor 6	SMALL BUSINESS PARTICIPATION	Least Important Factor

TAB A: COVER PAGE

Include the title of the solicitation, solicitation number, offeror name and date of the

submittal.

TAB B: FACTOR 1 – PAST PERFORMANCE

1. Submission Requirements:

Narrative: Submit no more than three projects. Each projects Past Performance Worksheet will not exceed one page double sided. Provide a narrative that describes the following past performance requirements:

a. The Offerors shall demonstrate past performance through the submission of similar projects, using the Construction – Past Performance Assessment Worksheet (Attachment 3). Information provided shall demonstrate recent and relevant past performance.

b. If the Offeror is a Joint Venture, Limited Liability Corporation (LLC), Partnership, Teaming Arrangement, or Parent company/subsidiary/affiliate as identified in the offeror's proposal, provide past performance information for construction projects relevant to each of the proposed roles on this project. If any firm has multiple functions or divisions, limit the project examples to those performed by the division or unit submitting the offer.

c. If projects were design-build, identify them as such. Submit no more than three projects completed or substantially completed within five years from the date of this solicitation that best represent the experience similar to the scope of work for this solicitation.

d. One of the three projects submitted for past performance may be a current construction project with at least 70% construction progress completed. However, the remaining projects submitted for past performance must be completed or substantially completed within five years. If Offeror is proposing as a Joint Venture (JV), LLC, Partnership and/or Teaming Arrangement and past performance cannot be provided as such, each partner shall submit past performance information, with no more than three projects each. The page count for each Past Performance Assessment Worksheet shall not exceed two pages.

e. The Past Performance Questionnaire (PPQ) (Attachment 4) is included in the solicitation is provided for the Offeror to submit to the client for each project the Offeror included for Factor 1, Past Performance that does not have an interim or final CPARS evaluation or is a non-Federal Government project. Ensure correct phone numbers and email addresses are provided for the client point of contact. Completed PPQs should be submitted with your proposal. If the Offeror is unable to obtain a completed PPQ from a client for a project(s) before proposal closing date, the Offeror should complete and submit with the proposal the first page of the PPQ, which will provide contract and client information for the respective project(s). Offerors should follow-up with clients/references to ensure timely submittal of questionnaires. If any negative past performance information is received to which the Offeror has not an opportunity to respond, the contractor will be given an opportunity to provide rebuttal. If the client requests, questionnaires may be submitted directly to the Government's point of

contact, Lindsay Chvilicek, via e-mail at lindsay.m.chvilicek@usace.army.mil prior to proposal closing date.

f. Offerors shall not incorporate by reference into their proposals PPQ's previously submitted for other RFPs. However, this does not preclude the Government from utilizing previously submitted PPQ information in the past performance evaluation.

g. Do not request PPQs on projects that have interim or final CPARS evaluations. If an interim or final CPARS evaluation exists and a PPQ is provided for the same project, the CPARS evaluation will be reviewed as the official past performance record for the project, and the PPQ will not be considered by the Source Selection Board or the Source Selection Authority.

h. For USACE or other DoD projects which are underway but do not yet have an interim or final CPARS evaluation, one PPQ per contract may be submitted; to be considered, the PPQ shall be signed by either the Primary Contracting Officer (PCO), Administrative Contracting Officer (ACO) or Contracting Officer Representative (COR) for the contract.

i. Offerors are not required to submit any additional past performance information. The Government will utilize CPARS, and any other information deemed relevant to assess confidence in the Offeror's ability to perform. Offerors may submit information on past performance issues and corrective actions taken to prevent these issues from reoccurring. Discuss whether these corrective actions have been implemented on contracts awarded subsequent to the performance issues, the effectiveness of the corrective actions, and POC information for the subsequent contracts.

j. In addition to the above, the Government may review any other sources of information for evaluation of past performance. Other sources may include, but are not limited to, past performance information retrieved through the Contractor Performance Assessment Reporting System (CPARS), using all CAGE/UEI numbers of team members (Partnership, joint venture, teaming arrangement, or parent company/subsidiary/affiliate) identified in the offeror's proposal, inquires of owner representative(s), Federal Awardees Performance and Integrity Information System (FAPIS), Electronic Subcontract Reporting System (eSRS), and any other known sources not provided by the offeror. While the Government may elect to consider data from other sources, the burden of providing detailed, current, accurate and complete past performance information rests with the Offeror.

k. Demonstrate the experience of the offeror and/or proposed team on projects same/similar in SIZE, SCOPE, and COMPLEXITY to that described in the solicitation. Offerors shall identify and describe the relevancies for each of the projects submitted compared to the scope of this project. The Government will evaluate the information provided in making the relevancy determination. Projects demonstrating experience in new or renovation construction projects consisting of a large warehouses, barracks, hangars, large battalion headquarters, office complexes or similar facility type including Design Build will be considered more relevant.

l. The Offeror may provide a supplemental narrative (not project lists), not to exceed two pages, explaining how any corporate past performance that is not directly related to the specific projects above is applicable to this project and how the Government will benefit.

2. Evaluation Criteria:

a. The Government will evaluate the Offeror's record of past performance to ascertain the probability of successfully performing the required efforts of the Solicitation projects to be procured. There are three aspects to the past performance evaluation: recency, relevancy, and confidence.

b. The first aspect of the past performance evaluation is the recency of the past performance. Recent means 70% or more of the contract has been completed and performance occurred within five (5) years of the solicitation issuance date. Based on this criteria, an Offeror's past performance submissions will be determined either "recent" or "not recent." Submissions deemed not recent will not be evaluated further.

c. Once a project is determined to be recent, the second aspect of the past performance evaluation is the relevance of the Offeror's present/past performance information.

d. Past performance submissions deemed recent, but not relevant, will not be evaluated further.

e. The Government will evaluate the Offeror's past performance to determine how relevant the past performance is to the project under consideration. Past performance on the projects identified in the project forms will receive more consideration than past performance provided in the supplemental narrative. The Government will place greater value on projects performed as a prime contractor than as a subcontractor, depending upon overall role and relevancy considerations.

f. More relevant past performance will typically be a stronger predictor of future success and have more influence on the past performance confidence assessment than past performance of lesser relevance.

g. Contracts with lower degrees of relevance will not be as strong of predictors of likely future contract performance success and will typically have less influence on the final past performance confidence rating.

h. Contracts that have little or no relevance typically do not influence the performance confidence rating; however, any contracts with adverse past performance could reflect larger company-wide concerns and may have impact upon the past performance confidence rating.

i. Past performance submissions with any of the Armed services or other agencies within Department of Defense (DOD) will have more influence on past performance

confidence assessment than past performance with other partners and agencies.

j. The burden of providing detailed recent and relevant past performance information rests with the Offeror. However, the Government reserves the right to verify the information on projects submitted for evaluation, and to review CPARS, or other Government project appraisal systems, for information on other projects performed by the Offeror whether submitted as part of a proposal or not. The Government also reserves the right to contact project clients/customers, or other references.

k. For any adverse performance information found and considered for which the Offeror has not had an opportunity to address, the Offeror will be afforded an opportunity to clarify or address.

3. Confidence Evaluation Criteria:

a. After past performance submissions are determined recent and relevant, the quality of the recent and relevant past performance will be rated for the overall confidence assessment. If a CPARS record and PPQ-0 exist for a particular project and the ratings conflict; the CPARS record shall govern.

b. The SSEB will review the past performance information available, to include CPARS and other past performance information deemed relevant, to determine the quality and usefulness as it applies to performance confidence assessment. If any firm has multiple functions or divisions, the Government will only evaluate past performance of the division or unit submitting the offer. If the Government cannot establish the Offeror's relevant past performance, it reserves the right to utilize the Past Performance Questionnaire to conduct telephone interviews on any source it deems relevant to the evaluation. Owners/references may be asked to comment on items such as quality of construction, timeliness, management of the work, subcontractor management, including timely payment to subs or suppliers, safety, level of support for such things as as-built documentation, O&M manuals, training, correcting construction errors, warranty work, etc. If negative information is received regarding past performance, the offeror will be notified and given an opportunity to provide information on the problems encountered and the offeror's corrective actions. The Government's evaluation is not limited to past performance information on the cited example projects.

c. In determining the performance confidence rating for Past Performance, the degree of relevancy of all of the considered efforts; the overall performance record of the offeror on each contract assessed; number and severity of problems and the demonstrated effectiveness of corrective actions taken (not just planned or promised); and trend data will be considered. Contracts with higher degrees of relevance will typically have a greater influence on the final performance confidence rating. Contracts with lower degrees of relevance will typically have less influence on the final performance confidence rating; however, any contracts with adverse past performance could reflect larger company-wide concerns and may impact the past performance confidence rating. Contracts which are comparatively more recent may be better predictors of likely future success than older contracts. The resulting relevant/recent

assessment conclusions will then be combined, along with the assessed quality of performance on prior contracts, to arrive at a single performance confidence rating for the Past Performance Factor.

d. The confidence rating will be established based on the past performance of the firms or that of its predecessor, if applicable. An entity may not establish past performance based on the past performance of its key personnel apart from that of the entity. If the Government does not obtain past performance information and cannot establish a past performance record for the Offeror through other sources, a rating of Unknown (Neutral) confidence will be assigned.

e. In the case of offerors for which there is no information on past contract performance or where past contract performance information is not available, the offeror will not be evaluated favorably or unfavorably on the factor of past contract performance and will be given a “Neutral Confidence” rating.

f. Although the SSEB may not rate an offeror that lacks recent, relevant past performance favorably or unfavorably with regard to past performance, the SSA may determine that a “Substantial Confidence” or “Satisfactory Confidence” past performance rating is worth more than a “Neutral Confidence” past performance rating in a best value tradeoff.

g. If negative past performance information is received on any PPQ, the Offeror will be given an opportunity to provide input as required by FAR part 15. CPARS that are part of the official record will be utilized as if the Offeror has already had an opportunity to respond.

TAB D: FACTOR 2 – DESIGN TECHNICAL

1. Submission Requirements:

Narrative (NTE four double-sided pages): Provide a narrative that describes the following design technical requirements:

Offerors shall submit narratives and drawings to describe the firm’s unique technical design solution. These elements must reinforce each other and be self-explanatory in presenting the offeror’s technical solution.

The narrative shall cover all features of the proposed design for all disciplines. The Offeror shall make a statement that their design complies with the most current regulations, standards, codes, and Design Requirements (Section 01 10 00). The narrative shall include but not necessarily be limited to the following:

a. General Approach – Describe the processes, procedures, and/or techniques that will be utilized to complete the design and construction on schedule. Describe the general phasing approach of design and construction. Indicate any intent to fast-track portions of the work, why this is an advantage to the government, and how this will be accomplished. The Offeror shall also describe how they intend to phase the work to

utilize the minimal laydown areas available. At a minimum the offeror shall acknowledge the limited access to laydown space and outline their means and methods for dealing with these constraints.

b. Identify your proposed onsite project staffing by position, to include, as a minimum: Superintendent, Site Safety and Health Officer (SSHO), and Construction Quality Control (CQC) Manager. Refer to the following Specification Sections for requirements: 01 32 01.00 10 Project Schedule; 01 35 26 Governmental Safety Requirements; 01 45 00.00 10 Quality Control. Information may be provided in narrative format, table(s), and/or organizational chart(s). Identification of specific individuals and/or resumes is not required nor desired as part of this submission but shall be submitted after award as required by the specifications.

c. Describe how the Prime Contractor, Superintendent, CQC Manager, Safety Manager, Construction PM, Designer of Record, and key subcontractors interact during both design and construction.

d. Describe how the DB team coordinates amongst each other and the process that will be used for quality control and quality assurance. Describe how the design/build team interacts/coordinates with outside agencies or public entities (The Fort Smith Air Field Manager, utility companies and local jurisdictions, etc.) during design and construction.

e. The Government will evaluate the Offeror's understanding of renovation projects of this scope and nature. To include the unique requirements of this facility as portrayed in your discussion of design, demolition and construction intent, including but not limited to design procedures/processes, proposed method of construction (i.e. utilities, building design), construction operations (i.e. Requests for Information (RFIs) and Submittal requirements), and quality control process for design and construction. Failure to provide the government with a clear process for working through this design, demolition and construction and a failure to acknowledge the unique challenges a renovation of this nature has will be considered a deficiency by the government.

2. Evaluation Criteria:

a. The Government will evaluate how the prime contractor, designers, and key subcontractors plan to interact during design and construction. The Government will also evaluate how the design/build team plans to interact and coordinate with outside agencies or public entities (AFCEC, USACE, local authority's having jurisdiction and utility companies, etc.) during design and construction. The offeror should provide a clear plan that is easily understandable with effective means of communication with all of these parties. Failure to provide a clear understandable communication plan will be evaluated as a deficiency.

b. Demonstrates a clear understanding of all tasks listed in the Statement of Work that will yield the required results in the required time frame with least impact to continued operation.

c. Demonstrates a clear understanding of existing operations and the ability to

continue operations with the least impact.

TAB D: FACTOR 3 – TECHNICAL SOLUTIONS

This factor considers the types of building systems, especially engineered systems, and their basis of design.

1. Submission Requirements:

Narrative (NTE six double-sided pages): Provide technical approach narratives, both qualitative and quantitative, defining the elements of the proposal. The proposed building systems shall meet all applicable codes, standards and criteria as prescribed in the Statement of Work. Narrative should focus on maintenance considerations, energy consumption, and suitability of the proposed systems for the expected usage.

a. Wall Sections & Details: Provide typical building sections, wall sections and appropriate details depicting material quality.

b. The minimum acceptable level of quality for finishes suitable for the expected population and usage. This is an aircraft hangar; the hangar space should have durable finishes that are not easily damaged. Office spaces should have finishes appropriate for the intent of the space. Finishes for office space should be esthetically pleasing, but they shall be economically suitable for the spaces.

c. Mechanical Systems: Describe how the mechanical systems selected provide for a highly efficient environmental control system including information about provisions for indoor air quality in the office spaces and maintenance for the entire project.

d. Plumbing Systems: Describe how the plumbing systems selected provide for a highly efficient water system. The Offeror shall also describe how they plan to provide efficient dispersion of hot water as necessary to break rooms, bathrooms and throughout any other building spaces that may require hot water.

e. Electrical Systems: Describe how the electrical power and lighting systems selected provide for a highly efficient electrical system.

f. Electronic and Communications Systems: Describe how the electronic and communications requirements will be addressed and what features will be provided in the proposed project.

g. Site Utilities and Site Systems: Describe how the site utility systems selected provide for an efficient system. Include information regarding coordination with privatized utility providers where applicable.

h. Interoperability: Describe how systems integrated into the new facilities which require connection and interface with existing Installation wide systems will be accommodated in the proposed project. Narrative should address the following systems as minimum: Fire Alarm, Telephone, Cable Television, Utility Monitoring & Control

System, Mass Notification and privatized utility companies where applicable.

i. Secure Area: Describe how the Special Access Program Facility (SAPF) will be designed and constructed in accordance with relevant standards and regulation to include the Intelligence Community Directive (ICD) / Intelligence Community Standards (ICS) 705 standards and F-35 Facility Requirements Document (RFD).

j. ATFP Considerations: Describe how the proposed materials, systems, and designs address the mandatory building ATFP requirements included in the UFC.

k. Fire Protection/Life Safety Considerations: Describe how Life Safety will be addressed and what fire protection features will be accommodated in the proposed project. Describe fall protection systems.

2. Evaluation Criteria:

a. Demonstrates that the systems and components provide value to the Government and addresses the requirements of the solicitation.

b. The Government will evaluate the information provided for completeness, coordination, approach, aesthetics, technical problem solving, appropriate use of materials, maintainability, and adherence to this solicitation. The Government will evaluate the Offeror's technical solution and narratives for completeness and compliance with Section 01 10 00 requirements. Failure to submit any of the identified narratives, drawings and or organizational chart included in Technical Approach will be evaluated as a deficiency.

c. The offeror may provide roofing upgrades to include the use of IDPM style roofs for the flat roofs and standing metal seam roofs for any pitches 3:1 or greater would be considered a significant strength.

TAB E: FACTOR 4 – SUSTAINABILITY

Sustainability considers, environmental stewardship, and lowered life cycle expenses.

The Government will evaluate the systems and components proposed in terms of warranties provided, maintenance considerations (frequency, estimated cost, access, equipment locations), operability (ease of use, placement of control features, simplicity), durability (withstand troop usage, ease of cleaning), sustainability, and energy consumption (HVAC, lighting, power).

1. Submission Requirements:

Narrative (NTE four (4) double-sided pages): Provide a narrative that describes the following sustainability requirements:

a. Demonstrates a strategy to fully comply with the Federal High Performance and Sustainable Building (HPSB) Guiding Principles (GPs) as specified in the Unified

Facilities Criteria 1-200-02 verified by an approved Third Party Certification. The facility shall comply with the Air Force Sustainable Design and Development (SDD) Implementing Guidance, 2 JUN 2011 and the AFCEC A-GRAM 17-01, dated February 2017.

b. Demonstrates a strategy to meet or exceed the requirements of the Guiding Principles Compliance Verification per UFC 2-200-02 Criteria, as administered by the Green Building Initiative.

c. Demonstrates a strategy to meet or exceed the requirements of Public Law 109-58, Energy Policy Act (EPA) 2005, 8 Aug 05.

d. Demonstrates the understanding of the extents to which UFC 3-210-10, Low Impact Development, current edition, apply to the project.

e. Demonstrates the understanding of the extents to Guiding Principles for Sustainable Federal Buildings by the Council on Environmental Quality on February 26, 2016 as they apply to the subject project.

f. Energy Conservation: Describe the strategy to achieve 30% energy savings over the International Energy Conservation Code (IECC) baseline in accordance with UFC 1-200-02 and Energy Policy Act (EPA) of 2005 in the proposed project.

2. Evaluation Criteria:

a. Demonstrates an ability to meet the requirements of Green Building Initiative Guiding Principles Compliance Verification per UFC 1-200-02.

b. Demonstrates a strategy and capability to meet a minimum of 30% energy savings from the IECC baseline.

c. Demonstrates an ability to prepare a Life-cycle Cost Analysis (LCCA) in accordance with CFR Title 10 Part 436, Subpart A and MIST Handbook 135.

d. Provides an overall demonstrable approach to resource conservation in the areas of material, energy, and water.

TAB F: FACTOR 5 – SUMMARY SCHEDULE

Proposed Contract Duration - The firm shall propose the contract duration for the project, not to exceed the maximum contract duration specified in the CLIN Schedule.

1. Submission Requirements:

Narrative (NTE eight double-sided pages total for the narrative and schedule, 11x17 inch pages are allowed for the summary level schedule and will be counted as a single page): Provide a narrative that describes the following summary schedule requirements:

a. Proposed Contract Duration: The Offeror shall propose the overall contract

duration to include all activities identified in the CLIN Schedule not to exceed the maximum contract duration as identified in Section 01 00 00.00 44. The Offeror may propose a phased turnover for features of work if advantageous to the government. The government is requiring the turnover of Building 216 by 30 June of 2026 though the contractor may propose a phased turnover of other facilities as well and the government would evaluate this to determine if this approach is a benefit the government.

b. Summary Schedule: Offerors shall submit a summary level schedule for construction. This project has no options associated with it. This summary schedule will, after contract award, be replaced with a project schedule as required by Section 01 32 01.00 10: Project Schedule. The summary schedule shall be task oriented, indicating the number of calendar days, after notice to proceed, by which milestones are to be achieved. Offeror may use a critical path or other method of his choice; however, schedules shall be graphically represented and shall include, as a minimum, Activity ID, Activity Description, Original Duration, early start and early finish dates, and total float for each activity. The proposed schedule shall include an activity that shows the proposed overall contract duration in calendar days. Give attention to the following features:

(1) Show activities for each feature of work, this includes all CLINS, in sufficient detail to demonstrate an understanding of the scope of work and to substantiate the reasonableness and realism of the proposed duration.

(2) Show submittal preparation and review/approval activities for long lead items to demonstrate an understanding of the submittal process and minimum review times for Government approved submittals.

(3) Show activities and/or milestones for coordination with privatized utility providers during construction, to demonstrate your understanding of the coordination requirements for the contract.

(4) Show turnover of the project within the overall period of performance with Building 216 being turned over by 30 June 2026. Identify any proposed phased turnovers. The time to complete the project and turnover to the Government must consider the requirement for the Contractor's CQC completion inspection and the subsequent joint Contractor-Government turnover inspection.

(5) Show closeout activities, to include the Red Zone meeting, record drawings, and O&M manuals to demonstrate your understanding of the closeout requirements of the contract.

(6) Critical Path: Indicate the anticipated overall critical path on the schedule. The overall schedule shall include key milestones and tasks in succession and duration to project completion.

(7) Describe the approach to address risks that may impact completing the project within the required duration. Clearly describe each risk, mitigation strategy, and detail an innovative approach if applicable. At a minimum, the narrative shall address

long lead items, supply, labor, and logistical risks in current market conditions.

2. Evaluation Criteria:

a. Proposed Contract Duration: The proposed contract duration will become the contractually binding duration for the project at award. The Government will evaluate the contract duration as proposed by the Offeror herein and on the Price Proposal Schedule, not to exceed the maximum allowed duration listed in Section 01 00 00.00 44. This duration shall also include all options. In assessing the reasonableness of the proposed contract duration, the Government may take into account how well the proposed summary schedule supports the proposed duration, as well as use other information, such as, but not limited to, independent judgment concerning logic, constraints, and typical construction durations. A proposed contract duration shorter than the maximum allowed duration, or proposed phasing providing for early turnover of facilities, will receive additional rating consideration, provided the schedule is realistic and deemed to be achievable. The Government will consider an unreasonably condensed contract duration, which places additional cost or schedule risk on the Government, or which may create a risk of contract or performance failure, as a significant weakness or a deficiency, depending upon the evaluators' judgment.

b. Summary Schedule:

(1) The Government will evaluate the schedule to assess the strength of understanding of the project scope for integrated design and construction, restrictions which must be considered in the schedule e.g., sequencing of work, long lead items, Government review periods for construction plan approvals and other Government approved construction submittals, closeout activities, etc. A schedule with Government submittal review periods shorter than the minimum specified review period for Government approved construction plans will be considered deficient and will be rated unacceptable.

(2) The Government will evaluate the strength of understanding of events associated with coordinating design submittals, reviews and incorporating review comments, the Offeror's capability to schedule the complete project within the proposed contract duration and the reasonableness and realism of the schedule.

(3) The Government will evaluate the design packaging plan for logic, reasonableness, how it facilitates meeting the proposed contract duration and how it facilitates the Government's ability to timely perform its design reviews. A schedule with Government design review periods shorter than the minimum specified review periods for design submittals will be considered deficient and will be rated unacceptable. The packaging plan shall minimize risk to the Contractor and to the Government for tear-out and coordination for reviews. A schedule that offers advantage(s) to the Government over one that merely indicates an adequate understanding of the scope, restrictions, major milestones, and general understanding of the various events that can affect start and completion of construction will receive additional consideration. Failure to provide a schedule that meets the **880 day** Period of Performance (POP) required will be considered a deficiency for this factor. Failure to provide for the turnover of Building

216 by 30 June 2026 will also be considered a deficiency for this factor. (Assume start of POP at NTP issued 30 days after award).

(4) The Government will evaluate the processes, procedures, and/or techniques that will be utilized in order to complete construction on schedule. This may be presented as a flow chart, narrative or by any other means in the proposal the Offeror chooses that allows the governments evaluation team to clearly understand the intent of the Offeror. Failure to provide this will be evaluated as a deficiency. Failure to provide a clear and easily understandable process for this will be evaluated as a weakness.

(5) The Government will evaluate the Offeror’s risk mitigation strategies to achieve successful contract performance within the contract period of performance. Narratives failing to identify and address potential long lead items, general market material supply, labor, or logistical risks in current market conditions shall be evaluated as a deficiency. The Government will evaluate whether the risk mitigation strategies are realistic and demonstrates an understanding of how to effectively reduce project risks as it relates to contract performance and schedule.

NOTE: ALL NON-PRICED FACTORS FROM VOLUME 1, WHEN COMBINED, ARE SIGNIFICANTLY MORE IMPORTANT THAN PRICE

TABLE 1 - COMBINED TECHNICAL/RISK RATINGS

Rating	Description
Outstanding	Proposal demonstrates an exceptional approach and understanding of the requirements and contains multiple strengths and/or at least one significant strength, and risk of unsuccessful performance is low.
Good	Proposal indicates a thorough approach and understanding of the requirements and contains at least one strength or significant strength, and risk of unsuccessful performance is low to moderate.
Acceptable	Proposal meets requirements and indicates an adequate approach and understanding of the requirements, and risk of unsuccessful performance is no worse than moderate.
Marginal	Proposal has not demonstrated an adequate approach and understanding of the requirements, and/or risk of unsuccessful performance is high.
Unacceptable	Proposal does not meet requirements of the solicitation and, thus, contains one or more deficiencies and is unawardable, and/or risk of performance is unacceptably high.

TABLE 2 - Technical Risk Ratings

Adjectival Rating	Description
-------------------	-------------

Low	Proposal may contain weakness(es) which have low potential to cause disruption of schedule, increased cost, or degradation of performance. Normal contractor emphasis and normal Government monitoring will likely be able to overcome any difficulties.
Moderate	Proposal contains a significant weakness or combination of weaknesses which may have a moderate potential to cause disruption of schedule, increased cost, or degradation of performance. Special contractor emphasis and close Government monitoring will likely be able to overcome any difficulties.
High	Proposal contains a significant weakness or combination of weaknesses which is likely to have high potential to cause significant disruption of schedule, increased Cost, or degradation of performance. Special contractor emphasis and close Government monitoring will unlikely be able to overcome any difficulties.
Unacceptable	Proposal contains a deficiency or a combination of significant weaknesses that causes an unacceptable level of risk of unsuccessful performance.

Table 3 - Past Performance Relevancy Ratings	
Rating	Definition
Very Relevant	Present/past performance effort involved essentially the same scope and magnitude of effort and complexities this solicitation requires.
Relevant	Present/past performance effort involved similar scope and magnitude of effort and complexities this solicitation requires.
Somewhat Relevant	Present/past performance effort involved some of the scope and magnitude of effort and complexities this solicitation requires.
Not Relevant	Present/past performance effort involved little or none of the scope and magnitude of effort and complexities this solicitation requires.

TABLE 4 - Performance Confidence Assessments	
Rating	Definition
Substantial Confidence	Based on the offeror's recent/relevant performance record, the Government has a high expectation that the offeror will successfully perform the required effort.
Satisfactory Confidence	Based on the offeror's recent/relevant performance record, the Government has a reasonable expectation that the offeror will successfully perform the required effort.
Neutral Confidence	No recent/relevant performance record is available, or the offeror's performance record is so sparse that no meaningful confidence assessment rating can be reasonably assigned. The Offeror may not be evaluated favorably or unfavorably on the factor of past performance.

Limited Confidence	Based on the offeror's recent/relevant performance record, the Government has a low expectation that the offeror will successfully perform the required effort.
No Confidence	Based on the offeror's recent/relevant performance record, the Government has no expectation that the offeror will be able to successfully perform the required effort.

TAB G: FACTOR 6 – SMALL BUSINESS PARTICIPATION PROPOSAL

All offerors, regardless of size status, are required to complete a Small Business Participation Proposal. In accordance with DFARS 215.304(c)(i), the government will evaluate Small Business Participation in source selections for unrestricted acquisitions that require use of FAR 52.219-9, Small Business Subcontracting Plan and is required for this procurement. Offerors shall articulate within their Small Business Participation Proposal how they intend to meet the Small Business Participation Proposal criteria outlined in the solicitation.

1. Submission Requirements:

Narrative: (No page limit for this Factor): Provide a narrative that describes the following Small Business Participation Proposal requirements and criteria:

All offerors shall complete and submit a Small Business Participation Proposal using the format template, Attachment 1 at the end of this section.

Nothing precludes an offeror from further demonstrating their extent of commitment to using small businesses beyond what has been required by this solicitation.

2. Criteria:

a. The Government requirement will evaluate the level of proposed participation of small businesses in the performance to determine which offeror proposes the best value in terms of the contract relative to the percentages and criteria established herein. Failure to submit a Small Business Participation Proposal will be evaluated as a deficiency.

b. All offerors shall articulate the extent to which Small Businesses (SB), Small, Disadvantaged Businesses (SDB), Women-Owned Small Businesses (WOSB), HZ Small Businesses (HZ), Veteran-Owned Small Businesses (VOSB) and Service-Disabled, Veteran-Owned Small Businesses (SDVOSB) that are specifically identified in the proposal.

c. Extent of participation of Small Business firms in terms of percentages based on the total value of the offeror's proposal of the acquisition and the extent to which the proposal meets or exceeds small business participation percentages detailed in paragraph below.

d. Large businesses may achieve their small business participation commitments through subcontracting to small businesses. Small businesses may achieve their small business participation commitments through their own performance/participation as a

prime or through a joint venture, teaming arrangement, and subcontracting to other small businesses.

e. The minimum small business participation percentages are:

- SB: 28% based on total value of proposal
- SDB: 5% based on total value of proposal
- WOSB: 5% based on total value of proposal
- HZ: 3% based on total value of proposal
- VOSB: 5% based on total value of proposal
- SDVOSB: 5% based on total value of proposal

f. Offeror shall describe the extent of commitments to identify firms (if any) in place for this solicitation. Enforceable commitments are weighed more heavily than non-enforceable commitments.

Enforceable commitments must include:

- (1) Firm must be a small business
- (2) Socioeconomic category of the small business
- (3) Services/supplies to be provided by the small business
- (4) Specificity to the subject requirement by indicating the solicitation number on the document
- (5) Legible signature blocks and signatures from BOTH parties authorized to sign on behalf of their respective firm to demonstrate acknowledgement of the business relationship
- (6) Small business firm must be identified on the Small Business Participation Proposal as appropriate

g. The offeror shall describe the use of small business firms providing the following information:

- (1) Name of each small business, include each socio-economic category
- (2) Complexity and variety of work to be performed by small business
- (3) Percentage of work performed by each firm

h. Offerors failing to identify, or severely limit, the supplies/services to be performed may be evaluated as a weakness or deficiency.

i. Past performance of the offerors in complying with the requirements of the clause FAR 52.219-8, Utilization of Small Business Concerns or 52.219-9, Small Business Subcontracting Plan. The Offeror shall provide a narrative describing compliance to small business. The Government will evaluate based on one and/or a combination of the following:

- (1) Reporting of small business performance in CPARS

- (2) History of prompt payments to small business subcontractors
 - (3) Reporting of small business performance in eSRS.
 - (4) Documentation from customers demonstrating use/support of small businesses
 - (5) Documentation of other information to substantiate the use of small business demonstrating the total small business contract completion by the small business prime and/or subcontracting to other small business.
 - (6) Documentation from federal agency customers demonstrating the use/support of small business and/or information substantiating the use of small business subcontractors may be evaluated more favorably.
 - (7) Small Business compliance reviews
 - (8) DCMA Small Business Subcontracting Program reviews
- j. Offerors are encouraged to submit proof of awards, accolades, or similar type documentation received for their current and/or past support of small businesses. The offeror is not limited to the examples provided.
- k. The Government reserves the right to review additional information outside of the evaluation criteria below.

l. Material submitted in support of the Small Business Participation Proposal shall be logically assembled and organized to facilitate evaluation. The use of hyperlinks in lieu of incorporating information into the proposal remains prohibited. Do not cross-reference materials as the Government will not look to obtain information in support of an offeror's Small Business Participation Proposal from other volumes or within the Small Business Subcontracting Plan (if applicable).

m. Offerors shall not submit a hybrid plan that includes a combination of elements from a Small Business Participation Proposal (in accordance with DFARS PGI 215.304) and elements of a Small Business Subcontracting Plan (in accordance with FAR 52.219-9) as the two are distinctly different. Doing so will result in a weakness.

3. Evaluation:

a. The submitted Small Business Participation Proposal will utilize the ratings as described in Table 5, Small Business Rating Method based on the following:

(1) Extent of participation of Small Business firms in terms of percentages and the extent to which the proposal meets or exceeds the small business participation percentages as detailed in paragraph above as outlined in the solicitation. Offerors providing less than the percentages outlined above may be evaluated as a weakness or deficiency.

(2) The Government will verify the total value of the offeror's proposal to ensure percentages are consistent as identified in the solicitation. If an offeror's value of their total proposal is inconsistent with the percentages outline in the Small Business Participation Proposal, it may result in a weakness or deficiency.

(3) Extent to which Small Business firms, as defined in FAR Part 19 (Small Business (SB), Small, Disadvantaged Business (SDB), Women-Owned Small Business (WOSB), HUBZone Small Business (HZ), Veteran-Owned Small Business (VOSB) and Service-Disabled, Veteran-Owned Small Business (SDVOSB), are specifically identified in the proposal. The Government will evaluate the firms specifically identified by the Offeror in the submitted Small Business Participation Proposal.

(4) Extent of commitment to use the identified firms. The Government will evaluate the types of commitments in place (if any) for this specific acquisition (small business prime, written contract, verbal, enforceable, non-enforceable, joint ventures, mentor-protégé, teaming agreements, partnership letters of commitment(s), etc.). Enforceable commitments as defined in paragraph above, may be evaluated more favorably than non-enforceable commitments.

(5) Extent to identify the complexity and variety of work small business firms are to perform. The Government will evaluate the meaningful elements of the type and complexity of work to be performed by small business. Offerors failing to identify, or severely limit, the supplies/services to be performed may be evaluated as a weakness or deficiency.

(6) Extent of past performance of the offerors in complying with the requirements of the clauses at FAR 52.219-8 *Utilization of Small Business Concerns* or 52.219-9 *Small Business Subcontracting Plan*. The Government will evaluate based on one and/or a combination of the following:

(a) Reporting of small business performance in CPARS

(b) History of prompt payments to small business subcontractors

(c) Reporting of small business performance in eSRS

(d) Documentation from customers demonstrating use/support of small businesses

(e) Documentation of other information to substantiate the use of small business demonstrating the total small business contract completion by the small business prime and/or subcontracting to other small business

(f) Documentation from federal agency customers demonstrating the use/support of small business and/or information substantiating the use of small business subcontractors may be evaluated more favorably

(g) SBA compliance reviews

(h) DCMA Small Business Subcontracting Program reviews

(7) Offerors with no prior contracts containing FAR clause 52.219-8, and whether negative information has been reported concerning the Offeror's past compliance with FAR 52.219-8 alongside any explanation to address the negative information.

(8) Extent of documentation from federal agency customers demonstrating the use/support of small business and/or information substantiating the use of small business subcontractors may be evaluated more favorably.

b. The government reserves the right to review additional information outside of offer's proposal.

c. The offeror's Small Business Participation Proposal will be evaluated based on Table 5, Small Business Rating Method

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Table 5. Small Business Rating Method

Adjectival Rating	Description
Outstanding	Proposal indicates an exceptional approach and understanding of the small business objectives.
Good	Proposal indicates a thorough approach and understanding of the small business objectives.
Acceptable	Proposal indicates an adequate approach and understanding of small business objectives.
Marginal	Proposal has not demonstrated an adequate approach and understanding of the small business objectives.
Unacceptable	Proposal does not meet small business objectives.

VOLUME II: CERTIFICATIONS AND PRICE PROPOSAL

Location	Description
TAB A	The Proposal Cover Sheet
TAB B	Signed Standard Form 1155 & Acknowledgement of Amendments
TAB C	Price (FACTOR 7)
TAB D	Section 00 45 00 – Representations and Certifications
TAB E	Joint Venture and LLC (If Applicable)
TAB F	Bid Guarantee (Bid Bond)
TAB G	Financial Information and Bonding Capability
TAB H	Subcontracting Plan (other than small businesses only)

General Instructions. In accordance with Federal Acquisition Regulation (FAR) 15.402 and 15.403-1, certified cost or pricing data are not required based on the fact that adequate competition is expected for this procurement. Information other than certified cost or pricing data may be provided in contractor format providing that sufficient information is made available. Information submitted shall be prepared following the instruction in FAR 15.403-5. If after receipt of proposals the Contracting Officer determines that there is insufficient information available to determine price reasonableness and none of the exceptions at FAR 15.403-1 apply, the Offeror may be required to submit cost or pricing data.

Additionally, in the event that adequate competition is not obtained, the Contracting Officer may incorporate FAR 52.215-20 entitled, "Requirements for Cost or Pricing Data

or Information Other Than Cost or Pricing Data,” into the solicitation and request a Certificate of Current Cost or Pricing Data.

There are no page limitations for this volume. Proposal information included in this volume which is not directly related to Price will be disregarded.

TAB A – The proposal cover sheet (Attachment 2) is required by FAR 52.215-1 (c)(2) and must be submitted by all offerors. The format for the proposal cover sheet is as follows:

1. Solicitation Number
2. The name, mailing address, telephone and e-mail address.
3. A statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation and agreement to furnish any or all items upon which prices are offered at the price set opposite each item.
4. Names, titles, telephone and email address of persons authorized to negotiate on the offeror’s behalf with the Government in connection with this solicitation; and
5. Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent’s authority unless that evidence has been previously furnished to the issuing office.

Offerors should ensure UEI number and CAGE Code are all included for both the Contractor and Designer. UEI number will be used to access CPARS data. Offerors should also provide any other assigned number that identifies them in the CPARS database. If a separate UEI has been created for a Joint Venture (JV) UEI must also be submitted. Also provide any other UEI that identify individual member firms in the JV.

TAB B - Standard Form 1155 and acknowledgement of all amendments (Block 19), completed and signed by authorized individual(s) of the offeror. Offers submitted in the name of a Joint Venture must be signed in accordance with the terms and conditions specified in the joint venture agreement as evidenced in the proposal.

TAB C: FACTOR 7 – Price . Proposed price schedule is to be completed in its entirety by all offerors to include the Subtotals and Totals section as found in Section 00 10 00 - Solicitation, Contract Line-Item Number (CLIN) Schedule.

TAB D - Section 00 45 00 – Representations and Certifications. Confirm that the Offeror’s representations and certifications have been completed in the Online Representations and Certifications Application (ORCA) in accordance with FAR 52.204-8. Submit the representations and certifications not covered by ORCA that are included in Section 00 45 00 of this solicitation, under this tab.

TAB E - Joint Venture and LLC, if applicable. See Section 00 21 00 paragraph F.1.d. Note to 8(a)—SBA must approve a joint venture agreement prior to the award of an 8(a) contract on behalf of the joint venture.

TAB F - Offerors shall provide a fully executed Bid Bond as required by FAR Clause 52.228-1, Bid Guarantee *electronically in Tab F*. This requirement is to be completed regardless of Bid Bond requirement submission located in other parts of these instructions.

For the purposes of this Request for Proposal, please note that IAW FAR 28.001:

“Bond means a written instrument executed by a bidder or contractor (the “principal”), and a second party (the “surety” or “sureties”) (except as provided in FAR 28.204), to assure fulfillment of the principal’s obligations to a third party (the “obligee” or “Government”), identified in the bond. If the principal’s obligations are not met, the bond assures payment, to the extent stipulated, of any loss sustained by the obligee.”

Bonds shall therefore be executed in the name of the legal entity, whether a joint venture, partnership or the Prime Contractor of an informal teaming arrangement, with whom the Government would enter into a contract for a successful offeror. The entity named on the bond must be able to acquire bonding capacity on its own merits, and not as the result of indemnification from a subcontractor or third party.

TAB G - Financial Information & Bonding Capability (e.g. past three years financial statements, annual reports, Dun & Bradstreet Ratings and/or number, etc.) Provide a list of all current contracts with a value above \$35 Million, total dollar value, award date, anticipated completion, performance and payment bond amount.

TAB H - Subcontracting Plan shall be prepared in accordance with FAR 52.219- Electronic Subcontracting Reporting System (eSRS) located at <http://esrs.gov>. Instructions for completion of requisite forms, as well as guidance on coordinating and preparing for all compliance reviews by Federal agencies can be found at this website. Offerors are to ensure subcontractors agree to submit to ESRS. This will be evaluated for acceptability in accordance with AFARS Appendix DD. Either the contracting officer, the small business representative, or both, shall evaluate and rate the subcontracting plan as “acceptable” or “unacceptable,” in the context of this particular procurement. To receive an “Acceptable” rating, the contractor must satisfy all requirements of 52.219-9 and AFARS Appendix DD. Failure to receive subcontracting plan rating of acceptable could jeopardize the offeror’s selection for contract award.

Compliance. Failure to comply with the RFP requirements for Price information may result in an adverse assessment of an offeror’s proposal and reduce or eliminate its chance of being selected for award. Offerors shall ensure that the information presented in this volume is consistent and correlates with the information contained in the other proposal volumes.

Section 00 22 16
Attachments 1 - 4

ATTACHMENT 1
SMALL BUSINESS PARTICIPATION COMMITMENT DOCUMENT

All Offerors (both large and small businesses) are required to complete a Small Business Participation Commitment Document to be evaluated under Small Business Participation Evaluation Factor. The Offeror shall articulate how the Offeror intends to meet the small business objectives described in the Small Business Evaluation Factor.

Small Business Participation Commitment Document (Form)

(a) Check the applicable size and categories for the PRIME offeror only -- Check all applicable boxes:

- Other than Small Business
- Historically Black Colleges or Universities and Minority Institutions (HBCU/MI)
- American Native Corporation (ANC)
- Small Business Prime; also categorized as a
- Small Disadvantaged Business (SDB)
- Woman-Owned Small Business (WOSB)
- Historically Underutilized Zone (HUB Zone) Small Business
- Veteran Owned Small Business (VOSB)
- Service Disabled Veteran Owned Small Business (SDVOSB)

(b) Submit the total combined percentage of work to be performed by both large and small businesses (include the percentage of work to be performed both by Prime and Subcontractors):

Example: If Prime proposes a price of \$1,000,000, and small business (es) will provide \$250,000 in services/supplies as a prime or subcontractor, the percent (%) planned for small businesses is 25%; and 75% for large business equaling 100%.

Total Percentage planned for Large Business(es)	_____ %
Total Percentage planned for Small Business (es)	_____ %
Total	_____ % (Must Equal 100%)

(c) Please indicate the total percentage of participation to be performed by each type of subcategory small business.

The percentage of work performed by Small Businesses that qualify in multiple small business categories may be counted in each category:

Example: ACME Corporation (WOSB and SDVOSB) performing 2%; and Williams Group (SDB, HUBZone Small Business and WOSB) performing 3%. Results equate to: SDB 3%; HUBZone 3%; WOSB 5%; SDVOSB 2%; VOSB 2%;). SDVOSBs are also VOSBs automatically; however, VOSBs are not automatically SDVOSBs.

HBCU/Minority Institutions	_____ %
American Native Corporation And Indian Tribe SB	_____ %
Small Disadvantaged Business	_____ %
Woman Owned Small Business	_____ %
HUBZone Small Business	_____ %
Veteran Owned Small Business	_____ %
Service-Disabled Veteran Owned Small Business	_____ %

(d) List principal supplies/services to be performed by Small Businesses:

Example: If a Small Business qualifies also as a WOSB and a SDVOSB, and the Offeror may add them to each category below in which the SB entity qualifies.

Name of Company	Type of Supply/Service
Small Business	
_____	_____
_____	_____
Alaska Native Corporation	
_____	_____
_____	_____

Small Disadvantaged Business

_____	_____
_____	_____

Woman Owned Small Business

_____	_____
_____	_____

HUBZone

_____	_____
_____	_____

Veteran Owned Small Business

_____	_____
_____	_____

SDVOSB

_____	_____
_____	_____

HBCU/MCI

_____	_____
_____	_____

(e) Describe the extent of commitment to use small businesses (for example, what types of commitments if any, are in place for this specific acquisition either – small business prime, written contract, verbal, enforceable, non- enforceable, joint venturing, mentor- protégé, etc.)

Narrative (Limited to one page):

ATTACHMENT 2 PROPOSAL COVER SHEET

Solicitation Number	
Firm	
Address	
Phone	
Fax	
Email	
UEI Number	
Cage Code	

Also provide any other assigned number that identifies the member firm(s) in the CPARS database. If a separate UEI has been created for a joint venture (J-V) it must also be submitted. Provide a UEI number for each company identified in any proposed Contractor-subcontractor association of firms. If the firm is a joint venture or contractor- subcontractor association of firms, list the individual firms and briefly describe the nature of the association. Provide UEI for each.

Firm 1 _____ Nature of Association _____ UEI _____

Firm 2 _____ Nature of Association _____ UEI _____

Firm 3 _____ Nature of Association _____ UEI _____

Authorized Negotiators IAW FAR 52.215-11 - The Offeror represents that the following persons are authorized to negotiate on its behalf with the Government in connection with this Request for Proposals (RFP).

Name: _____ Title: _____ Email: _____

Statement specifying extent of agreement with all terms as specified in cover sheet instruction

#3 above: _____

—

Attachment 3

PAST PERFORMANCE ASSESSMENT WORKSHEET

(To be completed for each project submitted)

CONSTRUCTION OR PRIME CONTRACTOR		PROJECT #	
Offeror:			
Project and Location:			
Was this project performed by the division or unit of the company submitting the offer for W9126G24R10BP:			
Owner:			
Owner's Point of Contact for Reference:		Telephone:	
Awarded Construction Cost:		Final Construction Cost:	
Explain Cost Growth, if any:			
Date of Award:	Original Completion Date:	Revised Completion Date:	Percent Complete:
Explain Time Growth, if any:			
General Scope of Construction and Offeror's Role:			
Work Your Company Self-Performed:		Extent and Type of Work You Subcontracted Out:	
Describe extent of relevancy and complexity of the project. <u>RELEVANCY</u> :			
Provide any additional narrative to support relevancy assessment (in terms of scope, magnitude and complexity as compared to the scope of the solicitation).			
Your Performance Evaluation by Owner, if known:			

**Attachment 4
Past Performance Questionnaire**

NAVFAC/USACE PAST PERFORMANCE QUESTIONNAIRE (Form PPQ-0)

CONTRACT INFORMATION (Contractor to complete Blocks 1-4)

1. Contractor Information

Firm Name:

CAGE Code:

Address:w518ea

DUNs Number:

Phone Number:

Email Address:

Point of Contact:

Contact Phone Number:

2. Work Performed as: Prime Contractor Sub Contractor Joint Venture Other
(Explain)

Percent of project work performed:

If subcontractor, who was the prime (Name/Phone #):

3. Contract Information

Contract Number:

Delivery/Task Order Number (if applicable):

Contract Type: Firm Fixed Price Cost Reimbursement Other (Please specify):

Contract Title:

Contract Location:

Award Date (mm/dd/yy):

Contract Completion Date (mm/dd/yy):

Actual Completion Date (mm/dd/yy):

Explain Differences:

Original Contract Price (Award Amount):

Final Contract Price (*to include all modifications, if applicable*):

Explain Differences:

4. Project Description:

Complexity of Work High Med Routine

How is this project relevant to project of submission? *(Please provide details such as similar equipment, requirements, conditions, etc.)*

CLIENT INFORMATION (Client to complete Blocks 5-8)

5. Client Information

Name:

Title:

Phone Number:

Email Address:

6. Describe the client's role in the project:

7. Date Questionnaire was completed (mm/dd/yy):

8. Client's Signature:

NOTE: NAVFAC/USACE REQUESTS THAT THE CLIENT COMPLETES THIS QUESTIONNAIRE AND SUBMITS DIRECTLY BACK TO THE OFFEROR. THE OFFEROR WILL SUBMIT THE COMPLETED QUESTIONNAIRE TO USACE WITH THEIR PROPOSAL AND MAY DUPLICATE THIS QUESTIONNAIRE FOR FUTURE SUBMISSION ON USACE SOLICITATIONS. CLIENTS ARE HIGHLY ENCOURAGED TO SUBMIT QUESTIONNAIRES DIRECTLY TO THE OFFEROR. HOWEVER, QUESTIONNAIRES MAY BE SUBMITTED DIRECTLY TO USACE. PLEASE CONTACT THE OFFEROR FOR USACE POC INFORMATION. THE GOVERNMENT RESERVES THE RIGHT TO VERIFY ANY AND ALL INFORMATION ON THIS FORM.

ADJECTIVE RATINGS AND DEFINITIONS TO BE USED TO BEST REFLECT YOUR EVALUATION OF THE
CONTRACTOR'S PERFORMANCE

RATING	DEFINITION	NOTE
(E) Exceptional	Performance meets contractual requirements and exceeds many to the Government's benefit. The contractual performance of the element or sub-element being evaluated was accomplished with few minor problems for which corrective actions taken by the contractor were highly effective.	To justify an Exceptional rating, identify multiple significant events and state how they were of benefit to the Government. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
(VG) Very Good	Performance meets contractual requirements and exceeds some to the Government's benefit. The contractual performance of the element or sub-element being evaluated was accomplished with some minor problems for which corrective actions taken by the contractor were effective.	To justify a Very Good rating, identify a significant event and state how it was a benefit to the Government. There should have been no significant weaknesses identified.
(S) Satisfactory	Performance meets contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	To justify a Satisfactory rating, there should have been only minor problems, or major problems the contractor recovered from without impact to the contract/order. There should have been NO significant weaknesses identified. A fundamental principle of assigning ratings is that contractors will not be evaluated with a rating lower than Satisfactory solely for not performing beyond the requirements of the contract/order.
(M) Marginal	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being evaluated reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.	To justify Marginal performance, identify a significant event in each category that the contractor had trouble overcoming and state how it impacted the Government. A Marginal rating should be supported by referencing the management tool that notified the contractor of the contractual deficiency (e.g., management, quality, safety, or environmental deficiency report or letter).

(U) Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains a serious problem(s) for which the contractor's corrective actions appear or were ineffective.	To justify an Unsatisfactory rating, identify multiple significant events in each category that the contractor had trouble overcoming and state how it impacted the Government. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating. An Unsatisfactory rating should be supported by referencing the management tools used to notify the contractor of the contractual deficiencies (e.g., management, quality, safety, or environmental deficiency reports, or letters).
(N) Not Applicable	No information or did not apply to you contract	Rating will be neither positive nor negative

TO BE COMPLETED BY CLIENT

PLEASE CIRCLE THE ADJECTIVE RATING WHICH BEST REFLECTS YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE

EEXCELLENT
VGVERY GOOD
SSATISFACTORY
MMARGINAL
UUNSATISFACTORY
NNEUTRAL

1. QUALITY:						
a) Quality of technical data/report preparation efforts	E	VG	S	M	U	N
b) Ability to meet quality standards specified for technical performance	E	VG	S	M	U	N
c) Timeliness/effectiveness of contract problem resolution without extensive customer guidance	E	VG	S	M	U	N
d) Adequacy/effectiveness of quality control program and adherence to contract quality assurance requirements (without adverse effect on performance)	E	VG	S	M	U	N
2. SCHEDULE/TIMELINESS OF PERFORMANCE:						

a) Compliance with contract delivery/completion schedules including any significant intermediate milestones. <i>(If liquidated damages were assessed or the schedule was not met, please address below)</i>	E	VG	S	M	U	N
b) Rate the contractor's use of available resources to accomplish tasks identified in the contract	E	VG	S	M	U	N
3. CUSTOMER SATISFACTION:						
a) To what extent were the end-users satisfied with the project?	E	VG	S	M	U	N
b) Contractor was reasonable and cooperative in dealing with your staff (including the ability to successfully resolve disagreements/disputes; responsiveness to administrative reports, businesslike and communication)	E	VG	S	M	U	N
c) To what extent was the contractor cooperative, businesslike, and concerned with the interests of the customer?	E	VG	S	M	U	N
d) Overall customer satisfaction	E	VG	S	M	U	N
4. MANAGEMENT/ PERSONNEL/LABOR						
a) Effectiveness of on-site management, including management of subcontractors, suppliers, materials, and/or labor force?	E	VG	S	M	U	N
b) Ability to hire, apply, and retain a qualified workforce to this effort	E	VG	S	M	U	N
c) Government Property Control	E	VG	S	M	U	N
d) Knowledge/expertise demonstrated by contractor personnel	E	VG	S	M	U	N
e) Utilization of Small Business concerns	E	VG	S	M	U	N
f) Ability to simultaneously manage multiple projects with multiple disciplines	E	VG	S	M	U	N
g) Ability to assimilate and incorporate changes in requirements and/or priority, including planning, execution, and response to Government changes	E	VG	S	M	U	N
h) Effectiveness of overall management (including the ability to effectively lead, manage and control the program)	E	VG	S	M	U	N
5. COST/FINANCIAL MANAGEMENT						
a) Ability to meet the terms and conditions within the contractually agreed price(s)?	E	VG	S	M	U	N
b) Contractor proposed innovative alternative methods/processes that reduced cost, improved maintainability or other factors that benefited the client	E	VG	S	M	U	N
c) If this is/was a government cost-type contract, please rate the Contractor's timeliness and accuracy in submitting monthly invoices with appropriate back-up documentation, monthly status reports/budget variance reports, compliance with	E	VG	S	M	U	N

established budgets and avoidance of significant and/or unexplained variances (underruns or overruns)	
d) Is the Contractor's accounting system adequate for management and tracking of costs? <i>If no, please explain in the Remarks section.</i>	Yes No
e) If this is/was a government contract, has/was this contract been partially or completely terminated for default or convenience or are there any pending terminations? <i>Indicate if show cause or cure notices were issued, or any default action in the comment section below.</i>	Yes No
f) Have there been any indications that the contractor has had any financial problems? <i>If yes, please explain below.</i>	Yes No
6. SAFETY/SECURITY	
a) To what extent was the contractor able to maintain an environment of safety, adhere to its approved safety plan, and respond to safety issues? (Includes: following the user's rules, regulations, and requirements regarding housekeeping, safety, correction of noted deficiencies, etc.)	E VG S M U N
b) The contractor complied with all security requirements for the project and personnel security requirements.	E VG S M U N
7. GENERAL	
a) Ability to successfully respond to emergency and/or surge situations (including notifying COR, PM, or Contracting Officer in a timely manner regarding urgent contractual issues).	E VG S M U N
b) Compliance with contractual terms/provisions (<i>explain if specific issues</i>)	E VG S M U N
c) Would you hire or work with this firm again? (<i>If no, please explain below</i>)	Yes No
d) In summary, provide an overall rating for the work performed by this contractor.	E VG S M U N

Please provide responses to the questions above (if applicable) and/or additional remarks. Furthermore, please provide a brief narrative addressing specific strengths, weaknesses, deficiencies, or other comments which may assist our office in evaluating performance risk (please attach additional pages if necessary).

End of Section 00 21 16 Attachments

Section 00 45 00 - Representations and Certifications

CLAUSES AND/OR PROVISIONS INCORPORATED BY REFERENCE

52.209-13	Violation of Arms Control Treaties or Agreements—Certification	NOV 2021
52.229-11	Tax on Certain Foreign Procurements—Notice and Representation	JUN 2020

CLASUES AND/OR PROVISIONS INCORPERATED BY FULL TEXT

None

End of Section 00 45 00

Section 00 72 00 - Contract Clauses

CLAUSES AND/OR PROVISIONS INCORPORATED BY REFERENCE

52.232-18	Availability of Funds	APR 1984
252.204-7015	Notice of Authorized Disclosure of Information for Litigation Support	JAN 2023
252.222-7006	Restrictions on the Use of Mandatory Arbitration Agreements	JAN 2023
252.225-7056	Prohibition Regarding Business Operations with the Maduro Regime	MAY 2022

CLASUES AND/OR PROVISIONS INCORPORATED BY FULL TEXT

52.222-23 NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION (FEB 2022)

(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
5.6%	6.9%

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 **Fort Smith, Sebastian County, Arkansas**.

(End of provision)

52.225-11 BUY AMERICAN-CONSTRUCTION MATERIALS UNDER TRADE AGREEMENTS (NOV 2023)

(a) *Definitions*. As used in this clause—

Caribbean Basin country construction material means a construction material that—

- (1) Is wholly the growth, product, or manufacture of a Caribbean Basin country; or
- (2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a Caribbean Basin country into a new and different construction material distinct from the materials from which it was transformed.

Commercially available off-the-shelf (COTS) item—

- (1) Means any item of supply (including construction material) that is—
 - (i) A commercial product (as defined in paragraph (1) of the definition of "commercial product" at Federal Acquisition Regulation (FAR) [2.101](#));
 - (ii) Sold in substantial quantities in the commercial marketplace; and
 - (iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and
- (2) Does not include bulk cargo, as defined in [46 U.S.C.40102\(4\)](#), such as agricultural products and petroleum products.

Component means an article, material, or supply incorporated directly into a construction material.

Construction material means an article, material, or supply brought to the construction site by the Contractor or subcontractor for incorporation into the building or work. The term also

includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

Cost of components means—

(1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or

(2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

Critical component means a component that is mined, produced, or manufactured in the United States and deemed critical to the U.S. supply chain. The list of critical components is at FAR [25.105](#).

Critical item means a domestic construction material or domestic end product that is deemed critical to U.S. supply chain resiliency. The list of critical items is at FAR [25.105](#).

Designated country means any of the following countries:

(1) A World Trade Organization Government Procurement Agreement (WTO GPA) country (Armenia, Aruba, Australia, Austria, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, New Zealand, North Macedonia, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, Ukraine, or United Kingdom);

(2) A Free Trade Agreement (FTA) country (Australia, Bahrain, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Korea (Republic of), Mexico, Morocco, Nicaragua, Oman, Panama, Peru, or Singapore);

(3) A least developed country (Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Laos, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Tanzania, Timor-Leste, Togo, Tuvalu, Uganda, Vanuatu, Yemen, or Zambia); or

(4) A Caribbean Basin country (Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bonaire, British Virgin Islands, Curacao, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saba, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sint Eustatius, Sint Maarten, or Trinidad and Tobago).

Designated country construction material means a construction material that is a WTO GPA country construction material, an FTA country construction material, a least developed country construction material, or a Caribbean Basin country construction material.

Domestic construction material means—

(1) For construction material that does not consist wholly or predominantly of iron or steel or a combination of both-

(i) An unmanufactured construction material mined or produced in the United States; or

(ii) A construction material manufactured in the United States, if—

(A) The cost of its components mined, produced, or manufactured in the United States exceeds 60 percent of the cost of all its components, except that the percentage will be 65 percent for items delivered in calendar years 2024 through 2028 and 75 percent for items delivered starting in calendar year 2029.

(B) The construction material is a COTS item; or

(2) For construction material that consists wholly or predominantly of iron or steel or a combination of both, a construction material manufactured in the United States if the cost of foreign iron and steel constitutes less than 5 percent of the cost of all components used in such construction material. The cost of foreign iron and steel includes but is not limited to the cost of foreign iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the construction material and a good faith estimate of the cost of all foreign iron or steel components excluding COTS fasteners. Iron or steel components of unknown origin are treated as foreign. If the construction material contains multiple components, the cost of all the materials used in such construction material is calculated in accordance with the definition of "cost of components".

Fastener means a hardware device that mechanically joins or affixes two or more objects together. Examples of fasteners are nuts, bolts, pins, rivets, nails, clips, and screws.

Foreign construction material means a construction material other than a domestic construction material.

Foreign iron and steel means iron or steel products not produced in the United States. Produced in the United States means that all manufacturing processes of the iron or steel must take place in the United States, from the initial melting stage through the application of coatings, except metallurgical processes involving refinement of steel additives. The origin of the elements of the iron or steel is not relevant to the determination of whether it is domestic or foreign.

Free Trade Agreement country construction material means a construction material that-

(1) Is wholly the growth, product, or manufacture of a Free Trade Agreement (FTA) country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a FTA country into a new and different construction material distinct from the materials from which it was transformed.

Least developed country construction material means a construction material that-

(1) Is wholly the growth, product, or manufacture of a least developed country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a least developed country into a new and different construction material distinct from the materials from which it was transformed.

Predominantly of iron or steel or a combination of both means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of iron or steel components excluding COTS fasteners.

Steel means an alloy that includes at least 50 percent iron, between 0.02 and 2 percent carbon, and may include other elements.

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

WTO GPA country construction material means a construction material that-

(1) Is wholly the growth, product, or manufacture of a WTO GPA country; or

(2) In the case of a construction material that consists in whole or in part of materials from another country, has been substantially transformed in a WTO GPA country into a new and different construction material distinct from the materials from which it was transformed.

(b) Construction materials.

(1) This clause implements [41 U.S.C. chapter 83](#), Buy American, by providing a preference for domestic construction material. In accordance with [41 U.S.C. 1907](#), the domestic content test of the Buy American statute is waived for construction material that is a COTS item, except that for construction material that consists wholly or predominantly of iron or steel or a combination of both, the domestic content test is applied only to the iron and steel content of the construction material, excluding COTS fasteners. (See FAR [12.505\(a\)\(2\)](#)). In addition, the Contracting Officer has determined that the WTO GPA and Free Trade Agreements (FTAs) apply to this acquisition. Therefore, the Buy American restrictions are waived for designated country construction materials.

(2) The Contractor shall use only domestic or designated country construction material in performing this contract, except as provided in paragraphs (b)(3) and (b)(4) of this clause.

(3) The requirement in paragraph (b)(2) of this clause does not apply to information technology that is a commercial product or to the construction materials or components listed by the Government as follows:

None

(4) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(3) of this clause if the Government determines that-

(i) The cost of domestic construction material would be unreasonable.

(A) For domestic construction material that is not a critical item or does not contain critical components.

(1) The cost of a particular domestic construction material subject to the restrictions of the Buy American statute is unreasonable when the cost of such material exceeds the cost of foreign material by more than 20 percent;

(2) For construction material that is not a COTS item and does not consist wholly or predominantly of iron or steel or a combination of both, if the cost of a particular domestic construction material is determined to be unreasonable or there is no domestic offer received, and the low offer is for foreign construction material that does not exceed 55 percent domestic content, the Contracting Officer will treat the lowest offer of foreign construction material that is manufactured in the United States and exceeds 55 percent domestic content as a domestic offer and determine whether the cost of that offer is unreasonable by applying the evaluation factor listed in paragraph (b)(4)(i)(A)(1) of this clause.

(3) The procedures in paragraph (b)(4)(i)(A)(2) of this clause will no longer apply as of January 1, 2030.

(B) For domestic construction material that is a critical item or contains critical components.

(1) The cost of a particular domestic construction material that is a critical item or contains critical components, subject to the requirements of the Buy American statute, is unreasonable when the cost of such material exceeds the cost of foreign material by more than 20 percent plus the additional preference factor identified for the critical item or construction material containing critical components listed at FAR [25.105](#).

(2) For construction material that does not consist wholly or predominantly of iron or steel or a combination of both, if the cost of a particular domestic construction material is determined to be unreasonable or there is no domestic offer received, and the low offer is for foreign construction material that does not exceed 55 percent domestic content, the Contracting Officer will treat the lowest offer of foreign construction material that is manufactured in the United States and exceeds 55 percent domestic content as a domestic offer, and determine whether the cost of that offer is unreasonable by applying the evaluation factor listed in paragraph (b)(4)(i)(B)(1) of this clause.

(3) The procedures in paragraph (b)(4)(i)(B)(2) of this clause will no longer apply as of January 1, 2030.

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) Request for determination of inapplicability of the Buy American statute.

(1)

(i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(4) of this clause shall include adequate information for Government evaluation of the request, including-

(A) A description of the foreign and domestic construction materials;

(B) Unit of measure;

(C) Quantity;

(D) Price;

(E) Time of delivery or availability;

(F) Location of the construction project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American statute applies and the Contracting Officer and the Contractor negotiate adequate

consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(4)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American statute applies, use of foreign construction material is noncompliant with the Buy American statute.

(d) *Data*. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

Construction Material Description	Unit of Measure
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Item1

Foreign construction material	_____
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Domestic construction material	_____
--------------------------------	-------

Item1

Foreign construction material	_____
-------------------------------	-------

Domestic construction material	_____
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[Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued)].*

[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]

[Include other applicable supporting information.]

(End of clause)

52.236-1 Performance of Work by the Contractor

The Contractor shall perform on the site, and with its own organization, work equivalent to at least 15% 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)

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 contract specifications and drawings.

End of Section 00 72 00

Section 00 73 00 – Special Contract Requirements

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 **10** 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 **as shown in Section 01 00 00.00 44**. 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 **as shown in Section 01 00 00.00 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)

WAGE RATES AND DETERMINATIONS

APPLICATION OF WAGE DECISIONS

Task Order Number: **TBD**

Project: **FY24, Republic of Singapore Air Force (RSAF) Facility Renovations for F-16 and F-35**

Location: **Ebbing NGB, Fort Smith, Arkansas**

County, State: **Sebastian County, AR**

1. Davis-Bacon Construction Wage Rate Requirements AR20240034, Building Construction Projects, will be applicable to the construction, alteration, painting or repair of buildings, installations within buildings, appurtenances to buildings, foundations for buildings, excavation and fill for buildings, and utilities within five feet of buildings for those construction activities performed in **Sebastian County, AR**.

2. Davis-Bacon Construction Wage Rate Requirements AR20230057, Heavy Construction Projects, will be applicable to the construction, alteration or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, parking areas, alteration or repair of bridges, flood control projects, landscaping, site improvements, sewers, and other similar projects and any other construction requirements not shown in Paragraph 1 above for those construction activities performed in **Sebastian County, AR**.

3. Davis-Bacon Construction Wage Rate Requirements AR20230172, Highway Construction Projects, will be applicable to the construction, alteration or repair of roads, streets, highways, runways, taxiways, alleys, trails, paths, parking areas, alteration or repair of bridges, flood control projects, landscaping, site improvements, sewers, and other similar projects and any other construction requirements not shown in Paragraph 1 above for those construction activities performed in **Sebastian County, AR**.

NOTE:

Payroll records are required, under the Davis-Bacon Act, to be submitted to the U.S. Army Corps of Engineers for all construction work performed.

The Wage Decision Number applicable to the work performed is to be shown on all certified payroll records submitted. If multiple wage decisions are utilized within a pay period, so annotate clearly those work hours and rates-of-pay per the applicable wage decision under which the work was performed.

"General Decision Number: AR20240034 01/05/2024

Superseded General Decision Number: AR20230034

State: Arkansas

*Construction Type: Building
BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).*

County: Sebastian County in Arkansas.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

<p><i>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</i></p>	<p><i>Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.</i></p>
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<p><i>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</i></p>	<p><i>Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.</i></p>
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The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number Publication Date
0 01/05/2024

BOIL0069-002 01/01/2021

	Rates	Fringes
BOILERMAKER.....	\$ 30.49	23.13

CARP0071-002 01/01/2023

	Rates	Fringes
CARPENTER (Includes Drywall Hanging, and Form Work).....	\$ 30.48	10.98

PAIN0424-008 07/01/2021

	Rates	Fringes
PAINTER (Spray).....	\$ 16.25 **	10.42

PLUM0155-015 08/01/2023

	Rates	Fringes
PIPEFITTER.....	\$ 31.58	13.36

PLUM0155-017 08/01/2023

	Rates	Fringes
PLUMBER.....	\$ 31.58	13.36

SUAR2015-031 01/09/2017

	Rates	Fringes
BRICKLAYER.....	\$ 19.39	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 14.79 **	0.00
ELECTRICIAN.....	\$ 19.91	2.54

INSULATOR - MECHANICAL (Duct, Pipe & Mechanical System Insulation).....	\$ 17.16 **	4.76
IRONWORKER, REINFORCING.....	\$ 14.00 **	0.00
IRONWORKER, STRUCTURAL.....	\$ 19.39	0.00
LABORER: Common or General.....	\$ 11.53 **	0.00
LABORER: Mason Tender - Brick...	\$ 12.04 **	0.00
LABORER: Pipelayer.....	\$ 14.02 **	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 19.10	0.00
OPERATOR: Bulldozer.....	\$ 16.74 **	0.00
OPERATOR: Crane.....	\$ 17.52	0.00
OPERATOR: Grader/Blade.....	\$ 14.66 **	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 17.79	0.00
OPERATOR: Roller.....	\$ 14.86 **	2.18
PAINTER (Brush and Roller).....	\$ 13.38 **	0.00
ROOFER.....	\$ 15.39 **	0.00
SHEET METAL WORKER, Includes HVAC Duct Installation.....	\$ 20.25	2.73
TRUCK DRIVER: Dump Truck.....	\$ 13.92 **	0.85

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

*** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage*

determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed

in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage

determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

*Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210*

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION"

"General Decision Number: AR20240057 01/05/2024

Superseded General Decision Number: AR20230057

State: Arkansas

*Construction Type: Heavy
HEAVY CONSTRUCTION PROJECTS (Including Water and Sewer Lines)*

County: Sebastian County in Arkansas.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

|If the contract is entered |. Executive Order 14026 |

into on or after January 30, generally applies to the 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number Publication Date
0 01/05/2024

SUAR2015-054 01/09/2017

Rates Fringes

CARPENTER, Includes Form Work....\$ 16.47 ** 1.93

CEMENT MASON/CONCRETE FINISHER...	\$ 15.23 **	0.00
ELECTRICIAN.....	\$ 22.88	7.19
LABORER: Common or General.....	\$ 12.16 **	0.00
LABORER: Pipelayer.....	\$ 14.54 **	1.82
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 16.35 **	0.00
OPERATOR: Bulldozer.....	\$ 17.00 **	1.92
OPERATOR: Crane.....	\$ 24.21	6.79
OPERATOR: Loader.....	\$ 15.45 **	0.00
PAINTER (Brush and Roller).....	\$ 18.00	0.00
TRUCK DRIVER: Dump Truck.....	\$ 14.05 **	3.04

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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*** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.*

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is

like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

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Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) *Has there been an initial decision in the matter? This can be:*

- * *an existing published wage determination*
- * *a survey underlying a wage determination*
- * *a Wage and Hour Division letter setting forth a position on a wage determination matter*
- * *a conformance (additional classification and rate) ruling*

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

*Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210*

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

*Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210*

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

*Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.*

Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION"

"General Decision Number: AR20240172 01/05/2024

Superseded General Decision Number: AR20230172

State: Arkansas

Construction Type: Highway

County: Sebastian County in Arkansas.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

*|If the contract is entered |. Executive Order 14026 |
into on or after January 30,	generally applies to the
2022, or the contract is	contract.
renewed or extended (e.g., an	. The contractor must pay
option is exercised) on or	all covered workers at
after January 30, 2022:	least \$17.20 per hour (or
	the applicable wage rate
	listed on this wage
	determination, if it is
	higher) for all hours
	spent performing on the
	contract in 2024.

*|If the contract was awarded on|. Executive Order 13658 |
|or between January 1, 2015 and| generally applies to the |
|January 29, 2022, and the | contract. |*

contract is not renewed or	. The contractor must pay all
extended on or after January	covered workers at least
30, 2022:	\$12.90 per hour (or the
	applicable wage rate listed
	on this wage determination,
	if it is higher) for all
	hours spent performing on
	that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number Publication Date
 0 01/05/2024

SUAR2014-044 07/21/2014

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 16.68 **	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 13.07 **	0.00
ELECTRICIAN, Includes Traffic Signalization.....	\$ 20.40	0.00
FENCE ERECTOR.....	\$ 11.78 **	0.00
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine).....	\$ 13.25 **	0.00
HIGHWAY/PARKING LOT STRIPING: Painter.....	\$ 20.00	0.00
IRONWORKER, REINFORCING.....	\$ 14.22 **	0.00

IRONWORKER, STRUCTURAL.....	\$ 18.35	0.00
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....		
	\$ 14.68 **	0.00
LABORER: Common or General.....	\$ 12.22 **	0.00
LABORER: Mason Tender - Cement/Concrete.....		
	\$ 13.08 **	0.00
LABORER: Pipelayer.....	\$ 14.33 **	0.00
OPERATOR: Asphalt Spreader.....	\$ 15.80 **	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....		
	\$ 18.08	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....		
	\$ 16.06 **	0.00
OPERATOR: Broom/Sweeper.....	\$ 12.00 **	0.00
OPERATOR: Bulldozer.....	\$ 16.17 **	0.00
OPERATOR: Crane.....	\$ 25.34	0.00
OPERATOR: Drill.....	\$ 14.85 **	0.00
OPERATOR: Grader/Blade.....	\$ 17.00 **	0.00
OPERATOR: Hydroseeder.....	\$ 10.79 **	0.00
OPERATOR: Loader.....	\$ 23.68	12.36
OPERATOR: Mechanic.....	\$ 19.07	0.00
OPERATOR: Milling Machine.....	\$ 17.73	0.00
OPERATOR: Oiler.....	\$ 19.29	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....		
	\$ 21.54	0.00
OPERATOR: Post Driver (Guardrail/Fences).....		
	\$ 16.97 **	0.00

OPERATOR: Roller.....	\$ 15.80 **	0.00
OPERATOR: Scraper.....	\$ 16.50 **	0.00
OPERATOR: Screed.....	\$ 17.30	0.00
TRAFFIC CONTROL: Flagger.....	\$ 12.33 **	0.00
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....		
	\$ 12.21 **	0.00
TRUCK DRIVER: Dump Truck.....	\$ 16.49 **	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 21.03	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 18.61	0.00
TRUCK DRIVER: Water Truck.....	\$ 14.73 **	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 12.50 **	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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Washington, DC 20210*

4.) *All decisions by the Administrative Review Board are final.*

=====

END OF GENERAL DECISION"

SPECIAL CONTRACT REQUIREMENTS

1) FAR provision 52.229-11 and FAR clause 52.229-12

FAR provision 52.229-11 and FAR clause 52.229-12 are included in this solicitation. This provision and clause concern the imposition of a 2 percent Federal excise tax withholding on any resultant contract award or payment request. This rule applies to Federal Government contracts for goods or services that are awarded to foreign persons – such as foreign contractors. It implements the Department of the Treasury’s final regulations published in the Federal Register at 81 FR 55133 on August 18, 2016, under section 5000C of the Internal Revenue Code relating to the 2 percent tax on payments made by the U.S. Government to foreign persons pursuant to certain contracts.

Pursuant to the FAR 52.229-3 Federal, State, and Local Taxes, taxes imposed under 26 U.S.C. 5000 C may not be included in the contract price or reimbursed.

Exemptions from this excise tax must be claimed by an Offeror when it submits, with its offer, a U.S. Department of Treasury Internal Revenue Service (IRS) Form W-14, Certificate of Foreign Contracting Party Receiving Federal Procurement Payments, available via the internet at www.irs.gov/W14. If not submitted with the offer, exemptions will not be applied to any resulting contract and the Government will withhold a full 2 percent on each contract payment. Failure to submit an IRS Form W-14 with each payment request will also result in an automatic withholding of 2 percent from the payment request.

When filling out the IRS Form W-14 the following information may be used to complete Part I, Lines 6 and 7.

Line 6 Contract/reference number: *W9126G24R10BP*

Line 7 "Name and address of the acquiring agency": 819 Taylor St, CT OFC RM 2A17
Fort Worth TX 76102

Any exemption claimed and self-certified is subject to audit by the IRS. Any disputes concerning this tax are adjudicated by the IRS because the Section 5000C tax is a tax matter not a contract issue.

Offerors are encouraged to seek guidance from their own tax professionals for advice concerning the provision, clause, and exclusions exclusion/submission of IRS Form W-14. Additional information is also available at:

Notwithstanding the above, the USACE does not have a means of withholding this excise tax at this time. As a result, contractors are expected to comply with the instructions above and to properly complete and return the W-14 at proposal submission, and with each pay application. The amount due for each withholding will be confirmed by USACE, BUT WILL NOT BE WITHHELD. It is the contractor's responsibility to set aside, or remit to the IRS, the amount confirmed by USACE. Whether the contractor sets the money aside for future payment to the IRS, or makes payment to the IRS, is the contractor's discretion, based on its analysis of the regulations regarding the excise tax. In the event that USACE is able to withhold during contract performance, it will notify the contractor and make such a withholding (including any catch up withholdings); no advance notice is required to the contractor prior to the withholding. Under no circumstances is USACE liable for any tax not paid by the contractor. The contractor is liable for the tax, to the extent required by law, regardless of whether USACE makes a withholding.

FAR 29.204 expressly states that "agencies merely withhold the tax (section 5000C tax) for the Internal Revenue Service (IRS). All substantive issues regarding the underlying section 5000C tax, e.g., the imposition of, and exemption from the tax, are matters under the jurisdiction of the IRS." Therefore, we cannot help you determine how the tax law applies to you. We strongly recommend that you contact the IRS and/or a tax professional should you have any questions of this nature. To be clear, this information does not constitute tax advice or a representation of your tax liability. Furnishing this information does not create liability for the USACE for any Federal, state, or local taxes applicable to the above-referenced contract or any other contract.

For submission requirements and basis of evaluation:

Executed FAR Provision 52.229-11.

Completed IRS Form W-14, Certificate of Foreign Contracting Party Receiving Federal Procurement Payments, if applicable. *If not submitted with the offer, exemptions will not*

be applied to any resulting contract and the Government will withhold a full 2 percent on each payment.

End of Section 00 73 00

SECTION 01 00 00.00 46

DESIGN AND CONSTRUCTION SCHEDULE

PART 1 GENERAL

1.1 SCHEDULE

Commence, prosecute, and complete the work under this contract in accordance with the following schedule and CONTRACT CLAUSES COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK and LIQUIDATED DAMAGES:

	Item of Work	Commencement of Work (Calendar days)	Completion of Work (Calendar days)	Liquidated Damages per calendar days
(1)	All work, including O&M Manuals and Final Record Drawings for the renovation of B216.	Upon receipt of NTP.	NLT 30 June 2026	\$ 6,694.00
(2)	All work, including O&M Manuals and Final Record Drawings for the renovation of B201, B202, B214, and B218.	Upon receipt of NTP.	880 days	\$6,694.00

a. All work on this project shall be completed within the number of calendar days stated in Work Item 1 above, inclusive of all review periods and Government phasing requirements specified. If the Government accepts a proposal for a completion period of lesser duration, and such proposal alters the time periods for review and phasing, the Contract shall be read to include the original periods for review and phasing. If a completion period of lesser duration is proposed and accepted by the Government, the accepted completion period will replace the original construction schedule listed above in

the Schedule. If an alternate completion period is proposed, the Bid Schedule must reflect pricing information for the alternate proposed completion period. The liquidated damages stated above will be applied for each calendar day the Contractor exceeds the Contract scheduled duration.

b. Liquidated damages for individual items of work will not be combined. Only the rate of the affected item of work will be assessed.

c. Liquidated damages are not accumulative for multiple phases of work.

** Operation and Maintenance Manuals: See Section 01 32 01.00 10 PROJECT SCHEDULE, paragraph O&M Manuals for requirements and withholding amount to ensure completion of O&M Manuals.

*** Record Drawings: See Section 01 32 01.00 10 PROJECT SCHEDULE, paragraph titled As-Built DRAWINGS for requirements and withholding amount to ensure completion of record drawings.

1.1.1 Testing of Heating and Air-Conditioning Systems

The times stated for completion of this project includes all required testing specified in appropriate specification sections of heating, air conditioning and ventilation systems including HVAC Commissioning. Exception: boiler combustion efficiency test, boiler full load tests, cooling tower performance tests, and refrigeration equipment full load tests, when specified in the applicable specifications, shall be performed in the appropriate heating/cooling season as determined by the Contracting Officer.

1.2 SECURITY REQUIREMENTS

1.2.1 Installation Entrance Requirements

All installation entrance requirements are outline in 01 35 10.00 46 SPECIAL PROJECT PROCEDURES FOR EBBING FIELD.

1.3 UTILITIES

1.3.1 Payment for Utility Services

1.3.2 Coordination

For Contractor Telephone and Internet Service, the Contractor shall coordinate with local phone company for contractor telephone and internet service during construction.

1.3.3 Outages

See 01 14 00.00 46 WORK RESTRICTIONS (SWL) for outage information.

1.4 CONTRACTOR PERFORMANCE EVALUATIONS

In accordance with the provisions of Subpart 36.201 (Evaluation of Contractor Performance) of the Federal Acquisition Regulation (FAR), construction contractor's performance shall be evaluated throughout the performance of the contract. The United States Army Corps of Engineers

(USACE) follows the procedures outlined in Engineering Regulation 415-1-17 to fulfill this FAR requirement. For construction contracts awarded at or above \$750,000.00, the USACE will evaluate contractor's performance and prepare a performance report using the Contractor Performance Assessment Reporting System (CPARS), which is now a web-based system. After an evaluation (interim or final) is written up by the USACE, the contractor will have the ability to access, review and comment on the evaluation for a period of 60 days. Accessing and using CPARS requires specific software, called PKI certification, which is installed on the user's computer. The certification is a Department of Defense requirement and was implemented to provide security in electronic transactions. The certification software could cost approximately \$110 - \$125 per certificate per year and is purchased from an External Certificate Authorities (ECA) vendor. Current information about the PKI certification process and for contacting vendors can be found on the web site: <http://www.cpars.csd.disa.mil/>. If the Contractor wishes to participate in the performance evaluation process, access to CPARS and PKI certification is the sole responsibility of the Contractor.

1.5 CONTRACTOR PAYROLL RECORD

Contractor shall be required to log payrolls for all their own employees and subcontractors utilizing ENG Form 3180. Each subcontractor requires a separate ENG 3180 for their payrolls. The Contractor shall maintain the ENG 3180, along with the payrolls, on site and available for review by the Contracting Officer's Representative. The ENG 3180's shall be updated weekly as payrolls are submitted. After making copies for their files, the Contractor is required to submit the originals of each week's payrolls to the Resident Office via the Resident Management System (RMS) and to SWL's Office of Counsel via email as instructed. Before final payment, the Contractor shall provide the completed ENG 3180's to the Contracting Officer's Representatives.

1.6 CONTRACTOR SUPPLY and USE OF ELECTRONIC SOFTWARE FOR PROCESSING WAGE RATE REQUIREMENTS CERTIFIED LABOR PAYROLLS

(a) The contractor is required to use a commercially-available electronic system to process and submit certified payrolls electronically to the Government. The requirements for preparing, processing, and providing certified labor payrolls are established by the Wage Rate Requirements statute.

(b) The contractor shall be responsible for obtaining and providing for all access, licenses, and other services required to provide for receipt, processing, certifying, electronically transmitting to the Government, and storing weekly payrolls and other data required for the contractor to comply with the Wage Rate Requirements statute. When the contractor uses an electronic payroll system, the electronic payroll service shall be used by the contractor to prepare, process, and maintain the relevant payrolls and basic records during all work under this construction contract and the electronic payroll service shall be capable of preserving these payrolls and related basic records for the required 3 years after contract completion. The contractor shall obtain and provide electronic system access to the Government, as required to comply with the Wage Rate Requirements over the duration of this construction contract. The access shall include electronic review access by the Government contract administration office to the electronic payroll processing system used by the contractor.

(c) The contractor's provision and use of an electronic payroll processing system shall meet the following basic functional criteria:

- (1) commercially available;
- (2) compliant with appropriate Wage Rate Requirements statute payroll provisions in the Federal Acquisition Regulation (FAR);
- (3) able to accommodate the required numbers of employees and subcontractors planned to be employed under the contract;
- (4) capable of producing an Excel spreadsheet-compatible electronic output of weekly payroll records for export in an Excel spreadsheet;
- (5) demonstrated security of data and data entry rights;
- (6) ability to produce contractor-certified electronic versions of weekly payroll data;
- (7) ability to identify erroneous entries and track the date/time of all versions of the certified Wage Rate Requirements statute payrolls submitted to the government over the life of the contract;
- (8) capable of generating a durable record copy, that is, a CD or DVD and PDF file record of data from the system database at end of the contract closeout. This durable record copy of data from the electronic payroll processing system shall be provided to the Government during contract closeout.

(d) All contractor-incurred costs related to the contractor's provision and use of an electronic payroll processing service shall be included in the contractor's price for the overall work under the contract. The costs for compliance with the Wage Rate Requirements statute by using electronic payroll processing services shall not be a separately bid or reimbursed item under this contract.

1.7 ADDITIONAL CONTRACTOR PAYROLL RECORD

(1) The Little Rock District requires the contractor and all sub-contractors to use an electronic payroll system meeting the requirements the above referenced requirements and the following.

(a) The Certified Labor Payrolls must be tracked electronically via WEB-based software and all data must be submitted via WEB. Payroll guidelines, "Instructions to Contractors on Contract Labor Requirements, published as "Appendix A, SWFP 1185-1-1" (also known as the Green book), will be provided to advise/inform contractors how these labor provisions will be administered and enforced.

(b) The WEB-based software must be capable of downloading data directly from existing electronic payrolls, track workers to ensure that overtime is being paid when overtime status is reached on Government contracts whether on one or multiple contracts or different sub-contractors. The software must track apprentices and journeyman ratios, create and track SF-1444 "Request for Authorization of Additional Classification and Rate", track workers by name/address/with or without Social Security Numbers, allow automated redaction of information appearing on payroll statements for agency response to Freedom of Information Act (FOIA requests), and provide free online training by the software provider to any user of the

software.

(c) The software must allow fringe benefit statement to track fringe benefits "whether cash or into an approved plan, fund, or program. If the fringe benefits are paid into a plan, fund, or program the company's name (receiving benefits), phone number, and address shall be listed on the Statement of Compliance Form (DD Form 879 or WH-347).

(d) Software must provide a method of tracking standard and non-standard deductions such as restitution, alimony, child support, and allow for custom entries. Method of tracking must list the deductions on the statement of compliance or be listed as an attachment.

(e) The Contractor is required to provide the updated 3180's and notify the Contracting Officer's Representatives weekly by email when the current payrolls are complete and ready for inspection/review on the WEB. Before final payment, the Contractor shall provide the completed ENG For 3180's and 3 disks (CD/DVD) which include complete copies of the Contractor and sub-contractor's payrolls/attachments, to the Contracting Officer's Representatives.

(2) Electronic copies of electronically/manually signed forms/memos/letters such as SF 1413 Statement of Acknowledgement (sub-contractor agreement), SF-1444 "Request for Authorization of Additional Classification and Rate", employee deduction authorization, certification of apprentices and trainees shall be provided to the Contracting Officer's Representative as required by FAR.

1.8 STREET CLOSINGS

The Contractor shall coordinate all requests for street closings with the Contracting Officer in writing 21 days prior to date of requested outage:

a. One lane traffic shall be maintained at all times (except that a total closing may be allowed for specific 8-hour periods).

b. The final street repair shall be completed within 21 calendar days after the start of any street crossing. Any part of the street returned to service prior to final repair shall be maintained smooth with hot-mix cold-lay surface course.

c. Open cuts across paved roads and streets for utility crossings will not be allowed. Utility crossings will be accomplished by boring or jacking procedures only.

1.9 SEQUENCE OF DESIGN/CONSTRUCTION (FAST TRACK)

(a) After receipt of the Contract Notice to Proceed (NTP) the Contractor shall initiate design, comply with all design submission requirements as covered under Division 01 General 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 Contracting Officer, the initial submission failed to meet the minimum quality requirements as set forth in the Contract.

(b) 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.

(c) No payment will be made for any in-place construction until all required submittals have been made, reviewed and are satisfactory to the Government.

1.10 Veterans Employment Emphasis for U.S. Army Corps of Engineers Contracts

In addition to complying with the requirements outlined in FAR Part 22.13, FAR Provision 52.222-38, FAR Clause 52.222-35, FAR Clause 52.222-37, DFARS 222.13 and Department of Labor regulations, U.S. Army Corps of Engineers (USACE) contractors and subcontractors at all tiers are encouraged to promote the training and employment of U.S. veterans while performing under a USACE contract. While no set-aside, evaluation preference, or incentive applies to the solicitation or performance under the resultant contract, USACE contractors are encouraged to seek out highly qualified veterans to perform services under this contract. The following resources are available to assist USACE contractors in their outreach efforts:

U.S. Department of Labor Veterans' Employments and Training Service (VETS):
www.dol.gov/vets

Federal Veteran Employment Information:
<https://www.fedshirevets.gov/>

Veterans Opportunity to Work (VOW) Program:
<https://www.benefits.va.gov/vow/>

U.S> Army Warrior Transition Command Employments Index:
<https://wct.army.mil/modules/employers/index.html>

Hiring Our Heros:
<https://www.uschamberfoundation.org/hiring-our-heroes>

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

SECTION 01 00 50

FORMS AND ATTACHMENTS

PART 1 GENERAL

Listed below, and attached at the end of this section, are forms and attachments referred to into other parts of the technical specifications.

1.1 SUBMITTAL REGISTER

In this section.

1.2 TRANSMITTAL FORM (ENG FORM 4025-R)

See Section 01 33 00 SUBMITTAL PROCEDURES

1.3 ACTIVITY HAZARD ANALYSIS (AHA)

See Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS

1.4 ACCIDENT INVESTIGATION REPORT (ENG FORM 3394)

See Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS

1.5 SWL FORM 463

See Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS

1.6 OSHA FORM 300 & 301

See Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS

1.7 RMS-QCS MONTHLY INJURIES-ILLNESSES & EXPOSURE

See Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS

1.8 SAFETY PERFORMANCE SIGN

See Section 01 14 00.00 46 WORK RESTRICTIONS

1.9 PROJECT IDENTIFICATION SIGN

See Section 01 14 00.00 46 WORK RESTRICTIONS

1.10 USACE-LITTLE ROCK DISTRICT NATIONAL BACKGROUND SCREENING
CONSENT/RELEASE FORM (SSCI-2013)

See Section 01 15 10.10 46 AT/OPSEC SITE SECURITY REQUIREMENTS

1.11 OPTIONAL FORM 306

See Section 01 15 10.10 46 AT/OPSEC SITE SECURITY REQUIREMENTS

1.12 SWL Form 487 USACE-SWL CONTRACTOR REQUIRED INFORMATION FORM

See Section 01 15 10.10 46 AT/OPSEC SITE SECURITY REQUIREMENTS

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used

-- End of Section --

01 10 00

STATEMENT OF WORK – DESIGN / BUILD REQUEST FOR PROPOSAL (D/B RFP)

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ATTACHMENTS

Attachment A.....Industry and Military Criteria and Governing Codes

Attachment B.....Concept Design Drawings

Attachment C.....Room Data Sheets

Attachment D.....Site Photos

*Attachment EAs-Built Drawings

Attachment FHydrant Flow Test Results

Attachment GMain Ramp Apron Clearances

Attachment HList of Pyro Room Contents

*Note: Attachment E is provided as a separate electronic file.

PART 1 PROJECT DESIGN CRITERIA

All applicable Federal, State and industry standards, including those not referenced, constitute design criteria for this project. This scope of work presents requirements for various renovations in five facilities located at Ebbing Air National Guard Base (ANGB) in Fort Smith, Arkansas. The five facilities are B201, B202, B214, B216, and B218.

1.1 Design Requirements

Comply with the requirements stated in this Scope of Work document and all applicable codes and regulations. Reference to Attachment A for a list of Industry and Military Criteria and Governing Codes. Comply with versions that are the most current at the time of the solicitation of this design-build contract. In the event of a conflict between requirements, the most stringent applies. The complete library of Unified Facilities Criteria (UFC) and Unified Facilities Guide Specifications (UFGS) is located at: <http://www.wbdg.org>. Also reference the United States Army Corps of Engineers (USACE) Engineering Construction Bulletins (ECBs) at <http://www.wbdg.org/ffc/dod/engineering-and-construction-bulletins-ecb> for recent updates.

1.1.1 Design Criteria

Facility design, materials, equipment, and installation must be in accordance with the requirements of listed codes, design manuals and military criteria (see Attachment A), and in conjunction with industry standard criteria, material and efficient practices. The latest version of building codes may be used as design guides as long as there are no conflicts between standards. In the event of conflicts, the Military and Industry standards take precedence. The building design and the materials selected must meet the specifications set forth in this Request for Proposal (RFP). Contractor is responsible for the code compliance, technical accuracy and coordination of all designs, drawings, specifications, and other documents or publications upon which the design and construction are based.

1.2 Design Submittal

Provide electronic design files for the project as part of design and construction responsibilities. Follow all guidelines, references, and indications in this report when preparing a bid proposal and when designing the five facilities at Ebbing ANGB. Deliver drawings, specifications, calculations, and details as required for a complete construction document package.

PART 2 GENERAL

2.1 General Conditions

Provide all supervision, labor, materials, equipment, supplies, and transportation necessary to perform the work specified within this Design Build Request for Proposal (DB RFP). The Contractor must be the architect/engineer and constructor of record on this project. For design and construction, utilize an integrated approach that meets the requirements of this RFP while, at the same time is cost effective and establishes synergy among the systems and spaces applicable to the structures as a whole. The design of all architectural and engineering features must be accomplished, reviewed, and approved by professionals licensed to practice in their respective professional field in the United States. Deliver a complete design and do not assume that the provided design criteria and drawings in this solicitation alleviate responsibility of performing any additional design as required to produce a complete set of construction documents.

Employ all design and construction criteria, including but not limited to industry and military criteria and governing codes, from the most current version of the reference that aligns with the date of issue of the solicitation for the design-build contract. The exception to this is if a Unified Facilities Criteria (UFC) document references a specific date of issue of a code or guide referenced therein.

The magnitude of construction for this project is \$25M - \$100M.

2.2 General Facility Descriptions

Construct the five facilities at Ebbing ANGB in accordance with all current and applicable codes. This includes, but is not limited to, accessibility complying with the Architectural Barriers Act (ABA), life safety, fire separations, energy, OSHA, Unified Facilities Code (UFC), and building codes, etc. A brief description of each building is listed below. A detailed description of the scope of work follows this section and is organized by technical discipline. Reference Attachment C for additional requirements.

Building 201 is an existing fire station being repurposed as a storage warehouse facility in support of the F-16 mission. The existing facility is 9,563 gross square feet. The exterior façade requires minor repairs and modification. The interior requires extensive demolition of non-load bearing walls and finishes. Remove and replace all interior finishes.

Building 202 is an existing three-bay hangar with administrative and support spaces. The hangar was originally designed in 2008 to support the A-10 mission and has since been decommissioned. The goal of this project is to renovate the 30,098 gross square foot facility to support the F-16 mission and to restore the three hangar bays to their original functions (Bay 1: Fuel Cell, Bay 2: General Purpose Maintenance, and Bay 3: Wash Bay). As part of this project, renovate existing support functions for current mission needs. The exterior façade requires minor repair. The existing interior configuration is to remain; however, minor modifications are required to meet current code requirements and specific mission needs. Remove and replace the majority of the interior finishes.

Building 214 will be repurposed to an engine repair shop and requires overall repair and renovations of the entire 12,962 SF facility. On the exterior, replace translucent panels and exterior doors. Replace roof. Repair and repaint the existing canopies located to the west and provide a new metal roof. The interior requires minor reconfiguration and the inclusion of a new conditioned parachute room.

Building 216 was originally designed as shop facility with the interior configured with large shop spaces, classroom, office, and support spaces. Renovate and restore to its original function the 17,500 gross square foot facility in support of the F-16 and F-35 missions. The exterior requires minor repair and modification. Provide an approximately 1,400 gross square foot addition to accommodate a distinguished visitor's (DV) meeting area. Add a screen wall on the south side of the sidewalk from the parking lot to the building to screen the view of the service vehicle parking area. This facility will have two secure areas; the first a United States Secret Clearance Access Area in accordance with DoDM 5200.01 V3, and the other to provide Special Access Program Facility (SAPF) space for F-35 secure operations in accordance with the Technical Specifications for Construction and Management of Sensitive Compartmented Information Facilities – IC Tech Spec for ICD/ICS 705 (ICD705) and the F-35 Lightning II Functional Requirements Document (FRD). Refer to Room Data Sheets and Conceptual Drawings. Selective demolition of interior partitions and modification of structural walls are required to create the spatial relationships of the new mission's program.

Building 218 was originally a 3,359 gross square foot low-slope pre-engineered metal building (PEMB). A 4,420 gross square foot addition was constructed circa the early 2000's. The facility will be extensively repaired and renovated. The original facility with a low slope roof is susceptible to water infiltration. Field observations show no air/vapor barrier has been installed in the original facility wall system and the roof system requires replacement. Remove and replace the exterior envelope (roof panels, metal wall panels, doors, and windows) to meet current codes and prevent further water infiltration. Reconfigure partition walls for the new layout. Design a hardened pyro room to meet material explosive classification as defined within Section 3.7.13 of this RFP. The existing addition requires minor repair work and replacement of damaged glazing

PART 3 TECHNICAL REQUIREMENTS

3.1 General

See below for the building locations and Attachment C for the project location. Coordinate construction limits with Base Civil Engineer Squadron to minimize impact on Base operations. Provide fencing and/or barriers to secure the work area from the airfield, apron, and sunshades.

3.1.1 Existing Conditions

3.1.1.1 Site

This project consists of the renovation of five (5) buildings (B201, B202, B214, B216, and B218) at Ebbing ANGB, Fort Smith, Arkansas.



Figure 3.1.1.1-1 - Building Locations

3.1.1.2 Surface Conditions

- 3.1.1.2.1 Building 201 is an existing fire station. It is currently bordered by aircraft or vehicular concrete pavement on the south and east sides. The north and west sides are primarily concrete sidewalks, bordered by areas of lawn.
- 3.1.1.2.2 Building 202 is bordered on the north, east, and south sides by aircraft or vehicular concrete pavement, and on the west by concrete sidewalks and vehicular pavement. There is an area of lawn on the west side of Building 202.
- 3.1.1.2.3 Building 214 is bordered on the north, east, and west sides by concrete vehicular pavement. The area to the south is lawn.
- 3.1.1.2.4 Building 216 is bordered on its north side by a rectangular concrete flume that separates it from a parking lot and an area of lawn. The east side is bordered by concrete sidewalk that separates it from the lawn area. The concrete flume continues down the east side of the building, separating it from Building 218. The south side of the building is bordered by concrete pavement, with a section having a landscaped strip adjacent to the building. The southern portion of the west side is adjacent to the service yard parking area. The northern portion of the west side is a landscaped area. The landscaped area is separated from an elevated parking area by a V-shaped concrete channel that connects to the rectangular concrete flume. The primary access to Building 216 is from steps from the elevated parking lot.
- 3.1.1.2.5 Building 218 is bordered on the north side by a landscaped area and parking lot. The northern portion of the east side is landscaped, changing to concrete pavement for the south east area. The south side is concrete pavement and the west side is the landscaped area and drainage flume separating Building 218 from Building 216.

3.1.1.3 Utility Services

All of the buildings currently have utility services. Existing utility service information was provided by Ebbing ANGB GIS data. Only Buildings 202 and 216 have fire water service. There are no known deficiencies in utility services.

3.1.1.4 Drainage

The site currently drains by surface and storm drain. Add splash blocks to all downspouts that discharge to grade. Replace the V-shaped channel at Building 216 with a rectangular flume in the area of the addition to improve drainage. Reroute existing downspouts in the area of the Building 216 addition to the flume.

3.1.1.5 Fire Hydrants

Adequate fire hydrants are available to serve the facilities. All buildings are served by at least two fire hydrants.

3.2 Civil Design

3.2.1 Demolition

Demolition activities are needed as a part of the addition to Building 216. In addition to removing two trees and the horseshoe pits, remove and replace approximately 165 linear feet of the existing V-shaped channel.

The proposed addition to Building 218 is in an area of existing concrete aircraft pavement which must be sawcut and removed. Only sawcut at existing joints. Perform concrete pavement demolition in a manner that prevents damage to the existing pavement to remain. Repair any damage to existing pavement at no cost to the Government. Extend the limits of concrete pavement and subgrade removal beyond the addition footprint to an existing pavement joint.

3.2.2 Site Design

Building 201's site work is limited to trenching and restoration for the fire water service connection. There is no site work proposed for Building 202. Building 214's site work is limited to trenching and trench restoration for the fire water service connection. Site design for Building 216 includes adding approximately 165 linear feet of rectangular concrete flume along the west side of the addition, and a brick screen wall separating the building access sidewalk from the service vehicle parking area. Site design for Building 218 is limited to grading and replacement of aircraft paving removed for the new addition.

3.2.2.1 Design Responsibility

Design and construct the site and facilities within the specific site responsibility areas defined.

3.2.2.2 Existing Conditions

Accept the site as-is and be solely responsible for any field survey work required for verification, design, and construction. Do not waste excess soil from within the work area without written approval of the Contracting Officer Representative (COR).

3.2.2.3 Field Office and Laydown Area

Provide a field office and lay down area in accordance with UFGS specification requirements. Use of B201 and B202 for field office and laydown areas is allowed. Stage/phase construction such that new finishes are not damaged.

3.2.2.4 Permanent Utility Connections

Connect all utilities from the buildings to the service lines. All buildings are sub-metered for electricity and natural gas. The Base does not sub-meter for water or sewer.

3.2.2.5 Post-Construction Site Restoration

Upon completion of the project, remove all trailers, materials and equipment. Restore to original or better condition areas used for the storage of equipment or material, or construction use. Remove gravel used to traverse grassed areas and restore the area to its original condition, including top soil, sodding, and seeding as necessary.

3.2.2.6 Temporary Utilities

All temporary utilities are the responsibility of the Contractor. Provide temporary utility services in accordance with UFGS Specification 01 50 00.

3.2.3 Base Utility Information and Design Requirements

On-site utilities are the responsibility of the Base Civil Engineer Squadron. Water and sanitary sewer services to the Base are provided by Fort Smith Utilities Department (FSUD). FSUD provides water service to the water tower; Ebbing ANGB is the water service provider after the water tower. Ebbing ANGB provides sanitary sewer collection on the Base and connects to a FSUD main. Coordinate and plan utility information with the Installation's Civil Engineer Squadron. Obtain a dig permit prior to construction. Verify utility locations and sizes prior to digging. Bring any discrepancies between the drawings and actual conditions to the COR's attention. Determine if the existing services serving the buildings are adequate for the new distribution within the building. Reference Section 3.8 of this RFP for information on electrical utility scope of work.

3.2.3.1 Specification and Regulation Compliance

Comply with Unified Facilities Criteria and Arkansas Department of Environmental Quality specifications and regulations for utility design and construction. Where utilities are not owned by the Installation, comply with the specifications and regulations of the individual utility owner. Comply with Arkansas Department of Environmental Quality regulations regarding the minimum separation distance between water and sanitary sewer facilities.

3.2.3.2 Water

Water distribution and service is owned and operated by the Base. All of the buildings have water meters. Design and install all water systems in accordance with appropriate Unified Facilities Criteria and state of Arkansas regulations. Water distribution systems must conform to all Federal and State Requirements. Where there is a conflict between specifications, the most stringent applies.

3.2.3.2.1 Water Service: Verify current service and the projected redesign loading of the buildings. If required, provide a new water service connection between the buildings and the water main on the buildings. Domestic service and the fire service must be separate taps from the main. Provide shutoff valves on all new domestic water service lines.

3.2.3.2.2 Fire Service Line: Provide a new fire service line connection between B201, B214 and B218 and the existing water mains. Place a Post Indicator Valve (PIV) on the fire line. Wall-mount the PIV on the building. Install new Fire Department Connections (FDCs) for B201 and B214. Meet the requirements of UFC-3-600-01 for location of the FDC relative to a fire hydrant. Locate all FDCs within 150 feet of a fire hydrant.

3.2.3.2.3 Fire Hydrants: No new fire hydrants are required.

3.2.3.3 Sanitary Sewer:

No issues have been reported with the existing laterals. No site sanitary sewer work is required.

3.2.3.4 Natural Gas

Based on current service and the projected redesign of the buildings, it is anticipated that the existing natural gas service is adequate.

3.2.4 Siting

Comply with UFC 3-201-01 Civil Engineering and UFC 4-010-01 DoD Minimum Antiterrorism Standards for Buildings for site design. Verify that the exterior of the building complies with UFC 3-600-01 Paragraph 2-10, Fire Department (Emergency) Vehicle Access. Meet the requirements of ASHRAE 189.1 Section 5.3.2.1 for site hardscaping (sidewalks, courtyards, parking areas, and accesses.)

3.2.5 Site Grading

Verify exterior elevations versus the addition finished floor elevation of Buildings 216 and 218 to provide positive drainage away from the structures. Finish the grade adjacent to the building in accordance with UFCs and geotechnical engineering recommendations and requirements. Slope site grading to drain away from the building and door openings. Convey runoff to existing ditches or piped drainage systems. Slope non-paved drainage away from the building and structures with a minimum of 5 percent slope and a maximum of 10 percent slope at a horizontal distance of 10 feet. Where applicable, provide a drop of 6 to 8 inches at personnel doors without structural stoops. Do not use single riser steps. When steps are required, provide at least three risers and handrails. Meet the requirements of Table 3.1 in UFC 3-201-01, Civil Engineering for all grading. Resolve existing drainage issues at the north end of B218 where the landscape bed adjacent to the building is lower than the sidewalk, trapping water against the building.

3.2.6 Geotechnical

Include on the team a licensed geotechnical engineer to develop earthwork and foundation requirements and design parameters on which to base the proposal. Present foundation type, pavement and earthwork requirements on which the bid is based in the proposal along with the resume of the geotechnical engineer. Subsequent to award, perform and provide a complete geotechnical exploration of the proposed site to develop the final design. Perform the geotechnical exploration under the direction of a licensed professional engineer with at least 10 years of experience specializing in geotechnical engineering. This exploration is the full responsibility of the Contractor and detailed requirements are outlined below.

3.2.6.1 Final Geotechnical Evaluation after Award

Submit a final geotechnical evaluation report prepared by a licensed geotechnical engineer with the first foundation design submittal. This report must summarize the subsurface conditions; provide recommendations for the design of appropriate foundations, floor slabs, retaining walls, embankments, and pavements. In the report, recommend the type of foundation system to be used, lateral load resistance capacities for foundation systems, allowable bearing elevations for footings, grade beams, and slabs. Provide an assessment of post-construction settlement potential including total and differential settlement. Provide recommendations regarding lateral earth pressures (active, at-rest, passive) to be used in the design of retaining walls. Include the Site Class for seismic design along with an evaluation of any seismic hazards and recommendations for mitigation, if required. Include calculations to support the recommendations for bearing capacity, settlement, and pavement sections. Include supporting documentation for all recommended design parameters such as Site Class, shear strength, earth pressure coefficients, friction factors, sub-grade modulus, and California Bearing Ratio (CBR). In addition, provide earthwork recommendations, expected frost penetration, expected groundwater levels, recommendations for dewatering and groundwater control, possible presence of any surface or

subsurface features that may affect the construction of the project such as karst geohazards, sinkholes, boulders, mustow rock, old fill, old structures, soft areas, or unusual soil conditions. The geotechnical recommendation report must be sealed by the engineer of record, who must be licensed as a civil engineer and must have at least 10 years continuous experience in the region. Experience must include evaluation for potential shrink-swell movements of the subsurface materials.

3.2.6.2 Dewatering

In the report, determine project dewatering requirements. If temporary construction dewatering is required due to a high water table, the prepare and present a dewatering plan. Secure all the required information necessary for the design of the system.

3.2.6.3 Additional Borings

Sample any borings with a split spoon sampler in accordance with ASTM D-1586, with samples visually classified at 1.5-foot intervals in accordance with the Unified Soil Classification System (ASTM D 2487). Record the depth to water and Standard Penetration Blow counts. Provide a dated drilling log for each boring drilled. On the contract drawings, present soils information obtained from field logs, laboratory test and geologist's logs in the form of boring plan, final boring logs and explanatory notes.

3.2.6.4 Certification of Compliance with Final Geotechnical Evaluations

Certify in writing that the design of the project has been developed consistent with the geotechnical engineer's final geotechnical report. The certification must be stamped by the consulting professional geotechnical engineer and submitted with the first design submission. If revisions are made to the initial design submission, provide a new certification with the final design submission.

3.2.6.5 Pavements and Parking

Provide in the geotechnical report rigid pavement design(s) including design CBR and modulus of sub-grade reaction and the required compaction effort for sub-grades. Offer information on the types of base course materials available in the area and their design strengths. Include pavement designs in the report. Comply with appropriate Unified Facilities Criteria for the pavement design, including UFC 3-201-01 Civil Engineering and UFC 3-250-01 Pavement Design for Roads and Parking Areas, UFC 3-260-02 Pavement Design for Airfields, and UFGS 32 13 14.14 Concrete Paving For Small Airfield Projects. Conform to one of the following for pavement design: 1) the USACE Pavement Transportation Computer Assisted Structural Engineering (PCASE) program or 2) American Association of State Highway and Transportation Officials (AASHTO) standard pavement design procedures. Base the design thickness on the soils boring data taken for this project. Do not include increased stiffness from subgrade modification in the pavement thickness design. Use a minimum flexural strength of 650psi for concrete pavement design. Submit a complete and detailed pavement analysis for each design pavement section. The link to Corps Guidance Documents is <http://www.usace.army.mil/publications/>. Specific aggregates for aircraft paving may not be available from local sources.

3.2.6.5.1 Section Thicknesses: Conform to the specified requirements for the pavement design section thickness.

3.2.6.5.2 Portland Cement Concrete (PCC): Regardless of the geotechnical report pavement design, a minimum rigid concrete pavement section for areas required to support fire trucks and organizational vehicles and equipment traffic must consist of at least 8 inches of rigid concrete pavement, on 4 inches of aggregate base course, on 4 inches of aggregate subbase. The minimum rigid concrete pavement design for areas required to support passenger automobile traffic must consist of at least 6 inches of rigid concrete pavement, on 4 inches of aggregate base course, on 4 inches of aggregate subbase.

3.2.7 Landscaping Design

Project landscaping is to be limited to soil stabilization with seeding or sod and tree replacement. Replace trees as required in Specification Section 01 35 10.00. Match existing grass species.

3.2.8 Civil Design Antiterrorism (AT) Measures

Comply with the minimum standards in the AT UFC for the building construction. Eliminate locations of concealment. Design any recessed areas, concealed spaces, and landscape features on the exterior of the buildings with security in mind. Include well-lit alcoves and avoidance of large objects in the landscaped areas. Provide interesting visual features while still providing a safe, accessible and secure environment.

3.2.8.1 Landscape

Do not install landscaping items that could conceal packages within the unobstructed space of the building, per UFC requirements. Provide lockable or screw-type systems for structures, like manholes, located within the unobstructed space of the building to deter opening by unauthorized personnel. Locate trash receptacles and dumpsters outside of the building's unobstructed space per UFC requirements.

3.2.8.2 Flightline Access

Provide Access Control (ACS) and Intrusion Detection (IDS) systems infrastructure in the facilities to control access to the flightline. B201 and B218 require emergency exits that discharge to the flightline. Alarm these doors to deter unauthorized access. The hangar bays of B202 are considered part of the controlled area and do not require additional security measures for egress doors accessing the flightline.

3.2.8.3 Utility Enclosures

Secure electrical transformers and mechanical equipment placed within the building's unobstructed space per UFC 4-010-01 requirements. Although B201 is exempt from the minimum antiterrorism standards, replace the existing utility enclosures with six sided enclosures.

3.3 Architectural Design

3.3.1 General Description

The proposed design for the five facilities at Ebbing ANGB, and their associated site development is indicated in Attachment B. The drawings included in this RFP are conceptual in nature but have been developed with input from the facility users and the Installation to reflect their preferences and requirements. Consider the functional relationships between all buildings to ensure items such as sidewalks, entryways, and building facades enable and enhance interactions of the facilities supporting the F-16 mission.

3.3.1.1 Building 201 Modifications are as follows:

- a. Convert B201 from a fire station to a storage facility in support of the F-16 mission.
- b. Perform minor repairs and selective demolition.
- c. Remove and replace all exterior control and expansion joint sealants.
- d. Completely replace the SSMR system down to structural decking. The original roof is a low-slope roof with parapet. Structure was previously added to support the current standing seam metal roof (SSMR). Refer to the SSMR requirements provided in the roofing section below.
- e. Remove all windows and infill with CMU block with brick veneer to match adjacent construction. Give special attention to waterproofing and flashing at all infilled sections.
- f. Replace six overhead doors; three located on the east elevation and three on the south elevation. The replacement doors are to be solid insulated sectional panels. Sections with vision panels or glazing will not be accepted. The existing rails and motors are in good working order. Contractor may reuse the existing motors provided that a warranty for the replacement doors is provided.
- g. Remove the existing glazed paired entry doors on the south façade. Infill opening with CMU block and brick veneer to match adjacent construction.
- h. Remove the north existing apparatus bay personnel door. Infill opening with CMU and brick veneer to match adjacent construction.
- i. Remove existing west glazed entrance door system and replace with flush insulated metal doors. Paint new doors and new insulated metal frame.
- j. Remove all wood fencing at the existing utility enclosures. Provide metal wall panels and doors that match the utility enclosures near B202. The brick pilasters are to remain. All utility enclosures are within the 33-foot unobstructed space and require a new chain link top in accordance with the construction requirements in UFC 4-010-01.
- k. Provide an ABA compliant single occupant restroom with an ABA compliant water closet, grab bars, lavatory, mirror, service sink, and plumbing accessories. Renovate the existing sleeping room restroom to provide the minimum plumbing fixtures in accordance with UFC 3-420-01.
- l. Demolish interior partitions as indicated in the attachments. Provide double door widths to accommodate a pallet jack at openings in the existing structural walls that are to remain.
- m. Provide a dedicated telecommunications room (TR). The existing facility does not currently have a dedicated TR. There is a comm rack in the existing conference room. Refer to the Telecommunications section of this RFP for additional information.

- n. The existing electrical room is centrally located. The electrical room is to remain. Refer to the Electrical section of this RFP for additional requirements.
- o. Provide all new finishes inside the facility.

3.3.1.2 Building 202 Modifications are as follows:

- a. Repair and renovate facility to restore the original function as an aircraft fuel cell, general purpose maintenance, and wash bay hangar facility in support of the F-16 mission.
- b. Minor repairs, modifications, and selective demolition are required.
- c. Add new egress doors in the hangar bays to meet current life safety and UFC requirements.
- d. Add new emergency shower/eyewash stations in the hangar bays, paint booth, and tank bay.
- e. The SSMR system is existing to remain. A roof replacement is not in scope for B202. Repair existing gutter and downspout at the covered personnel entry. Repair water damage seen at brick veneer in this location.
- f. Provide new fall protection system for the F-16 parked in the tail-in configuration for three bays.
- g. Infill existing door connecting the Men's Restroom to Bay 1.
- h. Reconfigure administrative section north of Hangar Bay 1 to provide a support tool crib and supervisors office.
- i. Provide three overhead doors at the support counter.
- j. Repurpose space within the existing fire pump room created by demolishing foam suppression equipment as a new, enclosed storage room. Provide access via the main corridor. Provide fire rated assemblies as required by NFPA.
- k. Convert two existing CMU block storage rooms in Bay 1 to Secret Collateral Vaults (US Vault and RSAF Vault). The perimeter construction of the rooms will serve as the vault enclosure. The existing CMU block walls will remain. Replace the existing metal deck ceiling and associated structure with a cast-in-place concrete ceiling. Infill overhead door openings with CMU block and provide a new GSA vault door for each vault. No caged day gate is required. Refer to the Concept Design Drawings for additional information.
- l. Convert the existing janitor room and laundry room to a single storage/janitor room. The existing service sink is to remain to satisfy minimum plumbing fixture requirements.
- m. Provide two 5-ton bridge cranes with a 22'-0" minimum hook height. Provide one bridge crane in Bay 2 and a second bridge crane in Bay 3. Provide independent structural columns, new footings, and rails for the bridge crane. Coordinate overhead clearances of the bridge crane model selected with other systems, such as fall protection. The bridge crane coverage area is limited by the existing storage rooms and ramps. Provide a coverage area to the maximum extent possible. The user will primarily use the bridge crane over the nose end of the aircraft in the parked position.
- n. Repair and recertify the existing hoist in the tank bay.
- o. Disassemble and remove all existing equipment and materials in the paint booth room. Provide new finishes – refer to the Room Data Sheets for additional information. Replace the existing paint exhaust/ventilation fans in kind. Existing ductwork associated with the paint room exhaust system are to remain. Repair to ductwork that is associated with the replacement of the fans and connection to the new paint booth. Disconnect all infrastructure from the existing paint booth, capping and protecting during construction, and prepare all existing building/infrastructure

systems for connection by Government. New paint booth equipment will be Government provided and Government installed (GFGI). Coordinate infrastructure connection and scheduling requirements with the Contracting Officer Representative (COR) for new paint booth equipment.

3.3.1.3 Building 214 modifications are as follows:

- a. Patch and repair areas resulting from demolition work to match adjacent surfaces and finishes.
- b. Code upgrades are required, including stairs, handrails, fire separations, and a new communications room.
- c. Remove the offices on the mezzanine and replace with a new conditioned structure. Upgrade the mezzanine stairs to meet NFPA 101.
- d. Recondition existing spaces along the plan south of the facility to be storage spaces.
- e. Demolish the restrooms and upgrade to ABA compliant facilities. Provide a new janitor closet adjacent to them. Meet International Plumbing Code requirements for all fixtures.
- f. Install new fuel resistance resinous five coat epoxy hangar flooring in accordance with UFC 4-211-01 for ground floor areas identified in the room data sheets.
- g. Install a new conditioned parachute room with table for rigging and access to storage along the north portion of the facility.
- h. Replace the exterior doors of the facility. They have impeded functionality due to excessive corrosion. The two large main service doors in the work bay are in good working order and to remain.
- i. Minor upgrades and repairs to the envelope are required. Remove and replace the insulation along the work bay, roof, and walls. Replace the existing translucent panels with new.
- j. Reference demolition section of this RFP for demolition scope. Reference roof and exterior wall requirements section of this RFP for the percentage of the exterior envelope to be replaced.
- k. Existing cranes are to remain. Inspect, service, test, and certify the existing crane. Load capacity is unknown.
- l. Existing clerestory windows are to remain.
- m. Existing canopies located to the west are to remain and require minor repairs including repainting and replacing the metal roof.
- n. Provide a new hydrostatic low slope standing seam metal roof.
- o. Patch and repair areas resulting from demolition work to match adjacent surfaces and finishes.
- p. Remove all existing exterior doors as noted on the concept drawings.

3.3.1.4 Building 216 work includes but is not limited to:

- a. Construct a new addition with a low slope roofing system. See civil site design section of this RFP for site work requirements.
- b. Configure restrooms and showers per ABA.

- c. Provide a United States Secret Clearance Access Area – U.S. Secret Clearance Open Storage Area (Secure Room) in the northwest corner of B216 in accordance with Department of Defense Manual (DoDM) 5200.01 Volume 3, DoD Information Security Program: Protection of Classified Information.
- d. Provide a Special Access Program Facility compliant with F-35 Facility Requirements Document / TEMPEST Area in accordance with UFC 4-010-05 SCIF/SAPF Planning, Design, and Construction and UFC 4-026-01 Design to Resist Forced Entry. Coordinate design, construction, and accreditation with Ebbing ANGB AR Site Security Manager (SSM) and Accrediting Official (AO).
- e. Construct a simulator area and F-35 admin offices.
- f. Construct a command suite and large conference room.
- g. Provide new interior finishes and repair existing walls and floors to receive new finishes.
- h. Infill exterior wall at overhead doors and louvers.
- i. Replace existing roof.

3.3.1.5 Building 218 modifications are as follows:

- a. Provide new exterior envelope consisting of walls, roof, doors and glazing to align with existing low-slope PEMB structure to meet current codes.
- b. Construct a new 972 square foot facility expansion with a 240 square foot exterior overhang entry to the flight line to meet new program requirements.
- c. Include a new communication room in the building expansion area.
- d. Minor work to the large assembly room is required. Adjust the space to provide new sinks, refrigerators, and counters for microwaves to store personnel food and heat meals.
- e. Provide new ABA-compliant restroom facilities, showers, and an adjacent janitor closet. Provide all plumbing fixtures in accordance with International Plumbing Code requirements.
- f. Reconfigure partition walls in the existing circa 2000's expansion to meet RSAF program needs.
- g. Provide a hardened pyro room to be designed to meet the material explosive classification.
- h. Provide upgrades to fire separation partitions as required.
- i. Patch and repair areas resulting from demolition work to match adjacent surfaces and finishes. Reference demolition section of this RFP for requirements.

3.3.2 Demolition

The plans in Attachment B show the intended demolition extents. Inventory and coordinate with Contracting Officer Representative (COR) turn-over to the Government of any and all removed equipment. Dispose of any equipment not returned to the Government.

3.3.2.1 Building 201

- a. Demolish all equipment associated with the existing fire station as well as many interior partitions. Refer to attachments for additional information.

- b. Retain mechanical spaces and the single occupant restroom in their current locations.
- c. Remove existing concrete locker pad and repair concrete slab as required to provide a smooth finished surface along the west wall of the existing apparatus bay.
- d. Remove all plumbing fixtures in the facility.
- e. Remove all millwork and finishes in the facility.
- f. Remove existing mezzanine and associated structure/stairs in the existing northeast apparatus bay.
- g. Remove existing curb in the north restroom that currently holds the washer and dryer. Remove and cap all associated utilities.
- h. Remove all existing windows, glazed openings, and frames.
- i. Remove all existing overhead doors. Track and motors are to remain for reuse.
- j. Remove existing south entrance doors and north apparatus bay door and prepare for infill.
- k. Remove and replace existing west entrance door.

3.3.2.2 Building 202

- a. Minor reconfiguration is required. Refer to Attachment B Concept Design Drawings.
- b. Remove all non-loading bearing screen walls that were constructed in the tank bay, bay 1, and bay 2.
- c. Remove and prepare to infill the east personnel door in bay 1.
- d. Remove and prepare to infill the personnel door connecting the men's restroom to bay 1.
- e. Remove all existing utilities, shelving, brackets, etc. in the laundry room. Demolish partitions as shown in Attachment B between the laundry room and the adjoining janitor room.
- f. Remove all existing millwork, fixtures, appliances, and utilities for the kitchenette in the administrative room north of bay 2.
- g. Remove interior overhead doors for the two storage rooms in bay 1 and the overhead door in bay 3. Prepare to infill with CMU block and specified doors.
- h. Remove existing framing and metal decking at the two storage rooms in bay 1 and prepare to replace with concrete vault ceiling.
- i. Remove foam suppression system equipment in fire pump room. Refer to Fire Protection section of this RFP for additional information.
- j. All items in the existing Men's and Women's Restrooms/Locker Rooms are to remain.

3.3.2.3 Building 214

- a. While some selective demolition is required throughout the facility, much of B214 is to remain in its current configuration to operate as an engine shop. Reuse building elements to the maximum extent feasible.
- b. Demolish existing SSMR System.

- c. Demolish existing ground floor sealed finish of concrete slab in areas identified in Room Data Sheets. Grind and prep structural slab to receive new finish.
- d. Remove and replace interior insulation at work bay walls and roof insulation.
- e. Remove and replace translucent upper wall panels.
- f. Demolish wall panels enclosing the office space at the mezzanine.
- g. Modify/demolish the mezzanine stair railing in accordance with NFPA requirements.
- h. Remove and replace all exterior swinging doors and panels.
- i. Demolish existing kitchen space, restrooms, and adjacent wall for new space configuration.
- j. Conduct inspection, service maintenance, and load certification of existing cranes.
- k. Patch and repair masonry wall partitions as required for abandoned openings

3.3.2.4 Building 216

- a. Secure Areas within Building 216 require the most extensive alteration in accordance with the requirements of UFC 4-010-05 and F-35 FRD. One area is United States Secret Clearance Access Only and an F-35 SAPF/FRD Special Access Area. Selective demolition of interior partitions and modification of structural walls are required to create the spatial relationships of the new mission program. New exterior windows and doors are required in accordance with DoD Minimum Antiterrorism Standards in UFC 4-010-01. Civilian personnel occupy the facility, so it is to be accessible in accordance with ABA Standards.
- b. Demolish existing SSMR System.
- c. Selectively demolish restroom, lockers, and break areas.
- d. Demolish vault and vault door for command suite.
- e. Demolish interior partitions and interior doors.
- f. Demolish interior finishes. Demolish floor finishes to the slab.
- g. Provide new openings in exterior enclosure for egress. The original facility has endured three additions during its life with multiple exterior walls now serving as interior walls.
- h. Patch and repair masonry wall partitions as required for abandoned openings.

3.3.2.5 Building 218

- a. The new addition to the B218 facility requires selective demolition. Much of the facility east of gridline A (as shown in the concept drawings in Attachment B of this RFP) remains in its current configuration. Perform minor demolition for its new purpose. Reuse building elements to the maximum extent feasible.
- b. Remove the exterior envelope to fix moisture and air infiltration issues at the original low-slope PEMB building. Demolish the existing roof, metal wall panels, brick veneer base, and associated swing doors and windows. Reference Attachment B Concept Drawings.
- c. Demolish existing interior partitions, doors, windows, ceiling assembly, and flooring as required for the new space configuration as identified in Attachment B Concept Drawings.
- d. Remove damaged curtain wall system glazing. Repair to match the existing assembly.

- e. Provide any temporary bracing needed for the structural system.

3.3.3 Functional/Operational Requirements

The plans in Attachment B show the intended functional layouts.

3.3.4 Accessibility Requirements

Design the facilities to comply with DoD standards for accessibility for all spaces open to the public or accessed by civilian personnel.

3.3.5 Exterior Requirements

Complement existing buildings when choosing exterior design elements. Design wall types to meet the requirements for energy efficiency, weather protection, air and water infiltration, thermal movement, low maintenance, high durability, and aesthetic appearance. Provide low-maintenance finish materials to the greatest extent possible. Conform to the minimum requirements and allowable options contained within each of the applicable UFGS specification sections.

Design all work in accordance with UFC 3-101-01, Architecture, and UFC 3-301-01, Structural Engineering. Provide wind load calculations for exterior cladding in accordance with UFC 1-200-01 and UFC 3-301-01 with a comparative analysis of the cladding system. Refer to Concept Design Drawings in Attachment B and Room Data Sheets in Attachment C for more information.

3.3.5.1 Roofing System

- 3.3.5.1.1 Existing Standing Seam Metal Roof (SSMR): The standing seam metal roof system for Buildings 202 shows minimal damage. This system is to remain. Remove existing SSMR systems on B201, B214, B216, and B218.
- 3.3.5.1.2 Replacement: The roofs of all facilities, with the exception of B202, will be replaced in their entirety. No repairs will be undertaken as part of this project.
- 3.3.5.1.3 New SSMR System: For new roof systems, provide hydrostatic (structural) fully seamed standing seam roofing panels conforming to Ebbing ANGB requirements and matching the newest building addition roof system. Provide steel formed at the manufacturing plant and conditioned for flatness. Determine panel thickness by the requirements of UFC 3-110-03 Roofing. The minimum gauge for panels is 20-gauge, (.032-inch) thick or greater. Meet deflection and wind load requirements per ASCE 7-22. Provide continuous roof insulation over the entire roof area. Insulation must meet or exceed the requirements of the International Energy Code, Air Force High Performance Building requirements, and all federal mandates. Provide the following warranties for metal roof system: Manufacturer's 20 year no dollar limit weathertight warranty, manufacturer's 20 year no dollar limit factory applied finish warranty, and 2-year installation warranty
- 3.3.5.1.4 Roof penetrations: Flash all existing and new roof penetrations according to the new roof manufacturer's required details for watertight warranty coverage.
- 3.3.5.1.5 Low-Slope Roof: Provide a single-ply membrane roof assembly in accordance with UFC 3-110-03 for the new addition roof at Building 216. Use 80 mil fully adhered TPO Hydrostatic System. Minimize roof penetrations as much as practicable and must be sealed and

waterproofed. Design low-slope roof systems to allow positive drainage toward the facility's exterior. Internal roof drains are not permitted. Provide roof and overflow drains that tie directly into the storm drain. The complete low-slope roof system assembly must be rated and installed to resist wind loads in accordance with ASCE 7-22 and UFC 3-110-03 and validated by uplift resistance testing in accordance with Factory Mutual (FM) test procedures. Do not install non-rated systems except as approved by the Contracting Officer. Submit licensed engineer's wind uplift calculations and substantiating data to validate any non-rated roof system. Furnish the roofing system manufacturer's materials and workmanship warranty for the roofing system. The warranty period must not be less than 20 years from the date the Government accepts the work.

3.3.5.1.6 Roof Insulation: Provide roof insulation that is continuous over the entire roof area. Insulation must meet or exceed the requirements of the International Energy Code, and all Federal mandates. Roof insulation must have an R-value determined per ASHRAE Standard 90.1 and per project energy goals. Roof insulation must also be compatible with attachment methods for the specified insulation and roof system. On portions of the roof where the sloping of structure does not allow the minimum slopes, provide a factory tapered roof insulation system to provide positive drainage of roof system, and to include drainage around curbs, penetrations, and projections through the roof plane. For new construction, provide one layer of the tapered roof insulation assembly factory tapered to a slope not less than 1/2-inch per foot. Provide 1/2- inch reinforced gypsum coverboard over rigid insulation per roof manufacturer's instructions.

3.3.5.1.7 Closed-Cell Spray Polyurethane Foam (ccSPF) may be used at the underside of roof construction to form a continuous layer of insulation that provides part of an air barrier. Conform to requirements of IBC for separating foam insulation from interior exposure. Demonstrate air barrier conformance using test procedures per U.S. Army Corps of Engineers Air Leakage Test Protocol for Building Envelopes.

3.3.5.2 Splash Blocks

Provide splash blocks at downspouts emptying at grade. Splash blocks may be precast concrete, and must be 24-inches long, 12-inches wide and 4-inches thick, unless otherwise indicated, with smooth-finished countersunk dishes sloped to drain away from the building.

3.3.5.3 Fascia, Gutters, and Downspouts

Where required, provide new fascia at insulated roof to match standing seam metal roof and downspouts. Install rectangular discharge at the bottom of the downspout. Provide gutter and downspouts at main entry canopy. Install rectangular discharge at the bottom of the downspout. Provide concrete splash blocks where downspouts exit to daylight. Provide scuppers and downspouts matching the original roof design and construction at Buildings 216 and 218. Building 201 has sustained water damage to the brick facade at the support columns of the covered entry. Repair damage and add a downspout to correct drainage. At Building 202, provide a new gutter and downspout at the covered entrance.

3.3.5.4 Downspouts

Prepare calculations to determine the minimum drainage requirement using the calculation method as specified in the Sheet Metal and Air Conditioning Contractors National Association's (SMACNA) Architectural Sheet Metal Manual. Space supports for downspouts according to the

manufacturer's recommendation for the substrate. Provide complete installation, including elbows and offsets. Form straps and fasteners of metal compatible with the downspouts. Provide downspouts terminating in splash blocks with elbow-type fittings.

3.3.5.5 Scuppers

Provide new scuppers at the addition to B216. Extend the scupper liner through and project it outside of the wall, penetrating to form a bottom drip edge against the face of the wall. Fold outside edges under 1/2-inch on all sides. Join the top and sides of the roof deck lining to a closed flange by a locked and soldered joint. Join the bottom edge by a locked and soldered joint to the closure flange, where required, form with a ridge to act as a gravel stop around the scupper inlet. Provide surfaces to receive the scupper lining and coat with bituminous plastic cement.

3.3.5.6 Curbs and Gutters

Provide contraction joints spaced every 10-feet maximum unless otherwise indicated. Cut contraction joints 3/4-inch deep with a jointing tool after the surface has been finished. Provide expansion joints 1/2-inch thick and spaced every 100-feet maximum unless otherwise indicated.

3.3.5.7 Exterior Soffits

Include high-performance coatings at exterior soffit systems. Where soffit abuts other materials, provide trim accessories of the same material and finish as the soffit material. Where ventilation is required, provide a soffit/ridge/louver/ventilator ventilation system with air quantities complying with the IBC. For unvented spaces, provide sealed soffits to maintain the integrity of the air and insulation barrier systems. Metal soffit panels must be factory-formed and factory-finished. Use factory-applied sealant inside laps.

3.3.5.8 Exterior Walls

Repair exterior walls to match existing as required at all facilities. Repair joint sealants as needed. New exterior wall appearance is to match existing facility and harmoniously tie into the visual character of the adjacent facilities. The metal exterior wall systems for Buildings 201, 202, and 214 show minimal damage. The existing wall system is to remain; patch and repair as required. Assume no more than 10% of the metal wall panels require repair and replacement. Match the existing wall system at the repaired metal wall panel system assembly. Replace Building 214's translucent panel walls with new translucent panels compatible with the existing metal wall panels. Provide a new wall panel system at Building 218's original low-slope PEMB building portion. Provide new metal wall panels conforming to Ebbing ANGB requirements and matching newest B218 building addition wall system.

3.3.5.8.1 Metal Wall Panel Exterior Enclosure: Design all work to comply with UFC 3-101-01, Architecture, and UFC 3-301-01, Structural Engineering, and the following requirements:

Wind Loads: Provide wind load calculations for exterior cladding in accordance with UFC 1-200-01 and UFC 3-301-01 with a comparative analysis of the cladding system to be provided.

Water Penetration: No water penetration must occur at a pressure of 8-psf (39-Kg/m²) of fixed area when tested in accordance with ASTM E 331.

Insulating Value: Comply with UFC 3-101-01 for the ASHRAE requirements defining the minimum insulating value of the complete wall system.

Warranty: Provide 20-year finish warranty directly to the Government, commencing at time of Government's acceptance of the roof work.

Factory Color Finish: Provide panels with a factory-applied, baked coating to the exterior and interior of metal wall panels and metal accessories. Provide exterior finish topcoat of 70 percent polyvinylidene fluoride (PVDF) resin with not less than 0.8 mil dry film thickness (DFT). Provide exterior primer standard with panel manufacturer but not less than 0.8 mil dry film thickness (DFT)

Design the wall system and attachments to resist wind loads as determined by ASCE 7-22, with a safety factor appropriate for the material holding the anchor.

3.3.5.8.2 Exterior Wall System: Anchored Brick Veneer with Structural CMU backing (B216 Addition)

Provide 8-inch by 8-inch by 16-inch nominal standard gray concrete masonry units (CMU) structural wall, fluid-applied air/moisture barrier, continuous board insulation at the exterior face of structural CMU, 2-inch min air space, and modular face brick. The interior face of exterior structural CMU walls must have either a paint finish or metal furring and gypsum board with a paint finish.

Meet or exceed the requirements of ASHRAE 90.1 for energy performance and comply with UFC 3-101-01 requirements for all exterior wall construction assemblies.

3.3.5.8.3 Exterior Wall System: Double Wythe Framed Wall (Building 218 envelope & addition)

Provide PEMB structure with 24-gauge (minimum) factory-formed wall panels with concealed attachments and high panel corrugations mechanically attached. Use a modular brick dimension and match the existing facility addition at the lower masonry wall. Provide joints in masonry walls to accommodate thermal movement, expansion, and shrinkage of wall materials, and construction to avoid cracks in masonry units and mortar joints. Provide a 2-in. minimum clear dimension from the face of cavity insulation and sheathing material to the back of the exterior wythe of masonry.

Meet or exceed the requirements of ASHRAE 90.1 for energy performance and comply with UFC 3-101-01 requirements for exterior wall construction assemblies.

3.3.5.9 Exterior Painting

Comply with Master Painter Institute (MPI) standards for commercial quality coatings. As a minimum, apply SSPC PA Method 1 to all surfaces. Follow MPI Architectural Painting Specification; recommendations noted are considered to be required. Paint all exposed unfinished surfaces unless otherwise noted. Include as a minimum a prime coat as recommended by the finish coating system manufacturer and two finish coats.

Select paint systems for the project in accordance with the MPI Architectural Painting Decision Tree available in the Whole Building Design Guide. Use this interactive MPI Decision Tree website to identify the project's applicable paint system(s). The MPI Decision Tree identifies paint systems for each interior or exterior coated surface in "Normal" or "Aggressive" environmental

conditions and generally lists the applicable paint systems in descending order of performance. The paint system at the top of each substrate list generally indicates the highest-performing acceptable coating system.

Choose paints that provide performance, are environmentally friendly, and conform to EPA or local environmental regulations, whichever requires the lowest VOC content.

3.3.5.10 Exterior Sealant

For joints on vertical surfaces, provide ASTM C920, Type M, Grade NS, Class 25, and use NT. For joints in horizontal surfaces, provide ASTM C920, Type S or M, Grade P, Class 25, Use T. All joints in exterior walls must receive foam backer rod and sealant application. Seal masonry joints at windows, doors, masonry expansion joints, lintel, and sill flashing.

3.3.5.11 Exterior Doors and Frames

Replace rusted, damaged doors or doors not conforming to NFPA requirements where required. B214 exterior doors show excessive deterioration and require replacement through the facility. In B216, replace doors where receiving new building wall system. Assume that no more than 20% of existing doors will be replaced in areas not directly affected by floor plan modifications.

At new exterior doors to the facility, provide insulated steel doors and meet the requirements of UFC 1-200-01, UFC 4-010-01 and antiterrorism requirements.

Test exterior doors, frames, and hardware in accordance with ASTM F 2247. Steel (hollow metal) insulated flush single doors must be a minimum 3-feet by 7-feet and steel (hollow metal), insulated, flush double doors must be 6-feet by 7-feet unless required otherwise.

Meet SDI/DOOR A250.8, Level 3, physical performance Level A, Model 2 at all flush steel exterior doors and frames with insulating core construction. All steel door frames must be welded. Exterior doors must have top edge closed flush and sealed to prevent water intrusion and a minimum thickness for doors must be 1 3/4-inches.

Include aluminum thresholds and aluminum-housed weather seals at all doors. Provide paint finish at all exterior doors unless doors and frames are aluminum storefront type. All drips at exterior door head locations must be aluminum.

Refer to door hardware section of this RFP for door hardware requirements.

3.3.5.12 Exterior Overhead Doors

Overhead sectional doors must be installed with aluminum frames, be provided with glazing as required, and be provided with all required operating hardware, tracks, and supports for electrical operators. Comply with ANSI/DASMA 102 - American National Standard Specifications for Sectional Overhead Type Doors. Verify electric requirements available at building location for the selection of motor.

Coiling overhead exterior doors must be insulated, be provided with glazing as required, and be provided with all required operating hardware, tracks, and supports for electrical operators. Comply with ANSI/DASMA 102 - American National Standard Specifications for Coiling Overhead Type Doors. Verify electric requirements available at building location for selection of motor.

3.3.5.13 Exterior Storefront Doors, Windows, and Glazing

Provide prefinished aluminum storefront entrances and window systems at locations identified in this RFP, and at locations and general configurations shown in Attachment B Concept Design Drawings.

Prefinished aluminum storefront entrance doors and glazing assemblies must have a fluoropolymer finish or clear anodized aluminum finish, insulated laminated low-e tinted glazing to meet all code required structural design, wind loads, air infiltration, water penetration, and energy performance (ASHRAE 90.1), and Appendix M Memorandum requirements.

Storefront window frames must be extruded aluminum shapes with removable glass stops and glazing beads for frames accommodating fixed glass. Provide aluminum alloy for doors and frames; ASTM B221M, ASTM B221, Alloy 6063-T5 for extrusions; ASTM B209M, ASTM B209, alloy and temper best suited for aluminum sheets and strips.

3.3.5.14 Exterior Glazing

Window systems, including glazing, framing, connections, and support structures, do not have to be designed, analyzed, or tested for blast resistance; however, exterior glazing and components must be designed to minimize hazardous fragmentation by meeting the prescriptive requirements outlined in Standard 10. This facility complies with Standard 10.

Provide complete systems, including but not limited to framing, mullions, trim, glazing, sealants, insulation, fasteners, anchors, accessories, concealed auxiliary members, and attachment devices for securing the wall to the structure as required.

3.3.5.15 Exterior Wall Louvers

Where required, provide prefinished aluminum, fixed blade 45-degree minimum slope drainable wall louvers with insect screens. Wall louvers must meet wind loads as defined in accordance with ASCE 7-22 and be AMCA certified for expected wind driven rain. Comply with UFC 4-010-01 standards for intake louvers. Provide a finish color matching the existing facility finishes. Provide sill flashing with sloped drain pan at base of louver to collect moisture that migrates down the interior face of the louver. This sill flashing must drain water to the outside of the building.

3.3.5.16 Handrails/Guardrails

Upgrade existing stair railing and risers to meet NFPA 101 requirements. Where required by the final design solution, provide railing compatible with the existing rail system. Grind and finish all joints. Repaint the railing as required. Color selection is subject to approval by the Contracting Officer's Representative.

3.3.5.17 Door Hardware

Provide exterior and interior door hardware in a satin stainless or chrome finish (BHMA 630 for exterior or 626 for interior), unless noted otherwise. Provide stainless steel exterior hardware. Provide hardware components and keying in accordance with ABA and USAF requirements for accessibility, and NFPA 101 requirements for life safety. All lock hardware must match Ebbing ANGB master lock system. Use concealed-style hardware devices whenever possible. Reinforce all doors and frames as needed to accommodate the hardware. Provide locking hardware at all

doors unless noted otherwise. Configure exterior door hardware for doors to swing out in accordance with antiterrorism minimum standards per UFC 4-010-0 and as specified in other sections of this RFP. Provide the services of an Architectural Hardware Consultant (AHC) or equivalent hardware consultant to review and approve the hardware design and construction submittals. Master keying and individual room keying requirements must be in accordance with the instructions provided by the facility users at a required pre-delivery conference.

- 3.3.5.17.1 Hinges: Provide minimum three per door leaf, BHMA A156.1, 4 1/2-inch by 4 1/2-inch (minimum), stainless steel, BHMA 630 finish, ball bearing hinges, non-removal pins for security doors.
- 3.3.5.17.2 Locksets: BHMA A156.13, Series 1000, Operational Grade 1, Security Grade 2, escutcheons not less than 7-inch by 2 1/4-inches with a bushing at least 1/4-inch-long, BHMA 630 finish. Provide lever-style handles of design. Provide electromagnetic locks at GSA Vault Doors.
- 3.3.5.17.3 Card Key System: Provide card key type access units for specialized entries as required by the program. Provide lithium battery powered, magnetic stripe keycard locksets that are ANSI/BHMA A156.13, Series 1000, Grade 1, mortise or ANSI/BHMA A156.2, Series 4000, Grade 1, cylindrical locks, tamper resistant, UL listed with 1-inch (25-mm) throw deadbolt, 3/4-inch (19-mm) throw latch bolt, auxiliary dead-locking latch, and 2 3/4-inch (68.75-mm) backset. The latch and dead bolts must be operated simultaneously by rotating the inside lever. Locks with mechanical override lock cylinders are not acceptable. Locks must be operated only by a correctly encoded keycard. The use of a newly issued keycard automatically re-keys the lock and voids the previous keycard. The lock must re-lock immediately after the outside lever is turned and the latch retracted. Locks must have a memory that can record up to 140 entries into each room, identification of the keycard used to access the room, and the date and time of entry. Entry information of the lock must be retrievable by a data key that can be inserted into the lock and then taken to the front desk printer to display information. Other components that are required for this system at the front desk are a personal or laptop computer, printer, and encoder to program each key.
- 3.3.5.17.4 Exit Devices: BHMA A156.3, Grade 1, BHMA 630 finish. Provide adjustable strikes for rim type and concealed vertical rod devices. Provide open back strikes for pairs of doors with mortise and vertical rod devices. Provide touch bars in lieu of conventional crossbars and arms. Provide escutcheons, not less than 7-inches by 2 1/4-inches.
- 3.3.5.17.5 Closers: BHMA A156.4, Series C02000, Grade 1, with PT 4C (unless otherwise noted), BHMA 630 or 689 finish. Provide with brackets, arms, mounting devices, fasteners, full size covers except at storefront mounting, and other features necessary for the particular application. Provide closers on all fire rated, apparatus bay shops/ storage, corridors, or acoustic doors.
- 3.3.5.17.6 Coordinators: Provide for pairs of doors with closers, BHMA 630 or aluminum with 689 finish.
- 3.3.5.17.7 Weather Stripping and Thresholds: Provide adjustable weather stripping (1.25-CFM air leakage rate, maximum) and aluminum thresholds and retainers at all exterior doors.
- 3.3.5.17.8 Rain Drips: For all exterior doors that open to the outside, where the door swing area is not covered by an overhang, provide top and bottom rain drips complying with ANSI R3Y535 as a minimum.

3.3.5.17.9 Soundproofing Gasketing: Provide soundproof gasketing at all sound rated door assemblies as tested.

3.3.5.17.10 Kick Plates: Provide stainless steel, BHMA 630 at restrooms and janitor closets.

3.3.5.17.11 Hardware for storefront doors can be provided by the storefront door manufacturer as required to meet the tested assembly criteria and meet the minimum requirements of this Section.

3.3.5.17.12 Stops: Provide stops in accordance with BHMA A156.16. Use a BHMA 630 finish.

3.3.5.18 Non-Destruction Emergency Access System

Provide a non-destructive emergency access system with a Rapid Entry System and a 3200 series Knox Box at all facilities without an existing system. Locate one Knox Box within plain sight near the main entrance of all facilities (coordinate location with Fire Department) and place a second Knox Box near the entrance to the mechanical room.

3.3.5.19 Finish Hardware

Provide ANSI/BHMA Grade 1 hardware and Series 1000 mortise locksets. Plastic cores are unacceptable. Provide closers with option PT4C for all exterior doors, all doors opening to corridors, and as required by code. Install exit devices at all building egress doors, and from other areas as required by code, based on occupancy type. Provide weather stripping, thresholds, and door sweeps at all exterior doors. Provide hinges with anti-friction bearings. Provide kickplates at doors located in high traffic areas. Meet the requirements of the base keying system for door hardware finish. Provide 7-pin removable cores.

3.3.5.20 Auxiliary Hardware

Provide wall mounted stops for all doors which have no overhead holder/stops. Provide wall backing as required for wall mounted stops at framed walls. Provide other hardware as necessary for a complete installation.

3.3.5.21 Hardware for Fire Doors

Install hardware for fire doors in accordance with the requirements of applicable codes. Exit devices installed on fire doors must have a visible label bearing the marking "Fire Exit Hardware." Other hardware installed on fire doors, such as locksets, closers, and hinges must have a visible label or stamp indicating the hardware items have been approved by an approved testing agency for the installation on fire-rated doors. Install hardware for smoke-control door assemblies in accordance with applicable codes.

3.3.5.22 Exterior Windows

- a. Building 201: Infill all existing glazing.
- b. Building 202: All glazing is existing to remain. The record drawings indicate the storefront system is impact resistant in accordance with antiterrorism minimum standards.
- c. Building 214: All glazing is to remain.
- d. Building 216: Provide new glazing at new facility addition.

- e. Building 218: Repair damaged curtainwall glazing and provide new glazing in new wall assembly.

3.3.5.23 Exterior Signage

Provide exterior signage at the facility conforming to base requirements and in accordance with UFC 3-120-01.

3.3.6 Interior Requirements

Provide durable sustainable materials and furnishings, easily maintained and replaced. Provide interior surfaces which are easy to clean. Finishes must conform to the requirements of the IBC, NFPA and UFC 3-600-01. Where code requirements conflict, the most stringent code requirement must apply. Refer to Concept Design Drawings in Attachment B and Room Data Sheets in Attachment C for more information.

3.3.6.1 Acoustical Requirements

Design new doors, new interior partitions, and ceilings to provide for attenuation of sound transmission and impact noise from internal sources, in accordance with applicable criteria. Comply with the minimums given in UFC 1-200-01 and UFC 3-101-01.

Sound conditions (and levels) for interior spaces, due to the operation of mechanical and electrical systems and devices must not exceed levels as recommended by ASHRAE handbook criteria. Provide acoustical treatment for drain lines and other utilities (HVAC) to prevent noise transmission into the interior of public spaces. Provide STC ratings in compliance with UFC 4-610-01 Administrative Facilities.

3.3.6.2 Interior Systems Access

Design building systems to all access for removal, repair, and maintenance of mechanical equipment, plumbing equipment, and fire dampers. Include removable panels, access doors, and other solutions in the design as required.

3.3.6.3 Housekeeping Pads

Provide concrete housekeeping pads for new mechanical and electrical equipment locations.

3.3.6.4 Interior Walls (Partitions)

3.3.6.4.1 Concrete Masonry Units (CMU) Walls: New interior walls must generally be concrete masonry units to match existing conditions. Paint the interior face of the exterior walls with exposed CMU block. Finish CMU block surfaces with a uniform texture and free of surface imperfections that would adversely affect the intended finished appearance.

3.3.6.4.2 Metal Stud Interior Partition Walls: Construct interior metal stud partition walls using galvanized metal studs and mold resistant / anti-microbial glass-mat gypsum panels in unconditioned, semi-conditioned areas or as required. Provide gypsum panels which are 5/8-inch-thick minimum and meet ASTM C1396/C1396M. Provide Type 'X' gypsum panels for fire-resistance-rated assemblies and higher density core for STC acoustical rated assemblies. Provide 5/8-inch-thick abuse-resistant glass mat gypsum panels meeting ASTM C1629/C1629M on walls in corridors and maintenance areas, and walls adjacent to assembly

areas. Provide cement backboard for walls with tile and/or walls with plumbing fixtures and shower enclosures with solid surface panels. Provide mold resistant / anti-microbial gypsum wallboard for janitor rooms walls and ceilings of toilet rooms meeting ASTM D3273. Apply gypsum board to framing and furring members in accordance with ASTM C840 or GA 216. Refer to UFC 3-101-01 for required wall STC ratings. Finish all interior metal stud walls with gypsum wall board and apply a painted finish. Finish interior gypsum wall and ceiling surfaces to ASTM C 840 and GA 214 and GA 216. Provide a Level 4 finish unless otherwise noted and a Level 3 finish when overlaid by tile. Metal studs must have a galvanized coating ASTM A653/A653M, G-60; aluminum coating ASTM A463/A463M, T1-25; or a 55-percent aluminum-zinc coating. Provide support systems and attachments per UFC 3-310-04, "Seismic Design for Buildings" in seismic zones. Install metal support framing in accordance with ASTM C754. Provide rubber resilient wall base at areas receiving carpet, resilient flooring, static dissipative, and sealed concrete flooring. Rubber wall base material must be 1/8-inch-thick minimum and must conform to ASTM F 1861. Provide a metal cove base at restroom areas. Do not install interior wall sheathings or finishes prior to construction meeting required interior environmental conditions. This includes glass-mat gypsum wallboard, cementitious backer board, all applied finishes, and materials subject to mold and mildew. Acceptable environmental conditions are as follows: building is completely dried-in, including roofing system, wall vapor barrier, thermal envelope, exterior windows, and exterior doors. Temperature and humidity ranges must comply with the manufacturer's directions and technical specifications for specific products.

3.3.6.4.3 Fire-Rated and Smoke Partitions: Provide fire-rated partitions per code. Extend fire-rated partitions from the concrete floor slab to the underside of the roof deck above. Seal openings and penetrations through partitions around comm rooms, mechanical rooms, electrical rooms and other locations indicated on the drawings to prevent the passage of smoke.

3.3.6.4.4 Firestopping: Provide fire stopping using UL-approved systems. Provide details of such systems in the drawings. A Qualified Fire Protection Engineer (QFPE) must review and approve the fire stopping systems. The fire stopping installer must be approved by the manufacturer. The system must include a listed and approved F and T rating for both horizontal and vertical installations. Indicate locations and types of all fire stopping systems on the drawings.

3.3.6.4.5 Retractable Partitions: Provide retractable partitions and associated work, including tracks and anchoring systems in Building 216 between rooms 109A and 109B. Provide a sound barrier equal to, or greater than, the sound rating of the partition at wall assemblies above retractable partitions. Operable panel partitions must be factory finished, supported from an overhead track without floor guides, and include all hardware, track, and accessories necessary for operation. The suspension system must consist of steel or heavy-duty extruded aluminum track connected to the structural system by threaded rods and trolleys designed to support the partition's weight. Provide steel track of 16 gage minimum, phosphate treated and finished, or zinc or cadmium coated, or provide an extruded aluminum track with a minimum thickness of 1/8-inch (3.2-mm). Tracks must have an integral ceiling guard. Trolleys must have at least two ball-bearing nylon or steel-tired wheels spaced according to the manufacturer's design criteria and four at an end post.

3.3.6.5 Casework

Provide casework which is a commercial grade medium density fiberboard (MDF) or medium density particleboard substrate with a plastic laminate finish. Provide, at a minimum, a plastic laminate finish at exposed fronts and ends of cabinets, door, and drawer fronts. Provide door

and drawer fronts which are 3/4" thick. Provide 1/2" minimum shelves able to withstand 45 lbs. Provide thermally fused melamine at cabinet tops, wall bottoms, and concealed and semi-concealed surfaces. Rapidly renewable materials are encouraged for casework materials. Provide hardware complying with ANSI/BHMA A156.9.

Conform to and comply with the Custom Grade quality standards as outlined in the AWI AWS section for laminate-clad cabinets for all materials, construction methods, and fabrication. Provide countertops made of solid surface material (SSM) with an integral backsplash and apron. Provide solid surface counter-mounted lavatories and vitreous china wall-mounted lavatories.

3.3.6.6 Building 216 Secure Access Areas

3.3.6.6.1 United States Secret Clearance Access: US Secret Clearance or higher access area in accordance with DoDM 5200.01 Volume 3 for Open Storage Area (Secure Room). Provide interior and exterior wall assemblies, floor assemblies, roof assemblies, ceiling assemblies, and interior and exterior door assemblies in accordance with DoDM 5200.01 Vol 3 and UFC 4-026-01 Design Against Forced Entry. VIPER EM Simulator room is a US Secret Secure space. All interior walls around and within identified areas must be ICD 705 Type A Sound Group 4. Provide STC 50 minimum rating at walls and STC 55 minimum rating at secure doors. No exterior windows are proposed for these areas. Access Control System will utilize Government issued Common Access Card (CAC).

3.3.6.6.2 Special Access Program Facility (SAPF) Construction: Special Access Program Facilities information will be handled and stored in this facility. "Open Storage Area" of classified information will occur within this facility. Comply with UFC 4-010-05 SCIF/SAPF Planning, Design, and Construction, ICD/ICS 705 Technical Specifications for Construction and Management of Sensitive Compartmented Information Facilities (ICD 705), and the F-35 Facility Requirements Document (FRD) with any specific items for the F-35 A and F-35 B. The most restrictive and highest level of protection from any document takes precedence. Equip the SAPF areas with protective construction in accordance with UFC 4-026-01 Design to Resist Forced Entry and devices to guard against information loss. Acoustical And Radio Frequency (RF) shielding protection measures are designed to protect Special Access information against being inadvertently overhead and intercepted. Provide Radio Frequency Shielding on all six sides, including above the concrete slab on grade and under the finish floor material at all SAPF areas. A true RF shielded ceiling above a finish ceiling is acceptable. Fully connect and seal walls, floors, and true ceilings. Comply with ICD 705, Chapter 3, Figure 2, Wall B – Suggested Construction for Expanded Metal and Sound Group 4 at all interior wall assemblies within the SAPF perimeter and Man Trap perimeter (identified on plans). Provide STC 50 minimum rating at walls and STC 55 minimum rating at secure doors.

3.3.6.7 Interior Doors

Fire rate interior doors where required. Provide Level 2 hollow metal frames in accordance with ANSI/SDI A250.8 (SDI 100). Provide face welded frames as defined in ANSI/SDI A250.8-2014, 2.4.1.3. Provide kick plates at doors with heavy visitor traffic. Provide security doors and hardware at necessary locations. Paint door frames with an enamel finish. Provide stainless steel interior door hardware. Insulate doors serving unconditioned areas.

3.3.6.7.1 Interior Steel Doors: Interior steel doors must be hollow metal steel, unrated, and fire-rated as identified or required by code or other criteria. Provide single or pair doors as indicated on the

Concept Design Drawings. Provide 16-gauge minimum interior doors. Meet SDI/DOOR A250.8, Level 3 requirements. Form doors to sizes required. Refer to UFC 3-101-01 for STC ratings. Fabricate interior hollow metal doors from hot dipped zinc coated steel, alloyed type, that comply with ASTM A924/A924M and ASTM A653/A653M. The coating weight must meet or exceed the minimum requirements for coatings having 0.4 ounces per square foot, total of both sides, i.e., A40. Repair damaged zinc-coated surfaces by the application of zinc dust paint. Thoroughly clean and chemically treat to insure maximum paint adhesion. Factory prime as specified in SDI/DOOR A250.8.

Interior Wood Doors: Provide wood doors at administration and office areas. Standard interior doors must be flush solid core wood doors with good or better grade birch veneer. Conform to WDMA 1.S. 1-A. Door frames must be welded 16-gauge steel for SDI/DOOR A250.8 Level 2 doors. Provide fire rated doors and STC-rated doors as required. Metal doors may be used when wood doors do not meet the requirements of the mission. Hardwood veneers must be plain-sliced and book-matched. Doors must be factory-stained, finished, and prepared for door hardware. Where glazed openings are required, use the manufacturer's standard wood moldings. Moldings for doors to receive a natural finish of the same species and color as the face veneer. Unless noted otherwise, provide vertically oriented narrow-view glass panels, approximately 4 inches by 24 inches, in doors to private offices. Doors required to have an STC rating must be a tested assembly that includes door and frame, certified to achieve the STC rating equal to or higher than the partition wall it is installed in unless noted otherwise. At all interior doors, provide solid core hardwood veneer with a clear factory finish. Provide kick plates at doors with heavy traffic. Provide security doors and hardware at necessary locations. Provide hollow metal doors where serving the apparatus bay, restrooms, and janitorial rooms. Provide insulated doors where serving unconditioned areas.

3.3.6.7.2 Interior Overhead Doors:

Provide coiling overhead interior doors with all required operating hardware, and supports for electrical operators. Comply with ANSI/DASMA 102 - American National Standard Specifications for Coiling Overhead Type Doors. Verify electric requirements available at building location for selection of motor.

3.3.6.7.3 GSA Vault Doors:

Provide GSA labeled, secure vault doors. Doors must conform to FA AA-D-600 Class 5V, Style K, Design S.

3.3.6.8 Interior Door Hardware: Refer to Door Hardware section above.

3.3.6.9 Specialties

3.3.6.9.1 Enclosures: Provide toilet enclosures and entrance screens of solid phenolic material with integral color Type III, Style A, floor supported or wall hung. Specify tamperproof fasteners and recessed accessory items to the greatest extent possible. Provide stainless steel hardware. Provide accessible stalls with grab bars to meet ABA criteria. Provide blocking as required to support partitions.

3.3.6.9.2 Toilet Accessories: Provide new stainless steel satin finish toilet accessories to meet Base standards.

- 3.3.6.9.3 Urinal Screens: Provide urinal screens of solid phenolic material with integral color Type III, Style A, floor supported, or wall hung. Secure wall-hung urinal screens with continuous flanges to the urinal screen and wall. Provide blocking as required to support screens.
- 3.3.6.9.4 Plumbing Accessories: Provide new stainless steel, commercial grade, satin finish plumbing accessories to meet Base standards. Provide ABA compliant plumbing accessories. Provide blocking as required for support.
- 3.3.6.9.5 Fire Extinguishers and Cabinets: Furnish and install fire extinguishers as required by applicable codes and criteria. Provide 10-pound minimum fire extinguishers. Furnish and install new fire extinguishers in existing recessed cabinets where possible. Provide new recessed cabinets, where necessary, sized to contain a minimum 10-pound fire extinguisher cylinder. Cabinets must not diminish or compromise the fire rating of rated walls.
- 3.3.6.9.6 Interior Signage: Provide interior signage throughout the facility in accordance UFC 3-120-01. Meet all ABA requirements and coordinate with facility user for signage design. Follow ABA guidelines for signage background color and text. Coordinate exterior signage finishes with Base standards and interior signage finishes for a cohesive appearance. Signs for permanent spaces (i.e., mechanical and communication rooms) must have permanent room numbers and corresponding names. Provide life safety signage, including but not limited to evacuation plans, in key areas.
- 3.3.6.9.7 Corner Guards: Provide 4' high (minimum) standard metal corner guards at all exterior wall corners of gypsum board walls at main circulation locations. Construct exposed concrete wall outside corners with a chamfered corner.

3.3.7 Interior Finishes

Refer to Concept Design Drawings in Attachment B and Room Data Sheets in Attachment C for more information. Provide a comprehensive interior design (CID) package with each level of design submittal. This includes both a structural interior design (SID) package and a furniture, fixtures, and equipment (FF&E) package.

3.3.7.1 Floor Finish

- 3.3.7.1.1 Sealed Concrete: Provide a sealed concrete floor finish at all mechanical rooms, electrical rooms, SIPR Rooms, janitor closets, and storage rooms. Seal concrete floor slabs that do not receive a finish with a low-VOC water-based clear sealer to prevent dusting and improve general maintainability. Prepare concrete slabs to receive sealer by mechanically grinding them to remove the top 1/8-inch of concrete material and expose slab aggregate. Provide a clean, smooth slab surface for the sealer application.
- 3.3.7.1.2 Luxury Vinyl Tile (LVT): Utilize vinyl tile floor finishes in administrative, vault areas, and high traffic areas to facilitate ease of maintenance. In Building 202, install vinyl sheet flooring to match existing. Provide a product which contains recycled content and is low VOC. Provide vinyl which is minimum .08" thick, conforms to ASTM F 1303, Type II, Grade 1, Class A, and has a fibrous backing. Extend color and pattern through the total thickness of the material.
- 3.3.7.1.3 Epoxy: Provide five-coat epoxy in the hangar bays and adjacent corridors. Provide three-coat epoxy in the paint booth, storage room, pod, and tank bay of Building 202 in accordance with

UFC 4-211-01. Provide seamless resinous flooring in the Support, Support Storage, and Supply Trade rooms of B202.

- 3.3.7.1.4 Carpeting: Use carpet tile in administrative offices and conference rooms, with the exception of Building 202. Provide carpet which is medium tone, has a multi-color loop pile, and is minimum 28-ounce. Meet Carpet and Rug Institute (CRI) and Indoor Air Quality (IAQ) label requirements for carpet and adhesives. Utilize Nylon 6 or 6,6 designated products on this project.
- 3.3.7.1.5 Tile: Provide an unglazed porcelain floor tile at restrooms, shower rooms, and the lactation room. Provide metal cove base in all restrooms to receive new finishes. Match existing tile in restrooms where required. Provide impact resistant tile for floors and walls in accordance with ASTM C 648. Floor tile must be a minimum of Class III.
- 3.3.7.1.6 Electrostatic Dissipative Flooring: Provide static dissipative vinyl tile composed of polyvinyl chloride resin, plasticizers, fillers, pigments, and antistatic additive with colors and texture dispersed uniformly throughout its thickness in data and comm rooms per room data sheets attached to this RFP. Tile must meet size, thickness, indentation, impact, deflection, dimensional stability, resistance to chemicals, squareness, and resistance to heat requirements of ASTM F 1066 Standard Specification for Vinyl Composition Tile, Class 2, and have a through pattern D antistatic additive with colors and texture dispersed uniformly throughout its thickness.
- 3.3.7.1.7 Striping: Provide striping in Hangar Bays and around emergency shower/eyewash stations in accordance with UFC 4-211-01.
- 3.3.7.2 Wall Base
- 3.3.7.2.1 Rubber Wall Base: Provide rubber wall base at all areas to receive carpet, resilient flooring, and sealed concrete flooring. Rubber material must be 1/8" thick minimum and to conform to ASTM F 1861. In restrooms, provide a coved porcelain tile base where matching existing, and metal cove base where new finishes are being installed.
- 3.3.7.2.2 Coved Metal Base: Provide coved metal base at areas to receive new floor and wall tile finishes. Provide stainless steel cove trim shapes, height to match tile and setting thickness, designed for flooring applications.
- 3.3.7.2.3 Porcelain Tile Base: Provide porcelain tile base when matching existing conditions at areas to receive new floor and wall tile finishes.
- 3.3.7.2.4 Integral Epoxy Wall Base: Provide integral epoxy wall base at all metal stud partitions in rooms to receive new epoxy flooring. Install as to provide a 1/2" radius at the juncture of the floor and wall.

3.3.7.3 Wall Finish

Provide a Level 4 smooth finish at painted gypsum board partitions exposed to view. Paint exposed concrete walls with epoxy paint. Install fiberglass reinforced plastic (FRP) wall panels at all service sinks.

- 3.3.7.3.1 Paint: Paint interior surfaces, except factory pre-finished material or interior surfaces receiving other finishes, a minimum of one prime coat and two finish coats. Paints having a lead content over 0.06 percent by weight of nonvolatile content are unacceptable. Do not use paints containing zinc-chromate, strontium-chromate, mercury or mercury compounds, confirmed or suspected human carcinogens. Interior paints and coating products must contain a maximum level of 150 g/l (grams per liter) of volatile organic compounds (VOCs) for non-flat coatings and 50 g/l of VOCs for flat coatings. Provide eggshell finish on gypsum board walls in dry areas and semi-gloss on trim and door frames. Provide commercial-grade paint systems meeting MPI standards. Paint all exposed surfaces unless otherwise indicated. Coordinate painting and stenciling of fire sprinkler water system within the building as shown in guide specifications. At masonry walls use block filler and primer and two finish coats of semi-gloss paint.
- 3.3.7.3.2 Paint Selection: Use only paint listed on the "Approved product list" of the Master Painters Institute (MPI). Application criteria must be as recommended by MPI guide specifications for the substrate to be painted and the environmental conditions existing at the project site. Use only paints which provide the minimum required finishes and the highest quality of material, durability and life cycle cost. Paints and coating products must be classified as containing low or zero volatile organic compounds (VOC) in accordance with MPI criteria. Ensure compatibility with existing finishes and maintenance practices during selection of paint colors, textures, and locations.
- 3.3.7.3.3 Tile: Provide impervious, unglazed, through-body porcelain wall tile. Provide a minimum 4'-0" wainscot height in restrooms and a full-height installation at shower enclosures. Match existing tile where required. Provide a minimum Class III tile conforming to ASTM C 648 for impact resistance, and Tile Council of North America (TCNA) for standard grade tile. Use epoxy grout.
- 3.3.7.3.4 Fiberglass Reinforced Plastic (FRP) Panels: Provide 4'-0" FRP panels at all service sinks. Comply with ASTM D5319 and use only panels which are resistant to rot, corrosion, staining, denting, peeling, and splintering.
- 3.3.7.3.5 Stainless Steel Panels: Provide a 4'-0" stainless steel wall protection panel wainscot at all industrial, high traffic circulation areas. Provide type 304 stainless steel conforming to NSF Standard 51.
- 3.3.7.4 Ceiling Finish
- 3.3.7.4.1 Exposed Ceilings – In rooms without ceilings paint the structure and all exposed elements (including ceiling hung equipment and piping) as specified in this RFP, criteria, or code. Do not field paint factory finish equipment.
- 3.3.7.4.2 Suspended Gypsum Board Ceiling: Provide a painted gypsum board ceiling at all restrooms, janitor closets, lactation room, and secure rooms. At gypsum board ceilings, provide metal access panels for access to all valves. Use water resistant gypsum board with an epoxy paint finish at ceilings in restrooms and shower areas.
- 3.3.7.4.3 Acoustic Ceiling Tile (ACT): Provide a 24" x 24" ACT ceiling, type III or IV, pattern E, with a tegular edge. Product selected must have a minimum NRC rating of 0.70 and contain recycled content. If applicable, ensure CAC is equal to or greater than the STC rating of enclosing partitions.

3.3.8 Furniture, Fixtures & Equipment (FF&E)

Provide an FF&E package to be coordinated with the user group's requirements. Provide critical dimensions on the floor plan to verify the specified furniture and equipment fit. Complete this FF&E package a minimum of 120 days prior to the completion of construction. Refer to Concept Design Drawings in Attachment B and Room Data Sheets in Attachment C for more information.

3.4 Structural Design

Design the new construction and modifications to the existing facilities to meet all applicable design codes and criteria, including UFCs. The primary criteria used for structural design is UFC 1-200-01, DoD Building Code (General Building Requirements) and the UFCs and codes referenced therein, including the International Building Code, and UFC 3-301-01 Structural Engineering. These design standards apply to new construction and to the five existing facilities. Reference Attachment A for a complete list of guides and codes.

3.4.1 Design Criteria

Design all structures to support all applied loads including gravity loads, seismic loads, wind loads, lateral loads, and UFC 4-010-01 Antiterrorism (AT) loads, and to meet the serviceability requirements of UFC 3-301-01, Section 2-1.2. Design the supports and bracing for ancillary building items (e.g. overhead architectural features, systems and equipment, mechanical, electrical, and plumbing equipment) for gravity loads, seismic loads, lateral loads, and AT loads. This includes the design of glazing systems, glazing system support structures, and connections of glazing systems to the primary and secondary structural support systems. Utilize the following design criteria:

3.4.1.1 Risk Category

Category II

3.4.1.2 Ground Snow Load

10 PSF

3.4.1.3 Live Loads

As defined in ASCE 7

3.4.1.4 Wind

Wind Speed = 106 MPH,

Wind Exposure Category = C

3.4.1.5 Rain and Ice Loads

Rain: 15 min Precipitation Intensity = 6.1 in/h

Rain: 60 min Precipitation Intensity = 3.21 in/h

Ice thickness = 2 inches

3.4.1.6 Seismic

Seismic Accelerations: $S_s = 0.159g$, $S_1 = 0.087g$

Site Class = D Assumed (unless determined otherwise by geotechnical investigation)

3.4.2 Foundations/Slabs

Design and construct the foundation system based on a site-specific geotechnical investigation. Base the type of foundation system selected on the geotechnical investigation recommendations, adjacent construction, facility size, structural loads, local availability of materials and labor, and floor plan features. Design the foundation system to limit total settlement to one inch or less and to limit differential settlements to one-half inch or less. Structurally support exterior stoops and slabs adjacent to the structure to prevent differential settlement between the stoop or slab and the primary structure. For the existing buildings, verify the adequacy of the slab on grade where heavy loading, fork lift loading, and rack loading will be present. Check existing foundation for additional loading as required.

For bidding purposes of the new additions to Buildings 216 and 218, assume a drilled pier with grade beam foundation system with slab on grade floor.

3.4.3 Exterior Walls

Exterior walls must be easily maintained, have a high resistance to wear and tear, meet the building envelope insulation requirements, and provide structural support for the architectural finishes selected. This includes, but is not limited to, all exterior components such as walls, doors, windows (glazing systems) and architectural appurtenances. For existing walls, check all new wall penetration and wall infills for the appropriate loading and serviceability criteria. Check existing walls for additional loading.

3.4.4 Interior Partitions

Construct interior partitions of light gauge metal wall studs or concrete masonry units (CMU) where required for wear resistance. Non-load bearing partitions must be easy to remove for any future floor plan modifications or repurposing of the space. Brace interior partitions laterally at the top and allow for vertical deflection of the structure without transferring loads to the partition.

3.4.5 Vertical Framing

Comply with UFC 4-010-01 for exterior wall and roof design requirements. Coordinate column locations with architectural layout. Conceal columns and vertical braces within interior walls where possible. Check existing framing as required if additional loads are applied.

3.4.6 Roof Structure

Design the roof structure to resist uplift loads as well as gravity loads. Design the steel deck as a diaphragm to provide transfer of lateral loads between vertical elements of the lateral load resisting system. Provide sufficient slope to the roof to prevent ponding or analyze the roof structure for potential ponding and provide adequate strength to resist the additional load. For any existing construction, provide support for any new deck penetrations and check framing for any additional loading if required. If fall protection is required per the UFC's, use permanent davits.

3.4.7 Lateral Load Resisting System

Design the lateral load resisting system to resist all lateral loads and to meet the applicable serviceability requirements referenced in paragraph 3.4.1 above. The lateral load resisting system must provide a complete, continuous load path to transfer lateral loads from the point of application to the earth. Design connections in the lateral load resisting system to meet seismic detailing requirements even if wind loads govern.

3.4.8 Antiterrorism

Provide structural design for all applicable elements indicated in UFC 4-010-01. These elements include, but are not limited to, wall design, overhangs and breezeways, windows and skylights, building entrance layouts, exterior doors, overhead mounted architectural features, and equipment bracing.

3.5 Mechanical Design

3.5.1 Code Compliance

Design heating, ventilating, air conditioning (HVAC) and plumbing systems to conform to the publications listed in Attachment A. Utilize the most current codes and standards at the time of the design/build contract solicitation.

3.5.2 Existing Systems

The designs include equipment which varies building-to-building. See Section 3.5.8 for design directives for each building.

3.5.3 Functional Requirements

3.5.3.1 Heating, Ventilating, and Air-Conditioning (HVAC)

Attain the following objectives for the HVAC systems: occupant comfort, indoor air quality, acceptable noise levels, energy efficiency, reliable operation, and ease of maintenance. Provide air-conditioning and heating for all occupied spaces except for maintenance bays, hangar bays, and other areas as noted. Provide air-conditioning only for server/communication rooms. Keep areas that require heating for freeze protection above 40 degrees at all times.

3.5.3.2 Energy Sources

The available energy sources are natural gas and electricity provided by Oklahoma Gas & Electric. Meters for each service exist at each building. In accordance with Executive Order EO14057), new gas-fired mechanical systems are not allowed in any the buildings within the scope of this project (201, 202, 214, 216 & 218). The use/continued use of natural gas is limited to the existing gas-fired infrared heaters in Building 201, and all gas-fired systems in Building 202, which will remain in service as-is.

3.5.4 Prescriptive Requirements – New Equipment

3.5.4.1 Life Cycle Cost Analysis

Perform Life Cycle Cost Analysis (LCCA) to determine heating, cooling, and energy-related decisions of major systems in accordance with UFC 1-200-02 Life Cycle Cost Analysis requirements. Per UFC 1-200-02 (current change), achieve at least 30% energy consumption reduction from ASHRAE 90.1 (current version as directed by UFC) baseline, or achieve an energy consumption level at the highest level possible that is life cycle cost effective. Provide mechanical systems based on achieving the lowest life cycle cost of approved alternatives. Include total ownership costs, operation and maintenance costs, and payback. If life-cycle cost effective, implement Energy Efficiency Measures (EEMs) such as variable speed drives and Electronically Commutated Motors (ECM). Implement renewable energy design strategies such as solar hot water heating where life cycle cost effective. Provide life cycle cost analysis and recommendations to the Government for review and acceptance.

3.5.4.2 Design Criteria

3.5.4.2.1 Outside Design Criteria

ASHRAE 2021 0.4%:
Summer: 100F DB, 75.9F WB
Winter: 17.9F DB

ASHRAE 2021 1.0%:
Summer: 96.6F DB, 76.3F WB
Winter: 22.3F DB
HR: 8.9

3.5.4.2.2 Inside Design Criteria

Occupied zones conditioned for comfort cooling and heating

Summer: 78 degrees F and a maximum of 55 degrees F dew point. Design must take into account moisture gain in the space.

Winter: 68 degrees F (occupied), 55 degrees F (unoccupied)

Unoccupied zones conditioned to prevent freezing

Winter: 40 degrees F

Server/Communications Rooms:

72 degrees F

50% RH maximum

3.5.4.3 Calculations

For regularly occupied areas, use the 1 percent dry bulb and corresponding mean coincident wet bulb (MCWB) temperature and the 1 percent humidity ratio and corresponding mean coincident dry bulb (MCDB) temperature for design calculations and equipment sizing.

For server/communication rooms, coordinate with end user for specific temperature and humidity requirements. Separate, dedicated air conditioning systems must provide 24/7 cooling to each room. Utilize the 0.4 percent dry bulb temperature and the corresponding MCWB temperature and the 1 percent humidity ratio and corresponding MCDB for design calculations and equipment sizing.

Perform cooling and heating load calculations, building energy simulation models, and EEMs using Carrier HAP, Trane Trace 700, or other DOE-approved simulation software. Size all cooling equipment based on the calculated peak sensible and total loads for the building/zone. Size terminal units, unit heaters, and communication/server room air conditioning units based on the calculated peak sensible and total loads for the spaces served. Consider site elevation, refrigerant line lengths, and other factors that affect deration of equipment capacity. Consider heat/energy recovery where life cycle cost effective.

Utilize temperature setbacks and resets in occupied spaces during unoccupied times to maximize energy conservation, unless noted otherwise. Do not use setbacks for cooling in storage areas of building 201.

3.5.4.4 Equipment Selection

3.5.4.4.1 Product Procurement

Basis-of-design equipment must be Energy Star or Federal Energy Management Program of the Department of Energy (FEMP) designated products when available. The term "Energy Star product" means a product that is rated for energy efficiency under an Energy Star program. The term "FEMP designated product" means a product that is designated under the Federal Energy Management Program of the Department of Energy as being among the highest 25 percent of equivalent products for energy efficiency. When selecting integral sized electric motors, choose NEMA PREMIUM type motors that conform to NEMA MG 1, minimum Class F insulation system. Motors with efficiencies lower than the NEMA PREMIUM standard may only be used in unique applications that require a high constant torque speed ratio (e.g., inverter duty or vector duty type motors that conform to NEMA MG 1, Part 30 or Part 31).

3.5.4.4.2 Cooling and Heating Systems

Provide mechanical equipment to maintain space temperature setpoints. The equipment must also include provisions to maintain space humidity levels where specific tolerance requirements are indicated. Possible system types include: split system outdoor heat pumps with indoor fan coils, ground-mounted heat pump packaged rooftop units (RTU), and single-zone minisplit heat pumps with cassette or ducted fan coils. Provide cooling-only, dedicated minisplit systems with low-ambient cooling capability for server/communication rooms. Where required by the UFC or end user for critical server/communication rooms, provide redundant cooling systems. Variable Refrigerant Flow (VRF) systems are prohibited. In accordance with UFC 3-410-01 c9, 3-5.2.5, select condensers/condensing units/heat pumps for service in ambient conditions 5 degrees F above the outdoor dry bulb temperature listed in section 3.5.5.1 above. Select equipment with refrigerants that have ozone depletion potential (ODP) no greater than 0.0. CFC-based refrigerants and refrigerants subject to phaseout must not be utilized.

Where specific humidity control is required for spaces served by an RTU, provide manufacturer's onboard dehumidification system (i.e.: Carrier Humidimizer). For spaces served by split systems, provide commercial standalone dehumidifiers with automatic draining and/or pump sized to accommodate specified levels.

3.5.4.4.3 Unitary Heating Systems

Provide LCCA-effective electric unit heaters in unoccupied spaces such as mechanical rooms, electrical rooms, etc. Do not specify new gas-fired equipment.

3.5.4.4.4 Exhaust and Ventilation Systems:

Provide exhaust systems in all toilet rooms, janitors closets, etc. Provide ventilation in mechanical rooms, electrical rooms, etc. with inline exhaust fans and interlocked, operable louver or transfer air. Schedule ECM motors for exhaust fans whenever available for the

application. Include fan speed controller mounted nearby in an accessible location for balancing purposes.

3.5.4.5 Variable Frequency Drives (VFD)

Provide VFD's for all motors and fans greater than 10 hp, excluding exhaust fans.

3.5.4.6 Equipment Locations

Locate mechanical equipment to maintain the manufacturer's recommended minimum service clearances, code clearances, and the clearances required for removal of the equipment. Provide access doors for concealed equipment that may require maintenance or repair. Place floor and ground-mounted equipment on concrete housekeeping pads. Do not design roof-mounted intakes, exhaust fans, etc., unless absolutely necessary as buildings 201, 214, 216 and 218 do not have dedicated roof access.

3.5.4.7 Air Quality

Maintain ASHRAE 62.1 (current version as accepted by UFC) ventilation throughout the building to satisfy the minimum occupancy ventilation requirements, maintain building pressurization, and provide necessary make-up air for building exhaust. Outside air for ventilation may be introduced through fan coils or RTUs. Show outside air schedules on drawings and consider the maximum potential occupancy load when calculating outside air requirements in all spaces. For systems with outdoor air exceeding 750 cfm, provide a dedicated outdoor air system (DOAS). Where life-cycle cost effective, use energy recovery to preheat/precool incoming outside air.

3.5.4.8 Emergency Power Off (EPO) and Anti-Terrorism and Force Protection (ATPF)

Locate an EPO switch in the Mechanical Room as well as in the local operating console/fire alarm control panel (LOC / FACP), when available, for all air-moving systems serving occupied spaces and centralized ventilation systems such as Dedicated Outside Air systems (DOAS). Provide ATPF switch where required in accordance with UFC 4-010-01.

3.5.4.9 Ductwork

Construct, brace, reinforce, install, support, and seal insulated and galvanized steel ductwork in accordance with the IMC and SMACNA standards. In addition, ducted returns, dampers, air devices, and filters are required. Louvers are required for exhaust systems in lieu of roof-mounted equipment. Fortification (per Air Force and DOD standards) may be required for ducts with 96 square inch cross-sectional areas and larger passing through secure (SAPF & Secret) area perimeters.

3.5.4.10 Noise Abatement

Select air handling units (fan coils, RTUs, etc.), ductwork and diffusers to minimize noise from the units to the space. The selected fans must generate the lowest possible sound power levels and corresponding sound spectra. If attenuation is required, it must be in accordance with UFC requirements. Secure spaces may require specific Sound Transmission Class (STC) ratings (for example: STC50). Employ sound-attenuation devices such as duct silencers, Z-ducts and similar devices to achieve specified STC ratings.

3.5.5 Building Automation System

Provide a Building Automation System consisting of a building control network, and integrate the building control network into the Base's existing Energy Management Control System (EMCS) as follows:

3.5.5.1 Existing Base-wide EMCS

The Base's existing EMCS includes BACNET-based Siemens controls already established in each building, and report to the central station located in Building 450. Maintain each building's existing controls infrastructure as much as practicable for reuse including control panel(s), supervisory controller(s), etc., for integration of new equipment.

3.5.5.2 Direct Digital Control (DDC) System

Outfit all new mechanical equipment including split system fan coils, condensing units, heat pumps, RTUs, minisplit systems, etc., with controls compatible with existing controls infrastructure and conforming to Base standards. Coordinate exact requirements with the Base DDC Provider.

3.5.5.3 Base DDC Provider

The Base has an existing service contract with Powers-HVAC based in North Little Rock, AR (877-274-7127). The current point of contact is Mike Fogo (479-275-9733) who is based out of the Springdale, AR office.

3.5.6 Testing, Adjusting and Balancing (TAB)

Test and balance all air systems using a firm certified for TAB by the Associated Air Balance Council (AABC), National Environmental Balancing Bureau (NEBB), or the Testing Adjusting, and Balancing Bureau (TABB) in accordance with UFGS 23 05 93. The TAB firm must be an independent subcontractor and not an employee or subcontractor of any other subcontractor on this project. Perform TAB in accordance with the requirements of the standard under which the TAB Firm's qualifications are approved, i.e., AABC MN-1, NEBB TABES, or SMACNA HVACTION unless otherwise specified herein. All recommendations and suggested practices contained in the TAB Standard are mandatory. Use the provisions of the TAB Standard, including checklists and report forms, as much as practicable to satisfy the contract requirements. Use the TAB Standard for all aspects of TAB, including qualifications for the TAB Firm and Specialist and calibration of TAB instruments. Where the instrument manufacturer calibration recommendations are more stringent than those listed in the TAB Standard, adhere to the manufacturer's recommendations. All quality assurance provisions of the TAB Standard such as performance guarantees are part of this contract. For systems or system components not covered in the TAB Standard, the TAB Specialist must develop TAB procedures. Where new procedures and requirements applicable to the contract requirements have been published or adopted by the body responsible for the TAB Standard used (AABC, NEBB, or TABB), the requirements and recommendations contained in these procedures and requirements are mandatory.

3.5.7 Commissioning

Commission all HVAC systems and equipment, including controls, and all systems requiring commissioning in accordance with ASHRAE, UFC 1-200-02 and Specification section 01 91 00.15. The Commissioning Agent (CA) must be an independent subcontractor and not an employee or subcontractor of any other subcontractor on this project. The CA must not have business connections with any other

party on the project, nor have any other role or responsibilities outside of commissioning activities. The CA must communicate and report directly to the Government in the execution of the commissioning activities.

3.5.8 Building-By-Building Design Directives

Project scope includes existing mechanical systems deemed suitable for reuse due to their age and condition. Remove all gas-fired equipment (split systems with furnaces, boilers, etc.) unless noted otherwise. All gas-fired equipment in building 202 must remain in service as-is. Where directives indicate to remove an existing system, designer of record (DOR) must calculate the capacity of its replacement in accordance with Sections 3.5.4.3 above. Likewise, capacities of new (additional) systems must be calculated by DOR. Not all directives include unit heaters and exhaust systems, which are to be replaced, reused or scheduled as new at the discretion of the DOR.

3.5.8.1 Building 201

- a. Remove existing Carrier 5-ton split system (DX & gas, dated 2018) located in south Mechanical room 116, including associated ductwork and air devices. Provide new heat pump split system in its place, and new ductwork and air devices to support "Bulk Spares".
- b. Provide new (additional) heat pump split system in Mechanical 116 and distribution ductwork to support "Spares/Transit Area" & "Semi Bulky Racked Storage".
- c. Demolish existing Carrier 4-ton split system (DX & gas, located in current fire alarm panel room) and associated distribution ductwork in its entirety.
- d. Demolish existing Carrier 4-ton split system (DX & gas, located in west Mechanical room 123) and associated distribution ductwork in its entirety. Provide new heat pump split system in its place, and new distribution ductwork and air devices to support "Racked Storage".
- e. Provide new ground-mounted, heat pump, packaged rooftop unit (RTU) on the north side of the building, and mounted on minimum 6" tall concrete housekeeping pad. Provide distribution ductwork to support "Compact Storage" and "Fast Moving Bulk Spares". Where available, provide manufacturer's onboard dehumidifier system (e.g., Carrier Humidimizer) in lieu of a standalone dehumidifier.
- f. Provide standalone, packaged dehumidifier with onboard automatic drain and/or pump suspended in each of the main storage areas (five total) to maintain relative humidity levels of 50% (or less), or to range specified by end user. Standalone unit not required in space(s) served by an RTU with onboard dehumidification system.
- g. Reuse two existing gas-fired infrared (IR) heaters (200 MBH each, date unknown) in "Fast Moving Bulk Spares", and two (2) existing gas-fired IR heaters (60 MBH each, date unknown) in "Bulk Spares". DOR to determine if existing IR heater locations will interfere with new racking equipment or other storage methods, and demolish heaters if necessary. The intent is to provide additional heating in these spaces when their overhead doors are open.
- h. Provide BACNET DDC controls for each new mechanical system as described in Section 3.5.5.

3.5.8.2 Building 202

- a. Existing systems (makeup air units, air compressors, air dryers, water heater, IR heaters, exhaust fans, etc.) located in northwest Mechanical 138 to remain in-service, as-is.
- b. Existing systems (IR heaters, exhaust/supply fans, etc.) located in the aircraft bays to remain in service, as-is.
- c. Seven (7) existing heat pump split systems serve occupied and unoccupied non-aircraft bay spaces throughout the building. The heat pumps are located in two enclosures on the west side of the building. Corresponding fan coils are located above ceilings throughout the non-hangar areas of the building. The systems must remain in service, as-is, except where ductwork modifications are required to support revised floorplans in the core office areas.
- d. Existing systems serving various unoccupied spaces (Electrical, Comm, Fire Riser, Pod, Storage, Vaults, etc.) to remain in service, as-is.
- e. Modify one of the existing split system's ductwork and air distribution to support the lactation room.
- f. Provide dedicated, cooling-only minisplit system for new Comm room. System must be capable of low-ambient cooling to 0 degrees Fahrenheit.
- g. Existing mechanical systems are currently tied to the Base's EMCS in Building 450. Verify this and provide BACNET DDC controls for existing mechanical systems (if none exists) as described in Section 3.5.5.

3.5.8.3 Building 214

- a. Demolish existing hydronic heating water system in its entirety including boiler & appurtenances, pump, piping and hydronic unit heaters throughout building.
- b. Demolish gas-fired, ground-mounted makeup air unit located outside the northeast corner of the building.
- c. Demolish exhaust system including hoods in the northeast corner of the building.
- d. Demolish three (3) Carrier split systems on the south side of the building, and one (1) on the north side. Demolish ductwork associated with all four systems.
- e. Provide new heat pump split system in Mechanical 008 and distribution ductwork for all spaces on the south side of the building including storage, toilet rooms and AME.
- f. Provide new minisplit heat pump system for Parachute 004 including ceiling-mounted cassette fan coil. Locate heat pump on north side of the building.
- g. Provide new minisplit heat pump system for the mezzanine JEI-EMMS room including ceiling-mounted cassette fan coil. Locate heat pump on the north side of the building.
- h. Provide new minisplit heat pump system for the mezzanine 425FS Trade Learning room including ceiling-mounted cassette fan coil. Locate heat pump on the north side of the building.
- i. Provide new minisplit heat pump system for the mezzanine JEIM Engine office including ceiling-mounted cassette fan coil. Locate heat pump on the west side of the building.
- j. Provide new minisplit heat pump system for Storage room 006 including ceiling-mounted cassette fan coil. Locate heat pump on the west side of the building.

- k. Provide new minisplit cooling-only system for Comm room 005 including wall-mounted fan coil. System must be capable of low-ambient cooling to 0 degrees Fahrenheit. Locate condensing unit on the north or east side of the building.
- l. Provide minimum four (4) electric downblast unit heaters for the main Work Bay. Locate and suspend units such that they will not interfere with boom cranes and other equipment located in the Work Bay.
- m. Provide one (1) electric unit heater in the Tool Storage area of the single-story north side of the building.
- n. Provide new exhaust system(s) for revised toilet rooms and janitor's closet.
- o. Provide two wall-mounted airfoil propeller fans on the upper east wall of the Work Bay, each sized to collectively provide 15-20 air changes per hour. Provide two operable louvers on the lower west side of the building, interlocked with the fans and sized for maximum 550 feet per minute airflow. Provide line-voltage thermostat(s) with manual override to operate the systems for cross-ventilation/heat removal in the Work Bay.
- p. Provide BACNET DDC controls for each new mechanical system as described in Section 3.5.5.

3.5.8.4 Building 216

- a. Demolish two existing Liebert split systems serving the southwest wing of the building in their entirety.
- b. Remove existing Carrier 4-ton split system (DX & heating water, dated 2018) located in southwest Mechanical room 17. Remove all associated ductwork and air devices. Provide new heat pump split system, ductwork and air devices to support proposed rooms 106, 111 & 112. Fortify main supply and return ducts leaving/entering Mech 17 per Air Force and DOD standards.
- c. Remove existing Carrier 25-ton split system (DX & heating water, dated 2018) located in southwest Mechanical room 17. Remove all associated ductwork and air devices. Provide new heat pump split system, ductwork and air devices to support rooms 107-110. Fortify main supply and return ducts leaving/entering Mech 17 per Air Force and DOD standards.
- d. Demolish existing Fujitsu minisplit system located just north of Mech 17 in its entirety. Location of associated fan coil within building is not known.
- e. Provide new minisplit cooling-only system for Comm room 00 including wall-mounted fan coil. System must be capable of low-ambient cooling to 0 degrees Fahrenheit. Locate condensing unit on the north or east side of the building.
- f. Demolish existing Fujitsu dual minisplit system located just outside Vestibule 30 in its entirety (outdoor and indoor units). Location of associated fan coils within building is not known.
- g. Remove existing 250MBH (capacity and 2018 date, both estimated) Lochinvar boiler, distribution pumps, appurtenances and all associated heating water distribution piping in its entirety. Boiler and appurtenances are located in Mech 17. Extent of heating water distribution piping is not known.
- h. Remove existing Carrier 30-ton split system serving original portion of the building (dated 2018). Remove fan coil and associated gas-fired duct heater located in Mech 16. Provide

new heat pump split system and revise ductwork and air distribution devices to support proposed room layouts.

- i. Provide new minisplit heat pump system for new DV MTG Room/Lounge addition on west side of the building. Provide ceiling-mounted cassette fan coil. Locate heat pump on existing slab north of addition.
- j. Provide new precision-cooling split system(s) for Secure Comm, Vault ALIS/ODIN and/or Vault 1 Server rooms. Coordinate exact rooms requiring 24/7 cooling with end user. System(s) must be capable of maintaining room temperature between 60-84 degrees Fahrenheit and relative humidity levels between 40-70%. System must include onboard humidification and be capable of low-ambient cooling to 0 degrees Fahrenheit. Locate condensing unit(s) on the east side of the building. Reference products: Trane S-Mext (indoor unit) and TRUY (outdoor unit).
- k. Demolish existing York 30-ton ground-mounted RTU (gas & DX, dated 2018) serving the two northmost additions to the building. Provide new ground-mounted heat pump packaged RTU on existing concrete pad. Revise existing ductwork to support proposed room layouts in the northmost additions. Fortify ducts passing through new secure perimeter in accordance with Air Force and DOD standards, and design ductwork to reduce sound transfer to specified STC levels.
- l. Provide dedicated, cooling-only split system for room serving F-16 Unit Training Device (UTD). Data provided for this device (F16SATD) dated August 2015 indicates a heat gain of 52,000 BTUH and a relative humidity range of 30-70% for the space in which it resides. Coordinate exact requirements for this space with end user.
- m. Demolish existing Fujitsu dual minisplit system located on the northeast side of the building in its entirety. Associated fan coils are located just inside the adjacent wall.
- n. Provide BACNET DDC controls for each new mechanical system as described in Section 3.5.5.

3.5.8.5 Building 218

- a. Demolish existing minisplit system that previously served the existing Comm room. System is currently inactive.
- b. Provide new minisplit cooling-only system for Comm 119 including wall-mounted fan coil. System must be capable of low-ambient cooling to 0 degrees Fahrenheit. Locate condensing unit on the east side of the building.
- c. Remove existing Carrier 3-ton ground-mounted RTU (DX & gas, dated 2018) located near the southwest corner of the original building, and associated ductwork and air devices.
- d. Provide new ground-mounted heat pump RTU located near the southwest corner of the original building, and mounted on minimum 6" tall concrete housekeeping pad. Alternatively, provide new heat pump split system in west Mechanical 123 if space allows. Provide distribution ductwork to support new southeast building addition as well as existing adjacent, revised room layouts.
- e. Remove existing Carrier 4-ton split system (DX & gas, dated 2018) located in west Mechanical 123. Provide new heat pump split system. Revise distribution ductwork to support proposed room layouts.

- f. Demolish existing Luxaire 5-ton split system (DX & gas, dated 2018 or newer) located in northwest Mechanical 113. Provide new heat pump split system. Existing duct distribution system currently serves the west and north exposures of the building. Revise distribution ductwork to support proposed room layouts.
- g. Remove existing Carrier 5-ton split system (DX & gas, dated 2018) located in northwest Mechanical 113. Provide new heat pump split system. Existing duct distribution system currently serves the existing central assembly room. Revise distribution ductwork to support proposed room layouts.
- h. Remove existing Carrier 5-ton split system (DX & gas, dated 2018) located in northwest Mechanical 113. Provide new heat pump split system. Existing duct distribution system currently serves the existing entry lobby and east exposure of the building. Revise distribution ductwork to support proposed room layouts.
- i. Existing mechanical systems are currently tied to the Base's EMCS in Building 450. Provide BACNET DDC controls for each new mechanical system as described in Section 3.5.5

3.6 Plumbing Design

3.6.1 Existing Systems

The designs include new and/or existing equipment which varies building-to-building. See Section 3.6.5 for design directives for each building.

3.6.2 Plumbing System

3.6.2.1 Life Cycle Cost Analysis

Base water efficiency design and energy-related decisions for major systems on Life Cycle Cost Analysis (LCCA) in accordance with UFC 1-200-02 Life Cycle Cost Analysis requirements. If life-cycle cost effective, implement renewable energy design strategies such as solar hot water heating.

3.6.2.2 Cold Water

Provide domestic cold water through a reduced pressure principle backflow preventer located where indicated in section 3.6.5. If shown to be needed by a current water flow test, boost the water pressure by a triplex domestic water booster pump system in a lead/lag configuration with a third pump as a redundant reserve and a hydro-pneumatic tank.

3.6.2.3 Hot Water

Generate domestic hot water at 140°F via a domestic electric storage tank or instantaneous water heater(s). In accordance with Executive Order EO14057, new gas-fired water heaters are not allowed. Install a thermostatic mixing valve at each fixture delivering hot water (except mop sinks) and set to temperatures as defined in the IPC. Insulate all piping in accordance with the IECC, and label with text and color identification. If design includes recirculation pump, tie it into building occupancy programming.

3.6.2.4 Waste and Vent Piping

Provide drainage piping (waste and vent) in accordance with UFGS 22 00 00 Plumbing. Drain waste from plumbing fixtures and floor drains directly to the sanitary sewer system. Vent all sanitary vents to atmosphere through a combined vent system minimizing the number of roof penetrations. Do not use air admittance valves. Install trap primers on all floor drains.

3.6.3 General Plumbing Fixtures

Provide fixtures, accessories and supports in accordance with UFGS 22 00 00. Provide WaterSense-rated products whenever possible. Fixtures and features listed below are for reference only and must be modified as applicable to each building. Refer to Specifications for all required features and appurtenances for each item.

3.6.3.1 Water Closets

Provide wall-mounted, vitreous china fixtures water closets with elongated bowl with open front seat and exposed 1.28 gpf sensor operated flush valves. Floor-mounted 1.6/1.0 gpf dual-flush water closets may also be acceptable.

3.6.3.2 Urinals

Provide wall-mounted, vitreous china urinals with exposed 0.125 gpf sensor-operated flush valves.

3.6.3.3 Sinks

Provide wall or counter-mounted, vitreous china sinks with sensor-operated faucets. Provide thermostatic mixing valve for each fixture set to provide 110°F hot water maximum. Provide 0.5 gpm aerator.

3.6.3.4 Showers

Stand-alone showers must be floor mounted, constructed of terrazzo or other approved manufactured stone basin. All shower valves must be pressure-balanced with integral thermostatic mixing valves set to provide 110°F and 1.5 gpm, maximum.

3.6.3.5 Miscellaneous Sinks

Provide kitchen/break room sinks with 20-gauge stainless steel double or single bowl and gooseneck faucet with wrist blade handles. Provide 1.0 hp garbage disposal where requested. Coordinate connection to other appliances (i.e. dishwashers, refrigerators, and ice machines) with architect.

3.6.3.6 Mop Sinks

Provide floor-mounted, stainless steel or terrazzo mop sinks with clamp-down floor drain and wall-mounted faucet. Faucet must have a wall bracket supported spout with pail hook, integral atmospheric vacuum breaker, and 3/4" hose thread.

3.6.3.7 Floor Sinks

Provide 12"x12" floor sink at water entry backflow preventer assemblies with 3/4" grate, cast-iron body with porcelain enamel coating, and dome strainer. Provide trap primer.

3.6.3.8 Hose Bibbs

Provide hose bibbs in Mechanical Rooms, fire sprinkler riser rooms and rooms where backflow preventers are located (if separate from the Mechanical Room), if none currently exist.

3.6.4 Piping and Materials

3.6.4.1 Water Supply

Provide domestic Water piping 1/2" to 8", above and below ground, in accordance with UFGS 22 00 00 Plumbing. Provide piping insulation in accordance with UFGS 23 07 00 and ASHRAE 90.1.

3.6.4.2 Water Hammer Arrestors

Provide water hammer arrestors in accordance with Plumbing and Drainage Institute (PDI) standard PDI-WH 201 "Water Hammer Arrestors".

3.6.4.3 Waste and Vent

Provide domestic Waste and Vent piping in accordance with UFGS 22 00 00 Plumbing.

3.6.4.4 Floor Drains

Provide floor drains with all-metal bronze body and nickel bronze strainers in all toilet rooms with two or more fixtures, shower rooms, mechanical rooms and janitor's closets.

3.6.4.5 Natural Gas

Natural Gas Piping (existing, where modification is required): Schedule 40 black steel, threaded joints and fittings.

3.6.5 Building-By-Building Design Directives

The scope of the project includes existing plumbing systems deemed suitable for reuse due to their age and condition. The extent and invasiveness of plumbing modifications varies between buildings.

3.6.5.1 Building 201

- a. Demolish existing 75-gallon gas-fired water heater located in Mechanical 116.
- b. Demolish plumbing (domestic and sanitary) throughout building while maintaining infrastructure necessary to support new toilet room 117.
- c. Install new reduced pressure backflow preventer assembly, pressure reducing valve and floor sink in Mechanical 116.
- d. Provide new electric water heater in Mechanical 116.

3.6.5.2 Building 202

- a. Building's water entry is located in Mechanical 138, but was not observed in the field. Verify the existence of a backflow assembly and pressure reducing valve, and provide these items if none exist.
- b. Provide counter-mounted sink in the new Lactation Room 132, and new mop sink in Janitor 145.
- c. Provide tempered water and new combination emergency shower/eyewash stations as listed here. Refer to Attachment B – Concept Design Drawings for locations. Bay One: 2 stations, Bay Two: one station, Bay Three: one station, Tank Bay 128: one station, Paint Booth 137: one station.

3.6.5.3 Building 214

- a. Building's water entry is located in the southeast corner of the building (AME 012). Provide new reduced-pressure backflow assembly, pressure-reducing valve and floor sink. Relocation of the water entry to Compressor/Fire Riser (Mech) 008 is an option.
- b. Demolish existing toilet room plumbing fixtures and associated domestic and sanitary piping as necessary to support proposed fixture layout. Provide new plumbing fixtures, including mop sink, as shown in proposed layout, and domestic and sanitary piping to support these.

- c. Demolish existing gas-fired water heater located in Mechanical 008 and provide new electric water heater.
- d. Demolish existing air compressor located in Mechanical 008 and associated distribution piping throughout building.
- e. Provide new air compressor in Mechanical 008. Coordinate with end user to determine system requirements including style (horizontal or vertical) and type (single stage, multistage, oiled, oil-free, etc.). Provide new distribution piping to serve a minimum of ten (10) air drops (locations to be determined) at delivery pressures and airflows prescribed by the end user.

3.6.5.4 Building 216

- a. Entirety of building's domestic water piping was replaced with PEX as recently as 2023, and as-built drawings are available.
- b. Building's water shutoff valve is located just outside Mech 16. It appears from the pre-PEX record drawings that the entry main may be located in the plumbing chase between Mech 16 and the Men's toilet room. Relocate water entry to Mech 16, and provide reduced-pressure backflow assembly, pressure-reducing valve and floor sink.
- c. Revise domestic and sanitary piping systems to support new kitchen sink and dual-level electric water cooler with bottle filler in new DV MTG/Lounge 113 and counter-mounted sink in the new Lactation room.

3.6.5.5 Building 218

- a. Building's water shutoff valve is located just outside Mech 123. The water main likely enters the plumbing chase in between the two existing toilet rooms. Relocate water entry to Mech 120 and provide reduced pressure backflow assembly, pressure reducing valve and floor sink. Reconnect domestic piping to water main in plumbing chase.
- b. Remove existing 40-gallon gas-fired water heater (dated 2016) and replace with new electric water heater.
- c. Existing plumbing fixtures in both toilet rooms to remain in service, as-is.
- d. Provide domestic and sanitary piping to support new break room sink and dual-level electric water cooler with bottle filler in Assembly Room 100 as shown on the proposed room layout.
- e. Provide domestic and sanitary piping to support new break room sink located in LSS Room 120A.

3.7 Fire Protection, Fire Alarm/Mass Notification (FA/MNS), and Life Safety Design

3.7.1 Qualified Fire Protection Engineer (QFPE)

A qualified fire protection engineer (QFPE) meeting the qualifications required by UFC 3-600-01, must be responsible for, but not limited to, the design engineering, preparation of the construction documents, construction phase inspection and acceptance testing of all of the fire sprinkler and fire alarm and mass notification systems. QFPE must also be involved with the building code and life safety code analysis. A qualified fire protection engineer is an integral part of the design/build team and must be involved in every aspect of the design as it relates to fire protection and life safety. The project QFPE must review the 100 percent design submission of plans and specifications and certify in writing that the design is in compliance with UFC 3-600-01 and all applicable criteria. This certification letter must be submitted with the 100 percent submission.

At a minimum, during the construction phase the QFPE must be responsible for material submittal review, shop drawing review, and participate in the preparatory inspection meeting, initial inspection at job site, mid-point inspection at job site, pre-final inspection with General Contractor and subcontractors, and final acceptance inspection and testing with General Contractor, subcontractors and the Corps of Engineers.

3.7.2 Design Criteria

The purpose of this narrative is to describe the proposed fire protection and life safety features for the renovations of Buildings 201, 202, 214, 216 and 218 located at Ebbing ANGB, Fort Smith, Arkansas. The following project scope applies to the fire protection and life safety requirements of these buildings.

Building 201 - change of use of entire building to warehouse/storage. Classified in NFPA 101, Chapter 43 as a "change in use." Comply with the "new" requirements in NFPA 101.

Building 202 – renovation and improvements of an existing aircraft hangar. The hangar is classified as Tier 2 in accordance with the USAF Sundown Policy. Classified in NFPA 101, Chapter 43 as a "Reconstruction." Comply with the "new" requirements in NFPA 101.

Building 214 – renovation and improvements of an existing maintenance facility (including mezzanine). Classified in NFPA 101, Chapter 43 as a "Reconstruction." Comply with the "new" requirements in NFPA 101.

Building 216 – renovation and improvements of an existing office building to include mission support spaces and secure spaces. Classified in NFPA 101, Chapter 43 as a "Reconstruction." Comply with the "new" requirements in NFPA 101.

Building 218 – renovation and occupancy change to an existing building to include mission support facilities and squadron assembly area. Classified in NFPA 101, Chapter 43 as a "Reconstruction." Comply with the "new" requirements in NFPA 101.

3.7.3 Automatic Sprinkler Protection

3.7.3.1 Provide, design, and install new or modified automatic wet pipe sprinkler systems in accordance with UFC 3-600-01 and NFPA 13 as indicated below:

- a. Building 201 – new system (per UFC3-600-01 Section 4-48.2.1).
- b. Building 202 – existing system to be replaced.

- c. Building 214 – new system (per UFC3-600-01 Section 4-48.2.1).
- d. Building 216 – existing system to be replaced.
- e. Building 218 – new sprinkler system required in accordance with UFC 3-600-01 due to the Pyro Room proposed in the building containing explosives.

3.7.3.2 Sprinkler risers must be as follows. Each riser assembly must consist of a new supervised OS&Y control valve, new or existing alarm check valve and a new or existing vane-type waterflow switch. Discharge all drain assemblies associated with the riser to a safe location at the exteriors of the buildings.

- a. Building 201 – Install a new fire sprinkler riser in the Spares/Transit Area Room 115.
- b. Building 202 – Provide new fire sprinkler riser in the current location of the fire water supply line (Fire Riser Room 135). This location is less than 10 feet from the edge of the building slab.
- c. Building 214 – Install a new fire sprinkler riser in the Compressor Room 008.
- d. Building 216 – Provide new riser in the current location of the existing sprinkler riser. Separate the riser from the room with partitions. Provide a 3' clearance for all valves (as required by UFC 3-600-01). This location is less than 10 feet from the edge of the building slab.
- e. Building 218 – A new fire sprinkler riser is proposed in the mechanical room on the north side of the building. This location is less than 10 feet from the edge of the building slab.

3.7.3.3 Additional Sprinkler System Details – Building 202

- a. Demolish all existing foam system equipment including, but not limited to, foam concentrate, concentrate storage tank, proportioner and concentrate piping/valves/fittings. These foam systems were previously decommissioned and it is assumed that the foam concentrate was disposed of at that time.
- b. Demolish all fire sprinkler systems back to the water supply line into the building. Preserve the sprinkler lead-in to the building.
- c. Provide a new fire pump and pump accessories in compliance with UFC 3-600-01, UFC 4-211-01 and NFPA 20.
- d. Provide new piping and valves for new closed-head water-only sprinkler systems in the hangar bays. No deluge type sprinkler system or foam sprinkler system is proposed.
- e. Provide a new wet pipe sprinkler system in the office and support areas.
- f. Provide wet pipe sprinkler protection for the paint booth area in accordance with NFPA 33. A new paint booth (GFGI) will be installed in the location of the existing paint booth.

3.7.3.4 Additional Sprinkler System Details - Building 216

- a. Demolish all portions of the fire sprinkler system back to the water supply line into the building.
- b. Provide a new wet pipe sprinkler system throughout the building.

3.7.3.5 Sprinkler Hazard Design

Sprinkler hazard design details are provided for reference only and it is the responsibility of the designer of record (DOR) to provide the design details and system criteria.

- 3.7.3.5.1 Hangar Bay 1 is a fuel cell maintenance bay. Design the sprinkler system per UFC 4-211-01, paragraph 5-12.4.1 per the USAF Sundown Policy. Provide a design density of 0.20 gpm/sf over the hydraulically most remote 5,000 square feet. Include an outside hose allowance of 500 gpm in the hydraulic calculations.
- 3.7.3.5.2 Hangar Bay 2 is a general maintenance bay. Design the sprinkler system per Chapter 5 of UFC 4-211-01 per the USAF Sundown Policy. Provide a design density of 0.20 gpm/sf over the hydraulically most remote 5,000 square feet. Include an outside hose allowance of 500 gpm in the hydraulic calculations.
- 3.7.3.5.3 Hangar Bay 3 is a corrosion control bay. Design the sprinkler system per Chapter 5 of UFC 4-211-01 per the USAF Sundown Policy. Provide a design density of 0.20 gpm/sf over the hydraulically most remote 5,000 square feet. Include an outside hose allowance of 500 gpm in the hydraulic calculations.
- 3.7.3.5.4 The shelf and rack storage in Buildings 201 is reported to be up to 8 feet in height, without solid shelves and no plastic commodities. In addition, provide rotating storage units and compact shelving in this building. Classify these areas as miscellaneous storage and protect in accordance with the storage provisions found in NFPA 13. Design the sprinkler system for the maximum possible storage height. Include an outside hose allowance of 500 gpm in the hydraulic calculations.
- 3.7.3.5.5 Classify work bays, equipment, general storage and mechanical rooms as ordinary hazard in accordance with UFC 3-600-01. Include an outside hose allowance of 250 gpm in the hydraulic calculations.
- 3.7.3.5.6 Classify the remainder of the building areas as light hazard in accordance with UFC 3-600-01. Include an outside hose allowance of 250 gpm in the hydraulic calculations.

3.7.3.6 Occupancy Hazard Classification

Sprinkler hazard design details are provided for reference only and it is the responsibility of the designer of record (DOR) to provide the design details and system criteria

- 3.7.3.6.1 In areas classified as ordinary hazard, design the overhead sprinkler system to provide a discharge density of 0.20 gallons per minute over the hydraulically most remote 2,500 square feet of floor area. Sprinklers in these areas must be ordinary temperature (unless ambient conditions require higher temperature rated sprinklers, such as mechanical equipment areas), quick-response type. For areas where ceiling heights do not exceed 30 feet: provide pendent, chrome finish, recessed, K-8 minimum sprinklers in areas with finished ceilings and provide upright, rough brass, K-8 minimum sprinklers in areas without finished ceilings. For areas where ceiling heights are between 30 and 45 feet: provide pendent, chrome finish, recessed, K-11.2 minimum sprinklers in areas with finished ceilings and provide upright, rough brass, K-11.2 minimum sprinklers in areas without finished ceilings. Provide protective cages for sprinklers that are subject to mechanical damage. The maximum protection area per sprinkler

must be 130 square feet, with a maximum spacing of 15 feet. Include an outside hose allowance of 250 gpm in the hydraulic calculations.

- 3.7.3.6.2 In areas classified as light hazard with ceiling heights that do not exceed 30 feet, hydraulically design the overhead sprinkler system to provide a discharge density of 0.10 gallons per minute over the hydraulically most remote 1,500 square feet of floor area. Sprinklers in these areas must be ordinary temperature (unless ambient conditions require higher temperature rated sprinklers), quick-response type. Provide pendent, chrome finish, recessed, K-5.6 minimum sprinklers in areas with finished ceilings and provide upright, rough brass, K-5.6 minimum sprinklers in areas without finished ceilings. In areas classified as light hazard with ceiling heights between 30 and 45 feet, the overhead sprinkler system must be hydraulically designed to provide a discharge density of 0.20 gallons per minute over the hydraulically most remote 2,500 square feet of floor area. Sprinklers in these areas must be ordinary temperature (unless ambient conditions require higher temperature rated sprinklers), quick-response type. Provide pendent, chrome finish, recessed, K-11.2 minimum sprinklers in areas with finished ceilings and provide upright, rough brass, K-11.2 minimum sprinklers in areas without finished ceilings. Provide protective cages for sprinklers that are subject to mechanical damage. The maximum protection area per sprinkler must be 225 square feet with a maximum spacing of 15 feet. Include an outside hose allowance of 250 gpm in the hydraulic calculations.
- 3.7.3.6.3 Seismic bracing is required as the seismic category for the site is Category C.
- 3.7.3.6.4 All new sprinkler system control valves must be provided with signage indicating their function and what it controls in accordance with NFPA 13. The sprinkler system design for Building 216 includes minimum pipe penetrations through ICD 705 walls. Make all sprinkler pipe penetrations via dielectric fittings or ground them properly (if dielectric fittings are not available due to size).
- 3.7.3.6.5 The ceilings do not exceed a slope of 2 in 12.
- 3.7.3.6.6 Hose stream demand must be in compliance with UFC 3-600-01 Table 9-4.
- 3.7.4 Special Fire Suppression and Releasing Systems: None proposed.

3.7.5 Water Supply

3.7.5.1 Fire Flow Requirements

3.7.5.1.1 All of the buildings that are part of this project as existing, Type IIB construction. Fire flow is required for each of the buildings, in accordance with UFC 3-600-01 and NFPA 1, as follows:

Building #	Building Area	From Table 18.4.4.2.1	Reduced for Sprinklers (75% reduction, but not less than 1,000 gpm)
201	9,600 sq ft	2,000 gpm @ 20 psi	1,000 gpm @ 20 psi

Building #	Building Area	From Table 18.4.4.2.1	Reduced for Sprinklers (75% reduction, but not less than 1,000 gpm)
214	13,100 sq ft	2,500 gpm @ 20 psi	1,000 gpm @ 20 psi
216	18,050 sq ft	2,750 gpm @ 20 psi	1,000 gpm @ 20 psi
218	7,825 sq ft	1,750 gpm @ 20 psi	1,000 gpm @ 20 psi

- 3.7.5.1.2 The water supply to the facilities is via existing underground water main systems supplied by the elevated water tank located on the Base property. The water level in this water tank is maintained by a supply line from the City of Fort Smith water department.
- 3.7.5.1.3 Preliminary fire hydrant flow tests were performed at the project site May 22, 2024, at approximately 7:45 am central time. The first test was conducted near Building 201 and indicated a static pressure of 61 pounds per square inch, reduced to 57 pounds per square inch while flowing 1000 gallons per minute. The second test was conducted near Building 214 and indicated a static pressure of 57 pounds per square inch, reduced to 55 pounds per square inch while flowing 1,030 gallons per minute.
- 3.7.5.1.4 Hydrant Flow Test Results. Reference Attachment F of this RFP for these test results.
- 3.7.5.1.5 Based on the results of the fire hydrant flow tests, it does not appear that a fire pump needs to be provided for Buildings 201, 214, 216, or 218 to support the new sprinkler systems. At least one fire pump is required in Building 202 to support the new sprinkler systems.
- 3.7.5.2 Fire Hydrants and Fire Access
 - 3.7.5.2.1 No new fire hydrants or fire access roads are proposed.
 - 3.7.5.2.2 For the new sprinkler systems in Buildings 201, 214, and 216, provide the fire department connection within 150 feet of an existing fire hydrant, where practical. Provide an exterior PIV on the fire main lead-in piping, located in accordance with the requirements of NFPA 24 and monitored by the building fire alarm system. Provide a new double-check backflow prevention device inside the building at the riser manifold.
 - 3.7.5.2.3 For the existing sprinkler systems in Buildings 202 and 216, the distance from the existing fire department connection to the existing fire hydrant is 150 feet or less. An exterior PIV is provided on the fire main lead-in piping, located in accordance with the requirements of NFPA 24. Building 202 and 216 are provided with existing backflow prevention devices which are to remain.
 - 3.7.5.2.4 Provide key boxes matching the requirements of the Base at all buildings.

3.7.6 Standpipe

A standpipe system is not required per UFC 3-600-01, Paragraph 9-10.2 in any of the 5 buildings in this project. The buildings are less than 4 stories and all areas of the buildings are within 450 feet of an exterior door.

3.7.7 Portable Fire Extinguishers

Provide general purpose portable fire extinguishers where required by NFPA 101. Size and space them in accordance with UFC 3-600-01 and NFPA 10. Provide new portable fire extinguishers throughout all areas of work. Provide at least one class 4A:80B:C rated dry chemical portable fire extinguisher for every 11,250 square feet of floor area and locate such that an occupant travels no more than 75 feet before reaching a portable fire extinguisher, except in the electrical equipment rooms. One class 4A:80B:C rated portable fire extinguisher must be located within 30 feet of the appropriate hazard, such as the main electrical panel. Provide wall mounted or in recessed cabinets, as specified in the architectural narrative.

3.7.8 Fire Alarm and Mass Notification System

- 3.7.8.1 Building 201 is classified as a low occupancy building and does not require a mass notification system per UFC 4-010-01. Since this is a sprinklered building it is required to have a fire alarm system in accordance with UFC 3-600-01, Paragraph 9-18.1 and NFPA 101.
- 3.7.8.2 The fire alarm device locations and notification appliance coverage does not comply with current requirements of UFC 3-600-01, UFC 4-021-01 or NFPA 72. A new fire alarm and mass notification system must be provided in Buildings 202, 214, 216, and 218.
- 3.7.8.3 Provide a new combination fire alarm and mass notification system in accordance with NFPA 72, UFC 3-600-01, UFC 4-021-01, and ECB 2018-17. Locate the fire alarm and the mass notification control unit (FMCU), fire alarm control panel (FACP), and remote annunciators in a normally occupied, conditioned area approved by the Contracting Officer, Base Civil Engineer Squadron and the Fire Department.
- 3.7.8.4 Initiating devices must consist of spot-type smoke detection (above the fire alarm and mass notification control unit, above any other fire alarm control units), carbon monoxide detectors (in mechanical rooms containing fuel-fired equipment), sprinkler waterflow switches and manual pull stations at each exit. Provide photoelectric duct detectors in the supply air ducts of air handling units greater than 2,000 cfm. All new sprinkler system tamper switches, including PIVs, must be monitored as supervisory conditions by the fire alarm system. The fire pump must be monitored for Pump Running, Loss of Phase and Phase Reversal. Use Class B wiring in red conduit for all SLC, IDC and NAC wiring. Provide a fire alarm remote annunciator at a location approved by the Fire Department, presumably at the main entrance.
- 3.7.8.5 Transmit alarm, trouble and supervisory signals to the Base Fire Department via a new Monaco BT-XF radio transceiver. Provide transient voltage surge suppression for each new control unit and auxiliary panel.
- 3.7.8.6 Provide all combination speaker/strobes, speakers, and strobes in accordance with NFPA 72. The fire alarm and mass notification system must utilize the same clear-lens strobes, labeled "Alert", for occupant notification. Provide LED signs above each exit from the building. The system must be designed in accordance with UFC 04-021-01 (as amended by ECB 2018-17), including live voice messaging and playback of prerecorded messages. All speaker devices

located in secure (ICD-705) areas must be of the self-amplifying type or a remote amplifier panel must be provided inside each secured area to support the speakers and a notification appliance circuit (NAC) panel provided to support visual notification appliances.

- 3.7.8.7 Provide weatherproof exterior speakers at exterior gathering locations, hangar bays, fire pump room, and entrances/exits to the building.
- 3.7.8.8 Connect the remote amplifier and NAC panel(s) to the main FMCU via a fiber optic connection.
- 3.7.8.9 Provide local operator consoles (LOC) at the main entrance and located throughout the building such that an occupant does not have to travel more than 200 feet to get to a LOC. Provide a global emergency HVAC shutdown button adjacent to each LOC. The HVAC shutdown is not required to be part of the MNS.
- 3.7.8.10 Provide an interface with the fire alarm system to silence the fire alarm voice messages during broadcast of mass notification messages.
- 3.7.8.11 Provide all metallic conduit penetrations through security wall assemblies with dielectric unions on the secured side of the wall. Surface mount all system components installed on secure area walls.

3.7.9 Basic Building Code Summary

3.7.9.1 Occupancy Classification (IBC Chapter 3 and NFPA 101, Chapter 6):

Building #	IBC Classification	NFPA 101 Classification
201	Group S-1	Storage
202	Group S-1	Industrial
214	Group F-1	Industrial
216	Group B	Business
218	Group A-3	Assembly

3.7.9.2 Construction Type (IBC Table 601): All 5 buildings appear to be Type IIB construction (non-rated, non-combustible).

3.7.9.3 Allowable Height, nonseparated mixed use (IBC Tables 504.3 and 504.4, Sprinklered per NFPA 13:

Building	Occupancy	Allowable Height/Stories	Provided Height/Stories
201	S-1	75 feet/4 stories	34 feet/1 story
202	S-1	75 feet/4 stories	47 feet/1 story
214	F-1	75 feet/3 stories	34 feet/1 story (+mezz)
216	B	75 feet/4 stories	32.5 feet/1 story
218	A-3/B	75 feet/3 stories	27 feet/1 story

3.7.9.4 Allowable Floor Area, non-separated mixed use (IBC Table 506.2, Sprinklered per NFPA 13:

Building	Occupancy	Allowable Area – Single Story (no open space increase)	Provided Area
201	S-1	70,000 sq ft	9,600 sq ft
202	S-1	70,000 sq ft	31,350 sq ft
214	F-1	62,000 sq ft	13,100 sq ft
216	B	92,000 sq ft	18,050 sq ft
218	A-3/B	28,500 sq ft	7,825 sq ft

3.7.9.5 Required Separations from Hazards (NFPA 101, Section 38.3.2)

3.7.9.5.1 Mechanical Rooms (boiler or furnace): 1-hour fire resistance rating or sprinklers

3.7.9.5.2 Storage Rooms (general): 1-hour fire resistance rating or sprinklers

3.7.9.5.3 Occupancy Separation (IBC Table 508.4): None Required

3.7.9.6 Required Fire Resistance Requirements (IBC Tables 601 and 705.5)

Exterior Bearing Walls: 0-hour fire resistance rating. Exterior walls are more than 10 feet from the adjacent building; therefore, the exterior walls are not required to be fire rated barriers.

Interior Bearing Walls: 0-hour fire resistance rating

Structural Frame: 0-hour fire resistance rating

Floors and Floor/Ceilings: 0-hour fire resistance rating

Roof and Roof/Ceiling: 0-hour fire resistance rating

Shafts: No shafts provided

3.7.9.7 Fire and/or Smoke Dampers (NFPA 101, Section 9.2 and NFPA 90A, Section 5.3)

Fire Dampers: 1-hour fire resistance rating (required only in air transfer openings in 1-hour fire resistance rated barriers)

Smoke Dampers: 1-hour fire resistance rating (required only in air-transfer openings in smoke partitions)

3.7.10 Basic Life Safety Code Summary

3.7.10.1 Means of Egress: Means of egress must be in accordance with NFPA 101 per UFC 3-600-01.

3.7.10.2 Separation of Means of Egress (NFPA 101, Sections 7.1.3.2 and 38.3.6.1),

Corridor Walls: Not required (automatic sprinkler protection provided)

Corridor Doors: Not required (automatic sprinkler protection provided)

3.7.10.3 Occupant Load (NFPA 101, Table 7.3.1. 2 and UFC 3-600-01, Table 10-1)

Assembly, concentrated	1 person per 15 net sf
Concentrated Business:	1 person per 50 gross sf
Business - other:	1 person per 150 gross sf
Collaboration Rooms >450 sf:	1 person per 15 gross sf
Collaboration Rooms <450 sf:	1 person per 30 gross sf
General/high hazard industrial:	1 person per 100 net sf
Storage:	1 person per 500 gross sf
Mechanical/Electrical:	Maximum anticipated

3.7.10.4 Number of Exits (NFPA 101, Sections 7.4.1.1)

Required (per floor): 2

Provided: >2

3.7.10.5 Egress Capacity (NFPA 101, Section 7.3)

Level Surfaces: 44 inches required
 Stairs: N/A – No stairs provided

3.7.10.6 Common Path of Travel

Occupancy	NFPA 101 Section	If sprinklered
Assembly > 50 people	12.2.5.2	20 feet
Assembly < 50 people	12.2.5.2	75 feet
Business	38.2.5.2.1 & 38.2.5.3.3	100 feet
Industrial (general)	Table 40.2.5.1	100 feet
Storage (ordinary hazard)	Table 42.2.5	100 feet

3.7.10.7 Dead-End Corridors

Occupancy	NFPA 101 Section	If sprinklered
Assembly > 50 people	12.2.5.3	20 feet
Assembly < 50 people	12.2.5.3	20 feet
Business	38.2.5.3.1	50 feet
Industrial	Table 40.2.5.1	50 feet
Storage	Table 42.2.5	100 feet

3.7.10.8 Travel Distance

Occupancy	NFPA 101 Section	If sprinklered
Assembly > 50 people	12.2.6.2	250 feet
Assembly < 50 people	12.2.6.2	250 feet
Occupancy	NFPA 101 Section	If sprinklered
Business	38.2.6.3	300 feet
Industrial	Table 40.2.6.1	250 feet
Storage	Table 42.2.6	400 feet

3.7.10.9 Discharge From Exits (NFPA 101, Sections 7.7): Connect all exits to an exit discharge path that terminates at a public way.

3.7.10.10 Interior Finishes (NFPA 101, Section 10.2)

Occupancy	Exit Enclosures	Exit Access Corridors	Rooms & Enclosed Spaces	Floor Finish
Assembly	N/A	Class A or B	Class A, B or C in assembly less than 300 occupants	Class I or II
Business	N/A	Class A or B	Class A, B or C	Class I or II
Industrial	N/A	Class A, B or C	Class A, B or C	Class I or II in exit access corridor, otherwise no requirement
Storage	N/A	Class A, B or C	Class A, B or C	Class I or II in exit access corridor, otherwise no requirement

3.7.11 Emergency Lighting

Provide emergency lighting via battery backup at all means of egress, including exit access corridors and exit discharges. Provide emergency lighting in the mechanical rooms via battery backup. Emergency lighting must be provided for a minimum of 1½ hours in the event of internal power failure. Provide all emergency lighting in accordance with NFPA 101. Provide new emergency lighting in areas that are being fully remodeled (i.e., walls and ceilings removed).

3.7.12 Marking of Means of Egress

Provide all new exit signs which are LED type with battery backup and have red lettering. Provide exit signs in accordance with NFPA 101. Provide exit signs wherever the location of the exit is not readily apparent. Provide exit sign illumination for a minimum of 1½ hours in the event of internal power failure.

3.7.13 Hazardous Materials

Limited quantities of hazardous materials stored within designated cabinets will be present in Building 202, Building 214, and in the Pyro Room of Building 218. The use and storage of all hazardous materials must be in accordance with UFC 3-600-01, Section 4-20 and NFPA 400. Provide classified electrical equipment complying with NFPA 70 Article 500 where required, including the Fuel Bay of Building 202 and the Pyro Room in Building 216.

The materials to be stored in the Pyro Room in Building 218 have been previously classified as Division 1.4. The quantity of these materials is proposed to be the same as at the user group's current site. The document provided by the user group listing the type and quantity is found in Attachment H. The total amount of explosive materials proposed in this room is shown to be less than the MAQ as defined in UFC 3-600-01, and this space is not required to be classified as a Hazardous Occupancy.

3.8 Electrical Design

3.8.1 Description of Services

All five buildings have existing services with Oklahoma Gas & Electric (OG&E) owned primaries, transformers, and meters. Coordinate any load increases with OG&E point of contact Michelle Rodriguez-Pico, rodrigmc@oge.com. Follow all applicable codes listed in Attachment A. For any utility work, coordinate design and installation with Oklahoma Gas and Electric.

3.8.1.1 Existing Service Information

- a. Building 201: 208Y/120V, 200A, 3-Phase, 4W, main service panel PA. Existing 5KW, 120/240V, 1-Phase, 3W generator and panel. Utility transformer 321798, meter OG&E 1060137 52750758G. 400HZ panel existing.
- b. Building 202: 480/277V, 1200A, 3-Phase, 4W, main service panel switchboard. Utility transformer 321855, meter OG&E 1060129 50620918G. 400HZ panel existing.
- c. Building 214: 480/277V, 400A, 3-Phase, 4W, MDP. Utility transformer 321831, meter OG&E 1060129 50620920G.
- d. Building 216: 480/277V, 800A, 3-Phase, 4W, disconnect switch. Utility transformer 500KVA, 322011, meter OG&E 1060129 50620917G. 400HZ existing panel.
- e. Building 218: 480/277V, 800A, 3-Phase, 4W, disconnect switch. Utility transformer 322010, meter OG&E 1060129 53224865G.

3.8.2 Contractor Requirements

Provide all personnel, equipment, tools, materials and other necessary items to perform all work required for fully functional facilities at B201, B202, B214, B216, and B218. Comply with the requirements of the latest editions of NFPA 70 (National Electrical Code), NFPA 70E (Standard for Electrical Safety in the Workplace), ANSI C2 (National Electrical Safety Code), and applicable OSHA requirements. Comply with installation, local, state, and federal environmental/occupational safety laws. Take all necessary actions to preclude any unsafe conditions which may be hazardous to the health and safety of personnel. Upon completion of construction, provide as-builts with red lines of any field notes or changes.

3.8.3 Demolition

Remove the entire existing electrical power distribution panels for Buildings 201, 214, 216, and 218. Include in demolition the panels, transformers, and disconnects. For all five buildings, including B202, completely remove electrical equipment back to the source where walls and spaces are modified. Replace all lighting and controls in areas affected by construction of all five buildings.

3.8.4 Electrical Power Systems New Work

Provide engineering calculations for demand load, voltage drop, short circuit analysis, arc flash, coordination study, and point to point lighting calculations for normal and emergency lighting systems. Meet the new electrical demand, new building functions (including electrical, mechanical, security and communications), and code requirements. Optimize energy savings. For all electrical equipment or devices, such as lighting and motors, meet ASHRAE 90.1 standard. All electrical equipment must have capability to withstand available short circuit currents. The following are scope requirements by building.

3.8.5 New Exterior Power Distribution Systems

3.8.5.1 Primary Duct Bank

New service is not anticipated.

3.8.5.2 Primary Feeders

New service is not anticipated.

3.8.5.3 Utility Transformer

New service is not anticipated.

3.8.5.4 Secondary Duct Bank

New service is not anticipated.

3.8.6 Interior Power Distribution Systems

3.8.6.1 Overview – See concept drawings for areas of construction.

- a. Install new panels and disconnects to replace existing weathered and rusted panels in Buildings 201, 214, 216, and 218. In new or modified areas of all buildings, provide a new electrical system that includes, but is not limited to, secondary service, lighting fixtures, lighting controls, receptacles (including for any security or ACS, TVs and A/V), motors, packaged units, and HVAC circuits.
- b. Replace conduit and conductor for any circuit which is relocated. Inspect any circuit that is existing to remain. If found to be in good condition, reconnect to new panels or disconnects.
- c. B201 - Replace panels, transformers, disconnects. Replace some lighting and receptacles. Install new lighting and receptacles in rooms affected by construction. Plan for 75% new.
- d. B202 - Replace some lighting and receptacles. Install new lighting and receptacles in rooms affected by construction. Install two overhead plug reels. Install two new hoists. Install grounding strips in all bays. Plan for 30% new.
- e. B214 - Replace panels, transformers, and disconnects. Replace some lighting and receptacles. Install new lighting and receptacles in rooms affected by construction. In Parachute room, provide devices with a hazardous rating. Install new 115V 400hz receptacles (from existing system) and 208V 3-phase receptacles. Install retractable extension coords with 120V 3 pin plugs. Plan for 60% new.
- f. B216 - Replace panels, transformers, and disconnects. Replace some lighting and receptacles. Install new lighting and receptacles in rooms affected by construction. Plan for 80% new.
- g. B218 - Replace panels, transformers, and disconnects. Replace some lighting and receptacles. Install new lighting and receptacles in rooms affected by construction. In Pilot Kit Up Room, provide devices with a hazardous rating. In Pyro room, provide devices with a hazardous rating and grounding points for pyro cabinet. Evaluate rooms

with hazardous classifications per NFPA and DA PAM 3685-64 Ammunition and Explosive Standards. Plan for 60% new.

3.8.6.2 Power Distribution

Provide new main distribution panels or service entrance panels in the main electrical rooms. Equipment must be service entrance rated to meet the existing or modified demand plus any additional loads such as electrification of new mechanical equipment, 480Y/277 volt (208Y/120V for B201), 3-phase, 4-wire distribution panelboards with a surge protection device (SPD). Do not install any surge protective device (SPD) in the switchboard or panelboard enclosure. Provide HACR rated circuit breakers where serving HVAC loads. Provide main service equipment with approximately 15% combination of spare devices and space to accommodate future load per UFC 3-501-01. Any new feeders from these panels to the downstream panel boards must be THWN copper in conduit. Step down, 15KVA or larger, dry type transformers (480V delta to 208Y/120V wye) must be insulation Class 220°C to provide for 115°C temperature rise; this also provides long term transformer reliability. In addition, dry type transformers that serve communications and computer receptacle loads must be K-4 rated to accommodate nonlinear loads. Locate all floor mounted equipment on concrete housekeeping pads. Building 214 has the additional requirement of a 115V 400Hz receptacle and a 208V 3-phase receptacle.

3.8.6.3 Conduit and Conductors

Route feeders and branch circuits in EMT conduit (RGS where exposed to damage). Conceal conduits above ceilings or inside of walls unless in utility spaces. All feeder and branch circuiting conductors must be 600V, THHN or THWN, copper wiring, rated at 75 degrees C for 100A and above, and 60 degrees C for under 100A. Equipment grounding conductors are provided for feeders and branch circuits. In areas where there is a hazardous classification, refer to the NEC Article 500. Do not use conduit as a ground pathway. Provide nonlinear, high harmonic loads with dedicated neutrals. Provide dielectric break for any conduit penetrating the secure or secret room boundaries.

3.8.6.4 Motors

Provide motors of sufficient size for the duty to be performed, and do not exceed the full-loading rating when the driven equipment is operating at specified capacity under the most severe conditions encountered. All motors must have open frames and continuous-duty classification and must be based on a 40 degree C ambient temperature reference. All motors must be derated (as applicable) for the facility's altitude. Thermal overloads must be the bimetallic type that can be reset. Motors above 1 HP must be premium efficiency. All three-phase motors must have phase loss protection. Disconnect switches for motors must be general duty type. Exterior switches must be of the rain-tight (NEMA 3R) type. Provide starters, variable frequency drives, and disconnect switches for packaged HVAC equipment as required by HVAC equipment manufacturer.

3.8.6.5 Faceplates

Provide receptacles and toggle switches that are white with stainless steel faceplates.

3.8.6.6 Panelboards

Panelboards serving large mechanical and lighting loads must be 480Y/277 volt (208Y/120V for building 201), 3 phase, 4 wire, while panelboards serving fractional horsepower loads and convenience outlets must be 208Y/120 volt, 3 phase, 4 wire. Size all panelboards for a minimum of 20% spare capacity and a minimum of 15% spare circuit breakers, utilizing copper bussing, and with a surge protection device (SPD). Do not install any (SPD) in the panelboard enclosure. Provide spare circuit breakers which are redundant and match the type of circuit breaker in the panelboard. All circuit breakers must be bolt-on type. Provide a panel schedule which is typed and placed in a protective holder located on the front inside of the panelboard door for all panelboards. Panels must have a hinged door with a master keyed flush tumbler latch. Label all panelboards with a plastic identification plaque. Refer to Section 3.9 – Telecommunications Design for telecommunication specific power requirements.

3.8.7 Power Quality and Grounding

Preserve power quality for the facility by using surge protective devices (SPD) at the service distribution equipment, panels, and where sensitive electronic loads exist. SPD's limit the intensity of over voltage transients from external power distribution events and internal power events.

3.8.7.1 Grounding

Ground interior electrical systems in accordance with Article 250 of the current National Electrical Code. Use grounding methods consistent with J-STD-607-C "Commercial Building Grounding and Bonding Requirements for Telecommunications", I3A, and applicable UFCs for all communications systems.

3.8.8 Interior Lighting

3.8.8.1 Lamps

Meet IESNA and Energy Code requirements for light fixture selection and controls. Comprise general facility lighting of high efficiency recessed LED luminaries. Provide pendant type LED industrial luminaries with wire guards at utility areas having unfinished ceilings (i.e.: electrical, mechanical, janitor.) Utilize direct, recessed, 2x2 luminaries throughout the facility (i.e.: open areas, offices, conference rooms, and hallways). Use LED fixtures which are 3500 degrees K with a minimum color rendering index (CRI) of 80. Use toggle switches which are white with stainless steel covers.

3.8.8.2 Controls

Comply with UFC 3-530-01 and ASHRAE 90.1, Chapter 9 for all facility lighting controls. Utilize dual technology (ultrasonic and infrared) occupancy / vacancy sensors, daylight sensors, multi-level switching, and a central lighting controller. Utilize multi-level switching for multi-occupant spaces such as open offices. Provide conference rooms with dimmable fixtures with preset lighting scenes for maximum illumination control. Provide three-way switching for spaces with multiple exits.

3.8.8.3 Exit Lighting

Provide emergency egress lighting by using battery backed ballasts. Frog-eye fixtures are not acceptable. Employ red LED lamps on a white field for "EXIT" lights.

3.8.8.4 Spare Parts Compatibility

Design lamp types, ballast types, and fixture types to be uniform so maintenance and stocking of replacement items is minimized.

3.8.8.5 Illumination Levels

Maintain the following illumination levels based upon IESNA recommendations:

Space	Lighting Level (fc)	Workplane (in)
Bathroom	5	0"
Corridors	5	0"
Entrance (Exterior)	1	0"
Exits (At Floor Level)	1	0"
Kitchen	50	36"
Offices	30	30"
Storage	10	0"
Telecomm Closet	50	36"
Utility Rooms	20	36"

3.8.9 Exterior Lighting

At any new or modified entrances or exits, include building mounted exterior lighting which is controlled to power on at dusk, automatically reduce lighting power by a minimum of 30% from 12 midnight or within one hour of normal closing (whichever is later) until 6am or normal opening (whichever is earlier) and during any period when no activity has been detected for a time of no longer than 15 minutes. Automatically turn off when sufficient daylight is available. Employ full cutoff, LED lamps at all exterior lighting. Illuminate entrances maintaining 1 footcandle. Spread illumination up to 10 feet away and around all personnel doors and roll-up doors.

3.8.10 Electrical Meters

No new meters are anticipated.

3.9 Telecommunications Design

3.9.1 General Information:

Produce all drawings, calculations, and specifications utilizing a Registered Communications Distribution Designer (RCDD), who will also sign and seal the documents. Review all submittals using only an RCDD or an RCDD certified tech.

3.9.2 Demolition

Remove Building 202, 214, 216, and 218's telecommunications systems in their entirety, with the exception of the outside plant telecommunications cabling. Splice outside plant cabling at current location (PET) and route to the new telecom room. Building 201 communications to remain as is.

Re-use the existing comm rooms in Buildings 201 and 202. In both buildings, remove all cat 6 wiring in modified walls back to the comm panels.

Before demolition begins, and before new installation, contact the Base Communications Squadron to test the existing outside plan (OSP) copper of each building to ensure the fiber and copper are still functioning and in good condition. Test both the copper and fiber 100% and provide test report to the Contracting Officer Representative (COR).

For any existing equipment that is removed and re-installed, contact the Base Communications Squadron for shutdown and disconnect work. Coordinate an onsite location to hold and store equipment in a location safe from the environment until construction is complete. Base Communications Squadron will inspect the equipment for proper operation before installation.

Install any existing cables removed and re-used in a splice case. Copper cables will have the pairs "cleared" to prevent shorts and grounds before placement of a splice case.

For fiber cables ensure there is no light source on the feeder side before installing a splice case. This is a safety issue as the light source can be extremely harmful to one's eye if looking into the fiber ends.

3.9.3 Telecommunications Systems New Work

3.9.3.1 General New Work by Building

- a. B201 – Add phone drop from existing communication. All existing comm to remain as is.
- b. B202 - Utilize existing communications room and add all new racks, patch panels, comm room power panel, cable tray NIPR and phone line drops. See concept drawings and room data sheets for drop locations and quantities. An additional wall mounted cabinet is required on the east side of the building to accommodate distance limitations. Provide backbone cabling consisting of multiple 12 strand 9/125mm single-mode fiber optic (SM FO) OS2 cables. Add Wi-Fi for ES and IDMS. Install SMF between communications room and the areas housing PMA-Server-Module (PSM) and the PMD-Reader.
- c. B214 - Add new communications room per UFC requirements including new racks, patch panels, comm room power panel, cable tray, and add NIPR and phone line drops. See concept drawings and room data sheets for drop locations and quantities. Install SMF between communications room and the areas housing PMA-Server-Module (PSM) and the PMD-Reader.

- d. B216 – The existing communications room is not in full compliance with the UFCs. Because this is a renovation project, reuse of the existing space is allowed without modification to the room size. See concept drawings and room data sheets for drop locations and quantities. Install SMF between communications room and the areas housing PMA-Server-Module (PSM) and the PMD-Reader.
- e. B218 - Add new communications room per UFC requirements including new racks, patch panels, comm room power panel, cable tray and add NIPR and phone line drops. See concept drawings and room data sheets for drop locations and quantities. Add Wi-Fi for ES and IDMS. Install SMF between communications room and the areas housing PMA-Server-Module (PSM) and the PMD-Reader.

3.9.3.2 Fiber Testing

For multimode optical fiber, perform optical fiber end-to-end attenuation tests in accordance with TIA-568.3 and TIA-526-14 using Optical Power Meter and Light Source and OTDR for multimode optical fiber. For single-mode optical fiber, perform optical fiber end-to-end attenuation tests in accordance with TIA-568.3 and TIA-526-7 using Optical Power Meter and Light Source, and OTDR.

3.9.3.3 Telecommunications Power

In new communications rooms, provide a dedicated 208/120V, 3-phase, 4 wire panelboard to serve each telecommunications room. Panelboards must serve all receptacles, equipment rack power, and HVAC power in the telecommunications room. Do not circuit the lighting in the telecommunications spaces to the telecommunications panelboards. Provide a minimum of two dedicated duplex receptacles at each equipment rack, located 24" above finished floor (AFF). Provide a dedicated 20A, 120V NEMA 5-20R and 208V 1-phase spare receptacle at each rack, located at 24" AFF, for Government furnished, Government installed (GFGI) uninterruptible power source (UPS) equipment.

3.9.3.4 Grounding

Provide backboards in accordance with TIA-569-C. Provide backboards which are fire-retardant-treated wood, bearing the manufacturer's stamp. If painted, the manufacturer's fire rated stamp must remain visible. Cover a minimum of two adjacent walls with backboards. When renovating an existing telecommunications room that does not have adequate space, size the backboard as large as possible to accommodate wall mounted equipment.

Provide dedicated Telecommunications Grounding Busbar (TGB) grounding bus with a ground conductor tied to the Telecommunications Master Grounding Busbar (TMGB) in the Telecommunication Entrance Facility (TEF.) Bond the TMGB to the facility power system grounding system per J-STD 607-C. Design the communications grounding between any TGB and the TMGB for no more than 100 milliohms resistance. Provide dielectric break for any conduit penetrating the room boundaries in Secure or Secret rooms. Provide a separate red and black ground in accordance with ICD-705 3.14 in the Vault area.

3.9.3.5 Patch Panels

Include a minimum of one LAN rack with RJ-45 jack, TIA 568A configuration patch panels, and 24 port optical fiber patch panels with LC connectors in each communication room.

3.9.3.6 Outside Plant Telecommunications

Leave outside plant (OSP) telecommunication cabling in place at new communications rooms. All existing (and new if required) OSP cables must be protected when not in use, and until they are terminated. Disconnect OSP cabling from the existing protective entrance terminals (PET) and fiber optic patch panels. Terminate outside plant single mode fiber optic (SM FO) OS1 cabling on rack mounted 24 port optical fiber entrance patch panels with LC connectors in the Communications Entrance Room (CER). Terminate outside plant copper pair cabling on backboard mounted circuit protector with service entrance overvoltage protectors in a 1:1 arrangement. Install ISP multi-pair cable from the PET to the rack and terminate on a CAT 6 patch panel. (pair per port).

3.9.3.7 Telephone Backbone Cabling

In new communications rooms, provide a new telephone backbone cabling system which consists of patch cords to be used to jumper voice ports for the room's outlets.

3.9.3.8 Data Backbone Cabling

For the new communication cabinet in Building 202, provide data backbone cabling consisting of multiple 12 strand 9/125mm single-mode fiber optic (SM FO) OS2 cables routed from rack mount fiber patch panels in the main communications room to rack mounted FO patch panels in the communication rooms on each floor. Utilize LC style connectors for backbone cabling.

3.9.3.9 Horizontal Cabling

Include jacks with a minimum of one voice jack and one data jack per wall plate for new voice and data telecommunication infrastructure. Provide jacks for offices, workstations, and assembly rooms. For station data wiring use one Cat-6 cable to each RJ-45 jacks and employ TIA 568A wiring topology. Terminate all data jacks on rack mounted patch panels. Locate wall jacks within 18-inches of power receptacles and provide a minimum of two per private office. Route telecom cabling in a combination of conduit and cable tray and terminate at the nearest telecommunications room rack-mounted patch panels.

3.9.3.10 Future Antenna System

Provide a 2.5" hole for two future antennas (GPS, primary link 16). Coordinate hole location with antenna location on roof.

3.9.3.11 SIPRNet

Provide SIPRNet connectivity at select locations indicated on room data sheets. Service these spaces with SIPRNet telecommunication rooms. In areas accredited as Sensitive Compartmented Information Facilities (SCIF), the SIPRNet cables are not required to be located in Protective Distribution Systems (PDS). Outside a SCIF, provide PDS for SIPRNet level telecommunications. Provide SIPRNet rooms in accordance with the "Building SIPRNET Communication Room – New Construction Guidance" and in accordance with the Technical Guide for the Integration of Secret Internet Protocol Router Network Version 5.0. Work with client to determine SIPRNet drop locations.

3.9.3.12 SIPRNet ICIDS

Provide infrastructure (conduit, power sources, and junction boxes) for the intrusion detection (IDS) at the Arms Vaults and SIPRNET rooms.

3.9.3.13 Protective Distribution System (PDS)

Furnish and install a PDS to provide SIPRNET access points in the offices and conference rooms. Mount PDS components exposed on walls on stand-off spacers such that 360-degree inspection of raceway is possible. Provide two, 2-inch conduits from each SIPRNet room to the adjacent telecommunications closet. Provide two, 4-pair, unshielded, CAT-6, copper cables in one two-inch conduit. Provide 12 strand single mode fiber optic cable in the second two-inch conduit. The following separation must occur between SIPRNet (Red) cabling and equipment from NIPRNet (black) cabling and equipment per NSTISSAM TEMPEST/2-95 requirements: (1) Provide 2 inch (5 cm) between red conductors crossing black conductors; (2) Provide 6 inch (15 cm) between red conductors running parallel with black conductors for over 98.5 feet (30 meters); (3) Provide 39.4-inch separation between encryption devices, jacks and computers.

3.10 Special Systems Design

3.10.1 Lightning Protection

Each building has an existing lightning protection system. Where roofing is replaced, remove the existing system and install a new system connected to the existing (where applicable).

Where required, install new lightning protection systems per NFPA 780. Provide systems consisting of Class 1 materials, 24-inch air terminals at maximum 25-foot spacing, main conductors, cross conductors, down conductors, bonding conductors, and connected to the existing system. When located on roofs, utilize cross conductors which are compatible with the roof material. Utilize Schedule 80 PVC conduit to route conductors down from the roof to the counterpoise. Where down conductors are not feasible, building steel may be used as the down conductors. Provide a lightning protection system with a UL Master Label certificate. Ground all electrical and communications systems to a single point to limit voltages due to lightning, line surges, and unintentional contact with higher voltage lines.

3.10.2 Conveying Systems

Two new 5-ton bridge cranes with a 22'-0" minimum hook height are required for Building 202. Refer to Architectural Section for additional information. Support the bridge cranes independently of the existing building structure. Coordinate design and installation of conveying system and fall protection systems.

In Building 214, inspect, test, and repair existing hoists and cranes and recertify for use.

3.10.3 Security Systems

3.10.3.1 Security Cameras

Provide interior IP addressable security camera infrastructure (conduit, junction boxes, and pull strings) for select areas within the facility. Provide dedicated conduits from camera locations to telecommunications room. Provide space in the rack for GFGI video server recording and control equipment. If cameras exceed 295', utilize fiber with media converters and provide a power feed for the converters.

3.10.3.2 Access Control System (ACS)

Provide provisions for a Government-furnished, Government-installed (GFGI) access control system (ACS) at all exterior entrances except mechanical and electrical rooms, which must be key locked. Use card key and PIN keypad devices for maximum flexibility and security. Configure the ACS to allow for government CAC cards to be used for access. Integrate and control access to SCIF perimeter portals through the ACS.

3.10.3.3 Audio-Visual Equipment

Provide provisions for a GFGI ceiling mounted projector where indicated on concept drawings. Provide a recessed projection screen, with motor, above the ceiling in the room with a projector. Provide infrastructure and wiring for a computer, as well as the supports and wiring for a wall mounted television. Provide a wall switch to control retraction of the screen. Coordinate specific layout and equipment requirements with the Users during the design phase.

3.10.4 Closed Circuit Television (CCTV)

Provide infrastructure (conduit, pull strings, and junction boxes) for a closed-circuit television (CCTV) system. Route the CCTV system from Building 216 to new cameras (GFGI) mounted on the outside of Building 202. Locate cameras to provide a full clear image of the parking apron. Servers and monitoring equipment will be provided and installed by others.

3.11 Antiterrorism (AT) and Force Protection (FP) Design

3.11.1 Antiterrorism

B201 is considered a low occupancy building and is exempt from the minimum antiterrorism standards. B202, B214, B216, and B218 must comply with the latest minimum standards as defined in UFC 4-010-01 DoD Minimum Antiterrorism Standards for Buildings. The Design Basis Threat for these facilities is low; therefore, only the minimum standards are applicable.

Apply Standard 2 enclosure requirements at B201 for the existing utility yards as a best practice and as preferred by Ebbing ANG Base.

3.11.2 Force Protection

No site modifications are required for antiterrorism. The existing sites have parking within the 33-foot unobstructed space. Standard 2 – Section 3-3.7 of UFC 4-010-01 allows parking within the unobstructed space. Ebbing ANGB has a barrier plan in place to respond operationally to a force protection condition (FPCON) change. In this case, parking may be temporarily eliminated within the unobstructed space at a higher FPCON.

3.12 Cybersecurity

3.12.1 Control System Cybersecurity

Determine all facility related/industrial control systems that are required to be designed in accordance with UFC 4-010-06 Cybersecurity of Facility Related Control Systems. These systems may include but are not limited to: Utility Monitoring Control Systems, Fire Alarm Mass Notification, Access Control Systems, EMCS, and Intrusion Detection Systems. Reference the Department of Defense Platform IT Master list. Submit a complete list to the Government as required in the design phases for approval. After determining the facility related system involved, the Contractor is responsible for all design submissions / deliverables / functions as outlined in UFC 4-010-06 Section 5.

3.12.2 Cybersecurity Specifications

Deliver an edited UFGS Specification Section 25 05 11 Cybersecurity for Facility-Related Control Systems for each facility control system identified and planned. All design submittals and deliverables will be reviewed and approved by the Government at all stages of the design. Interface with the Base via the Contracting Officer to define existing system requirements, Confidentiality Integrity Availability Impact Ratings, transport cybersecurity requirements (for example: existing enclave, standalone), existing authorization status, local installation cyber-requirements and other items that may impact the security posture of the system or scope and level of work required. Deliver construction submittals in accordance with the approved UFGS 25 05 11 for each platform.

PART 4 EXECUTION

4.1 General

4.1.1 Design Criteria

Facility design, materials, equipment, and installation must be in accordance with the requirements of the listed codes and design manuals in Attachment A.

4.1.2 Specifications

Utilize SpecsIntact to provide specifications for this project. There is no charge for this software. This software can be downloaded by the contractor from http://www.wbdg.org/ccb/browse_cat.php?c=3. Submittal of marked-up guide specifications is required at the 65% and 95% submittal stages of design which illustrate what has been edited from standard guide specifications. Prepare marked-up guides utilizing SpecsIntact software with strike-outs and redlining for this purpose. At the Final submittal stage, submit clean copies of specifications without markups.

4.1.3 Construction Documents

Provide the Government with a copy of the completed specifications, design calculations, and drawings. All design submittals must be electronic only, with the exception of Contract Drawings, As-Built Drawings and Operations and Maintenance (O&M) manuals.

4.1.4 Hazardous Materials

Perform a Regulated Materials Survey of the features to be renovated/demolished. In addition to lead paint, PCBs, asbestos, and mercury surveys, include any other components that may require special handling during the renovations of the buildings. Use only accredited laboratories to analyze samples. Provide a preliminary report prior to the design charrette which includes anticipated costs for abatement. Notify the Contracting Officer as soon as possible if abatement is required. Reference CLIN schedule for an allowance amount included to cover the abatement of all hazardous materials, if found during the renovations required for this project.

4.1.5 Topographic Survey

Furnish a topographic survey of the proposed site areas.

4.1.6 Building 216 Construction Schedule

Building 216 must be ready for occupancy no later than 30 June 2026. Complete construction on all other buildings within the period of performance (PoP).

4.1.7 Availability of Buildings

All buildings will be vacated prior to commencement of construction.

4.1.8 Miscellaneous

Verify all information received and all existing conditions. Obtain all information necessary to properly design and install all work. Coordinate the gathering of information during design through the Contracting

Officer. Any further survey required to provide utility locations, manhole inverts, and verification of existing features is the responsibility of the Contractor.

Contractor may use the existing facilities for construction storage and staging. Do not store items in rooms that have received a new epoxy floor finish.

4.2 Site Construction Information

4.2.1 Site Layout

Confine proposed development and site modifications to the immediate project area that is disturbed by through construction activities.

4.2.1.1 Haul Route

Coordinate with the Base Civil Engineer Squadron to determine an appropriate haul route to the site and appropriate construction vehicle entrance.

4.2.1.2 Construction Storage Yard

Store all equipment and material within the project limits. Restore this area in accordance with the contract or pre-construction condition based upon the location of the storage area(s). Regardless of the area, fence and screen the yard. Keep the fence well maintained and the site clean. Prior to commencing construction, obtain final approval from the Contracting Officer for establishing the storage yard.

SECTION 01 14 00.00 46

WORK RESTRICTIONS (SWL)

PART 1 GENERAL

1.1 PROTECTION OF GOVERNMENT PROPERTY

1.1.1 Protection of Government Facilities

Take whatever measures are necessary or required for protection of the existing buildings, grounds, parking area and other Government facilities.

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. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Installation Plan; G
Utility Outage Requests; G
Utility Connection Requests; G
Excavation Permits; G

SD-02 Shop Drawings

Plumbing System; G

1.3 WORK SCHEDULE

1.3.1 Work Hours

Arrange work schedule so that the work performed at the Government installation will be during the normal day shift established as 7:00 a.m. to 4:30 p.m., Monday through Friday, except Federal holidays, with the option of working weekends with the approval of the Contracting Officer's Representative. Work at the installation during other periods of time will be permitted only on the specific approval of the Contracting Officer or his authorized representative for each specified time. In the event an operation is necessary which cannot be completed within the day shift period specified above without loss or additional cost to the Contractor, the work day period for that operation may be extended upon request of the Contractor and approval of the Contracting Officer.

1.3.2 Inspection Hours

The contract requires that certain tests be performed in the presence of the Contracting Officer or his representative. These tests will be scheduled between 08:30 a.m. and 03:00 p.m., Monday through Thursday, excluding Federal holidays; the Government shall be given 72 hours advance notice.

1.4 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

1.4.1 Procedure for Determination

This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the contract clause entitled "Default (Fixed Price Construction)". In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

- a. The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.
- b. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

1.4.1.1 Schedule of Anticipated Adverse Weather Days

The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY

WORK DAYS BASED ON (5) DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
9	6	6	5	4	3	2	1	2	1	4	6

1.4.1.2 Reporting Adverse Weather Delays

Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the Contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled workday. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph (b), above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the contract clause entitled "Default (Fixed Price Construction)".

1.5 BASE REGULATIONS

The Contractor shall conform to all base regulations and directives pertaining to security, safety, debris removal, fire, traffic and personnel clearances, insofar as they pertain to the Contractor's activities on Ebbing Air National Guard Base (Ebbing ANGB). Contractor shall ensure conformance by all of his employees. Security requirements are subject to change. The Contractor can expect to be questioned and to present identification proof each time accessing the base. Entry to the Base under elevated security levels is limited to the main entrance for contractors. Entry may take as much as 60 minutes or more on some occasions due to emergencies or high levels of alert. The Contractor shall have a representative available on Base to receive all materials and equipment arriving on Base. The Contractor shall coordinate with Ebbing ANGB Security Forces Squadron for security requirements. Deliveries are to be coordinated with the 33rd/PIO and 188th SFS (as applicable) to provide escort. Contractor may not escort deliveries. Only DOD-ID holders may escort. Delivery of concrete shall be closely coordinated to assure adequate inspectors and escorts are available.

1.6 MATERIAL SHIPMENTS

The Government will not receive material shipments for construction projects and the Contractor shall not ship materials to himself addressed in care of Base Civil Engineer, Squadron or the Base Contracting Office. Receiving and storage of all construction shipments is entirely the responsibility of the Contractor. Shipments shall be addressed to the Contractor who shall be responsible for their receipt, unloading, handling, and storage at the site. Government will not accept deliveries on behalf of the Contractor or his subcontractors or assume responsibility for security of materials, equipment, or supplies delivered to the site. Contractor shall protect and preserve materials, supplies, and equipment of every description (including property which may be Government furnished or owned) and work performed.

1.7 UTILITIES

Existing electrical service to the facilities shall be maintained until new electrical service is in place and ready for operation. Utility interruptions will be approved by the Contracting Officer. The Contractor shall submit an installation plan/schedule outage plan for all utility outages 30 days after notice to proceed. This plan will be reviewed by the Contracting Officer. The plan must be approved prior to implementing any work. The Contractor shall submit to the Contracting Officer a written request for such work at least two (2) weeks prior to the desired date. Telecommunication lines impacted by the construction and related work must be phased to ensure continuous service. Electrical, water, sewer, and gas systems shall not be interrupted without prior approval of the COR.

1.7.1 Excavation Permits

A properly completed AF Form 103, Base Civil Engineering Work Clearance Request, shall be obtained by the Contractor prior to performing any excavation. A separate AF Form 103 is required for each excavation to be accomplished. Submit a request for AF Form 103 a minimum of 14 calendar days and a maximum of 28 days prior to desired start of excavation. The Contractor shall allow 14 calendar days for processing. Each request shall be in writing and designate the location of the proposed excavation and

the scheduled date. The completed AF Form 103 will contain information for locating existing utilities and telephone lines. The Contractor will keep the AF Form 103 at the excavation site and will comply with instructions for hand excavation and with other methods of safeguarding the buried utilities. In addition to the requirement to obtain a construction permit and prior to any excavation, the Contractor shall perform a pipe/cable location survey using a variety of modern locating equipment suitable for locating various types of pipe and cable. The Contractor shall use a signal generating locator such as a Goldak Gold Digger 4400 for metallic pipe and cable. For non-metallic pipe use a vibration generator such as a Fuji Tecom PL-130 or an RD-500. For non-metallic sewer pipe use a snake with attached generator. The Contractor shall mark all locations on the ground. The Contractor shall submit a sketch showing the found locations of utilities to the Contracting Officer for approval prior to beginning excavation. The Contracting Officer will provide available information as to the existence and location of known utilities with the approved construction permit. The Contractor shall be responsible for repairing damage to utilities, whether known or unknown, due to any failure on his part to form a rigorous survey, and at no additional cost to the Government.

1.7.1.1 Excavation Adjacent to Underground Utilities

Digging within three feet of underground communication or electrical power cables shall be performed by hand until the cable is exposed. The base Civil Engineer shall be notified 14 days prior to hand excavation. A base utilities representative will mark underground cable locations prior to excavation. Once the cable is exposed, mechanical excavation may be used if there is no chance of damaging the cable. Marking of utilities by the Base or its representatives does not relieve the Contractor of the responsibility to perform its own rigorous survey or repair at no additional cost to the government damage caused to existing utilities.

1.7.2 Utility Outage Requests and Utility Connection Requests

The Contractor shall obtain written permission or approval from the Contracting Officer for any utility outage. The outage request shall be submitted by the Contractor in accordance with the following paragraphs and shall indicate the proposed work and length of outage. Utility outages and connections required during the execution of the work that affect existing systems shall be arranged for at the convenience of the Government and shall be scheduled outside the regular working hours or on weekends. Contractor shall not be entitled to additional payment for utility outages and connections required to be performed outside the regular work hours.

1.7.2.1 Postponement of Outages

The Government reserves the right to postpone for 7 days, any scheduled outages. There shall be no outages when the outside temperature is expected to be below 35 degrees F.

1.7.2.2 Turning Utilities On and Off

Government personnel and/or the utility owner shall either perform and/or be present for all shutting off and turning on of valves and switches necessary to accomplish scheduled outage.

1.7.3 Water, Sewer, and Gas

Water outages will be performed by Base Civil Engineering. At least three (3) weeks written advance notice is required prior to shutting off water, sewer, or gas utilities. A service outage shall not exceed 4 hours unless otherwise approved by the Contracting Officer. Tapping of utilities without outages shall be accomplished where possible and shall be in requirements governing Ebbing ANGB.

1.7.4 Electrical

At least two (2) weeks written advance notice is required prior to shutting off electrical utilities. Electrical primary power outages will be performed by Entergy. The outage shall not exceed 4 hours. "Hot" line work will not be allowed.

1.7.5 Telecommunications

The Contractor shall not disturb communication wiring to facilities. Where such facilities require removal of communication equipment and wiring to accomplish the work involved, the Contractor shall notify the Contracting Officer at least five (5) work days in advance of the requirement, for scheduling such removals by the Government. The Contractor shall allow for the accomplishment of such removals by the telephone company or communications personnel for the systems they service. If construction activities damage any communication equipment or wiring, the Contractor shall restore services as soon as possible, but no later than 24-hours, and at no cost to the Government.

1.8 COMPLIANCE WITH ARKANSAS DEPARTMENT OF HEALTH

All work performed under this contract shall conform to the requirements of the Arkansas Department of Health. The Contractor shall submit a plumbing system plan for approval to the Arkansas Department of Health. The Contractor shall pay all fees required to obtain plumbing permit.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used.

-- End of Section --

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AT/OPSEC SITE SECURITY REQUIREMENTS

PART 1 GENERAL

1.1 Security Level

This is a Security Level One, Table A contract.

1.2 General Overview

- a) The security provisions of this contract and/or applicable task order apply to all Contractor and Subcontractor Employees (CSEs) physically working on federally controlled property or requiring access to a Department of Defense (DoD) network.
- b) The requirements in this specification shall be in addition to requirements specific to Ebbing ANGB installation requirements. Refer to 01 35 10.00 46 SPECIAL PROJECT PROCEDURES FOR EBBING FIELD WORK RESTRICTIONS for installation specific requirements.
- c) Prime Contractors (PCs) are responsible for subcontractor compliance with the security provisions of this contract and shall coordinate all security requirements on the behalf of the subcontractors and their employees.
- d) PCs will submit to the Southwestern Little Rock District Security Office (SWL-DSO) within 5 business days of the contract award personnel qualifications for the primary and alternate security Points of Contacts (POC) for this contract. This notification will be in the form of an email sent to m4xslceswlcontracts@usace.army.mil with the following information for each individual:

Full Name:

Email Address:

Work Phone:

Work Cell:

Time Zone of their work location:

NOTE: Only primary and alternate security POCs are authorized to contact the SWL-DSO to inquire about a contract employee.

- e) PCs security POCs shall submit the appropriate security investigation package for EACH CSE based on the Security Level listed above.
- f) The SWL-DSO reserves the right to upgrade the security level background check/investigation requirement of any contract and/or applicable task order; this includes upgrading the investigation standards for specific CSEs. If required, badges will be issued to all cleared personnel and are to be worn at all times while working on U.S. Army Corps of Engineers (USACE) property. Any CSE working on USACE property without the proper identification badge will be escorted off site.

NOTE: Proposed foreign contractors seeking to work on a USACE contract

must be cleared through the Department of State prior to having site access. To obtain approval, each individual must complete and submit the appropriate documents for processing. The required procedure takes approximately 45 business days to process once all documentation is completed properly and submitted.

1.3 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. Submittals with an "S" are for inclusion in the Sustainability Notebook, in conformance with Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Security Investigation Package; G

SD-07 Certificates

Personnel Qualifications; G

1.4 Security Investigation Package Requirements for each CSE

1.4.1 Security Level One

Security Level One requirements are listed below. Processing time is a minimum of ten business days.

- (1) SWL form 487 dated 2016, Contractor Required Information Form.
- (2) A copy of the CSE's driver's license or government issued identification card.
- (3) A copy of the CSE's proof of citizenship document or proof of authorization to work in the United States. Acceptable documents are:
 - (a) U.S. Birth Certificate
 - (b) U.S. Passport
 - (c) U.S. Certificate of Citizenship-INS
 - (d) U.S. Certification of Naturalization
 - (e) FS-545, Certificate of Birth Abroad
 - (f) U.S. Certificate of Report of Birth
 - (g) U.S. Consular Report of Birth Abroad
 - (h) Workers visa
 - (i) Permanent Resident card
- (4) One (1) digital passport-styled photo to be used for the USACE badge. Photos will be transmitted to the Security Office by means of

CD or Email m4xslceswlcontracts@usace.army.mil. Each digital photo shall be stored in a file labeled by the name of the CSE. If transmitted through email, the subject line of the email must be the name of individual pictured. Photo requirements are as follows:

- (a) In color.
 - (b) Taken within the last six months to reflect your current appearance.
 - (c) Taken in front a plain white or off-white background.
 - (d) Taken in full face viewed directly facing the camera.
 - (e) Taken with a neutral expression (preferred) or a natural smile, and with both eyes open.
 - (f) No hats or sunglasses are authorized in this photo; face must be clearly displayed with no distracters.
- (5) PCs must ensure each CSE is prescreened using the E-Verify program to meet the established employment eligibility requirements. The PC must ensure that the applicant has two valid forms of government issued identification, in order to ensure the correct information is entered in to the E-verify system. The CSE will provide the SWL-DSO with a list of verified employees to include their registration number from E-Verify. This list will be transmitted or mailed in the package along with the other required documents for CSEs. The E-Verify system can be located at the following URL (<http://www.dhs.gov/e-verify>).
- (6) PCs must train each CSE on the iWatch/core watch suspicious activity reporting requirements (see paragraph 5).

1.4.2 Security Level Two

Security Level Two Requirements are listed below. Processing time is approximately 6 months once all documents are submitted electronically and accepted by the Personnel Security Investigation-Center of Excellence (PSI-COE) via the Personnel Security Investigation Portal (PSIP). Work Authorization/Site Access shall be denied until this background investigation is completed and favorably adjudicated. Automatic disqualifying factors that apply to all contractors being vetted at this level can be found in Table A.

- (1) All requirements of the Security Level One package apply.
- (2) Optional Form (OF) 306, Declaration for Federal Employment. This form shall be affixed with original date and signature; signature must be hand written-electronic signatures will not be accepted. The OF-306 can be found at the following web site:
http://www.opm.gov/forms/pdf_fill/of306.pdf.
- (3) Fingerprint: Must be captured on an FD-258 electronically at an approved government site or manually (hard-copy) by a law enforcement or designated government security official.
 - (a) Hard-copy fingerprint submission can be captured by a law enforcement official local to the individual. CSE's shall ensure that

fingerprints are captured on a true/original FD-258 fingerprint card. No other form will be accepted. Card may be mailed through USPS to: U.S. Army Corps of Engineers, P.O. Box 867, Attn: Security, Little Rock, AR 72201. Use of the commercial delivery service such as Federal Express or UPS shall use following address: US Army Corps of Engineers, Attn: Security Office, Suite 6116, Little Rock, AR, 72201.

(b) CSEs can request to be fingerprinted electronically at the SWL-DSO. If this option is chosen, the individual must contact the SWL-DSO to schedule an appointment. Electronic fingerprinting is the quickest way to receive the results.

(c) CSE will have a background investigation requested by the SWL-DSO. The CSE will receive an email from PSI-COE with a link to complete the SF 85 online through e-QIP. It is the CSE's responsibility to read each email thoroughly and complete all tasks given by PSI-COE to ensure the investigation will not be terminated. The CSE will receive an information email stating no further documentation or revisions are required. See Standard Form (SF) 85 for required data input information at http://www.opm.gov/forms/pdf_fill/sf85.pdf. This is to be used as a guide (only) when completing the online equivalent and submitting direct to OPM.

1.4.3 Security Level Three

Security Level Three Requirements are listed below. Processing time is approximately 9 months once all documents are submitted electronically and accepted by the Personnel Security Investigation - Center of Excellence (PSI-COE) via the Personnel Security Investigation Portal (PSIP). Work Authorization/Site Access shall be denied until this background investigation is complete and favorably adjudicated. Automatic disqualifying factors that apply to all contractors being vetted at this level can be found in Table A.

- (1) All requirements of the Security Level One and Two packages apply except the SF 85 is replaced with the SF 86. See Standard Form (SF) 86 for required data input information at http://www.opm.gov/forms/pdf_fill/sf86.pdf.

1.4.4 Multi-Level Security

Multi-Level Security requires the use of "escorts", which shall be provided by the contractor. Processing time varies. Escorts are contractor employees who have met Security Level Two requirements (this takes approximately 6 months once all documents are submitted. Refer to section 1.3.2. Escorts will be provided at a 5:1 ratio, this means for every five contractor employees there will be one approved escort that is to remain within close proximity to those they are escorting at all times. All employees that will not be designated as escorts shall meet Security Level One, Table A requirements (this takes approximately 5 business days. Refer to section 1.3.1.

1.5 Personnel Security Investigation Package Transmission

Mailing Address:
USACE SWL
Attn: Security Office

700 West Capitol Ave (room 6116)
P.O. Box 867
Little Rock, AR 72201

- (a) If mailed- the investigation package will be transmitted in a sealed envelope together with a transmittal letter attached to the outside of the envelope for each applicant with the following information:

(1) Contract Number and Title

(2) Contracting Officer's representative name, office number, and cellular number

(3) CSE's full name and contact information

(4) PC name, address, and telephone number

- (b) Investigation packages can be faxed to (501) 324-5471. Faxed packages must have coversheet with contract information. Documents that contain personally identifiable information (such as social security number) must have coversheet stating "Page contains PII follows".
- (c) Email transmission- email packages to m4xslceswlcontracts@usace.army.mil Documents must be password protected if they contain personally identifiable information (such as social security number). Passwords to documents must be sent in separate email.
- (d) Investigation packages will be submitted to the SWL-DSO for processing and adjudication. Incomplete forms, illegible forms, etc., will be returned for correction and/ or completion and can delay the CSE from beginning work. The SWL-DSO address can be found in paragraph 1.3.2-3(a) of this specification.
- (e) Any change in personnel (whether an addition or replacement) at any time throughout the duration of the contract, will require the new personnel or replacement personnel to be vetted and approved by the SWL-DSO, in accordance with the requirements contained herein, prior to being granted Work Authorization/Site Access to any USACE property.

1.6 IWATCH/ Corps Watch Suspicious Activity Reporting (AT/OPSEC Cover Sheet, pg. 2, Section G, 4)

In addition to the IWATCH/Corps Watch Requirements, Contractors and Subcontractors must also comply with the 188th's OPSEC and AT training which will be provided in person at Ebbing ANGB upon mobilization to the project.

1.7 Disqualifying Factors

Background check/investigation disqualifying factors are included in Tables A and B of this specification. The term cleared refers to an individual granted authority to work on U.S. Army Corps of Engineers Property. This authorization comes through the Little Rock District Security Office to the Contracting Officer's Representative (COR).

Disqualifying Factors Table A			
CRIMINAL HISTORY/ CRIMINAL INFORMATION CHARGED* OR CONVICTED	< 5 Yrs	< 10 Yrs	> 10 Yrs
Known/suspected terrorist or belongs to known/suspected terrorist organization (verified through terrorist watch list)	DENY	DENY	DENY
Espionage, sabotage, treason, or terrorism (not terroristic threats); or conspiracy or attempt to commit offense	DENY	DENY	DENY
Knowingly/willfully engaged in acts or activities to overthrow the U.S. Government by force in any jurisdiction or any country; or conspiracy or attempt to commit offense	DENY	DENY	DENY
Active wants or warrants	DENY	DENY	DENY
Barred from any Federal installation or facility	DENY	DENY	DENY
Any type of identity fraud or inability to verify claimed identity	DENY	DENY	DENY
Any Felony Charge (except those specifically identified in table)	DENY	DENY	ALLOW
Felony charge involving unlawful distribution, sale, use, possession, or manufacture of and explosive, explosive device, or firearm; or conspiracy or attempt to commit offense	DENY	DENY	DENY
Registered Sex Offender	DENY	DENY	DENY
Rape, forcible sodomy, or sexual assault, or conspiracy or attempt to commit offense	DENY	DENY	DENY
Any sexual offense involving a minor or child, including child molestation, or child pornography; or conspiracy or attempt to commit offense	DENY	DENY	DENY
Kidnapping, hostage taking, human trafficking, or human smuggling, or conspiracy or attempt to commit offense	DENY	DENY	DENY
Child abuse involving serious bodily injury to a child or minor	DENY	DENY	DENY
Criminal homicide, murder, manslaughter, or negligent homicide	DENY	DENY	DENY
Hate Crimes offenses	DENY	DENY	DENY
Any type of assault or violent crime to include violent domestic charges	DENY	DENY	

Disqualifying Factors Table A			
Computer/cybercrimes such as improperly accessing (or introducing a virus or other contaminant) a computer, system, or network; modifying, damaging, using, disclosing, copying, or taking programs or data	DENY	DENY	DENY
Mayhem, maiming	DENY	DENY	DENY
Any type of arson, vandalism, or willful destruction of property	DENY	DENY	
Illegal Weapons Charges	DENY	DENY	DENY
Any type of extortion, bribery, or fraud to include "hot checks"	DENY	DENY	ALLOW
Any type of burglary, robbery, theft, larceny or conspiracy or attempt to commit offense	DENY	DENY	ALLOW
Any type of possession or distribution of stolen property	DENY	ALLOW	ALLOW
Any type of threat or disruption to the public or disturbing the peace (terroristic threat, inciting a riot, etc.)	DENY	DENY	ALLOW
Importation, manufacture, distribution of, or possession with intent to distribute a controlled substance, or conspiracy or attempt to commit offense	DENY	ALLOW	ALLOW
Illegal possession or use of a controlled substance	DENY	ALLOW	ALLOW
Operation of a motor vehicle while intoxicated by alcohol or drugs in any jurisdiction (1 conviction)	DENY	ALLOW	ALLOW
5 or more offenses for any crime (excluding minor traffic violations)	DENY	DENY	ALLOW
3 or more offenses for any crime (excluding minor traffic violations)	DENY	DENY	ALLOW
LEGEND/NOTES			
DENY	Individual(s) are not cleared to work on USACE property under any circumstance		
* Individual must be completely finished through legal processes of being charged with a crime, and will be required to provide documentation if record suggests otherwise.			

Disqualifying Factors Table B			
CRIMINAL HISTORY/ CRIMINAL INFORMATION CHARGED* OR CONVICTED	< 5 Yrs	< 10 Yrs	> 10 Yrs

Disqualifying Factors Table B			
Known/suspected terrorist or belongs to known/suspected terrorist organization (verified through terrorist watch list)	DENY	DENY	DENY
Espionage, sabotage, treason, or terrorism (not terroristic threats); or conspiracy or attempt to commit offense	DENY	DENY	DENY
Knowingly/willfully engaged in acts or activities to overthrow the U.S. Government by force in any jurisdiction or any country; or conspiracy or attempt to commit offense	DENY	DENY	DENY
Active warrants or warrants	DENY	DENY	DENY
Barred from any Federal installation or facility	DENY	DENY	DENY
Any type of identity fraud or inability to verify claimed identity	DENY	DENY	DENY
Any Felony Charge (except those specifically identified in table)	DENY	DENY	ALLOW
Felony charge involving unlawful distribution, sale, use, possession, or manufacture of and explosive, explosive device, or firearm; or conspiracy or attempt to commit offense	DENY	DENY	DENY
Registered Sex Offender	DENY	DENY	DENY
Rape, forcible sodomy, or sexual assault, or conspiracy or attempt to commit offense	DENY	DENY	DENY
Any sexual offense involving a minor or child, including child molestation, or child pornography; or conspiracy or attempt to commit offense	DENY	DENY	DENY
Kidnapping, hostage taking, human trafficking, or human smuggling, or conspiracy or attempt to commit offense	DENY	DENY	DENY
Child abuse involving serious bodily injury to a child or minor	DENY	DENY	DENY
Criminal homicide, murder, manslaughter, or negligent homicide	DENY	DENY	DENY
Hate Crimes offenses	DENY	DENY	DENY

Disqualifying Factors Table B			
Any type of assault or violent crime to include violent domestic charges	DENY	DENY	ALLOW
Computer/cyber-crimes such as improperly accessing (or introducing a virus or other contaminant) a computer, system, or network; modifying, damaging, using, disclosing, copying, or taking programs or data	DENY	DENY	DENY
Mayhem, maiming	DENY	DENY	DENY
Any type of arson, vandalism, or willful destruction of property	DENY	DENY	ALLOW
Illegal Weapons Charges	DENY	DENY	DENY
Any type of extortion, bribery, or fraud to include "hot checks"	DENY	DENY	ALLOW
Any type of burglary, robbery, theft, larceny or conspiracy or attempt to commit offense	DENY	DENY	ALLOW
Any type of possession or distribution of stolen property	DENY	ALLOW	ALLOW
Any type of threat or disruption to the public or disturbing the peace (terroristic threat, inciting a riot, etc.)	DENY	ALLOW	ALLOW
Importation, manufacture, distribution of, or possession with intent to distribute a controlled substance, or conspiracy or attempt to commit offense	DENY	ALLOW	ALLOW
Illegal possession or use of a controlled substance	ALLOW	ALLOW	ALLOW
Operation of a motor vehicle while intoxicated by alcohol or drugs in any jurisdiction (1 conviction)	ALLOW	ALLOW	ALLOW
5 or more offenses for any crime (excluding minor traffic violations)	DENY	DENY	ALLOW
3 or more offenses for any crime (excluding minor traffic violations)	DENY	ALLOW	ALLOW
LEGEND/NOTES			
DENY	Individual(s) are not cleared to work on USACE property under any circumstance		

Disqualifying Factors Table B

* Individual must be completely finished through legal processes of being charged with a crime, and will be required to provide documentation if record suggests otherwise.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 22 00.00 10

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 SINGLE JOB PAYMENT ITEMS

Payment items for the work of this contract for which contract job payments will be made are listed in the SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular job or unit price payment item, are included in the listed job item most closely associated with the work involved. The job price and payment made for each item listed constitutes full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.1.1 XXX (BASE BID; CLIN 0001)

1.1.1.1 Payment

Payment will be made for all costs associated with xxx.

1.1.1.2 Unit of Measure

Unit of measure: Job

-- End of Section --

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

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)

EM 385-1-1 (2024) Safety and Health Requirements Manual

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

View Location Map

Progress and Completion Pictures
Field Office Overhead
Accounting Practice
Delegation Of Authority

SD-05 Design Data

Modified Red Zone Checklist

1.3 VIEW LOCATION MAP

Submit, prior to or with the first digital photograph submittals, a sketch or drawing indicating the required photographic locations. Update as required if the locations are moved.

1.4 PROGRESS AND COMPLETION PICTURES

Reference 01 35 10.00 46 SPECIAL PROJECT PROCEDURES FOR EBBING FIELD for base specific requirements including permissions concerning progress photos and photography. Photographically document site conditions prior to start of construction operations. Include aerial photographs. Provide monthly, and within one month of the completion of work, digital photographs, 1600x1200x24 bit true color minimum resolution in JPEG file format showing the sequence and progress of work. Take a minimum of 20 digital photographs each week throughout the entire project from a minimum of ten different viewpoints selected by the Contractor unless otherwise directed by the Contracting Officer. Submit with the monthly invoice

digital photographs, cumulative of all photos to date, through RMS, with naming convention as directed by the Contracting Officer. Indicate photographs demonstrating environmental procedures. Also provide the view location sketch in the submittal as a digital file. Photographs provided are for unrestricted use by the Government.

1.5 MINIMUM INSURANCE REQUIREMENTS

Provide the minimum insurance coverage required by FAR 28.307-2 Liability, during the entire period of performance under this contract. Provide other insurance coverage as required by State law.

1.6 SUPERVISION

1.6.1 Superintendent Qualifications

Provide project superintendent with a minimum of 10 years experience in construction with at least 5 of those years as a superintendent on projects similar in size and complexity. The individual must be familiar with the requirements of EM 385-1-1 and have experience in the areas of hazard identification and safety compliance. The individual must be capable of interpreting a critical path schedule and construction drawings. The qualification requirements for the alternate superintendent are the same as for the project superintendent. The Contracting Officer may request proof of the superintendent's qualifications at any point in the project if the performance of the superintendent is in question.

1.6.2 Minimum Communication Requirements

Have at least one qualified superintendent, or competent alternate, capable of reading, writing, and conversing fluently in the English language, on the job-site at all times during the performance of Contract work. In addition, if a Quality Control (QC) representative is required on the Contract, then that individual must also have fluent English communication skills.

1.6.3 Duties

The project superintendent is primarily responsible for managing subcontractors and coordinating day-to-day production and schedule adherence on the project. The superintendent is required to attend Red Zone meetings, partnering meetings, and quality control meetings. The superintendent or qualified alternative must be on-site at all times during the performance of this contract until the work is completed and accepted.

1.6.4 Non-Compliance Actions

The Project Superintendent is subject to removal by the Contracting Officer for non-compliance with requirements specified in the contract and for failure to manage the project to ensure timely completion. Furthermore, 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 is acceptable as the subject of claim for extension of time for excess costs or damages by the Contractor.

1.7 Field Office Overhead

Notice to Offerors: You must declare below the accounting practice that you apply to contracts to calculate field office overhead for all change orders, modifications, and requests for equitable adjustment. Pursuant to Federal Acquisition Regulation (FAR) Parts 31.105(d)(3) and 31.203(d)(1), an accounting practice that varies from modification to modification is not allowable. Select one of the following:

- a. If you use Time Distribution Base for Per Diem Rate practice, see "Field Office Overhead - Per Diem Rate" listed below.
- b. If you use Direct Cost Distribution Base for a Percentage Mark-up practice, see "Field Office Overhead - Percentage Markup", listed below.
- c. If you choose Other Accounting Practice That is Allowed Under the FAR and That Uses a Single Distribution Base, you must describe the accounting practice in sufficient detail below to allow the Contracting Officer to determine what accounting practice is being utilized by your company and that it complies with the criteria for acceptable accounting practices as set out in FAR Parts 31.105(d)(3) and 31.203(d)(1).
- d. Contractor must declare the Accounting Practice to apply to this contract, in writing, within 10 days after Notice to Proceed is received.

1.7.1 Field Office Overhead - Per Diem Rate

The Contracting Officer shall make an equitable adjustment and modify the contract in writing for any change to the contract, issued pursuant to the Changes clause or otherwise, for which the Government is responsible, and which causes either an increase or decrease in the Contractor's costs as to time or performance under the contract. Under such an equitable adjustment, the Contractor's field office overhead shall be an allowable cost, in accordance with the Contractor's accounting practice as identified by the Contractor.

The Contractor shall declare which standard form of accounting practice it applies to field overhead costs: if a contractor indicates that it follows a per diem basis, no overhead percentage markup rate for office overhead costs shall be allowed.

Under such an equitable adjustment, the Contractor shall be reimbursed for field office overhead on a per diem basis when the completion of the contract is extended by reason of the change issued under any clause, except the Default clause, subject to the Contractor substantiating the variable expense by providing a detailed breakdown of its proposed increase or decrease of costs as required by the Contract Clause DFARS 252.236-7001 MODIFICATION OF PROPOSALS - PRICE BREAKDOWN. No payment of field office overhead on a per diem basis shall be allowed for any change when the completion of the contract is not extended by reason of the change.

1.7.2 Field Office Overhead - Percentage Markup

The Contracting Officer shall make an equitable adjustment and modify the contract in writing for any change to the contract, issued pursuant to the Changes clause or otherwise, for which the Government is responsible, and which causes either an increase or decrease in the Contractor's costs as to

time or performance under the contract. Under such an equitable adjustment, the Contractor's field office overhead shall be an allowable cost, in accordance with the Contractor's accounting practice as identified by the Contractor.

The Contractor shall declare which standard form of accounting practice it applies to field overhead costs: if a contractor indicates that it follows a percentage basis, no per diem rate for office overhead costs shall be allowed.

Under such an equitable adjustment, payment of office overhead costs shall be allowed for any change on a percentage markup basis regardless of whether the completion of the contract is, or, is not, extended by reason of the change, except for modifications issued pursuant to the Default Clause. The Contractor shall provide a detailed breakdown of its proposed increase or decrease of costs as required by Contract Clause DFARS 252.236 - 7001 MODIFICATION OF PROPOSALS - PRICE BREAKDOWN.

1.8 Delegation of Authority

Submit separate letters of authority for each individual with delegated authority to negotiate and/or sign documents on behalf of the contractor for this contract. Provide name, title, telephone number, and email address for each individual and state their delegated authorities, to include authority limits where applicable, for the following items:

- a. Serial Letters
- b. Price Proposals
- c. Authority to Negotiate (time and/or cost)
- d. Contract Modifications Prompt
- e. Prompt Payment Certification
- f. Certified Payroll Documents
- g. Safety incident notices and forms
- h. CPARS performance evaluations
- i. Release of Claims
- j. Delegation of Competent Person and/of Qualified Person

Each letter submitted shall include the individual's acknowledgement of their delegated authority and shall include the individual's handwritten signature and electronic signature.

Submit the letters within 10 days after receipt of Notice to Proceed.

Update the authority delegations, in writing, when changes in personnel or delegated authority occur.

1.9 PRECONSTRUCTION CONFERENCE AND MUTUAL UNDERSTANDING CONFERENCE (MUC)

Prior to start of construction, a pre-construction conference will be scheduled by the authorized representative of the Contracting Officer. The purpose of the preconstruction conference is to discuss and review the contract, its requirements, and general administrative processes and procedures as well as define contractual lines of authority. The purpose of the MUC is to develop a mutual understanding of more in depth administrative requirements of the Contract including but not limited to: daily reporting, invoicing, value engineering, safety, base-access, outage requests, hot work permits, schedule requirements, quality control, schedule of prices or earned value report, shop drawings, submittals, cybersecurity, prosecution of the work, government acceptance, final

inspections and contract close-out and the processes for joint risk management between the Contractor and Government. Contractor must present and discuss their basic approach to scheduling the construction work and any required phasing. It is preferred the major subcontractors also be present for the preconstruction conference.

1.9.1 Attendees

Contractor attendees must include the Project Manager, Superintendent, Site Safety and Health Officer (SSHO), Quality Control Manager and major subcontractors.

1.10 FACILITY PLANNING MEETINGS (Red Zone Meetings)

Meet with the Government to identify strategies to ensure the project is carried to expeditious closure and turnover to the Client. Start planning the turnover process at the Pre-Construction Conference meeting with a discussion of the Red Zone process and convene at regularly scheduled Red Zone Meetings beginning at approximately 75 percent of project completion. Include the following in the facility Turnover effort:

1.10.1 Red Zone Checklist

- a. Contracting Officer will provide the Contractor a copy of the Red Zone checklist template.
- b. Prior to 75 percent completion, modify the Red Zone Checklist template by adding or deleting critical activities applicable to the project and assign planned completion dates for each activity. Submit the modified Red Zone Checklist to the Contracting Officer. The Contracting Officer may request additional activities be added to the Red Zone Checklist at any time as necessary.

1.10.2 Meetings

- a. Conduct regular Red Zone Meetings beginning at approximately 75 percent project completion, or three to six months prior to Beneficial Occupancy Date (BOD), whichever comes first.
- b. The Contracting Officer will establish the frequency of the meetings, which is expected to increase as the project completion draws nearer. At the beginning, Red Zone meetings may be every two weeks then increase to weekly towards the final month of the project.
- c. Using the Red Zone Checklist as a Plan of Action and Milestones (POAM) and basis for discussion, review upcoming critical activities and strategies to ensure work is completed on time.
- d. During the Red Zone Meetings discuss with the Contracting Officer any upcoming activities that require Government involvement.
- e. Maintain the Red Zone Checklist by documenting the actual completion dates as work is completed and update the Red Zone Checklist with revised planned completion dates as necessary to match progress. Distribute copies of the current Red Zone Checklist to attendees at each Red Zone Meeting.

1.11 PARTNERING

To most effectively accomplish this Contract, the Contractor and Government must form a cohesive partnership with the common goal of drawing on the strength of each organization in an effort to achieve a successful project that without safety mishaps, conforming to the Contract, within budget and on schedule. The partnering team must consist of personnel from both the Government and Contractor including project level and corporate level leadership positions. Key Personnel from the supported command, end user, Contractor, key subcontractors and the Designer of Record are required to participate in the Partnering process.

1.11.1 Facilitated (Formal) Partnering

- a. Within 35 calendar days after award and prior to the start of work, host a Formal Partnering session with key personnel from the project team including both Contractor and Government personnel. All costs associated with the Partnering session including the third-party independent Facilitator Consultant, meeting room and other incidental items are the responsibility of the Contractor.
- b. Before the Facilitated (Formal) Partnering session, coordinate with the Facilitator all requirements for incidental items (such as audio-visual equipment, easels, flipchart paper, colored markers, note pads, pens/pencils, colored flash cards) and have these items available at the Partnering session. Provide copies of any documents required for distribution to all attendees. Participants will bear their own costs for meals, lodging and transportation associated with Partnering.
- c. The Initial Partnering Session must be a duration of one day and be held at a location off base as agreed to by the Contracting Officer. Partnering session may take place concurrently with the Meeting.
- d. Facilitator must be experienced in conducting corporate Partnering sessions and must be a third-party independent facilitating consultant - not an employee of the Contractor. The Facilitator is responsible for leading all aspects of the Partnering session necessary to achieve the Partnering goal.
- e. An outcome of the Partnering session must be an escalation matrix agreed upon by both the Government and Contractor, which identifies key Government and Contractor decision makers by name and anticipated decision durations.
- f. Host follow-on Partnering Sessions at three- to six-month intervals or more frequently if needed and lasting generally a half day or less. Attendees need only be those required to resolve current issues. The same Facilitator used in the Initial Partnering session must lead the follow-on sessions unless an alternative is permitted by the Contractor Officer. All costs associated with follow-on Partnering sessions are the responsibility of the Contractor.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 32 01.00 10

PROJECT SCHEDULE

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.

AACE INTERNATIONAL (AACE)

AACE 29R-03	(2011) Forensic Schedule Analysis
AACE 52R-06	(2006) Time Impact Analysis - As Applied in Construction
AACE 84R-13	(2015) Planning and Accounting for Adverse Weather

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 67-17	(2017) Schedule Delay Analysis
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U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 1-1-11	(2017) Administration -- Project Schedules
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1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Project Scheduler Qualifications; G

Preliminary Project Schedule; G

Initial Project Schedule; G

Periodic Schedule Update; G

1.3 PROJECT SCHEDULER QUALIFICATIONS

Designate an authorized representative to be responsible for the preparation of the schedule and all required updating and production of reports. The Designated Project Scheduler must have prepared and maintained at least three previous construction schedules for projects of similar size and complexity to this contract, using Primavera P6. Representative must be certified by a professionally recognized

certification program for scheduling which demonstrates a comprehensive knowledge of CPM scheduling principles and application.

PART 2 PRODUCTS

2.1 SOFTWARE

The scheduling software utilized to produce and update the schedules required herein must be capable of meeting all requirements of this specification.

2.1.1 Government Default Software

The Government uses Primavera P6. Ensure exported schedule files are compatible with the version of P6 used by the Government.

2.1.2 Contractor Software

Scheduling software used by the contractor must be commercially available from the software vendor for purchase with vendor software support agreements available. The software routine used to create the required .sdef file must be created and supported by the software manufacturer.

2.1.2.1 Primavera

If Primavera P6 is selected for use, provide the ".xer" export file in a version of P6 importable by the Government system. Verify at the SEKO meeting which version of P6 is in use by the Government. Export the schedule in a version of P6 no newer than that used by the Government.

2.1.2.2 Other Than Primavera

If the Contractor chooses software other than Primavera P6, that is compliant with this specification, provide for the Government's use two licenses, two computers, and training for two Government employees in the use of the software. These computers will be stand-alone and not connected to Government network. Computers and licenses will be returned at project completion.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Prepare for approval a Project Schedule, as specified herein, pursuant to FAR Clause 52.236-15 Schedules for Construction Contracts. Show in the schedule the proposed sequence to perform the work and dates contemplated for starting and completing all schedule activities. The scheduling of the entire project is required. The scheduling of design and construction is the responsibility of the Contractor. Contractor management personnel must actively participate in its development. Designers, Subcontractors, and suppliers working on the project must also contribute in developing and maintaining an accurate Project Schedule. Provide a schedule that is a forward planning as well as a project monitoring tool. Use the Critical Path Method (CPM) of network calculation to generate all Project Schedules. Prepare each Project Schedule using the Precedence Diagram Method (PDM).

3.1.1 Scheduling Expectations Kickoff Meeting(SEKO)

In conjunction with the post award conference or pre construction conference the Government and the Contractor will hold a separate and distinct Scheduling Expectations Kickoff Meeting(SEKO). The intent of this meeting is for the Government to review with the contractor the requirements of the scheduling specification, communicate the Government's expectations regarding schedule development and management, and answer any questions the Contractor may have regarding the schedule requirements.

3.2 BASIS FOR PAYMENT AND COST LOADING

The schedule is the basis for determining contract earnings during each update period and therefore the amount of each progress payment. The aggregate value of all activities coded to a contract CLIN must equal the value of the CLIN. Match the progress payment "Pay Period Thru" date in RMS to the schedule data date.

3.2.1 Activity Cost Loading

Activity cost loading must be reasonable and without front-end loading. Activities with a negative cost loading is not allowed. Provide additional documentation to demonstrate reasonableness if requested by the Contracting Officer.

3.2.2 Withholdings / Payment Rejection

Failure to meet the requirements of this specification may result in the disapproval of the preliminary, initial, or periodic schedule updates and subsequent rejection of payment requests until compliance is met.

In the event that the Contracting Officer directs schedule revisions and those revisions have not been included in subsequent Project Schedule revisions or updates, the Contracting Officer may withhold 10 percent of pay request amount from each payment period until such revisions to the project schedule have been made.

3.3 PROJECT SCHEDULE DETAILED REQUIREMENTS

3.3.1 Level of Detail Required

Develop the Project Schedule to the appropriate level of detail to address major milestones and to allow for satisfactory project planning and execution. Failure to develop the Project Schedule to an appropriate level of detail will result in its disapproval. The Contracting Officer will consider, but is not limited to, the following characteristics and requirements to determine appropriate level of detail:

3.3.2 Activity Durations

Reasonable activity durations are those that allow the progress of ongoing activities to be accurately determined between update periods. Non-procurement activities Original Durations (OD) are not to exceed 20 workdays or 30 calendar days.

3.3.3 Design and Permit Activities

Include design and permit activities with the necessary conferences and follow-up actions and design package submission dates. Include the design

schedule in the project schedule, showing the sequence of events involved in carrying out the project design tasks within the specific contract period. Provide a detailed level of scheduling sufficient to identify all major design tasks, including those that control the flow of work. Also include review and correction periods associated with each item.

3.3.4 Procurement Activities

Include in the schedule activities associated with the critical submittals and their approvals, procurement, fabrication, and delivery of long lead materials, equipment, fabricated assemblies, and supplies. Long lead procurement activities are those with an anticipated procurement sequence of over 90 calendar days.

3.3.5 Mandatory Activities

Include the following activities in the initial project schedule and all updates.

- a. Submission, review and acceptance of SD-01 Preconstruction Submittals (individual activity for each).
- b. Submission, review and acceptance of features requiring design completion Submission, review and acceptance of design packages.
- c. Submission of mechanical/electrical/information systems layout drawings.
- d. Submission and approval of O & M manuals.
- e. Submission and approval of as-built drawings.
- f. Submission and approval of DD1354 data and installed equipment lists.
- g. Submission and approval of testing and air balance (TAB).
- h. Submission of TAB specialist design review report.
- i. Submission and approval of fire protection specialist.
- j. Submission and approval of Building Commissioning Plan, Controls testing plan, test data, and reports: Develop the schedule logic associated with testing and commissioning of mechanical systems to a level of detail consistent with the contract commissioning requirements. All tasks associated with building testing and commissioning will be completed prior to submission of building commissioning report and subsequent contract completion.

These activities may include but are not limited to: air and water balancing, building commissioning -functional performance testing, controls testing, and performance verification testing. Include other systems testing, if required. Include additional commissioning requirements noted elsewhere in the Contract as required in the schedule and discuss during the SEKO meeting, noted in paragraph SCHEDULING EXPECTATIONS KICKOFF MEETING (SEKO).

- k. Contractor's pre-final inspection.
- m. Correction of punch list from Contractor's pre-final inspection.

- n. Government's pre-final inspection.
- o. Correction of punch list from Government's pre-final inspection.
- p. Final inspection.

3.3.6 Government Activities

Show in schedule, Government and other agency activities that could impact progress. These activities include, but are not limited to approvals, acceptance, design reviews, environmental permit approvals by State regulators, inspections, utility tie-in, Government Furnished Equipment (GFE) and Notice to Proceed (NTP) for phasing requirements.

3.3.7 Standard Activity Coding Dictionary

Use the activity coding structure defined in the Standard Data Exchange Format (SDEF) in ER 1-1-11. This exact structure is mandatory. Develop and assign all Activity Codes to activities as detailed herein.

The SDEF format is as follows:

Field	Activity Code	Length	Description
1	WRKP	3	Workers per day
2	RESP	4	Responsible party
3	AREA	4	Area of work
4	MODF	6	Modification Number
5	BIDI	6	Bid Item (CLIN)
6	PHAS	2	Phase of work
7	CATW	1	Category of work
8	FOW	20	Feature of work*
<p>*Some systems require that FEATURE OF WORK values be placed in several activity code fields. The notation shown is for Primavera P6. Refer to the specific software guidelines with respect to the FEATURE OF WORK field requirements.</p>			

3.3.7.1 Workers Per Day (WRKP)

Assign Workers per Day for all field construction or direct work activities, if directed by the Contracting Officer. Workers per day is based on the average number of workers expected each day to perform a task for the duration of that activity.

3.3.7.2 Responsible Party Coding (RESP)

Assign responsibility code for all activities to the Prime Contractor, Subcontractor(s) or Government agency(ies) responsible for performing the activity.

- a. Activities coded with a Government Responsibility code include, but are not limited to: Government approvals, Government design reviews, environmental permit approvals by State regulators, Government Furnished Property/Equipment (GFP) and Notice to Proceed (NTP) for phasing requirements.
- b. Activities cannot have more than one Responsibility Code. Examples of acceptable activity code values are: DOR (for the designer of record); ELEC (for the electrical subcontractor); MECH (for the mechanical subcontractor); and GOVT (for USACE).

3.3.7.3 Area of Work Coding (AREA)

Assign Work Area code to activities based upon the work area in which the activity occurs. Define work areas based on resource constraints or space constraints that would preclude a resource, such as a particular trade or craft work crew from working in more than one work area at a time due to restraints on resources or space. Examples of Work Area Coding include different areas within a floor of a building, different floors within a building, and different buildings within a complex of buildings. Activities cannot have more than one Work Area Code.

3.3.7.4 Modification Number (MODF)

Assign a Modification Number Code to any activity or sequence of activities added to the schedule as a result of a Contract Modification, when approved by Contracting Officer. Key all Code values to the Government's modification numbering system. An activity can have only one Modification Number Code.

3.3.7.5 Bid Item Coding (BIDI)

Assign a Bid Item Code to all activities using the Contract Line Item Number (CLIN) to which the activity belongs, even when an activity is not cost loaded. An activity can have only one BIDI Code.

3.3.7.6 Phase of Work Coding (PHAS)

Assign Phase of Work Code to all activities. Examples of phase of work are design phase, procurement phase and construction phase. Each activity can have only one Phase of Work code.

- a. Code proposed fast track design and construction phases proposed to allow filtering and organizing the schedule by fast track design and construction packages.
- b. If the contract specifies phasing with separately defined performance periods, identify a Phase Code to allow filtering and organizing the schedule accordingly.

3.3.7.7 Category of Work Coding (CATW)

Assign a Category of Work Code to all activities. Category of Work Codes

include, but are not limited to design, design submittal, design reviews, review conferences, permits, construction submittal, procurement, fabrication, weather sensitive installation, non-weather sensitive installation, start-up, and testing activities. Each activity can have no more than one Category of Work Code.

3.3.7.8 Feature of Work Coding (FOW)

Assign a Feature of Work Code to appropriate activities based on the Definable Feature of Work to which the activity belongs based on the approved QC plan.

Definable Feature of Work is defined in Section 01 45 00 QUALITY CONTROL. An activity can have only one Feature of Work Code.

3.3.8 Contract Milestones and Constraints

Milestone activities are to be used for significant project events including, but not limited to, project phasing, project start and end activities, or interim completion dates. The use of artificial float constraints such as "zero free float" or "zero total float" are prohibited.

Mandatory constraints that ignore or effect network logic are prohibited. No constrained dates are allowed in the schedule other than those specified herein. Submit additional constraints to the Contracting Officer for approval on a case by case basis.

3.3.8.1 Project Start Date Milestone and Constraint

The first activity in the project schedule must be a start milestone titled "NTP Acknowledged," which must have a "Start On" constraint date equal to the date that the NTP is acknowledged.

3.3.8.2 End Project Finish Milestone and Constraint

The last activity in the schedule must be a finish milestone titled "End Project."

Constrain the project schedule to the Contract Completion Date in such a way that if the schedule calculates an early finish, then the float calculation for "End Project" milestone reflects positive float on the longest path. If the project schedule calculates a late finish, then the "End Project" milestone float calculation reflects negative float on the longest path.

3.3.8.3 Interim Completion Dates and Constraints

Constrain contractually specified interim completion dates to show negative float when the calculated late finish date of the last activity in that phase is later than the specified interim completion date.

3.3.8.3.1 Start Phase

Use a start milestone as the first activity for a project phase. Call the start milestone "Start Phase X" where "X" refers to the phase of work.

3.3.8.3.2 End Phase

Use a finish milestone as the last activity for a project phase. Call the finish milestone "End Phase X" where "X" refers to the phase of work.

3.3.9 Adverse Weather

Ensure anticipated adverse weather is accounted for in the Project Schedule. AACE 84R-13 provides methodologies for techniques in planning for adverse weather. The preferred methodology is the use of a weather calendar. If a method other than a weather calendar is proposed the discuss the reason during the SEKO meeting.

3.3.10 Calendars

Schedule activities on a Calendar to which the activity logically belongs. Develop calendars to accommodate any contract defined work period such as a 7-day calendar for Government Acceptance activities, concrete cure times, etc. Develop the default Calendar to match the physical work plan with non-work periods identified including weekends and holidays. Develop Seasonal Calendar(s) and assign to seasonally affected activities as applicable.

If a weather calendar is used its implementation and execution is to be in accordance with AACE 84R-13

3.3.11 Open Ended Logic

Only two open ended activities are allowed: the first activity "NTP Acknowledged" is to have no predecessor logic, and the last activity -"End Project" is to have no successor logic. Except as noted above all activities are to have at least a start-to-start or finish-to-start relationship with its predecessor(s) and a finish-to-finish or finish-to-start relationship with its successor(s).

Predecessor open ended logic may be allowed in a time impact analyses upon the Contracting Officer's approval.

3.3.12 Default Progress Data Disallowed

Actual Start and Finish dates must not automatically update with default mechanisms included in the scheduling software. Updating of the percent complete and the remaining duration of any activity must be independent functions. Disable program features that calculate one of these parameters from the other. Activity Actual Start (AS) and Actual Finish (AF) dates assigned during the updating process must match those dates provided in the Contractor Quality Control Reports. Failure to document the AS and AF dates in the Daily Quality Control report will result in disapproval of the Contractor's schedule.

3.3.13 Out-of-Sequence Progress

Activities that have progressed before all preceding logic has been satisfied (Out-of-Sequence Progress) will be allowed only on a case-by-case basis subject to approval by the Contracting Officer. Propose logic corrections to eliminate out of sequence progress or justify not changing the sequencing for approval prior to submitting an updated project schedule. Address out of sequence progress or logic changes in the Narrative Report and in the periodic schedule update meetings.

3.3.14 Added and Deleted Activities

Do not delete activities from the project schedule or add new activities to the schedule without approval from the Contracting Officer. Activity ID and description changes are considered new activities and cannot be changed without Contracting Officer approval.

3.3.15 Original Durations

Activity Original Durations (OD) must be reasonable to perform the work item. OD changes are prohibited unless justification is provided and approved by the Contracting Officer.

3.3.16 Leads, Lags, and Start to Finish Relationships

Lags must be reasonable as determined by the Government and not used in place of realistic original durations, must not be in place to artificially absorb or create float, or to replace proper schedule logic.

- a. Leads (negative lags) are prohibited.
- b. Start to Finish (SF) relationships are prohibited.

3.3.17 Retained Logic

Schedule calculations must retain the logic between predecessors and successors ("retained logic" mode) even when the successor activity(s) starts and the predecessor activity(s) has not finished (out-of-sequence progress). Software features that in effect sever the tie between predecessor and successor activities when the successor has started and the predecessor logic is not satisfied ("progress override") are not be allowed.

3.3.18 Percent Complete

Update the percent complete for each activity started, based on the realistic assessment of earned value. Activities which are complete but for remaining minor punch list work and which do not restrain the initiation of successor activities may be declared 100 percent complete to allow for proper schedule management. Budgeted cost of activity is to be reduced by the amount needed to correct deficiency. The activity referenced in paragraph COST LOADING of CLOSEOUT ACTIVITIES must have its budgeted cost increased by this amount.

3.3.19 Remaining Duration

Update the remaining duration for each activity based on the number of estimated workdays it will take to complete the activity. Remaining duration may not mathematically correlate with percentage found under paragraph entitled Percent Complete. The remaining duration for unstarted activities are not to be less than its original duration.

3.3.20 Cost Loading of Closeout Activities

Cost load the "Correction of punch list from Government pre-final inspection" activity(ies) not less than 1 percent of the present contract value. Activity(ies) may be declared 100 percent complete upon the Government's verification of completion and correction of all punch list

work identified during Government pre-final inspection(s).

3.3.20.1 As-Built Drawings

If there is no separate contract line item (CLIN) for as-built drawings, cost load the "Submission and approval of as-built drawings" activity not less than \$35,000 or 1 percent of the present contract value, whichever is greater, up to \$200,000. Activity will be declared 100 percent complete upon the Government's approval.

3.3.20.2 O & M Manuals

Cost load the "Submission and approval of O & M manuals" activity not less than \$20,000. Activity will be declared 100 percent complete upon the Government's approval of all O & M manuals.

3.3.21 Early Completion Schedule and the Right to Finish Early

An Early Completion Schedule is an Initial Project Schedule (IPS) that indicates all scope of the required contract work will be completed before the contractually required completion date.

- a. No IPS indicating an Early Completion will be accepted without being fully resource-loaded (including crew sizes and manhours) and the Government agreeing that the schedule is reasonable and achievable.
- b. The Government is under no obligation to accelerate work items it is responsible for to ensure that the early completion is met nor is it responsible to modify incremental funding (if applicable) for the project to meet the contractor's accelerated work.

3.4 PROJECT SCHEDULE SUBMISSIONS

Provide the submissions as described below. The data reports and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS. If the Contractor fails or refuses to furnish the information and schedule updates as set forth herein, the Contractor will be deemed not to have provided an estimate upon which a progress payment can be made.

Review comments made by the Government on the schedule(s) do not relieve the Contractor from compliance with requirements of the Contract Documents.

3.4.1 Preliminary Project Schedule Submission

Within 15 calendar days after the NTP is acknowledged, submit the Preliminary Project Schedule defining the planned operations detailed for the first 90 calendar days for approval. The approved Preliminary Project Schedule will be used for payment purposes not to exceed 90 calendar days after NTP. Completely cost load the Preliminary Project Schedule to balance the contract award CLINS shown on the Price Schedule. The Preliminary Project Schedule may be summary in nature for the remaining performance period. It must be early start and late finish constrained and logically tied as specified. The Preliminary Project Schedule forms the basis for the Initial Project Schedule specified herein and must include all of the required plan and program preparations, submissions and approvals identified in the contract (for example, Quality Control Plan, Safety Plan, and Environmental Protection Plan) as well as design activities, planned submissions of all early design packages, permitting

activities, design review conference activities, and other non-construction activities intended to occur within the first 90 calendar days. Government acceptance of the associated design package(s) and all other specified Program and Plan approvals must occur prior to any planned construction activities. Activity code any activities that are summary in nature after the first 90 calendar days with Bid Item (CLIN) code (BIDI), Responsibility Code (RESP) and Feature of Work code (FOW).

3.4.2 Initial Project Schedule Submission

Submit the Initial Project Schedule for approval within 42 calendar days after notice to proceed is issued. The schedule must demonstrate a reasonable and realistic sequence of activities which represent all work through the entire contract performance period. Include in the design-build schedule detailed design and permitting activities, including but not limited to identification of individual design packages, design submission, reviews and conferences; permit submissions and any required Government actions; and long lead item acquisition prior to design completion. Also cover in the initial design-build schedule the entire construction effort with as much detail as is known at the time but, as a minimum, include all construction start and completion milestones, and detailed construction activities through the dry-in, including all activity coding and cost loading. Include the remaining construction, including cost loading, but it may be scheduled summary in nature. As the design proceeds and design packages are developed, fully detail the remaining construction activities concurrent with the monthly schedule updating process. Constrain construction activities by Government acceptance of associated designs. When the design is complete, incorporate into the then approved schedule update all remaining detailed construction activities that are planned to occur after the dry-in milestone. No payment will be made for work items not fully detailed in the Project Schedule.

3.4.2.1 Design Package Schedule Submission

With each design package submitted to the Government, submit a fragnet schedule extracted from the then current Preliminary, Initial or Updated schedule which covers the activities associated with that Design Package including construction, procurement and permitting activities.

3.4.3 Periodic Schedule Updates

Update the Project Schedule on a regular basis, monthly at a minimum. Provide a draft Periodic Schedule Update for review at the schedule update meetings as prescribed in the paragraph PERIODIC SCHEDULE UPDATE MEETINGS. These updates will enable the Government to assess Contractor's progress. Update the schedule to include detailed construction activities as the design progresses, but not later than the submission of the final un-reviewed design submission for each separate design package. The Contracting Officer may require submission of detailed schedule activities for any distinct construction that is started prior to submission of a final design submission if such activity is authorized.

- a. Update information including Actual Start Dates (AS), Actual Finish Dates (AF), Remaining Durations (RD), and Percent Complete. Updated information is subject to the approval of the Government at the meeting.
- b. AS and AF dates must match the date(s) reported on the Contractor's

Quality Control Report for an activity start or finish.

3.5 SUBMISSION REQUIREMENTS

Submit the following items for the Preliminary Schedule, Initial Schedule, and every Periodic Schedule Update throughout the life of the project:

3.5.1 Electronic Scheduling Data

Provide electronic scheduling data containing the current project schedule and all previously submitted schedules in the format of the scheduling software (e.g. .xer). Also include the Narrative Report and all required Schedule Reports. The electronic file is to identify the type of schedule (Preliminary, Initial, Update), full contract number, Data Date and schedule file name. Each schedule must have a unique file name and use project specific settings. The file naming convention is to be determined at SEKO meeting.

3.5.2 Narrative Report

Provide a Narrative Report with each schedule submission. The Schedule Narrative Report is a "stand alone" report in PDF or Word format. Title the report "Schedule Narrative Report". Show the Report date, schedule name, and contract number on the first page. Indicate who is responsible for the schedule update and narrative report. Provide a brief description of the Project Scope. The Narrative Report is expected to communicate to the Government the thorough analysis of the schedule output and the plans to compensate for problems, either current or potential, which are revealed through that analysis. Include the following information at a minimum in the Narrative Report:

- a. Identify and discuss the work scheduled to start in the next update period.
- b. Describe activities along the critical path in addition to activities on the next float path after the critical path.
- c. Describe current and anticipated problem areas, delaying factors and their impact, and an explanation of corrective actions taken or required to be taken. Identify the party responsible for delay, if applicable.
- d. Identify and explain why activities, based on their calculated late dates, should have either started or finished during the update period but did not.
- e. Identify and discuss all schedule changes by activity ID and activity name including what specifically was changed and why the change was needed. Include at a minimum new and deleted activities, logic changes, duration changes, calendar changes, lag changes, resource changes, and actual start and finish date changes.
- f. Identify and discuss out-of-sequence work.
- g. If the longest path changes from a monthly update to the next, provide an explanation of the factors driving the change.
- h. Respond to USACE Schedule Review Comments from the previous update(s).

3.5.3 Schedule Reports

The format, filtering, organizing, and sorting for each schedule report will be as directed by the Contracting Officer. Typically, reports contain Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float, Actual Start Date, Actual Finish Date, and Percent Complete. Provide the reports electronically in .pdf format. Provide three sets of hardcopy reports. The following lists typical reports that will be requested:

3.5.3.1 Activity Report

List of all activities sorted according to activity number.

3.5.3.2 Logic Report

List of detailed predecessor and successor activities for every activity in ascending order by activity number.

3.5.3.3 Total Float Report

A list of all incomplete activities sorted in ascending order of total float. List activities which have the same amount of total float in ascending order of Early Start Dates. Do not show completed activities on this report.

3.5.3.4 Earnings Report by CLIN

A compilation of the Total Earnings on the project from the NTP to the data date, which reflects the earnings of activities based on the agreements made in the schedule update meeting defined herein. Provided a complete schedule update has been furnished, this report serves as the basis of determining progress payments. Group activities by CLIN number and sort by activity number. Provide a total CLIN percent earned value, CLIN percent complete, and project percent complete. The printed report must contain the following for each activity: the Activity Number, Activity Description, Original Budgeted Amount, Earnings to Date, Earnings this period, Total Quantity, Quantity to Date, and Percent Complete (based on cost).

3.5.3.5 Scheduling and Leveling Report

Provide a Scheduling/Leveling Report generated from the current project schedule being submitted.

3.5.4 Network Diagram

The Network Diagram is required for the Preliminary, Initial and Periodic Updates. Depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The Contracting Officer will use, but is not limited to, the following conditions to review compliance with this paragraph:

3.5.4.1 Continuous Flow

Show a continuous flow from left to right with no arrows from right to left. Show the activity number, description, duration, and estimated earned value on the diagram.

3.5.4.2 Project Milestone Dates

Show dates on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

3.5.4.3 Critical Path

Show all activities on the critical path. The critical path is defined as the longest path.

3.5.4.4 Grouping and Sorting

Group and sort activities as directed to assist in the understanding of the activity sequence. Typically, this flow will group activities by major elements of work, category of work, work area and/or responsibility.

3.5.4.5 Cash Flow / Schedule Variance Control (SVC) Diagram

With each schedule submission, provide a SVC diagram showing 1) Cash Flow S-Curves indicating planned project cost based on projected early and late activity finish dates, and 2) Earned Value to-date.

3.6 PERIODIC SCHEDULE UPDATE

3.6.1 Periodic Schedule Update Meetings

Conduct periodic schedule update meetings for the purpose of reviewing the proposed Periodic Schedule Update, Narrative Report, Schedule Reports, and progress payment. Conduct meetings at least monthly within five days of the proposed schedule data date. Provide a computer with the scheduling software loaded and a projector which allows all meeting participants to view the proposed schedule during the meeting. The Contractor's authorized scheduler must organize, group, sort, filter, perform schedule revisions as needed and review functions as requested by the Contractor and/or Government. The Contractor scheduler must attend in person unless virtual attendance is approved by Contracting Officer. The meeting is a working interactive exchange which allows the Government and Contractor the opportunity to review the updated schedule on a real time and interactive basis. The meeting will last no longer than 8 hours. Submit schedule file and narrative to the Government a minimum of two workdays in advance of the meeting. The Contractor's Project Manager must attend the meeting with the authorized representative of the Contracting Officer. Superintendents, foremen and major subcontractors must attend the meeting as required to discuss the project schedule and work. Following the schedule update meeting, make corrections to the schedule and resubmit, following the required schedule naming convention. Include only those changes approved by the Government in the schedule review meeting. Only approved schedules may be used to generate invoices for payment.

3.6.2 Update Submission Following Progress Meeting

Submit the complete Periodic Schedule Update of the Project Schedule containing all approved progress, revisions, and adjustments, pursuant to paragraph SUBMISSION REQUIREMENTS not later than 4 workdays after the periodic schedule update meeting.

3.7 WEEKLY PROGRESS MEETINGS

Conduct a weekly meeting with the Government (or as otherwise mutually agreed to) between the meetings described in paragraph entitled PERIODIC SCHEDULE UPDATE MEETINGS for the purpose of jointly reviewing the actual progress of the project as compared to the as planned progress and to review planned activities for the upcoming two weeks. Use the current approved schedule update for the purposes of this meeting and for the production and review of reports. At the weekly progress meeting, address the status of RFIs, RFPs and Submittals.

3.8 REQUESTS FOR TIME EXTENSIONS

ASCE 67-17 provides delay analysis guidelines. If there is a conflict between the contract and guidance provided in ASCE 67-17, the contract will govern. Provide justification of delay to the Contracting Officer in accordance with the contract provisions and clauses for approval, within 10 days of a delay occurring. Also prepare a time impact analysis for each Government request for proposal (RFP).

3.8.1 Justification of Delay

Provide a description of the event(s) that caused the delay and/or impact to the work. As part of the description, identify all schedule activities impacted. Show that the event that caused the delay/impact was the responsibility of the Government. Provide a time impact analysis that demonstrates the effects of the delay or impact on the project completion date, or interim completion date(s). Evaluate multiple impacts chronologically; each with its own justification of delay. With multiple impacts consider any concurrency of delay. A time extension and the schedule fragnet becomes part of the project schedule and all future schedule updates upon approval by the Contracting Officer.

3.8.2 Changes That Do Not Cause Delay

If it is determined that a change does not constitute a schedule time extension, a fragnet as described in paragraph FRAGMENTARY NETWORK, is to be created and inserted into the Project schedule.

3.8.3 Time Impact Analysis (Prospective Analysis)

Prepare a time impact analysis for approval by the Contracting Officer based on industry standard AACE 52R-06. Utilize a copy of the last approved schedule prior to the first day of the impact or delay for the time impact analysis. If Contracting Officer determines the time frame between the last approved schedule and the first day of impact is too great, prepare an interim updated schedule to perform the time impact analysis. Unless approved by the Contracting Officer, no other changes may be incorporated into the schedule being used to justify the time impact.

3.8.4 Forensic Schedule Analysis (Retrospective Analysis)

Prepare an analysis for approval by the Contracting Officer based on methodologies identified in industry standard AACE 29R-03. Identify which methodology was chosen and explain why it is more appropriate than other methodologies available.

3.8.5 Fragmentary Network (Fragnet)

Prepare a proposed fragnet for time impact analysis consisting of a sequence of new activities that are proposed to be added to the project schedule to demonstrate the influence of the delay or impact to the project's contractual dates. Clearly show how the proposed fragnet is to be tied into the project schedule including all predecessors and successors to the fragnet activities. The proposed fragnet must be approved by the Contracting Officer prior to incorporation into the project schedule.

3.8.6 Time Extension

The Contracting Officer must approve the Justification of Delay including the time impact analysis before a time extension will be granted. No time extension will be granted unless the delay consumes all available Project Float and extends the projected finish date ("End Project" milestone) beyond the Contract Completion Date. The time extension will be in calendar days.

Actual delays that are found to be caused by the Contractor's own actions, which result in a calculated schedule delay, are not a cause for an extension to the performance period, completion date, or any interim milestone date.

3.8.7 Impact to Early Completion Schedule

No extended overhead will be paid for delay prior to the original Contract Completion Date for an Early Completion IPS unless the Contractor actually performed work in accordance with that Early Completion Schedule. The Contractor must show that an early completion was achievable had it not been for the impact.

3.9 FAILURE TO ACHIEVE PROGRESS

Should the progress fall behind the approved project schedule for reasons other than those that are excusable within the terms of the contract, the Contracting Officer may require provision of a written recovery plan for approval. The plan must detail how progress will be made-up to include which activities will be accelerated by adding additional crews, longer work hours, extra workdays, etc.

3.9.1 Artificially Improving Progress

Artificially improving progress by means such as, but not limited to, revising the schedule logic, modifying, or adding constraints, shortening activity durations, or changing calendars in the project schedule is prohibited. Indicate assumptions made and the basis for any logic, constraint, duration, and calendar changes used in the creation of the recovery plan. Any additional resources, manpower, or daily and weekly work hour changes proposed in the recovery plan must be evident at the work site and documented in the daily report along with the Schedule Narrative Report.

3.9.2 Failure to Perform

Failure to perform work and maintain progress in accordance with the supplemental recovery plan may result in an interim and final unsatisfactory performance rating and may result in corrective action

directed by the Contracting Officer pursuant to FAR 52.236-15 Schedules for Construction Contracts, FAR 52.249-10 Default (Fixed-Price Construction), and other contract provisions.

3.9.3 Recovery Schedule

Should the Contracting Officer find it necessary, submit a recovery schedule pursuant to FAR 52.236-15 Schedules for Construction Contracts.

3.10 OWNERSHIP OF FLOAT

Except for the provision given in the paragraph IMPACT TO EARLY COMPLETION SCHEDULE, float available in the schedule, at any time, belongs to the Project and is available for Contractor and Government use. This includes activity and project float. Activity float is the number of workdays that an activity can be delayed without causing a delay to the "End Project" finish milestone. Project float (if applicable) is the number of work days between the projected early finish and the "End Project" finish.

3.11 TRANSFER OF SCHEDULE DATA INTO RESIDENT MANAGEMENT SYSTEM

Ensure schedule data is uploaded to RMS. This data is additional supporting data in a form and detail required by the Contracting Officer pursuant to FAR 52.232-5 Payments under Fixed-Price Construction Contracts. The receipt of a proper payment request pursuant to FAR 52.232-27 Prompt Payment for Construction Contracts is contingent upon the Government receiving both acceptable and approvable hard copies and matching electronic versions of the application for progress payment.

3.12 PRIMAVERA P6 MANDATORY REQUIREMENTS

Ensure Primavera P6 settings provide a schedule capable of fulfilling the requirements of the contract. The following settings are mandatory and required in all schedule submissions to the Government:

- a. Activity Codes must be Project Level, not Global or EPS level.
- b. Calendars must be Project Level, not Global or Resource level.
- c. Activity Duration Types must be set to "Fixed Duration & Units".
- d. Percent Complete Types must be set to "Physical".
- e. Time Period Admin Preferences must remain the default "8.0 hr/day, 40 hr/week, 172 hr/month, 2000 hr/year". Set Calendar Work Hours/Day to 8.0 Hour days.
- f. Set Schedule Option for defining Critical Activities to "Longest Path".
- g. Set Schedule Option for defining progressed activities to "Retained Logic".
- h. Set up cost loading using a single lump sum non-labor resource. The Price/Unit must be \$1/hr, Default Units/Time must be "8h/d", and settings "Auto Compute Actuals" and "Calculate costs from units" un-selected.
- i. Activity ID's must not exceed 10 characters.

- j. Activity Names must have a verb-noun structure and contain the most defining and detailed description within the first 30 characters.
- k. The daily ending hour for all work calendars must be the same.

-- End of Section --

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Submittal Information

The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

Units of weights and measures used on all submittals are to be the same as those used in the contract drawings.

1.1.2 Project Type

The Contractor and the Designer of Record (DOR), if applicable, are to check and approve all items before submittal and stamp, sign, and date indicating action taken. Proposed deviations from the contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

1.1.3 Submission of Submittals

Schedule and provide submittals requiring Government approval before acquiring the material or equipment covered thereby. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

1.2 DEFINITIONS

1.2.1 Submittal Descriptions (SD)

Submittal requirements are specified in the technical sections. Examples and descriptions of submittals identified by the Submittal Description (SD) numbers and titles follow:

SD-01 Preconstruction Submittals

Submittals that are required prior to or at the start of construction (work) or the next major phase of the construction on a multiphase contract.

Preconstruction Submittals include schedules and a tabular list of locations, features, and other pertinent information regarding products, materials, equipment, or components to be used in the work.

Certificates Of Insurance

Surety Bonds

List Of Proposed Subcontractors

List Of Proposed Products

Baseline Network Analysis Schedule (NAS)

Submittal Register

Schedule Of Prices Or Earned Value Report

Accident Prevention Plan

Work Plan

Quality Control (QC) plan

Enviro

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

SD-05 Design Data

Design calculations, mix designs, analyses or other data pertaining to a part of work.

Design submittals, design substantiation submittals and extensions of design submittals.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. Unless specified in another section, testing must have

been within three years of date of contract award for the project.

Report that includes findings of a test required to be performed on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report that includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports

Daily logs and checklists

Final acceptance test and operational test procedure

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that the product, system, or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a manufacturer, supplier, installer or Subcontractor through Contractor. The document purpose is to further promote the orderly progression of a portion of the work by documenting procedures, acceptability of methods, or personnel qualifications.

Confined space entry permits

Text of posted operating instructions

SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including special notices and (SDS) concerning impedances, hazards and safety precautions.

SD-10 Operation and Maintenance Data

Data provided by the manufacturer, or the system provider, including manufacturer's help and product line documentation, necessary to maintain and install equipment, for operating and maintenance use by facility personnel.

Data required by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.

Data incorporated in an operations and maintenance manual or control system.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

Submittals required for Guiding Principle Validation (GPV) or Third

Party Certification (TPC).

Special requirements necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.

1.2.2 Approving Authority

Office or designated person authorized to approve the submittal.

1.2.3 Work

As used in this section, on-site and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction. In exception, excludes work to produce SD-01 submittals.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Submittal Register; G

1.4 SUBMITTAL CLASSIFICATION

1.4.1 Government Approved (G)

Government approval is required for any variations from the Solicitation or the Accepted Proposal and for other items as designated by the Government.

Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, submittals are considered to be "shop drawings."

1.4.2 Design-Build Submittal Classifications

1.4.2.1 Designer of Record Approved (DA)

Designer of Record (DOR) approval is required for extensions of design; critical materials; any variations from the Solicitation, the Accepted Proposal, or the completed design; equipment whose compatibility with the entire system must be checked; and other items as designated by the Contracting Officer. Provide the Government with the number of copies designated hereinafter of all DOR approved submittals. The Government may review any or all Designer of Record approved submittals for conformance with the Solicitation, the Accepted Proposal, and the completed design. The Government will review all submittals designated as varying from the Solicitation or Accepted Proposal, as described below. Provide design submittals in accordance with Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD). Generally, list design submittals under SD-05 Design Data.

1.4.2.2 Government Conformance Review of Design (CR)

The Government will review all intermediate and final design submittals for conformance with the technical requirements of the Solicitation. Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) covers the design submittal and review process in detail. Review will be only for conformance with the applicable codes, standards, and contract requirements. Design data includes the design documents described in Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD).

1.4.2.3 Designer of Record Approved/Government Conformance Review (DA/CR)

1.4.2.3.1 Variations from the Accepted Design

DOR approval and the Government's concurrence are required for any proposed variation from the accepted design that still complies with the contract before the Contractor is authorized to proceed with material acquisition or installation. If necessary to facilitate the project schedule, before official submission to the Government, the Contractor and the DOR may discuss with the Contracting Officer's Representative a submittal proposing a variation. However, the Government reserves the right to review the submittal before providing an opinion. In any case, the Government will not formally agree to or provide a preliminary opinion on any variation without the DOR's approval or recommended approval. The Government reserves the right to reject any design, variation that may affect furniture, furnishings, equipment selections, or operational decisions that were made, based on the reviewed and concurred design.

1.4.2.3.2 Substitutions

Unless prohibited or otherwise provided for elsewhere in the contract, where the Accepted Proposal named products, systems, materials or equipment by manufacturer, brand name, model number, or other specific identification, and the Contractor desires to substitute a manufacturer or model after award, submit a requested substitution for Government concurrence. Include substantiation, through identifying information and the DOR's approval, that the substitute meets the contract requirements and that it is equal in function, performance, quality, and salient features to that in the accepted contract proposal. If the contract otherwise prohibits substitutions of equal named products, systems, materials or equipment by manufacturer, brand name, model number or other specific identification, the request is considered a "variation" to the contract. Variations are discussed below in paragraphs: "DESIGNER OF RECORD APPROVED/GOVERNMENT APPROVED" and VARIATIONS.

1.4.2.4 Designer of Record Approved/Government Approved (DA/GA)

In addition to the above-stated requirements for proposed variations to the accepted design, both DOR and Government Approval and, where applicable, a contract modification are required before the Contractor is authorized to proceed with material acquisition or installation for any proposed variation to the contract (the Solicitation or the Accepted Proposal), that constitutes a change to the contract terms. The Government reserves the right to accept or reject any such proposed variation.

1.4.3 For Information Only

Submittals not requiring Government approval will be for information only. For Design-build construction all submittals not requiring DOR or Government approval will be for information only. Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are not considered to be "shop drawings."

1.4.4 Sustainability Reporting Submittals (S)

Submittals for Guiding Principle Validation (GPV) or Third Party Certification (TPC) are indicated with an "S" designation. These submittals are for information only and for use as specified in Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING.

Schedule submittals for these items throughout the course of construction as provided; do not wait until closeout.

1.5 PREPARATION

1.5.1 Transmittal Form

Use the ENG Form 4025-R transmittal form for submitting both Government-approved and information-only submittals. Submit in accordance with the instructions on the reverse side of the form. These forms or similar forms are included in the RMS CM software that the Contractor is required to use for this contract. Properly complete this form by filling out all the heading blank spaces and identifying each item submitted. Exercise special care to ensure proper listing of the specification paragraph and sheet number of the contract drawings pertinent to the data submitted for each item.

1.5.2 Submittal Format

1.5.2.1 Format of SD-01 Preconstruction Submittals

When the submittal includes a document that is to be used in the project, or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.2.2 Format for SD-02 Shop Drawings

Provide shop drawings not less than 8 1/2 by 11 inches nor more than 30 by 42 inches, except for full-size patterns or templates. Prepare drawings to accurate size, with scale indicated, unless another form is required. Ensure drawings are suitable for reproduction and of a quality to produce clear, distinct lines and letters, with dark lines on a white background.

- a. Include the nameplate data, size, and capacity on drawings. Also include applicable federal, military, industry, and technical society publication references.
- b. Dimension drawings, except diagrams and schematic drawings. Prepare drawings demonstrating interface with other trades to scale. Use the same unit of measure for shop drawings as indicated on the contract

drawings. Identify materials and products for work shown.

Submit an electronic copy of drawings in PDF format and native electronic format.

1.5.2.2.1 Drawing Identification

Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph IDENTIFYING SUBMITTALS.

Number drawings in a logical sequence. Each drawing is to bear the number of the submittal in a uniform location next to the title block. Place the Government contract number in the margin, immediately below the title block, for each drawing.

Reserve a blank space, no smaller than 2 inches on the right-hand side of each sheet for the Government disposition stamp.

1.5.2.3 Format of SD-03 Product Data

Present product data submittals for each section as a complete, bound volume. Include a table of contents, listing the page and catalog item numbers for product data.

Indicate, by prominent notation, each product that is being submitted; indicate the specification section number and paragraph number to which it pertains.

1.5.2.3.1 Product Information

Supplement product data with material prepared for the project to satisfy the submittal requirements where product data does not exist. Identify this material as developed specifically for the project, with information and format as required for submission of SD-07 Certificates.

Provide product data in units used in the Contract documents. Where product data are included in preprinted catalogs with another unit, submit the dimensions in contract document units, on a separate sheet.

1.5.2.3.2 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.3.3 Data Submission

Collect required data submittals for each specific material, product, unit of work, or system into a single submittal that is marked for choices, options, and portions applicable to the submittal. Mark each copy of the product data identically. Partial submittals will not be accepted for expedition of the construction effort.

Submit the manufacturer's instructions before installation.

1.5.2.4 Format of SD-04 Samples

1.5.2.4.1 Sample Characteristics

Furnish samples in the following sizes, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:

- a. Sample of Equipment or Device: Full size.
- b. Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.
- c. Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.
- d. Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
- e. Sample Volume of Nonsolid Materials: Pint. Examples of nonsolid materials are sand and paint.
- f. Color Selection Samples: 2 by 4 inches. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified. Sizes and quantities of samples are to represent their respective standard unit.
- g. Sample Panel: 4 by 4 feet.
- h. Sample Installation: 100 square feet.

1.5.2.4.2 Sample Incorporation

Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at the time of use.

Recording of Sample Installation: Note and preserve the notation of any area constituting a sample installation, but remove the notation at the final clean-up of the project.

1.5.2.4.3 Comparison Sample

Samples Showing Range of Variation: Where variations in color, finish, pattern, or texture are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle

of range. Mark each unit to describe its relation to the range of the variation.

When color, texture, or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.5.2.5 Format of SD-05 Design Data

Provide design data and certificates on 8 1/2 by 11 inch paper. Provide a bound volume for submittals containing numerous pages.

1.5.2.6 Format of SD-06 Test Reports

Provide reports on 8 1/2 by 11 inch paper in a complete bound volume.

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.7 Format of SD-07 Certificates

Provide design data and certificates on 8 1/2 by 11 inch paper. Provide a bound volume for submittals containing numerous pages.

1.5.2.8 Format of SD-08 Manufacturer's Instructions

Present manufacturer's instructions submittals for each section as a complete, bound volume. Include the manufacturer's name, trade name, place of manufacture, and catalog model or number on product data. Also include applicable federal, military, industry, and technical-society publication references. If supplemental information is needed to clarify the manufacturer's data, submit it as specified for SD-07 Certificates.

Submit the manufacturer's instructions before installation.

1.5.2.8.1 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.9 Format of SD-09 Manufacturer's Field Reports

Provide reports on 8 1/2 by 11 inch paper in a complete bound volume.

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.10 Format of SD-10 Operation and Maintenance Data (O&M)

Comply with the requirements specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA for O&M Data format.

1.5.2.11 Format of SD-11 Closeout Submittals

When the submittal includes a document that is to be used in the project or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.3 Source Drawings for Shop Drawings

1.5.3.1 Source Drawings

The entire set of source drawing files will not be provided to the Contractor. Request the specific Drawing Number for the preparation of shop drawings. Only those drawings requested to prepare shop drawings will be provided. These drawings are provided only after award.

1.5.3.2 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction data for the referenced project. Any other use or reuse is at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim, and waives to the fullest extent permitted by law any claim or cause of action of any nature against the Government, its agents, or its subconsultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities, or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic source drawing files are not construction documents. Differences may exist between the source drawing files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic source drawing files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. The Contractor is responsible for determining if any conflict exists. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished source drawing files, the signed and sealed construction documents govern. Use of these source drawing files does not relieve the Contractor of the duty to fully comply with the contract documents, including and without limitation the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic source drawing files for use in producing construction data related to this contract, remove all previous indication of ownership (seals, logos, signatures, initials and dates).

1.5.4 Electronic File Format

Provide submittals in electronic format, with the exception of material samples required for SD-04 Samples items. In addition to the electronic submittal, provide four hard copies of the submittals. Compile the submittal file as a single, complete document, to include the Transmittal Form described within, and also separately attach the native files which were used to create PDF. The attached files should include the original digital files used to create the submittal. Name the electronic submittal file specifically according to its contents, and coordinate the file naming convention with the Contracting Officer. Electronic files must be of sufficient quality that all information is legible. Use PDF as the electronic format, unless otherwise specified or directed by the Contracting Officer. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is searchable and can be copied. If documents are scanned, optical character resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file. When required, the electronic file must include a valid electronic signature or a scan of a signature.

E-mail electronic submittal documents smaller than 10MB to an e-mail address as directed by the Contracting Officer. Provide electronic documents over 10 MB on an optical disc or through an electronic file sharing system such as the DOD SAFE Web Application located at the following website: <https://safe.apps.mil/>.

1.6 QUANTITY OF SUBMITTALS

Submit hard copies of submittals to the Contracting Officer's Representative at the following address:

1.6.1 Addresses for Submittals

(NOTE: Formal address is subject to change to the local USACE Resident Office at Ebbing Field.)

US Army Corps of Engineers
Construction Branch
700 West Capitol
Little Rock, Arkansas 72203-0867

For FedEx, UPS, etc:

US Army Corps of Engineers
Construction Branch
700 West Capitol
Little Rock, Arkansas 72203-0867

The complete submittal, including the signed ENG Form 4025 and all enclosures/attachments, shall also be provided on compact disc in Adobe Portable Document Format (PDF) format with the hard copies.

1.7 SUBMITTAL PROCEDURES

1.7.1 GENERAL

The Government will discuss detailed submittal procedures with the Contractor at the Preconstruction Conference.

1.8 INFORMATION ONLY SUBMITTALS

Submittals without a "G" designation must be certified by the QC manager and submitted to the Contracting Officer for information-only. Provide information-only submittals to the Contracting Officer a minimum of 14 calendar days prior to the Preparatory Meeting for the associated Definable Feature of Work (DFOW). Approval of the Contracting Officer is not required on information only submittals. The Contracting Officer will mark "receipt acknowledged" on submittals for information and will return only the transmittal cover sheet to the Contractor. Normally, submittals for information only will not be returned. However, the Government reserves the right to return unsatisfactory submittals and require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe. For Design-Build construction, the Government will retain two copies of information-only submittals.

1.9 PROJECT SUBMITTAL REGISTER

A Project Submittal Register showing items of equipment and materials for when submittals are required by the specifications.

1.9.1 Submittal Management

Prepare and maintain a submittal register, as the work progresses. Do not change data that is output in columns (c), (d), (e), and (f) as delivered by Government; retain data that is output in columns (a), (g), (h), and (i) as approved. As an attachment, provide a submittal register showing items of equipment and materials for which submittals are required by the specifications. This list may not be all-inclusive and additional submittals may be required. Maintain a submittal register for the project in accordance with Section 01 45 00.15 10 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE(RMS CM). The Government will provide the initial submittal register in electronic format with the following fields completed, to the extent that will be required by the Government during subsequent usage.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD Number. and type, e.g., SD-02 Shop Drawings) required in each specification section.

Column (e): Lists one principal paragraph in each specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting the project requirements.

Column (f): Lists the approving authority for each submittal.

Thereafter, the Contractor is to track all submittals by maintaining a

complete list, including completion of all data columns and all dates on which submittals are received by and returned by the Government.

1.9.2 Preconstruction Use of Submittal Register

Submit the submittal register. Include the QC plan and the project schedule. Verify that all submittals required for the project are listed and add missing submittals. Coordinate and complete the following fields on the register submitted with the QC plan and the project schedule:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for the approving authority to receive submittals.

Column (h) Contractor Approval Date: Date that Contractor needs approval of submittal.

Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

1.9.3 Contractor Use of Submittal Register

Update the following fields in the Government-furnished submittal register program or equivalent fields in the program used by the Contractor with each submittal throughout the contract.

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.

Column (l) Date submittal transmitted.

Column (q) Date approval was received.

1.9.4 Action Codes

1.9.4.1 Government Review Action Codes

"A" - "Approved as submitted"

"AN" - "Approved as noted"

"RR" - "Disapproved as submitted"; "Completed"

"NR" - "Not Reviewed"

"RA" - "Receipt Acknowledged"

1.9.4.2 Contractor Action Codes

DESIGN BID BUILD SUBMITTALS			
Submittal Classifications shown in UFGS Sections	Submittal Classification	Corresponding SpecsIntact Submittal Register Code which is populated in the SI Submittal Register. Software Limitations: (The software shows one character delineation in the SpecsIntact Submittal Register)	RMS - The following Submittal Classifications are populated in RMS when the SpecsIntact Submittal Data File is pulled into RMS)
G	Submittal requires Government Approval	G	GA
BLANK	Submittal is For Information Only (FIO)	BLANK	FIO
S	Submittal is for documentation of Sustainable requirements	S	S/FIO

1.9.4.3 Contractor Action Codes

DESIGN BUILD SUBMITTALS			
Submittal Classifications shown in UFGS Sections	Submittal Classification	Corresponding SpecsIntact Submittal Register Code which is populated in the SI Submittal Register. Software Limitations: (The software shows one character delineation in the SpecsIntact Submittal Register)	RMS - The following Submittal Classifications are populated in RMS when the SpecsIntact Submittal Data File is pulled into RMS)
G	Submittal requires Government Approval	G	GA

DESIGN BUILD SUBMITTALS			
BLANK	Submittal is For Information Only(FIO)	BLANK	FIO
S	Submittal is for documentation of Sustainable Requirements	S	S/FIO

1.9.5 Delivery of Copies

Submit an updated electronic copy of the submittal register to the Contracting Officer with each invoice request. Provide an updated Submittal Register monthly regardless of whether an invoice is submitted.

1.10 VARIATIONS

Variations from contract requirements require Contracting Officer approval pursuant to contract Clause FAR 52.236-21 Specifications and Drawings for Construction and will be considered where advantageous to the Government.

1.10.1 Considering Variations

Discussion of variations with the Contracting Officer before submission of a variation submittal will help ensure that functional and quality requirements are met and minimize rejections and resubmittals. For variations that include design changes or some material or product substitutions, the Government may require an evaluation and analysis by a licensed professional engineer hired by the contractor.

Specifically point out variations from contract requirements in a transmittal letter. Failure to point out variations may cause the Government to require rejection and removal of such work at no additional cost to the Government.

1.10.2 Proposing Variations

When proposing variation, deliver a submittal, clearly marked as a "VARIATION" to the Contracting Officer, with documentation illustrating the nature and features of the variation including any necessary technical submittals and why the variation is desirable and beneficial to Government. Failure to point out variations may cause the Government to require rejection and removal of such work at no additional cost to the Government. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

Check the column "variation" of ENG Form 4025 for submittals that include variations proposed by the Contractor. Set forth in writing the reason for any variations and note such variations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted variations.

1.10.3 Warranting that Variations are Compatible

When delivering a variation for approval, the Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.10.4 Review Schedule Extension

In addition to the normal submittal review period, a period of 10 working days will be allowed for the Government to consider submittals with variations.

1.11 SCHEDULING

Schedule and submit concurrently product data and shop drawings covering component items forming a system or items that are interrelated. Submit pertinent certifications at the same time. No delay damages or time extensions will be allowed for time lost in late submittals. Allow an additional 14 calendar days for review and approval of submittals for refrigeration and HVAC control systems.

- a. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that work will not be delayed by submittal processing. The Contractor is responsible for additional time required for Government reviews resulting from required resubmittals. The review period for each resubmittal is the same as for the initial submittal.
- b. Submittals required by the contract documents are listed on the submittal register. If a submittal is listed in the submittal register but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the Contractor of supplying submittals required by the contract documents but that have been omitted from the register or marked "N/A."
- c. Resubmit the submittal register and annotate it monthly with actual submission and approval dates. When all items on the register have been fully approved, no further resubmittal is required.

Contracting Officer review of construction submittals will be completed within 30 calendar days after receipt of submission.

1.11.1 Government Reviewed Design

The Government will review design submittals for conformance with the technical requirements of the Solicitation. Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) covers the design submittal and review process in detail. Government review is required for variations from the completed design. Review will be only for conformance with the contract requirements. Included are only those construction submittals for which the DOR's design documents do not include enough detail to ascertain contract compliance. The Government may, but is not required to, review extensions of design such as structural steel or reinforcement shop drawings.

1.12 GOVERNMENT APPROVING AUTHORITY

When the approving authority is the Contracting Officer, the Government will:

- a. Note the date on which the submittal was received.
- b. Review submittals for approval within the scheduling period specified and only for conformance with project design concepts and compliance with contract documents.
- c. Identify returned submittals with one of the actions defined in paragraph REVIEW NOTATIONS and with comments and markings appropriate for the action indicated.

Upon completion of review of submittals requiring Government approval, stamp and date submittals. If the Government performs a conformance review of other Designer of Record approved submittals, the submittals will be identified and returned, as described above.

1.12.1 Review Notations

See 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) for Contracting Officer review periods for design submittals. Submittals will be returned to the Contractor with the following notations:

- a. Submittals marked "approved" or "accepted" authorize proceeding with the work covered.
- b. Submittals marked "approved as noted" or "approved, except as noted, resubmittal not required," authorize proceeding with the work covered provided that the Contractor takes no exception to the corrections.
- c. Submittals marked "not approved," "disapproved," or "revise and resubmit" indicate incomplete submittal or noncompliance with the contract requirements or design concept. Resubmit with appropriate changes. Do not proceed with work for this item until the resubmittal is approved.
- d. Submittals marked "not reviewed" indicate that the submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.

1.13 DISAPPROVED OR REJECTED SUBMITTALS

Make corrections required by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications, give notice to the Contracting Officer as required under the FAR clause titled CHANGES. The Contractor is responsible for the dimensions and design of connection details and the construction of work. Failure to point out variations may cause the Government to require rejection and removal of such work at the Contractor's expense.

If changes are necessary to submittals, make such revisions and resubmit

in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

1.14 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals is not to be construed as a complete check, and indicates only that the general method of construction, materials, detailing, and other information are satisfactory. the design, general method of construction, materials, detailing, and other information appear to meet the Solicitation and Accepted Proposal.

Approval or acceptance by the Government for a submittal does not relieve the Contractor of the responsibility for meeting the contract requirements or for any error that may exist, because under the Quality Control (QC) requirements of this contract, the Contractor is responsible for ensuring information contained within each submittal accurately conforms with the requirements of the contract documents.

After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

Approval of the Contractor's samples by the Contracting Officer does not relieve the Contractor of his responsibilities under the contract.

1.15 APPROVED/ACCEPTED SAMPLES

Approval of a sample is only for the characteristics or use named in such approval and is not to be construed to change or modify any contract requirements. Before submitting samples, provide assurance that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.

Match the approved samples for materials and equipment incorporated in the work. If requested, approved samples, including those that may be damaged in testing, will be returned to the Contractor, at its expense, upon completion of the contract. Unapproved samples will also be returned to the Contractor at its expense, if so requested.

Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make as that material. The Government reserves the right to disapprove any material or equipment that has previously proved unsatisfactory in service.

Samples of various materials or equipment delivered on the site or in place may be taken by the Contracting Officer for testing. Samples failing to meet contract requirements will automatically void previous approvals. Replace such materials or equipment to meet contract requirements.

1.16 WITHHOLDING OF PAYMENT

No payment for materials incorporated in the work will be made unless all required DOR approvals or required Government approvals have been obtained. No payment will be made for any materials incorporated into the

work for any conformance review submittals or information-only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

1.16.1 Withholding of Payment for Materials

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

1.17 CERTIFICATION OF SUBMITTAL DATA

Certify the submittal data as follows on Form ENG 4025: "I certify that the above submitted items had been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.

_____NAME OF CONTRACTOR _____ SIGNATURE OF CONTRACTOR

<p>CONTRACTOR</p> <p>(Firm Name)</p> <p>_____ Approved</p> <p>_____ Approved with corrections as noted on submittal data and/or attached sheets(s)</p> <p>SIGNATURE: _____</p> <p>TITLE: _____</p> <p>DATE: _____</p>

For design-build construction, both the Contractor Quality Control System Manager and the Designer of Record are to stamp and sign to certify that the submittal meets contract requirements.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

U.S. Army Corps of Engineers (USACE) TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE For use of this form, see ER 415-1-10; the proponent agency is CECW-CE.	DATE	TRANSMITTAL NO.
---	------	-----------------

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS *(This section will be initiated by the contractor)*

TO:	FROM:	CONTRACT NO.	CHECK ONE: <input type="checkbox"/> THIS IS A NEW TRANSMITTAL <input type="checkbox"/> THIS IS A RESUBMITTAL OF TRANSMITTAL _____
-----	-------	--------------	---

SPECIFICATION SEC. NO. <i>(Cover only one section with each transmittal)</i>	PROJECT TITLE AND LOCATION	THIS TRANSMITTAL IS FOR: <i>(Check one)</i> <input type="checkbox"/> FIO <input type="checkbox"/> GA <input type="checkbox"/> DA <input type="checkbox"/> CR <input type="checkbox"/> DA/CR <input type="checkbox"/> DA/GA
--	----------------------------	---

ITEM NO. <small>(See Note 3)</small>	DESCRIPTION OF SUBMITTAL ITEM <small>(Type size, model number/etc.)</small>	SUBMITTAL TYPE CODE <small>(See Note 8)</small>	NO. OF COPIES	CONTRACT DOCUMENT REFERENCE		CONTRACTOR REVIEW CODE	VARIATION <small>Enter "Y" if requesting a variation (See Note 6)</small>	USACE ACTION CODE <small>(Note 9)</small>
				SPEC. PARA. NO.	DRAWING SHEET NO.			
a.	b.	c.	d.	e.	f.	g.	h.	i.

REMARKS	I certify that the above submitted items had been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.		
	<table style="width:100%; border: none;"> <tr> <td style="width:60%; border: none;">NAME OF CONTRACTOR</td> <td style="width:40%; border: none;">SIGNATURE OF CONTRACTOR</td> </tr> </table>	NAME OF CONTRACTOR	SIGNATURE OF CONTRACTOR
NAME OF CONTRACTOR	SIGNATURE OF CONTRACTOR		

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED <i>(List by item No.)</i>	NAME AND TITLE OF APPROVING AUTHORITY	SIGNATURE OF APPROVING AUTHORITY	DATE
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INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each Transmittal shall be numbered consecutively. The Transmittal Number typically includes two parts separated by a dash (-). The first part is the specification section number. The second part is a sequential number for the submittals under that spec section. If the Transmittal is a resubmittal, then add a decimal point to the end of the original Transmittal Number and begin numbering the resubmittal packages sequentially after the decimal.
3. The "Item No." for each entry on this form will be the same "Item No." as indicated on ENG FORM 4288-R.
4. Submittals requiring expeditious handling will be submitted on a separate ENG Form 4025-R.
5. Items transmitted on each transmittal form will be from the same specification section. Do not combine submittal information from different specification sections in a single transmittal.
6. If the data submitted are intentionally in variance with the contract requirements, indicate a variation in column h, and enter a statement in the Remarks block describing the detailed reason for the variation.
7. ENG Form 4025-R is self-transmitting - a letter of transmittal is not required.
8. When submittal items are transmitted, indicate the "Submittal Type" (*SD-01 through SD-11*) in column c of Section I.
Submittal types are the following:

SD-01 - Preconstruction	SD-02 - Shop Drawings	SD-03 - Product Data	SD-04 - Samples	SD-05 - Design Data	SD-06 - Test Reports
SD-07 - Certificates	SD-08 - Manufacturer's Instructions	SD-09 - Manufacturer's Field Reports	SD-10 - O&M Data	SD-11 - Closeout	
9. For each submittal item, the Contractor will assign Submittal Action Codes in column g of Section I. The U.S. Army Corps of Engineers approving authority will assign Submittal Action Codes in column i of Section I. The Submittal Action Codes are:

A – Approved as submitted.	F – Receipt acknowledged.
B – Approved, except as noted on drawings. Resubmission not required.	X – Receipt acknowledged, does not comply with contract requirements, as noted.
C – Approved, except as noted on drawings. Refer to attached comments. Resubmission required.	G – Other action required (<i>Specify</i>)
D – Will be returned by separate correspondence.	K – Government concurs with intermediate design. (<i>For D-B contracts</i>)
E – Disapproved. Refer to attached comments.	R – Design submittal is acceptable for release for construction. (<i>For D-B contracts</i>)
10. Approval of items does not relieve the contractor from complying with all the requirements of the contract.

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

Ebbing RSAF Facility Renovations for F-16 and F-35

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION
		01 14 00.00 46	SD-01 Preconstruction Submittals														
			Installation Plan	1.7	G												
			Utility Outage Requests	1.7.2	G												
			Utility Connection Requests	1.7.2	G												
			Excavation Permits	1.7.1	G												
			SD-02 Shop Drawings														
			Plumbing System	1.8	G												
		01 15 10.10 46	SD-01 Preconstruction Submittals														
			Security Investigation Package	1.2	G												
			SD-07 Certificates														
			Personnel Qualifications	1.2	G												
		01 30 00	SD-01 Preconstruction Submittals														
			View Location Map	1.3													
			Progress and Completion	1.4													
			Pictures														
			Field Office Overhead	1.7													
			Field Office Overhead	1.7.1													
			Field Office Overhead	1.7.2													
			Accounting Practice	1.7													
			Delegation Of Authority	1.8													
			SD-05 Design Data														
			Modified Red Zone Checklist	1.10.1													
		01 32 01.00 10	SD-01 Preconstruction Submittals														
			Project Scheduler Qualifications	1.3	G												
			Preliminary Project Schedule	3.4.1	G												
			Initial Project Schedule	3.4.2	G												

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION

Ebbing RSAF Facility Renovations for F-16 and F-35

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					REMARKS		
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		MAILED TO CONTR/ DATE RCD FRM APPR AUTH	
																		(g)
		01 32 01.00 10	Periodic Schedule Update	3.6.2	G													
		01 33 00	SD-01 Preconstruction Submittals Register	1.9	G													
		01 33 16.00 10	SD-01 Preconstruction Submittals															
			Advanced Modeling Project Execution Plan (PxP)	1.7.2	C													
			Design Quality Control Plan	1.5.1	G													
			Initial Design Conference	1.5.2.2														
			Preconstruction Conference	1.5.2.5														
			DCM Procedures	3.5.1	G													
			Submittal Register	3.8.4	G													
			SD-05 Design Data															
			Design and Code Checklists	1.7.1	C													
			Sustainable Design	2.4	C													
			Interim Design Submittals	3.2.1	R													
			Building Rendering	3.6														
			Interior And Exterior Building Finishes Scheme	3.6.5.1.1	G													
			Furniture, Fixtures & Equipment	3.6.5.2.3	G													
			Conference Documentation	3.7.3														
			Final Design Submittals	3.8	R													
			Design Complete Documents	3.9	C													
			Rectified Design Documents	3.2.3.1														
			SD-11 Closeout Submittals															
			DD Form 1354	3.8.6	A													
		01 33 29	SD-01 Preconstruction Submittals															

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE		DATE OF ACTION	MAILED TO CONTR/ DATE RCD FRM APPR AUTH	
																		(g)
		01 33 29	Preliminary High Performance and Sustainable Building Checklist	1.5.3.2	G S													
			Sustainability Action Plan	1.4.1	G S													
			Preliminary Sustainability eNotebook	1.5.3.2	G S													
			SD-05 Design Data															
			Interim Design High Performance and Sustainable Building Checklist	1.5.3.2	G S													
			Interim Design Sustainability eNotebook	1.5.3.2	G S													
			Final Design High Performance and Sustainable Building Checklist	1.5.3.2	G S													
			Final Design Sustainability eNotebook	1.5.3.2	G S													
			SD-06 Test Reports															
			Third Party Certification Design Compliance Report	1.5.3.2	G S													
			SD-11 Closeout Submittals															
			Final High Performance and Sustainable Building Checklist	1.5.3.2	G S													
			Final Sustainability eNotebook	1.5.3.2	G S													
			Amended Final Sustainability eNotebook	1.5.3.2	G S													
			Amended Final High Performance and Sustainable Building Checklist	1.5.3.2	G S													

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER			ACTION CODE	DATE OF ACTION
		01 33 29	Third Party Certification Certificate, Assessment, or Validation and Compliance Report	3.2	G S													
		01 35 10.00 46	SD-01 Preconstruction Submittals															
			FAA Form 7460-01	1.6														
			Fod Plan	1.7														
			Final Airfield Driving Training Record	1.8														
		01 35 26	SD-01 Preconstruction Submittals															
			Accident Prevention Plan (APP)	1.7	G													
			Accident Prevention Plan (APP)	1.7	G													
			Accident Prevention Plan (APP)	1.7	G													
			Accident Prevention Plan (APP)	1.7	G													
			Indoor Air Quality (IAQ) Management Plan	1.16	G													
			Final IAQ Management Plan	1.16	S													
			SD-06 Test Reports															
			Monthly Exposure Reports	1.4														
			Notifications and Reports	1.12														
			Accident Reports	1.12.2	G													
			LHE Inspection Reports	1.12.3														
			SD-07 Certificates															
			Crane Operators/Riggers	1.6.1.4														
			Standard Lift Plan	1.7.3.2	G													
			Critical Lift Plan	1.7.3.3	G													
			Activity Hazard Analysis (AHA)	1.8														

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		MAILED TO CONTR/ DATE RCD FRM APPR AUTH
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01 35 26	Confined Space Entry Permit	1.9.1													
			Hot Work Permit	1.9.1													
			Certificate of Compliance	1.12.4													
			License Certificates	1.14													
			Radiography Operation Planning Work Sheet	1.14.1	G												
			Portable Gauge Operations Planning Worksheet	1.14.1	G												
		01 35 29.13	SD-02 Shop Drawings														
			Work Zones	3.9.1	G												
			SD-03 Product Data														
			Amendments to the APP/SSHP	1.4	G												
			Exposure Monitoring/Air Sampling Program	3.5													
			Site Control Log	3.9.2													
			SSHO's Daily Inspection Logs	1.8													
			SD-07 Certificates														
			Certificate Of Worker/Visitor Acknowledgement	1.7													
			SD-11 Closeout Submittals														
			Safety And Health Phase-Out Report	1.9	G												
		01 45 00	SD-01 Preconstruction Submittals														
			Contractor Quality Control (CQC) Plan	1.5.2	G												

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION	
																		(g)
		01 45 00	Additional Requirements For Design Quality Control (DQC) Plan	1.5.2.2	G													
			SD-05 Design Data															
			Design Quality Control	1.12.2														
			Discipline-Specific Checklists	1.5.2.2														
			SD-06 Test Reports															
			Verification Statement	1.12.3														
			SD-07 Certificates															
			Certificate Of Readiness	1.6.7.1	G													
		01 45 35	SD-01 Preconstruction Submittals															
			SIOR Letter of Acceptance	3.1.1	G													
			Project Manual	3.1.1	G													
			Project Manual	3.1.1	G													
			Written NDT Practices	3.1.1														
			Written NDT Practices	3.1.3														
			Statement Of Special Inspections	1.2	G													
			Schedule Of Special Inspections	1.2	G													
			SD-06 Test Reports															
			Daily Reports	3.1.1														
			Daily Reports	3.1.3														
			Daily Reports	3.1.3														
			Biweekly Reports	3.1.1														
			Biweekly Reports	3.1.2														
			SD-07 Certificates															
			AISC Certified Steel Fabricator	2.1														

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		MAILED TO CONTR/ DATE RCD FRM APPR AUTH	
																		(g)
		01 45 35	Steel Truss Plant Quality Assurance Program	2.1														
			Wood Truss Plant Quality Assurance Program	2.1														
			AC472 Accreditation	2.1														
			Steel Joist Institute Membership Certified Plant	2.1														
			Certificate of Compliance	2.1														
			Special Inspector of Record	1.5.17	G													
			Special Inspector	1.5	G													
			Qualification Records	3.1.1														
			Qualification Records	3.1.3														
			SD-11 Closeout Submittals															
			Comprehensive Final Report	3.1.1	G													
			Comprehensive Final Report	3.1.3	G													
		01 50 00	SD-01 Preconstruction Submittals															
			Construction Site Plan	1.3	G													
			Traffic Control Plan	3.5.1	G													
			Haul Road Plan	2.2.1	G													
			Contractor Computer Cybersecurity Compliance Statements	1.5.1.4														
			Contractor Temporary Network Cybersecurity Compliance Statements	1.5.6														
			Permits	3.3														

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/	DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER			ACTION CODE	DATE OF ACTION
		01 50 00	SD-06 Test Reports															
			Backflow Preventer Tests	3.6														
			SD-07 Certificates															
			Backflow Tester	1.4.1														
			Backflow Preventers	1.4														
		01 56 00.00 46	SD-01 Preconstruction Submittals															
			Dust Control	3.1	G													
			Products and Procedures	2.1	G													
			Material Safety Data Sheets	2.1	G													
			Sandblasting	3.3.2	G													
			SD-02 Shop Drawings															
			Recordkeeping	1.7														
		01 57 19	SD-01 Preconstruction Submittals															
			Preconstruction Survey	1.5.1														
			Regulatory Notifications	1.5.2	G													
			Environmental Manager	1.5.4	G													
			Qualifications															
			Employee Training Records	1.5.5	G													
			Environmental Protection Plan	1.6	G													
			Dirt and Dust Control Plan	1.6.9.1	G													
			Solid Waste Management Permit	1.10	G													
			Stormwater Pollution Prevention	3.2.1.1	G													
			Plan															
			Stormwater Notice of Intent	3.2.1.2	G													
			Borrow Permits	3.3.1														
			SD-06 Test Reports															

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION
		01 57 19	Monthly Solid Waste Disposal Report	1.10.1	G												
			Inspection Reports	3.2.1.3													
			SD-07 Certificates														
			Employee Training Records	1.5.5	G												
			Erosion and Sediment Control Inspector	1.5.5													
			Certificate of Competency	1.5.5.1													
			SD-11 Closeout Submittals														
			Regulatory Notifications	1.5.2	G												
			Assembled Employee Training Records	1.5.5	G												
			Solid Waste Management Permit	1.10	G												
			Stormwater Pollution Prevention Plan Compliance Notebook	3.2.1.4	G												
			Stormwater Notice of Termination	3.2.1.5	G												
			Waste Determination Documentation	3.6.1	G												
			Project Solid Waste Disposal Documentation Report	3.6.2.1	G												
			Sales Documentation	3.6.2.1	G												
			Contractor Certification	3.6.2.1													
		01 71 23.00 44	SD-01 Preconstruction Submittals														
			Survey Data														
			GPRS Report	3.1													
		01 74 19	SD-01 Preconstruction Submittals														

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION	
																		(g)
		01 74 19	Construction Waste Management Plan	1.7	G													
			SD-06 Test Reports															
			Quarterly Reports	1.9.2														
			Annual Report	1.9.3														
			SD-11 Closeout Submittals															
			Final Construction Waste Diversion Report	1.10	S													
		01 78 00	SD-03 Product Data															
			Warranty Management Plan	1.7.1														
			Warranty Tags	1.7.5														
			Spare Parts Data	1.5														
			SD-07 Certificates															
			Certification Of Usda Designated Items	2.4														
			SD-08 Manufacturer's Instructions															
			Instructions	1.7.1														
			SD-10 Operation and Maintenance Data															
			Operation and Maintenance Manuals	3.7	G													
			SD-11 Closeout Submittals															
			As-Built Drawings	3.1	G													
			Record Drawings	3.2.1	G													
			Record Drawings	3.3	G													

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION
		01 78 00	As-Built Record of Equipment and Materials	3.6													
			Final Approved Shop Drawings	3.4													
			Construction Contract Specifications	3.5													
			Certification of EPA Designated Items	2.3	G												
			Interim DD FORM 1354	3.9	G												
			Interim DD FORM 1354	3.9.1	G												
			Checklist for DD FORM 1354	3.9	G												
			High Performance And Sustainable Building (Hpsb) Checklist	3.9.2													
			List Of Installed Building Equipent Items For Dd Form 1354	3.9.2													
		01 78 23	SD-10 Operation and Maintenance Data														
			Facility Data Workbook	1.4	G												
			Training Plan	3.1.1	G												
			Training Outline	3.1.3	G												
			Training Content	3.1.2	G												
			Operation And Maintenance Manual, Progress Submittal	3.2.1	G												
			Operation And Maintenance Manual, Prefinal Submittal	3.2.2	G												

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		MAILED TO CONTR/ DATE RCD FRM APPR AUTH	
																		(g)
		01 78 23	Operation And Maintenance Manual, Final Submittal	3.2.3	G													
			SD-11 Closeout Submittals															
			Training Video Recording	3.1.4	G													
			Validation of Training Completion	3.1.6	G													
			Training Plan	3.1.1	G													
			Record Drawings And Utility Systems	1.6.6.7	G													
		01 78 24.00 10	SD-01 Preconstruction Submittals															
			Facility Data Project Execution Plan	1.5.1														
			SD-10 Operation and Maintenance Data															
			Facility Data Workbook, Construction Progress	3.1	G													
			Facility Document Set, Construction Progress	3.1	G													
			SD-11 Closeout Submittals															
			Facility Data Workbook, Construction Final	3.2	G													
			Facility Document Set, Construction Final	1.5.3	G													
			Facility Document Set, Construction Final	3.2	G													
		01 91 00.15	SD-05 Design Data															

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						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION
		01 91 00.15	Design Phase Commissioning Plan	3.2	G												
			SD-06 Test Reports														
			Completed Construction Observation Checklists	3.8	G												
			Design Review Report	3.3	G												
			Interim Construction Phase Commissioning Plan	3.7	G												
			Final Construction Phase Commissioning Plan	3.7	G												
			Issues Log	1.12	G												
			SD-07 Certificates														
			Commissioning Firm	1.9	G												
			SD-10 Operation and Maintenance Data														
			Maintenance and Service Life Plan	3.12	G												
			Systems Manual	3.11	G												
			SD-11 Closeout Submittals														
			Final Commissioning Report	3.13	G												
			Updated Final Commissioning Report	3.14	G												
			Final Commissioning Report (eNotebook)	3.13	S												
			Updated Final Commissioning Report (eNotebook)	3.14	S												

SECTION 01 33 16.00 10

DESIGN DATA (DESIGN AFTER AWARD)

PART 1 GENERAL

1.1 SUMMARY

After award, develop the accepted proposal into the completed design, as described herein. Use a collaborative, integrated design process for all stages of project delivery with comprehensive performance goals for site development, energy, water, material selection, indoor environmental quality, and waste diversion. Ensure incorporation of these goals in project delivery. Consider all stages of the building lifecycle, including deconstruction, rehabilitation, re-purposing, or demolition.

Designs shall be based on customer interviews and the Statement of Work (SOW) as referenced in Section 01 10 00. The Contractor shall conduct interviews with the key stakeholders as necessary to finalize functional, spatial, and operational requirements. The purpose of these submittals is primarily to ensure the Contractor is working towards a facility and site layout that is acceptable to the Government. The Contractor shall schedule the number and composition of the design submittal phases and include that information in the progress schedule.

1.2 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.

EBBING GENERAL PLAN AND CITY OF FORT SMITH

All professional services shall comply with the standards in the Ebbing General Plan, Ebbing infrastructure studies, and The City of Fort Smith Unified Development Ordinance Chapters 5-7.

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 19005-4 (2020) Document Management -- Electronic Document File Format for Long-Term Preservation -- Part 4: Use of ISO 32000-2 with Support for Embedded Files (PDF/A-4)

ISO 32000-2 (2020) Document Management -- Portable Document Format -- Part 2: PDF 2.0

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 13 (2022) Standard for the Installation of Sprinkler Systems

NATIONAL INSTITUTE OF BUILDING SCIENCES (NIBS)

NBIMS-US (V4) National BIM Standard - United States

NCS (V6) United States National CAD Standard

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 1110-1-2909	(2012) Engineering and Design -- Geospatial Data and Systems
ERDC/ITL TR-19-6	(2019) A/E/C Graphics Standard, Release 2.1
ERDC/ITL TR-19-7	(2019) A/E/C CAD Standard - Release 6.1

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-200-02	(2020; Change 2, 2022) High Performance and Sustainable Building Requirements
UFC 1-300-02	(2014; with Change 3, 2021) Unified Facilities Guide Specifications (UFGS) Format Standard
UFC 3-101-01	(2020; with Change 4, 2024) Architecture
UFC 4-010-01	(2018; with Change 3, 2024) DoD Minimum Antiterrorism Standards for Buildings
UFC 4-023-03	(2009; with Change 3, 2016) Design of Buildings to Resist Progressive Collapse

1.3 DEFINITIONS

1.3.1 Integrated Design

The project delivery process shall fully integrate all major trade partners, subcontractors and consultants, from solicitation development to project completion. The Contractor's key personnel (to include trade partners and major subcontractors) shall be actively involved during the design process to effectively integrate the design and construction requirements of this contract. To maximize coordination and proactively manage risk, the Government expects key personnel and Trade Partners, subcontractors/consultants, to participate in all design meetings and weekly progress meetings. The "construction team" shall remain actively engaged during design; and the "design team" shall remain actively engaged during construction. In addition to the typical required construction activities, the Contractor's involvement includes: integrating the design activities into the Master Schedule to maximize the effectiveness of expediting design and construction (within the limits allowed in the contract), ensuring constructability and economy of the design, integrating shop drawing and installation drawing process into the design, executing the material and equipment acquisition programs to meet critical schedules, effectively interfacing the construction and design quality control programs and providing the design team with accurate, up-to-date redline and as-built documentation.

1.3.2 Designer of Record (DOR)

Professional Registered members of the Contractor's Design-Build team that check, approve, sign, date, and certify, prior to submitting the deliverables to the Government, that the D-B design submittals comply with the contract requirements.

The DOR's stamp, sign, and date each design drawing and other design deliverables under their responsible discipline at each design submittal stage. The DOR(s) are responsible for maintaining the integrity of the design and for compliance with the contract requirements through construction and documentation of the as-built condition by coordination, review and approval of extensions of design, material, equipment and other construction submittals, review and approval or disapproval of requested deviations to the accepted design or to the contract, coordination with the Government of the above activities, and by performing other typical professional design responsibilities.

Identify, for approval, the Contractor's "DOR" or "Project Manager" who shall remain the project's "point person" from design through construction and commissioning.

1.3.3 Government Furnished Material (GFM)

Government material that may be incorporated into, or attached to, an end item to be delivered under a contract or which may be consumed in the performance of a contract. It includes, but is not limited to, raw and processed material, parts, components, assemblies, and small tools and supplies.

1.3.4 Advanced Modeling

A subset of geospatial technologies as defined in EM 1110-1-2909 to include BIM, CIM, GIS, and CAD. Advanced Modeling is comprised of models and drawings that form a digital representation of the project, or part thereof, that are comprised of model elements with facility data.

1.3.5 Model Element

A self-contained graphical element with a unique identification that is used to populate a model, and whose behavior and properties are defined by facility/site data and software processes. Model elements can represent a physical entity, such as a pump, a concrete wall, or a utility vault and range from the simple to the complex and can be custom modified.

1.3.6 USACE Minimum Modeling Matrix (M3)

The USACE Minimum Modeling Matrix (M3) describes the minimum modeling and data requirements by defining the level of development (LOD) and element grade.

1.3.7 Facility Data

Non-graphical data attached to surface and subsurface components for both building and site model elements that describe various facility characteristics such as parametric values that drive physical sizes, material definitions (e.g. wood, metal), manufacturer data, industry standards (e.g. AISC steel properties), location, and project identification numbers. Facility data can also define supplementary physical entities that are not shown graphically in the model, such as the system of a duct, hardware on a door, content of conduit, site surface, alignment, levee, channel or transformer properties.

1.3.8 Industry Foundation Class (IFC)

IFC are a standard and file format used for the exchange of model elements

and data; see <http://www.iai-tech.org>. In the context of this section, IFC does not mean "Issued For Construction."

1.3.9 Model Uses

A Model Use is a method or strategy of applying modeling during a facility's life cycle to achieve one or more specific objectives. Reference NBIMS-US for the definitive list of Model Uses and definitions.

1.3.10 USACE BIM Platform Configuration Standards - Templates, Workspaces, Catalogs, and Environments

1.3.10.1 USACE Revit Templates

The USACE Revit templates are discipline specific and include family content pertinent to that discipline. The templates share standard symbology such as annotation families, line styles, and text styles. The templates include pre-defined shared parameters.

1.3.11 USACE CAD/BIM Technology Center

The USACE CAD/BIM Technology Center hosts all standard content for USACE. This content can be accessed through the CAD/BIM Technology Center website, .

1.4 ORDER OF PRECEDENCE

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

- a. The Schedule (excluding specifications).
- b. Representations and other instructions:
 - i. Betterments: any portions of the Offeror's proposal, which both meets and exceeds the requirements of the RFP. NOTE: The Offeror must clearly identify all betterments in their proposal for government consideration.
 - ii. Specific requirements as referenced in Section 01 10 00 - Statement of Work.
- c. Contract Clauses.
- d. Other documents, exhibits, and attachments.
- e. The Specifications.
- f. Any design products including, but not limited to, plans, specifications, engineering studies and analyses, shop drawings, and equipment installation drawings. These are "deliverables" under the contract are not part of the contract itself. Design products must conform to all provisions of the contract, in the order of precedence.

1.5 PRECONSTRUCTION ACTIVITIES

1.5.1 Design Quality Control Plan

Submit a Design Quality Control Plan in accordance with Section 01 45 00 QUALITY CONTROL before design may proceed.

1.5.2 Meetings and Conferences

1.5.2.1 Post Award Conference

The Government will conduct a post award conference at the [Ebbing Field] (exact location will be provided by the COR), as soon as possible after Contract award, coordinated with issuance of the notice to proceed (NTP). Participation by the Contractor and major subcontractor representatives is mandatory. All designers need not attend this first meeting. The government will provide an agenda, meeting goals, meeting place, and meeting time to participants prior to the meeting.

As a minimum the following will be addressed during the conference: determination and introduction of contact person and their authorities; contract administration requirements; discussion of expected project progress processes; and coordination of subsequent meeting.

- a. The government will introduce the Government project delivery team members, facility users, facility command representatives, and installation representatives.
- b. Introduce key personal, major subcontractors and other needed staff.
- c. Define expectations and duties of each participant.
- d. Develop a meeting roster with complete contact information including name, office, project role, phone, mailing and physical address, and e-mail address for distribution to all participants. Also, provide minutes of the meeting to all participants.
- e. The Government and Contractor shall develop, establish, and agree to comprehensive design development processes including conduct of conferences, expectation of design development at conferences, fast-tracking, design acceptance, Structural Interior Design (SID)/Furniture, Fixtures & Equipment (FF&E) design approval, project closeout, etc. The government will explain contract requirements and the Contractor shall review their proposed project schedule and suggest ways to streamline processes.

1.5.2.2 Initial Design Conference

After Contract award, conduct the initial design conference, and provide a record of the meeting. All Designers of Record must participate in the conference. The primary purpose of the meeting is to make sure any needs are assigned and due dates established, as well as points of contact identified. The initial design conference may be scheduled and conducted at the project installation after the Post Award Conference and prior to initiation of significant preliminary design development, although it is recommended that the partnering process be initiated at the time of or before the initial design conference. Limit any design work conducted after award and prior to this conference to site work.

1.5.2.3 Advanced Modeling Kick-Off Meeting

Conduct an Advanced Modeling Kick-Off Meeting prior to submission of the Advanced Modeling PxP, within 45 days after Notice to Proceed. Required meeting attendance includes, at a minimum, the DOR, the design drawing and modeling specialist and the Geographic District BIM Manager or delegate.

The intent of this meeting is to coordinate the expectations for the Advanced Modeling PxP.

1.5.2.4 Advanced Modeling PxP Demonstration Meeting

Within 30 days after the acceptance of the Advanced Modeling PxP and M3, conduct a demonstration to review the Plan for clarification, and to verify the functionality of planned Model technology workflow and processes. If modifications are required, complete the modifications and resubmit the Advanced Modeling PxP performing a subsequent demonstration for Government acceptance.

1.5.2.5 Pre-Construction Conference

Before starting any construction activities, jointly conduct an administrative conference with the Government to discuss any outstanding requirements and to review local installation requirements. It is possible there will be multiple Pre-Construction Conferences based on the configuration of the design packages. Provide minutes of the meeting(s) to all participants.

1.6 SUBMITTALS

Each submittal includes an associated approval level designation as defined in the following table:

Approval Level Designation	Definition
G	Government approval
no designation	for information only
D	Designer of Record approval
C	Government Conformance Review of Design
R	Designer of Record Approval and Government Conformance Review
A	Designer of Record Approval and Government Approval
S	inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING

When used, a designation following the approval level designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Advanced Modeling Project Execution Plan (PxP); C

Design Quality Control Plan; G

Initial Design Conference

Preconstruction Conference

DCM Procedures; G

Submittal Register; G

SD-05 Design Data

Design and Code Checklists; C

Sustainable Design; C

Interim Design Submittals; R

Building Rendering

Interior And Exterior Building Finishes Scheme; G

Furniture, Fixtures & Equipment; G

Conference Documentation

Final Design Submittals; R

Design Complete Documents; C

Rectified Design Documents

SD-11 Closeout Submittals

DD Form 1354; A

1.7 DESIGN QUALITY CONTROL

1.7.1 Design And Code Checklists

Develop and utilize appropriate discipline-specific checklists during the design and quality control of each submittal. Submit these completed checklists with each design submittal, as applicable, as part of the project documentation. See Section 01 45 00 Contractor Quality Control and paragraph FIRE PROTECTION AND LIFE SAFETY CODE REVIEW for a sample Fire Protection and Life Safety Code Review checklist.

1.7.2 Advanced Modeling Project Execution Plan (PxP)

Develop an Advanced Modeling Project Execution Plan ("Plan" or "PxP") documenting mandatory and Contractor-elected BIM Uses, analysis technologies and workflows. Submit the PxP within 45 days after issuance of Notice to Proceed.

Use the USACE ADVANCED MODELING PROJECT EXECUTION PLAN (PxP) Template located at the USACE CAD/BIM Technology Center website to develop an acceptable Plan and update to include platforms and processes to meet the requirements of the project.

1.7.2.1 M3 Template

Use the M3 Template located at the USACE CAD/BIM Technology Center website and submit as part of the Advanced Modeling PxP.

1.7.2.2 Model Uses

Mandatory Model Uses are predefined in the Project Execution Plan (PxP) and cannot be modified. Identify additional elected Model Uses in the PxP.

1.8 DELIVERY, STORAGE, AND HANDLING

1.8.1 Electronic Design Submittal

In addition to hard copy submittals, provide identical copies of discs for approval, for each submittal required. Provide submittal files on electronic storage media in compliance with the quality requirements identified in this specification.

1.8.1.1 Malicious Content

Scan all electronic files for malicious viruses using commercially available scanning program that is routinely updated to identify and remove current virus threats.

1.8.1.2 Storage Media

Provide project data on disc-based (DVD±R/RW) media. Provide the full submittal on one single disc whenever possible. When separation of the submittal is required separate deliverables onto separate media. Document any media divisions in the PxP for approval by the Contracting Officer.

- a. Directly print identification of contents onto storage media. Do not provide adhesive labels. Include the name of the submittal, project, project location, Contract number, Designer of Record firm/Prime Contractor company's name, title of submission, and security classification (in accordance with the applicable security classification labeling regulations) on the label. If multiple discs are provided, clearly document the contents of each disc on the label.
- b. Include the name and contact information of the individual who produced the final data disc to ensure that any problems with the data or media can be easily resolved.
- c. When browsed on any computer, the disc displays the following folders and their associated content:
 - (1) Submittal files (containing all submittal data)
 - (2) All supporting documents associated with the submittal
 - (3) Readme containing one TXT, PDF, or HTML file with general use information, organizational instructions, and basic preparer contact information.

1.8.2 Advanced Model File Packaging

Execute the following actions for all design drawing and modeling files:

1.8.2.1 Autodesk Revit, Civil3D, and AutoCAD

- a. Purge unused

- b. Audit
- c. Compress

1.8.3 PDF File Packaging

Utilize PDF file format in accordance with ISO 32000-2 and ISO 19005-4. Provide files from original sources, text-searchable, and saved in "Standard" (uncompressed) resolution whenever possible.

1.8.3.1 Bookmarking

- a. Bookmark drawing submittal PDF sets to include one Parent Bookmark per Discipline and one Child Bookmark per sheet within each Discipline. Format Parent Bookmarks as "Discipline" (e.g. Architectural). Format Child Bookmarks as "Sheet ID Sheet Title" (e.g. A-101 First Floor Plan).
- b. Bookmark specification submittal PDF sets using the SpecsIntact Print Processing PDF Print/Publish feature, combining processed sections into one PDF document. Insert the Submittal Register into the file where specified by Section 01 33 00 SUBMITTAL PROCEDURES and bookmark.
- c. Bookmark design analysis and calculation submittal PDF sets to include one Parent Bookmark per design analysis section and one Child Bookmark per major paragraph per section. Format Parent Bookmarks as "Section" (e.g. Architectural). Format Child Bookmarks as "major paragraph designation Sheet Title" (e.g. 2.1 Primary Facility Functions).

1.8.4 Hardcopy Design Submittal

Print hard copy submittals directly from the electronically packaged PDF files. Provide quantities and sizes as indicated in DISTRIBUTION LIST.

The Designer(s) of Record stamps and signs the original full size hard copy sheets as Released For Construction. Provide distribution from this set.

1.8.5 Distribution List

Recipient	Hard Copy Quantity
USACE Design Branch	Electronic Copies Only
USACE Construction Branch	4
Ebbing Field	6

1.8.5.1 Addresses for Distribution

USACE Design Branch:
 USACE CESWF-EC-DG
 8196 Taylor St
 Fort Worth, TX 76102
 Attn: Matt Milliorn

USACE Construction Branch:
 For USPS Delivery (to be confirmed at Post Award Conference:

USACE Air Force Base Resident Office
PO Box 1279
Jacksonville, AR 72078

For FedEx, UPS, etc:

USACE Air Force Base Resident Office
Building 432
4th Street
Little Rock Air Force Base, AR 72099

Ebbing ANG - 188th CES
188th Wing Air National Guard Base
Attn: Lt. Col. Riley Donoho, BCE, Bldg 450
4850 Leigh Ave
Fort Smith, AR 72903

Ebbing ANG - PIO
33rd Fighter Wing, Det 1
4850 Leigh Ave
Fort Smith, AR 72903

PART 2 PRODUCTS

2.1 ADVANCED MODELING DOCUMENTS

Provide all of the following documents with each design submittal.

2.1.1 Submitted Files List

Provide list of all submitted electronic files including a description, directory, and file name for each file submitted. Identify which files have been produced from the Model and Facility Data. For all Sheet files, include a list of the sheet titles and sheet numbers.

2.1.2 Advanced Modeling Submittal Checklist

Complete the USACE BIM/CIM Advanced Modeling Submittal Checklist and include with each submittal. Download the Checklist from the USACE CAD/BIM Technology Center website.

2.1.3 Advanced Modeling Electronic Files

Include all Advanced Modeling files associated with the contract scope of work.

2.1.3.1 3D Interactive Review Model

Provide a copy of the BIM Model in an approved interactive review format. Use Autodesk Revit 2022 (or later), Google Earth (KMZ), or other Government Approved format documented in the PxB for the 3D Interactive Review Model format.

2.1.3.2 Industry Foundation Class (IFC) Coordination View

Provide an IFC Coordination View for all deliverables. Provide exported property set data for all IFC supported named building elements. Submit all IFC models in the IFC2x3 Coordination View V2.0 schema.

2.1.3.3 Quality Control (QC) Reports

As a minimum, include the following reports:

2.1.3.3.1 Model Standards Checks and Reports

Provide QC checks demonstrating adherence to the NCS v6.0 BIM Implementation section. Identify and report non-compliant elements and submit a corrective action plan. Provide the Government with detailed justification and request Government acceptance for any non-compliant elements that the Contractor proposes to be allowed to remain in the Model. Verify the following for the Model(s) and Facility Data set:

- a. No undefined, incorrectly defined, or duplicated elements.
- a. No errors when opening.
- c. No broken Links, References, or X-References.
- d. Minimized extraneous information.
- e. Content uses the coordinate system defined in the approved PxP.
- f. Models share a common alignment point.
- g. For a Design Complete or Record Submittal; no unloaded Links, References, or X-References exist.

2.1.3.3.2 Graphics Standards Checks and Report

Provide QC checks on all graphic deliverables demonstrating that the fonts, dimensions, symbology and other construction document formatting are compliant with the requirements of this specification. Identify and report non-compliant content.

2.1.3.3.3 CAD Standards Checks and Report

Provide QC checks on CAD Output demonstrating that filenames, sheet borders, layer/level names, and symbology are compliant with the requirements of this specification. Identify and report non-compliant content.

2.1.3.3.4 Interference Management (3D Coordination) Checks and Report

Execute Interference Management checks and provide a summary of the results noting total hard interferences (e.g., mechanical vs. structural, or mechanical vs. mechanical, overlaps in the same location) and soft interferences (e.g., conflicts regarding equipment clearance, service access, fireproofing, insulation, code space requirements).

2.1.3.3.5 Additional Parameters

Additional QC parameters as deemed appropriate for the Project may be developed and documented in the Advanced Modeling PxP.

2.1.4 Advanced Modeling Re-Submittals

If components of an Advanced Modeling submittal are rejected, provide the

following for each Advanced Modeling Re-Submittal, in addition to re-submittal information required by Section 01 33 00 SUBMITTAL PROCEDURES:

- a. Re-submit all components required under paragraph ADVANCED MODELING PACKAGE, including a new Advanced Modeling Checklist and updated content in response to Government comments.
- b. Provide a copy of all Government review comments.
- c. Provide a response to each Government review comment for back check.

2.2 DESIGN DRAWINGS

From advanced model files, produce design drawings that describe the scope of the Contract for all required submittals including all interim and final deliverables.

2.2.1 Electronic Drawing Files

Provide electronic drawing files in the latest AutoCAD and PDF format for each project drawing in the design set.

2.2.2 Drawing Index

Provide an index of drawings sheet as part of the drawing set, and an electronic table of all drawings submitted. Include the electronic file name, the sheet reference number, the sheet number, and the sheet title containing the data for each drawing.

2.2.3 Shop Drawings Used as Design Drawings

Design drawings may be prepared similar to shop drawings to minimize construction submittals after the Design Complete Submittals. Prepare and submit with the design drawings, appropriate connection, fabrication, layout, and product specific drawings.

2.2.3.1 Drawing Format For Shop Drawings Used as Design Drawings

Use the Contractor-originated drawings as the basis for the record drawings. Conform shop drawings included as design documents with the same drawing requirements such as drawing format, sheet size, layering, lettering, and title block used in design drawings.

2.2.3.2 Identification of Shop Drawings Used as Design Drawings

Indicate which shop drawings are being submitted as design drawings in the transmittal letter.

2.2.4 Seal on Documents

Sign, date and seal all Contractor-originated design drawings by the registered architect or the registered engineer of the respective discipline. This is the seal of the Designer of Record for that drawing. Application of the electronic seal and signature accepts responsibility for the work shown thereon.

2.3 SPECIFICATIONS

Provide a Contractor-originated design specification that, in conjunction

with the drawings, demonstrates compliance with materials, equipment, execution, and field quality control requirements of the RFP and accepted proposal.

2.3.1 Specifications Format

Utilize the Unified Facility Guide Specifications (UFGS) current at the time of Contract award. Process the specifications with the SpecsIntact software package.

- a. Edit and expand the appropriate specifications to ensure that all project design requirements, current code requirements, and regulatory requirements are met. Design specifications may be prepared that include manufacturer specific data and catalog cuts in lieu of non-proprietary, descriptive specifications. Clearly identify, where appropriate, specific products chosen to meet the contract requirements (i.e., manufacturers' brand names and model numbers or similar product information).
- b. Note that the UFGS are based on design-bid-build contracting and will require editing to apply to a design-build project. For instance, they assume that the Government will approve most submittals, whereas in design-build, the DOR has that action, unless this solicitation requires Government approval for specific submittals.
- c. Organize project sections not based on UFGS in accordance with CSI MasterFormat and UFC 1-300-02.

2.3.2 Identification of Manufacturer's Product Data Used as Specifications.

Provide complete and legible catalog cut sheets, product data, installation instructions, operation and maintenance instructions, warranty, and certifications for products and equipment for which final material and equipment choices have been made. Indicate, by prominent notation, each product that is being submitted including optional manufacturer's features and indicate where the product data shows compliance with the Contract requirements.

2.3.3 Specifications Packaging

Provide specifications to include the following:

- a. Cover sheet and project table of contents.
- b. Specification sections, each section with a table of contents.
- c. Manufacturer's Product Data. If providing as attachments to the applicable specification section, incorporate as attachment reference within the section and section table of contents.

2.3.4 Specification Deliverable

Submit a bundled specification package in PDF format for each design package. As a minimum, bookmark each specification section in the bundled package. Also, submit the source files, in the processing system format, used to create the PDF.

2.4 DESIGN ANALYSIS

Prepare, organize, and present a design analysis that will document the general parameters, functional and technical requirements, design objectives, design assumptions, and provides design calculations applicable to a project's design. Organize the design analysis into three parts; Part 1 - General Description; Part 2 - Design Requirements and Provisions; and Part 3 - O&M Provisions.

The design analysis states the purpose, authorization, applicable criteria and the project description for the project, and provides a summary of the factors influencing the choice of the civil, environmental, architectural, structural, mechanical, electrical, communications, fire protection, physical security systems, HTRW, and sustainable design features used in the project along with an indication of how the initial costs and life cycle costs were factored into final selections. In the final design analysis clearly and succinctly include:

- a. An introductory description of the project concepts that addresses the salient points of the design
- b. An orderly and comprehensive documentation of criteria and rationale for system selection, supported by life cycle cost analysis.
- c. The identification of any necessary licenses and permits that are anticipated to be required as a part of the design and/or construction process.
- d. Identify all applicable codes and criteria and highlight specific requirements within these codes and criteria for critical issues in the facility design.
- e. Required calculations as specified and as needed to support the design.
- f. Clearly identify "Sustainable Design" features that address high performance and sustainable building (HPSB) concepts as required by UFC 1-200-02. Sustainable design documentation must support Guiding Principles Validation and Third Party Certification (TPC) requirements in Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING to include HPSB and TPC checklists.
- g. Clearly identify "Antiterrorism" requirement and document the antiterrorism and forceprotection features as required by UFC 4-010-01.

2.4.1 Design Requirements and Provisions

Include subparts for each major design discipline and basic project design requirements for each discipline that justify and validate design decisions to include, but not limited to: life cycle cost effectiveness.

2.4.1.1 Civil

Include soil analysis and survey data, site design, site improvements, planting and landscaping, paving, grading and drainage, water, waste-water and soil treatment, contaminant containment, utilities systems analysis and design, and provisions for airfields, ports and railroads, if required.

2.4.1.2 Environmental

Include an impact assessment checklist covering air, water and noise effects from the project and construction; worker health and safety; HTRW remediation cleanup and action levels; transportation and disposal regulation requirements; quality control for chemical sampling/analysis; wetlands determination (tidal and nontidal); special wildlife, plant, and endangered species considerations; ground water, waterway and floodplain protection assessment; pollution prevention control requirements; and design measures to be implemented (i.e., construction site sediment and erosion control requirements by Federal, state and local governments); and hazardous material management, natural and cultural resources, and environmental permits.

2.4.1.3 Architectural

Include space allowance, functional layout, unique features, interior design, furniture planning, signage, accessibility, security, air barriers, energy conservation and sustainable design to include site analysis focusing on orientation, space-mass composition, materials used and details with respect to image, safety, maintenance and cost effectiveness and historical context.

2.4.1.4 Structural

Include foundation, structural, seismic, hardened structure, nuclear radiation and blast protection systems analysis and design.

2.4.1.5 Mechanical

Include heating, ventilation and air conditioning systems, refrigeration, plumbing, elevators and cranes, energy conservation, pollution control, noise and vibration control, heating and chilled water distribution, gas distribution, fuel storage and dispensing, and process systems design.

2.4.1.6 Electrical

Include power generation, transmission and distribution systems, lighting (interior and exterior), voice and video communications, intrusion detection, utilities monitoring control systems (UMCS), cathodic protection, lightning and static electricity protection systems analysis and design, aviation lighting, and electromagnetic protection

2.4.1.7 Fire Protection and Life Safety

Include building construction, exit requirements, fire extinguishing systems, fire protection water supplies, surge analysis, and alarm and detection systems analysis and design.

2.4.1.8 Physical Security

Include fencing, vaults, protective lighting, security systems, locks, arms rooms, controlled substances, entrances, guard facilities, classified material, patrol roads, clear zones, restricted areas, surveillance and penetration resistance.

2.4.1.9 Cybersecurity

Cybersecurity shall be integrated into the design for any facility control

systems per UFC 4-010-06, which include but are not limited to, the interfaces with the Energy Management Control System, building access control system, and fire alarm system.

2.4.2 Operations and Maintenance (O&M) Provisions

Identify design provisions made to enhance and to reduce the cost of operating and maintaining the facility when completed. Identify any special safety considerations or occupational health related considerations that may affect operation and maintenance activities as a result of the final design.

2.4.3 Design Analysis Packaging

2.4.3.1 Assembly and Identification

Assemble design analysis in a single volume with a table of contents if possible. Include a cover page in the basis of design for each discipline indicating the project title and locations, contract number, table of contents, and tabbed separations or bookmarks for quick reference. At a minimum tab or bookmark for each discipline.

2.4.4 Calculations

Place the signature and seal of the designer of record responsible for the work on the cover page of the calculations for the respective design discipline.

PART 3 EXECUTION

3.1 DESIGN SUBMITTALS

Include all deliverable products and associated support documents described in Part 2 of this specification with each design submittal.

3.2 DESIGN SUBMITTALS PHASES

The stages of design submittals described below define requirements with respect to process and content. Determine how to best plan and execute the design and review process for the project, within the parameters listed below. As a minimum, provide at least one interim design submittal, at least one final design submittal before construction of a design package may proceed, and at least one Design Complete submittal that documents the accepted design.

3.2.1 Interim Design Submittals

Submit either a single interim design for review, representing a complete package with all design disciplines, or split the interim design into smaller, individual design packages as deemed necessary for fast-track construction purposes. This is not necessarily a hold point for the design process; the Contractor may designate the interim design submittal(s) as a snapshot and proceed with design development at its own risk.

3.2.1.1 Interim Design Development Management

Maintain a fully functional configuration management system as described herein to track design revisions, regardless of whether or not there is a

need for a formal interim design development review.

3.2.1.2 Fast-Tracking

The Contractor may be allowed to fast-track certain portions of the design and construction prior to completion of the overall design provided that it does not place additional burden on government resources. The site work, utility, and foundation designs may be fast-tracked at the contractor's discretion. To facilitate fast-tracking, the Contractor may elect to divide the design into no more than three (3) design packages for the structure and associated interior work and no more than one (1) design package for site and associated civil work. The government will evaluate whether an early design package will burden the Project Team.

Clearly define how the Contractor will package the design, consistent with its overall schedule for approval and construction of the project. See Sections 01 33 00 SUBMITTAL PROCEDURES and 01 32 01.00 10 PROJECT SCHEDULE for requirements for identifying and scheduling the design packaging plan in the submittal register and project schedule. See also Sections 01 10 00 STATEMENT OF WORK, and 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS for any specified permit requirements.

If early procurement of long-lead items (construction materials or installed equipment) is necessary in order to facilitate the project schedule, identify those long-lead items. Additionally, explain how the early procurement will assure design integrity of the associated design package in meeting the contract requirements. Once the Government has reviewed the information provided, the Contracting Officer may allow the Contractor to procure the items at its own risk.

For any early completion of work required by the SOW, the contractor shall submit all disciplines at the same time for any phase that requires a stand-alone design package. All Design and Preconstruction Submittals shall be approved prior to the start of any phase of construction.

Identify the project elements that will be fast-tracked in the Design Quality Control Plan.

3.2.1.3 Over-the-Shoulder Progress Review

To facilitate a streamlined design-build process, the Government and the Contractor may agree to one-on-one review or small group reviews, on-line, or at the Contractor's design offices or other agreed location, when practicable to the parties. Coordinate such reviews to minimize or eliminate disruptions to the design process. Due to limits on project funding, utilize the maximum virtual teaming methods. Facilitate these reviews with electronic format data transfer and collaboration. Through the partnering process, find ways to facilitate the quality assurance process and to facilitate meeting or bettering the design-build schedule.

3.2.1.4 Interim Design Development Review Waiver

The Government may agree to shorten or waive the formal interim design development review period for design package(s) if an effective, mutually agreeable partnering procedure is established and implemented for regular (e.g., weekly) over-the shoulder review. During the course of the procedure, keep the Government reviewers fully informed of the progress, contents, design intent, design documentation, and other pertinent factors of the design package.

3.2.2 Final Design Submissions

After acceptance of the interim design package, revise the design package to incorporate the comments generated and resolved, perform and document a back-check review and submit the final design package.

3.2.3 Design Complete Submittals

After the final design submission and review conference for a design package, revise the design package to incorporate the comments generated and resolved in the final review conferences, perform and document a back-check review and submit the final, design complete documents, which represents released for construction documents.

3.2.3.1 Rectified Design Documents

Once all design submissions are complete (fast track, interim, etc), a complete set of design documents shall be provided that combines all of the individual design submissions into a single set of design documents.

3.3 DESIGN PLATFORM AND FILE FORMATS

Design the project using the systems and platforms defined below:

3.3.1 BIM

The BIM submittal format is Autodesk Revit Version 16. Provide the BIM submittals as fully operable, compatible, and editable within the native BIM/CIM tools.

3.3.2 CAD

3.3.2.1 Native CAD Authoring Content

All content produced through CAD authoring software outside of any object/element based BIM platform must be compliant with ERDC/ITL TR-19-6 and ERDC/ITL TR-19-7. Autodesk AutoCAD Template Files. Download from the CAD/BIM Technology Center website as part of the A/E/C Work Structure.

3.3.2.2 CAD Extracted From BIM/CIM Authoring Platforms

Provide editable CAD sheet files extracted from the BIM or CIM files. CAD content exported from a BIM or CIM modeling platform must comply with ERDC/ITL TR-19-6 and NCS BIM Implementation section, part "2.0 Clarifications."

3.4 ADVANCED MODELING REQUIREMENTS

3.4.1 BIM Modeling Requirements

3.4.1.1 Minimum Modeling Requirements

Model to the requirements of the USACE M3 as identified in the approved Advanced Modeling PXP.

3.4.1.2 Graphics and Layer Standards

a. All content produced with object/element based BIM authoring software

platforms must be compliant with ERDC/ITL TR-19-6.

- b. All content produced with layer-centric BIM authoring software must be compliant with ERDC/ITL TR-19-7 and ERDC/ITL TR-19-6.

3.4.1.3 USACE Platform Configuration Standards

USACE Revit Templates, most recent version at the time of Contract award. Download from the USACE CAD/BIM Technology Center website and, if required, upgrade to the Contract approved software version.

3.4.1.4 Classification

Include Facility Data referencing one or more classification system(s) identified in the M3 for all modeled elements.

3.4.1.5 Space/Room Data

In the model, include spatial data defining actual net square footage and data to develop the room finish schedule, including room names and numbers. Include program information to verify design space against programmed space, using this information to validate area quantities.

3.4.1.6 BIM Coordinate System

- a. Coordinate System: State Plane
- c. Horizontal Units of Measure: US Survey Feet
- d. Vertical Units of Measure: Feet
- e. Horizontal Datum: NAD 83/2011
- f. Vertical Datum: NAVD 88

3.4.1.7 Modeling Schedules

Comply with the NCS BIM Implementation section, part "2.4 Schedules." Produce schedules from, and link to, the Facility/Site Data within the Model. Document any exceptions in the PXP and submit for review.

3.4.1.8 Details and Enlarged Sections

Comply with the NCS BIM Implementation section, part "3.2 Model Coordination and Delivery." Derive all details and enlarged sections necessary for construction from the Model when possible. For those details and enlarged sections not derived directly from the Model, verify that geometry and data depicting the details and enlarged sections are consistent with Model elements. Details with significant drafted content such as 'standard' and 'typical' details cannot contradict the model and must utilize the model as an underlay when possible for the purposes of verification and coordination. Three dimensional, isometric, and section isometric details derived from the model are preferred. Create details and enlarged sections that are not derived from the Model using native authoring tools within the Model or be embedded within the Model.

3.4.1.9 Drawing Indices

Comply with the NCS BIM Implementation section, part "2.3 Sheet Organization." Where BIM authoring platform supports it, derive drawing indices from a model-driven schedule.

3.4.2 CAD

All content produced through layer-centric CAD authoring software outside of any object/element based BIM or CIM platform must be compliant with ERDC/ITL TR-19-7 and ERDC/ITL TR-19-6.

Autodesk AutoCAD Template Files Most recent version at the time of Contract award. Download from the CAD/BIM Technology Center website as part of the A/E/C Work Structure.

3.5 DESIGN CONFIGURATION MANAGEMENT (DCM)

3.5.1 Procedures

Develop and maintain effective, DCM procedures to control and track all revisions to the design documents subsequent to the Interim Design Submission and continuing through submission of the As-Built documents. After the final design is accepted, this process provides control of and documents revisions to the accepted design (See Special Contract Requirement: Deviating From the Accepted Design). Submit the DCM procedures within the Design Quality Control Plan.

- a. Include authorities and concurrences in the DCM system to authorize revisions, including documentation as to why the revision is required.
- b. The Government's "Dr Checks Design Review and Checking System" shall be used.
- c. Make the DCM data available to the Government reviewers at all times.

3.5.2 Tracking Design Review Comments

The DrChecks Design Review and Checking System to initiate, respond to, resolve and track Government design review comments shall be used.

The Government will set up the project in DrChecks. Throughout the design process parties enter, track, and back-check comments using the DrChecks system. Designers of Record annotate comments timely and specifically to indicate exactly the action to be taken or why the action is not required. After the design review conference and prior to the next design submittal for the package, the DORs annotate those comments that require DOR action or design revision to show how and where it has been addressed in the design documents. These procedures are part of the required design configuration management plan. Flag comments considered critical by the conference participants.

3.5.2.1 DrChecks Initial Account Set-Up

Identify a contact person within the office to act as the administrator for all Contractor personnel, including subcontractors, that will be accessing the PROJNET Dr Checks system. Through the Contracting Officer, coordinate with the Project Manager and the District PROJNET administrator for system access, system instruction and comment process instructions.

PROJNET contains an introductory file and other tutorial material that can be accessed once user accounts have been established. Upon log in, select Portals/User Documentation.

3.5.2.2 DrChecks Review Comments

Annotate and resolve all comments prior to the next submittal. Include the DrChecks comments and responses in the design analysis for record in the next design submittal for the package.

- a. Upon review of comments prior to the design review conference, the DOR(s) evaluate the comments. Include exactly what action will be taken or why action is not required.
- b. After the review conference, the DOR(s) formally respond to each applicable comment in DrChecks a second time, prior to the next submittal, clearly indicating what action was taken and what drawing/spec/analysis changed. Designers of Record are encouraged to directly contact reviewers to discuss and agree to the formal comment responses rather than relying only on DrChecks and review meetings to discuss comments. With the next design submittal, reviewers will back-check answers to the comments against the new submittal, in addition to reviewing additional design work.
- c. Clearly annotate in DrChecks those comments that require effort outside the requirements of the contract. Do not proceed with work outside the contract until a modification to the contract is properly executed.

3.6 DISCIPLINE DESIGN REQUIREMENTS

Provide interim design deliverables that include drawings, specifications, and design analysis for the part of design that the Contractor considers ready for review.

- a. Drawings: Include comments from any previous design conferences incorporated into the documents to provide an interim design for the feature of work submitted.
- b. Specifications: Provide specifications to ensure that all project design features are addressed, meeting current code requirements, and regulatory requirements. Use the track changes feature (redlines) to facilitate review of additions and deletions.
- c. Design Analysis: Prepare and present design analysis under the authority of the DOR, with calculations necessary to substantiate and support all design documents submitted. Address design substantiation required by the applicable codes and references.
- d. Building Rendering: Provide a draft color computer, artist, or hand drawn rendering with the conceptual design submittal of the building exterior. Include a slightly overhead view of the entire building in perspective renderings, to encompass elevations and the roof configuration of the building. After Government review and acceptance, provide a final rendering, including the following:
 - (1) Two C size (17 x 22) color prints, framed and matted behind glass with project title underneath the print.

- (2) One image file in JPG format on optical disk for those in the submittal distribution list.

3.6.1 Geotechnical Investigations and Reports

Submit a final geotechnical evaluation report, prepared by the licensed geotechnical engineer, along with the first foundation design submittal. Make this information available as early as possible during the over-the-shoulder progress review process.

- a. Summarize the subsurface conditions and provide recommendations for the design of appropriate utilities, foundations, floor slabs, retaining walls, embankments, and pavements.
- b. Include compaction requirements for fill and backfill under buildings, sidewalks, other structures and open areas.
- c. Recommend foundation systems to be used, allowable bearing pressures for footings, lateral load resistance capacities for foundation systems, elevations for footings, grade beams, slabs, etc.
- d. Provide an assessment of post-construction settlement potential including total and differential.
- e. Provide recommendations regarding lateral earth pressures (active, at-rest, passive) to be used in the design of retaining walls. Include the recommended spectral accelerations and Site Class for seismic design along with an evaluation of any seismic hazards and recommendations for mitigation, if required.
- f. Include calculations to support the recommendations for bearing capacity, settlement, and pavement sections.
- g. Include supporting documentation for all recommended design parameters such as Site Class, shear strength, earth pressure coefficients, friction factors, subgrade modulus, California Bearing Ratio (CBR).
- h. Provide earthwork recommendations, expected frost penetration, expected groundwater levels, recommendations for dewatering and groundwater control and the possible presence of any surface or subsurface features that may affect the construction of the project such as sinkholes, boulders, shallow rock, old fill, old structures, soft areas, or unusual soil conditions.
- i. Include pH tests, salinity tests, resistivity measurements, etc., required to design corrosion control and grounding systems.
- j. Include the raw field data.

3.6.1.1 Vehicle Pavements

Provide flexible and rigid pavement designs, as applicable for the project, including design CBR and modulus of subgrade reaction and the required compaction effort for subgrades and pavement layers. Also, provide information on the types of base course materials available in the area and design strengths.

3.6.1.2 Certification

With the professional geotechnical engineer consultant, certify in writing that the design of the project has been developed consistent with the Contractor's final geotechnical report. Submit the certification, stamped by the consulting professional geotechnical engineer, with the first design submission. If revisions are made to the initial design submission, provide a new certification with the final design submission.

3.6.2 Civil Site and Utilities Design Contents

Include the following in the interim design for the site and utilities. This list is not intended to limit the contractor from providing different or additional information as needed to support the design presented.

- a. Storm drainage design
- b. Pavement design in coordination with the geotechnical investigation report.
- c. Location and vicinity maps
- d. Removal and/or relocation plan
- e. Layout plan
- f. Grading and drainage plan
- g. Utility Plan: Identify and locate water lines, sanitary sewer lines, force mains, industrial waste lines, and other subsurface utility features
- h. Road and parking area profiles
- i. Utility Profiles: Indicate invert elevations of all drainage structures, manholes, storm drainpipe with size and invert elevations, ground profile, and new or existing structures or utilities crossing the new utilities.
- j. Civil details sheet
- k. Concrete Joint Plan: Provide a joint layout plan for each concrete apron, hardstands, road, pavement, etc
- l. Erosion and Sediment Control Plan
- m. Lawn and landscaping irrigation system
- n. Landscape, planting and turfing
- o. Site specific civil calculations

3.6.3 Structural Systems

3.6.3.1 General

- a. Identify all loads to be used for design.
- b. Describe the method of providing lateral stability for the structural

system to meet seismic and wind load requirements. Include sufficient calculations to verify the adequacy of the method.

- c. Calculations for all principal roof, floor, and foundation members and bracing and secondary members.
- d. Drawings showing principal members for roof and floor framing plans as applicable.
- e. Foundation plan showing main foundation elements where applicable.
- f. Typical sections for roof, floor, and foundation conditions.
- g. Complete seismic analyses for all structural, mechanical, electrical, architectural, and building features as dictated by the seismic zone in which the facility is being constructed.
- h. Identify the program name, source, and version used for computer generated calculations. Provide input data, including loads, loading diagrams, node diagrams, and documentation to illustrate the design. On the schematic models used for input, show, as a minimum, nodes/joints, element/members, materials/properties, and all loadings; induced settlements/deflections; and a list of load combinations. Include an output listing for maximum and minimum stresses, forces, and deflections for each element, and the reactions for each loading case and combination.
- i. Fully coordinate and integrate the overall structural design between two different or interfacing construction types, such as modular and stick-built or multistory, stacked modular construction. Provide substantiation of structural, consolidation/settlement analysis, etc., as applicable, through the interfaces.

3.6.3.2 Anti-Terrorism/Force Protection (ATFP)

Provide a design narrative and calculations where applicable, demonstrating compliance with each of the 22 standards in UFC 4-010-01, which includes Design of Buildings to Resist Progressive Collapse (use the most recent version of UFC 4-023-03, regardless of references to any specific version in UFC 4-010-01).

- a. Where sufficient standoff distance is not being provided, show calculations for blast resistance of the structural system and building envelope. Show complete calculations for members subjected to ATFP loads, e.g., support members of glazed items (jambs, headers, sills) connections of windows to support members and connections of support members to the rest of the structure.
- b. For three story and higher buildings, provide calculations to demonstrate compliance with progressive collapse requirements.

3.6.4 Architectural

Provide a project design that meets the criteria and requirements identified in UFC 3-101-01. Consider architectural compatibility with the local environment, functional requirements, economy of construction, energy conservation, interior and exterior details, and life cycle costs. Optimize special functionality, aesthetics, material quality, and maintainability of operations to meet intended functional requirements in

the final design.

Include the following in the basis of design as needed to sufficiently describe the project design

- a. Composite Floor Plans, floor plans, roof plans showing slope, exterior elevations, reflected ceiling plans, building sections and cross sections indicating floor to floor heights and wall sections which clearly delineate materials systems.
- b. Interior building elevations, enlarged details, door details, window details, enlarged toilet plans and details, enlarged stairway plans and details.
- c. Door and window schedules, finish schedules, hardware schedules, special signage and graphic requirements and all required built-in casework and equipment.
- d. Life safety analysis and life safety plans showing the location of all fire rated partitions, fire rated doors, egress pathways and exits.
- e. Air Barrier System: air barrier system plans and details (i.e. window flashing details, penetration in air barrier details, door flashing details, roofing /ceiling barrier interface details).
- f. Composite floor plan showing all pre-wired workstations
- g. Comprehensive Interior Design Package, which includes Structural Interior Design (SID) and Furniture, Fixtures, and Equipment (FF&E) Design packages.

3.6.5 Interior Design

3.6.5.1 Structural Interior Design (SID) Requirements

Structural Interior Design includes all interior and exterior building related elements and components generally part of the building itself, such as wall finishes, ceilings finishes, floor coverings, marker/bulletin boards, blinds, signage, built in casework and all exterior building finishes. Develop the SID in conjunction with the furniture footprint.

3.6.5.1.1 Format and Schedule

- a. Prepare and submit for approval an interior and exterior building finishes scheme for an interim design submittal. Conduct a meeting between the DOR and the appropriate Government officials to discuss the finish schemes prior to preparation of the schemes to be presented. Present original sets of the schemes to reviewers at an interim design conference.
- b. At the conclusion of the interim phase, after resolutions to the comments have been agreed upon between DOR and Government reviewers, the Contractor may proceed to final design with the interior finishes scheme presented.
- c. Submit the SID information and samples in letter size format using three ring binders with pockets on the inside of the cover. When there are numerous pages with thick samples, use more than one binder. Large D ring binders are preferred to O-ring binders. Use

page protectors that are strong enough to keep pages from tearing out. Anchor large or heavy samples with mechanical fasteners, Velcro, or double-faced foam tape rather than rubber cement or glue. Maximum spread for fold out items is 25-1/2 inches. Provide cover and spine inserts sheets identifying the document as "Structural Interior Design" package. Include the project title and location, project number, Contractor/A/E name and phone number(s), submittal stage and date. Provide copies of each design submittal as outlined in the DISTRIBUTION LIST, except, only provide one (1) copy to each of the recipients listed.

- d. Design submittal requirements include, but are not limited to:
- (1) Narrative of the Structural Interior Design Objectives: Include a narrative in the SID that discusses the building related finishes. Include topics that relate to base standards, life safety, sustainable design issues, aesthetics, durability and maintainability, discuss the development and features as they relate to the occupants requirements and the building design.
 - (2) Interior Color Boards
 - (a) Identify and key each item on the color boards to the contract documents to provide a clear indication of how and where each item will be used. Arrange finish samples to the maximum extent possible by room type in order to illustrate room color coordination. Label all samples on the color boards with the manufacturer's name, patterns and colors name and number. Key or code samples to match key code system used on contract drawings.
 - (b) Material and finish samples indicating true pattern, color and texture. Provide photographs or colored photocopies of materials or fabrics to show large overall patterns in conjunction with actual samples to show the actual colors. Provide finish samples large enough to show a complete pattern or design where practical.
 - (c) Color boards include, but are not limited to, original color samples of
 1. All walls finishes and ceiling finishes, including corner guards, acrylic wainscoting and wall guards/chair rail finishes.
 2. All tile information, including tile grout color and tile patterns.
 3. All flooring finishes, including patterns.
 4. All door, door frame finishes and door hardware.
 5. All signage, wall base, toilet partitions, locker finishes and operable/folding partitions and trim.
 6. All millwork materials and finishes (cabinets, counter tops)
 7. All window frame finishes and window treatments (sills, blinds)
 - (d) Color board samples reflect all actual finish textures, patterns and colors required as specified. Patterned samples sized to adequately show pattern and its repeat if a repeat occurs.
 - (3) Exterior Color Boards
 - (a) Prepare exterior finishes color boards in similar format as

the interior finishes color boards, for presentation to the reviewers during an interim design conference. Provide original color samples of all exterior finishes including but not limited to the following:

All Roof Finishes
All Brick and Cast Stone Samples
All Exterior Insulation and Finish Samples
All Glass Color Samples
All Exterior Metals Finishes
All Window & Door Frame Finishes
All Specialty Item Finishes, including trim

(b) Identify each item on the exterior finishes color boards and key to the building elevations to provide a clear indication of how and where each item will be used.

3.6.5.1.2 Structural Interior Design Documents

Indicate the placement of extents of SID material, finishes and colors on related drawings and detail to define all interior work. The following is a list of minimum requirements:

3.6.5.1.2.1 Finish Color Schedule

Provide finish color schedule(s) in the contract documents. Provide a finish code, material type, manufacturer, series, and color designations. Key the finish code to the color board samples and drawings.

3.6.5.1.2.2 Interior Finish Plans

Indicate wall and floor patterns and color placement, material transitions and extents of interior finishes. Include a finish material/color board, presenting a physical representation of material selections

3.6.5.1.2.3 Furniture Footprint Plans

Provide furniture footprint plans showing the outline of all freestanding and systems furniture for coordination of all other disciplines.

3.6.5.1.2.4 Interior Signage

Include interior signage plans or schedules showing location and quantities of all interior signage. Key each interior sign to a quantitative list indicating size, quantity of each type and signage text.

3.6.5.1.2.5 Interior Elevations, Sections and Details

Indicate material, color and finish placement.

3.6.5.2 Furniture, Fixtures and Equipment (FF&E) Requirements

This paragraph provides instructions, requirements, and responsibilities for the design of the Furniture, Fixtures, and Equipment (FF&E) package.

3.6.5.2.1 Scope and Design Requirements

FF&E design is the selection, layout, specification and documentation of furniture. This furniture includes but is not limited to:

Freestanding	seating, tables, file cabinets, desks and workstations, wood casegoods, storage cabinets, bookcases
Furniture Systems	
Non-Mission Unique Equipment	residential refrigerators, industrial shelving, workbenches
Accessories	lamps, artificial plants, trash receptacles, re-cycle containers, artwork

3.6.5.2.1.1 Project Requirements

Interview appropriate Government personnel to discuss and coordinate furniture and equipment requirements prior to development of the FF&E. This information includes the number of personnel to occupy the building, job functions and related furniture/office equipment to support the job function, room functions, rank and grade, and any applicable Army facility standards.

3.6.5.2.1.2 Design Direction

Design the FF&E package concurrently with the facility design. Limit the use of manufacturer representatives or dealers to providing specification and cost information only. Coordinate the FF&E package with the following:

- a. Interior finish selections and generic furniture footprint plans developed as part of the Structural Interior Design (SID).
- b. Building electrical outlets, switches, J-boxes, communication outlets and connections, and lighting as appropriate.
- c. Other building features such as architectural elements, thermostats, location of TV's, and mission unique equipment (MUE)
- d. Locate furniture in front of windows only if the top of the item falls below the window and unless otherwise noted, do not attach furniture including furniture systems to the building.
- e. If a project has SIPRNET and/or NIPRNET, coordinate furniture layout with SIPRNET and NIPRNET separation requirements. Take special note of any Network Enterprise Center (NEC) requirements regarding the location of secure (SIPRNET) surface mounted conduit or raceways with

associated clearances, wall drops, and wall lock boxes in order to coordinate with the location of desks and workstations that are to have SIPRNET accessibility. Verify that access required by NEC for SIPRNET box and conduit is provided. Coordinate with the User if there are any other types of secure cabling (classified networks) requirements for the project such as J-WIC's, and coordinate furniture and building location, separation and accessibility requirements with NEC.

- f. Base executive wood casegoods on the facility type and rank of end user. Typically this is limited to command suites or to those areas specified by the Installation POC and, when applicable, Installation Design Guide for FF&E's.

3.6.5.2.2 Acquisition and Procurement

3.6.5.2.2.1 Mission Unique Equipment

Identify locations on the FF&E drawings of known MUE items for space planning purposes. Clearly identify any FF&E items required by the User that are MUE, on FF&E drawings as Not in Contract (NIC), unless otherwise directed. MUE includes, but is not limited to, items such as:

Most commercial appliances
Fitness equipment
IT equipment (photocopiers, printers, etc.)
AV equipment (projectors, smart boards, flat screen display monitors, AV racks, AV carts)
Floor safes
Shredders
Clocks

3.6.5.2.2.2 Sources

- a. Utilize GSA Schedule manufacturers and products in selection of FF&E for this project. Open market sources can be specified when an item is not available on GSA Schedule, minimize use (\$3,000 per line item/\$25,000 per contract) and do not specify without written justification. Make a concerted effort to exclude items with proprietary features which would prevent competition.
- b. Specify furnishings from within a manufacturer's family wherever possible while ensuring aesthetic, quality and functionality are not compromised. For example: Steelcase, Turnstone, Brayton International, Metro, and Vecta are all Steelcase companies. Each alternate should also be specified from a manufacturer's family of furniture, example: first set of alternates would be specified from Knoll's family of furniture and the second from Herman Miller family of furniture. Select office furniture, including case goods, tables, storage, and seating, that is compatible in style, finish and color.

- c. It is acceptable to make selections from other than a manufacturer's family of furniture where costs are not reasonable for particular items, some items are not available or appropriate for the facility, or the items are not on GSA Schedule. If this occurs, specify product from an open line that is accessible by numerous dealerships.
- d. See paragraph SUBMITTAL COMPONENTS for Product Data Sheet alternate manufacturer requirements.

3.6.5.2.3 Format and Submittal Requirements

Provide the design package in letter size format using three-ring binders with pockets on the inside of the cover. Provide project binder cover and spine inserts sheets identifying the document as "Furniture, Fixtures & Equipment" package and include the project name and location, Contractor/AE name and phone number(s), submittal phase and date. Include a footer on all text documents that lists the project name, location, date and submittal phase. See paragraph SUBMITTAL COMPONENTS on Color Boards for additional requirements. Use more than one binder when there are numerous pages with thick samples. Large D-ring binders are preferred to O-ring binders. Use color board material that is strong enough to keep pages from tearing out. Anchor large or heavy samples with mechanical fasteners, Velcro, or double-faced foam tape rather than rubber cement or glue. Fold out items may have a maximum spread of 25-1/2 inches. Produce drawings in an 11 x 17 inch format size. Provide copies of each design submittal as outlined in the DISTRIBUTION LIST, except, only provide one (1) copy to each of the recipients listed.

3.6.5.2.3.1 Interim Submittal

Include the following:

- a. Design Narrative
- b. Product Data Sheet
- c. Drawings - Composite Furniture, Area Plans and Workstation Typical
- d. Color Boards
- e. Cost Estimate

3.6.5.2.3.2 Final Submittal

Provide a final FF&E that includes any changes made as a result of interim review comments. Include the following:

- a. Design Narrative
- b. Product Data Sheet
- c. Drawings - Composite Furniture, Area Plans and Workstation Typical and Electrical and Communication Plans
- d. Color Boards
- e. Cost Estimate

3.6.5.2.3.3 Design Complete Submittal

Provide a design complete submittal that includes any changes made as a result of final review comments. Provide documents upon completion of the final architectural submittal or ten months prior to the contract completion date (whichever comes first), to ensure adequate time for furniture acquisition.

- a. Design Narrative
- b. Product Data Sheet
- c. Drawings - Composite Furniture, Area Plans and Workstation Typical and Electrical and Communication Plans
- d. Color Boards
- e. Cost Estimate
- f. Include the following for furniture purchase in one of the Installation's copies:
 - (1) Disc 1: CAD drawings in the same format as the facility design. Provide all files, including any reference files, needed to view complete drawings.
 - (2) Disc 2
 - (a) All documents in PDF format including 11 x 17 inch drawings. Color boards are not required.
 - (b) Excel file of the cost estimate.
 - (3) Binder with paper copies of all FF&E components. Include binder cover and spine inserts with project information. Color boards are not required.

3.6.5.2.4 Submittal Components

Individually code all FF&E items. Use this code and cross-reference to all components of the FF&E.

3.6.5.2.4.1 Narrative of Interior Design Objectives

Provide a narrative description of the furniture, to include functional, safety and ergonomic considerations, durability, sustainability, aesthetics, and compatibility with the building design. Include the name and contact information for the DOR.

3.6.5.2.4.2 Product Data Sheet

Prepare one Product Data Sheet for each item specified in the design including typical workstations. This form identifies all information required to order each individual item. Include the following on the order form:

- a. Item Code (example: C1, T1)
- b. Item Name (example: Desk Chair, Training Table)

- c. Manufacturer
- d. Design Series
- e. Model Number
- f. GSA Information (FSC Group, contract number, expiration date)
- g. Overall Dimensions
- h. Finishes:
 - (1) Paint color, wood species and finish, and plastic laminate. In addition to the manufacturer's furniture wood finish information that is provided, provide the manufacturer name, pattern name and manufacturer's identification number of a wood-patterned plastic laminate which can be used as a reference control sample for bidding purposes on all items that require wood components or veneer.
 - (2) Fabric name and number, minimum Wyzenbeek Abrasion Test double rubs. Code to fabric samples on color boards. Use upholstery that is not proprietary to one furniture manufacturer, but accessible by multiple furniture manufacturers. Non-proprietary fabric includes, but is not limited to, textile manufacturer's fabrics that have been graded into furniture manufacturers fabric grades and are available through a manufacturer's GSA Schedule.
- i. Quantity:
 - (1) Item location by room number and room name
 - (2) Quantity per room
 - (3) Total Quantity
- j. Alternate Manufacturers: Provide 2 alternates for the major items that include, but are not limited to, desks and workstations, wood casegoods, furniture systems, seating, and tables. Supply alternates that are available on GSA Schedule and meet the requirements of the product data sheet. Provide manufacturer name, product series and model number for each alternate manufacturer.
- k. Furniture Item Illustration: Provide a high quality illustration for each furnishing item specified in the package. The illustration can be a photograph or a line drawing.
- l. Product Description: Provide non-proprietary, project specific salient characteristics for the item specified. In general this includes, but is not limited to:
 - (1) Functional features
 - (2) Style (aesthetics): narrative description of the item's appearance
 - (3) Sustainable design attributes
 - (4) Construction: construction materials and methods that relate to

- minimum quality standards required
 - (5) Testing requirements: BIFMA, etc.
 - (6) Ergonomic features and ranges
 - (7) Minimum warranty
 - (8) List any critical dimensions to include any maximum/minimum dimensions
- m. For projects with furniture systems also provide the following minimum requirements information in the Product Description:
- (1) Type of furniture systems (panel, stacking panels, spine wall, desk based system, or a combination)
 - (2) Minimum panel noise reduction coefficient (NRC)
 - (3) Minimum panel sound transfer coefficient (STC)
 - (4) Minimum flame spread and smoke development
 - (5) UL testing for task lighting and electrical system
 - (6) Panel widths and heights and their locations (this may be done on the drawings)
 - (7) Worksurface types and sizes (this may be done on the drawings)
 - (8) Type of storage components (lateral files, pedestals, overhead storage, shelving, tower storage)
 - (9) Worksurface edge type
 - (10) Varying panel/cover finish materials and locations (locations may be shown on the drawings)
 - (11) Keyboard requirements
 - (12) Lock and keying requirements
 - (13) Accessory components (examples: tack boards, marker boards, monitor arms, paper management, task lighting)
 - (14) Electrical and communication raceway requirement; type, capacity and location (base, beltline, below and/or above beltline)
 - (15) Locations of communication cables (base, beltline, below and/or above beltline, top channel)
 - (16) Types of electrical outlets required; including dedicated circuits
 - (17) Types of communication jacks (provided and installed by others)
 - (18) Locations of electrical outlets and communication jacks (this may be done on the drawings)
 - (19) Type of cable (examples: Cat. 6 (UTP and STP), fiber optic)

system needs to support (provided and installed by others)

- n. Special instructions for procurement ordering and/or installation (if applicable)

3.6.5.2.4.3 Drawings

- a. Coordinate all drawings developed as part of the FF&E interior design with the generic furniture floor plans provided and approved as part of the project construction drawings. Reflect any changes in size, quantity, or location of FF&E items during the FF&E design, from that shown on the construction drawing generic furniture plans, in the construction drawings.
- b. Do not provide manufacturer specific information such as product names and numbers on drawings. Provide non-proprietary drawings.
- c. Accurately reflect the proposed space planning and location of all FF&E items. Incorporate all applicable life safety codes and ABA/ADA requirements in space planning based on building type and utilization.
- d. Although not included or specified as part of the FF&E design package, show and identify the location and approximate sizes for all Mission Unique (MUE) furnished equipment that will occupy floor space. This includes but is not limited to such items as photocopiers, printers, vending machines, kitchen equipment, etc. Clearly label MUE on the drawings.
- e. Include, the following as a minimum:
 - (1) Composite Furniture Plans: Scaled drawings indicating location of all furniture and equipment to clearly illustrate overall space planning concept and intent.
 - (2) Area Furniture Plans: Scaled drawings showing detailed placement for each furniture, equipment, or accessory item. Provide a key plan identifying location in the building the area is located.
 - (a) Identify all FF&E items by code on the area plan. Include a legend on each sheet listing all item codes and names.
 - (b) Provide critical dimensions to include open office area aisle widths, and workstation spline wall centerline dimension to building walls.
 - (c) Identify all mission unique equipment by item code and/or name and as not in contract (NIC). In addition, identify construction contractor provided equipment that has a significant footprint that will influence the location and arrangement of the FF&E furnishings items specified for this project.
 - (3) Workstation Typical Plans: Large scaled plans and elevations/isometrics showing workstation typical configurations which clearly identify major workstation components to include but not be limited to panels, storage, worksurfaces, accessories (monitor arms, keyboard trays, etc), and task lighting. Include location of all electrical and communication outlets, indicate height on panel by note or symbol.

- (4) Electrical and Communication Plans: In order to facilitate and coordinate connectivity to the FF&E, also include copies of the building electrical and communications plans from the construction drawing set.

3.6.5.2.4.4 Color Boards

Accurately reflect the furniture fabric and finish patterns, textures and colors selected for the project. Provide samples of all finishes and fabrics indicated on the Product Data Sheet for each FF&E item.

Provide samples of sufficient size to adequately portray the pattern, color, and texture of the material. Photographic reproductions are prohibited. Label and cross-reference all samples to the furniture plans and Product Data Sheet. Arrange and group furniture finishes on the color boards corresponding to rooms or areas. Color boards include, but are not limited to, paint, plastic laminate, fabric, and wood finish (include plastic laminate reference control sample).

3.6.5.2.4.5 Cost Estimate

Base the cost estimate on GSA Schedules and organize by item code and name. Include separate line items for general contingency, installation, freight charges and any other related costs. Use installation and freight quotes from vendors in lieu of a percentage allowance when available. An estimate developed by a furniture dealership may be provided as support information for the estimate, but has to be separate from the DOR developed spreadsheet estimate.

- a. Verification of Quantity: Ensure that quantity counts for each item matches between the product data sheet, plans and cost estimate.
- b. Signature Block: Include a written statement at the bottom of the cost estimate that states all pricing is based on GSA Schedules. Provide a line for a government POC signature.

3.6.5.2.5 Furniture Specifications

Individually code all FF&E items. Use and cross-reference this code to all components of the FF&E.

3.6.5.2.5.1 Construction

- a. Specify modesty or back panels on freestanding desks and workstations located against walls as a fixed 1/2 or 1/3 partial height panel, or a hinged panel. Coordinate fixed panel heights with the electrical and data outlet mounting heights shown on the construction drawings to provide direct access to these outlets.
- b. Unless otherwise noted, provide lockable desks and workstations, filing cabinets and storage. Key all locks within a one person office the same; key all one person offices within a building differently. If an office or open office area has more than one workstation, key all the workstations differently, but key all locks within an individual workstation the same.
- c. Use light-emitting diode (LED)/solid state lighting where task lighting is required in furniture.

3.6.5.2.5.2 Finishes and Upholstery

Keep placement of furniture systems panel fabric accent colors to a minimum.

Specify seating upholstery that meets Wyzenbeek Abrasion Test, 55,000 minimum rubs. Specify upholstery and finish colors and patterns that help hide soiling.

3.6.5.2.5.3 Sustainability

For all designs provided regardless of facility type, make every effort to implement all aspects of sustainability, including sustainable materials and products acquisition, to the greatest extent possible, where life cycle cost effective, for all the selections made in the FF&E package in accordance with UFC 1-200-02 requirements.

3.6.5.2.5.4 Furniture Systems

Minimize the number of workstation typicals including parts and pieces required to assist in future reconfiguration and inventorying.

3.6.5.2.5.5 Seating

- a. Specify appropriate chair casters and glides for the floor finish where the seating is located.
- b. Provide task seating that supports a minimum of 300 pounds.
- c. Select ergonomic desk chairs with casters, waterfall front, swivel, tilt, variable back lock, adjustable back height or adjustable lumbar support, pneumatic seat height adjustment, seat depth adjustment, 7-11 inch arm height adjustment above the seat, and padded, contoured upholstered seat and back. Provide desk chairs with an adjustable seat height range of 4 1/2 inches, range to include 16-1/2 - 20 inches.
- d. In heavy use lounge, waiting and reception areas provide seating with arms that are non-upholstered or upholstered with wood arm caps.

3.6.5.2.5.6 Training Tables

Provide reconfigurable, moveable and storable training tables. Specify power and data requirements, dollies, flip-top and modesty panels as required.

3.6.5.2.6 Warranties

Specify manufacturer's performance guarantees or warranties that include parts, labor and transportation as follows:

Furniture System, unless otherwise noted	10 year minimum
Furniture System Task Lights	2 year minimum, excluding bulbs
Furniture System Fabric	3 year minimum

Metal Desks and Workstations	12 year minimum
Seating, unless otherwise noted	10 year minimum
Ergonomic Task Seating 24/7	10 year minimum
Seating Mechanisms and Pneumatic Cylinders	10 years
Ergonomic Task Seating Fabric (includes 24/7 seating)	5 years minimum
Tables, unless otherwise noted	10 year minimum
Table Mechanisms	5 year minimum
Table Ganging Device	1 year minimum
Wood Caseworks, Files and Storage	10 year minimum
Wood Framed Seating	10 year minimum
Wood Seating Fabric	3 years minimum
Items not listed above	1 year minimum

3.6.6 Plumbing Systems

- a. List all references used in the design including Government design documents and industry standards.
- b. Provide justification and brief description of the types of plumbing fixtures, piping materials and equipment proposed for use.
- c. Detail calculations for systems such as sizing of domestic hot water heater and piping; natural gas piping; LP gas piping and tanks; fuel oil piping and tanks.
- d. Show locations and general arrangement of plumbing fixtures and major equipment.
- e. Plan and isometric riser diagrams of all areas including hot water, cold water, waste and vent piping. Include natural gas (and meter as required), LP gas, fuel oil and other specialty systems as applicable.
- f. Include equipment and fixture connection schedules with descriptions, capacities, locations, connection sizes and other information as required.
- g. When the geotechnical report indicates expansive soils are present, indicate in the first piping design submittal how piping systems will be protected against damage or backfall/backflow due to soil heave (from penetration of slab to the 5 foot building line).

3.6.7 HVAC Systems

3.6.7.1 Design Analysis

Provide complete design calculations for mechanical systems. Include computations for sizing equipment, air duct design, and U-factors for ceilings, roofs and exterior walls and floors.

Employ commercially available energy analysis techniques to determine the energy performance of all passive systems and features. Use of hourly energy load computer simulation is required. Based on the results of calculations, provide a complete list of the materials and equipment proposed with the manufacturer's published cataloged product installation specifications and roughing-in data.

3.6.7.2 Mechanical Floor Plans

On the floor plans, show all principle architectural features of the building which affect the mechanical design. Also show the following:

Room designations
Mechanical legend and applicable notes
Location and size of all ductwork and piping
Location and capacity of all terminal units (i.e., registers, diffusers, grilles, hydronic baseboards)
Pre-Fabricated Paint Spray Booth
Paint Preparation Area
Exhaust fans and specialized exhaust systems
Thermostat location
Location of all air handling equipment
Air balancing information
Flue size and location
Piping diagram for forced hot water system (if used)

3.6.7.3 Equipment Schedule

Provide complete equipment schedules. Include the following in the Schedule:

Capacity
Electrical characteristics

Efficiency (if applicable)
Manufacturer's name
Optional features to be provided
Physical sizes
Minimum maintenance clearances

3.6.7.4 Details

Provide construction details, sections, elevations, etc., only where required for clarification of methods and materials of design.

3.6.7.5 Controls

Submit complete HVAC controls equipment schedules, sequences of operation, wiring and logic diagrams, Input/Output Tables, equipment schedules, and all associated information. See the Statement of Work for additional specific requirements.

3.6.8 Fire Protection and Life Safety

Provide plan for each floor of each building that presents a compendium of the total fire protection features being incorporated into the design. Working plans and all other materials submittal must meet NFPA 13 requirements, with respect to required minimum level of detail. Include the following types of information:

- a. The location and rating of any fire-resistive construction such as occupancy separations, area separations, exterior walls, shaft enclosures, corridors, stair enclosures, exit passageways.
- b. The location and coverage of any fire detection systems.
- c. The location and coverage of any fire suppression systems (sprinkler risers, standpipes, etc.).
- d. The location of any other major fire protection equipment.
- e. Indicate any hazardous areas and their classification.
- f. Schedule describing the internal systems with the following information:
 - (1) Fire hazard and occupancy classifications
 - (2) Building construction type
 - (3) GPM/square foot sprinkler density
 - (4) Area of operation

3.6.8.1 Fire Protection/Suppression Analysis

- a. Include building code analysis and basis of design for sprinkler and other suppression systems.
- b. An FPE must perform all fire protection analyses. Provide the fire

protection engineer's qualifications.

- c. List all references used in the design including Government design documents and industry standards used to generate the fire protection analysis
- d. Classification of each building in accordance with fire zone, building floor areas and height and number of stories
- e. Discussion and description of required fire protection requirements including extinguishing equipment, detection equipment, alarm equipment and water supply. Interface alarm and detection equipment to requirements of Electronic Systems.
- f. Plan for each floor of each building that presents a compendium of the total fire protection features being incorporated into the design. Include the following types of information:
 - (1) The location and rating of any fire-resistive construction such as occupancy separations, area separations, exterior walls, shaft enclosures, corridors, stair enclosures, and exit passageways.
 - (2) The location and coverage of any fire detection systems
 - (3) The location and coverage of any fire suppression systems (e.g. sprinkler risers, standpipes)
 - (4) The location of any other major fire protection equipment
 - (5) Indicate any hazardous areas and their classification
- g. Schedule describing the internal systems with the following information: fire hazard and occupancy classifications; building construction type; GPM/square foot sprinkler density; area of operation and other as required.
- h. Provide hydraulic calculations based on water flow test for each sprinkler system to insure that flow and pressure requirements can be met with current water supply. Include copies of water flow testing done to certify the available water source.
- i. Meet NFPA 13 requirements with respect to required minimum level of detail on working plans and all other submitted materials.

3.6.8.2 Fire Protection and Life Safety Code Review

Use the information outlined in the document associated with this section at

<http://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/forms-graphic> to provide the minimum requirement for development of Fire Protection and Life Safety Code submittals for all building projects. Additional and supplemental information may be used to further develop the code review. Insert N/A after criteria, which may be "not applicable".

3.6.9 Electrical Systems

3.6.9.1 Design Analysis

Include lighting calculations to determine maintained foot-candle

levels, electrical load analysis and calculations, electrical short circuit and protective device coordination analysis and calculations and arc fault calculations.

3.6.9.2 Floor Plan

On the floor plans show all principle architectural features of the building which will affect the electrical design. Also show the following on the floor plan:

- (1) Room designations
- (2) Electrical legend and applicable notes
- (3) Lighting fixtures, properly identified
- (4) Switches for control of lighting
- (5) Receptacles
- (6) Location and designation of panelboards. Plans should clearly indicate type of mounting required (flush or surface) and be reflected accordingly in specifications.
- (7) Service entrance (conduit and main disconnect)
- (8) Location, designation and rating of motors and/or equipment which requires electrical service. Show method of termination and/or connection to motors and/or equipment. Show necessary junction boxes, disconnects, controllers (approximate only), conduit stubs, and receptacles required to serve the motor and/or equipment.

3.6.9.3 Building Riser Diagram

From pad-mounted transformer to unit load center panelboard indicate the types and sizes of electrical equipment and wiring. Include grounding and metering requirements.

3.6.9.4 Load Center Panelboard Schedule(s)

Indicate the following information in the schedule(s):

- (1) Panelboard Characteristics (Panel Designation, Voltage, Phase, Wires, Main Breaker Rating and Mounting)
- (2) Branch Circuit Designations
- (3) Load Designations
- (4) Circuit Breaker Characteristics (Number of Poles, Trip Rating, AIC Rating)
- (5) Branch Circuit Connected Loads (AMPS)
- (6) Special Features

3.6.9.5 Lighting Fixture Schedule

Indicate the following information in the schedule:

- (1) Fixture Designation
- (2) General Fixture Description
- (3) Number and Type of Lamp(s)
- (4) Type of Mounting
- (5) Special Features

3.6.9.6 Details

Provide construction details, sections, elevations only where required for clarification of methods and materials of design.

3.6.10 Specialty Equipment

3.6.10.1 Corrosion Control and Prevention Systems

Provide a report clearly describing structures, systems or components in soil or water to be protected. Describe methods proposed for protection of each. The report must be stamped by the licensed corrosion engineer or NACE specialist with the first design submission.

The designer must be qualified to engage in the practice of corrosion control of buried or submerged metallic surfaces. Either accreditation or certification by the National Association of Corrosion Engineers (NACE) as a NACE Accredited Corrosion Specialist or a NACE certified Cathodic Protection Specialist, or a registered professional engineer with a minimum of five years experience in corrosion control and cathodic protection is required.

3.7 INTERIM DESIGN REQUIREMENTS

At least one interim design submittal, review and review conference is required for each design package (except that the Contractor may, upon Government approval, skip the interim design submission and proceed directly to final design of the sitework and utilities package). Additional interim design conferences or over-the-shoulder reviews may be scheduled, as needed, to assure continued Government concurrence with the design work. Include the interim submittal review periods and conferences in the Section 01 32 01.00 10 PROJECT SCHEDULE and indicate in periodic schedule updates what part of the design work is at what percentage of completion. Do not schedule meetings, Government reviews or responses during the last two weeks of December or other designated Government Holidays (including Friday after Thanksgiving). See also paragraph INTERIM DESIGN DEVELOPMENT REVIEW WAIVER for a waiver to the formal interim design review.

If the DB Contractor cannot meet its scheduled submittal date for a design package, it must revise the proposed submittal date and notify the government in writing, at least one (1) week prior to the submittal, in order to accommodate the Government reviewers' other scheduled activities. If a design submittal is over one (1) day late in accordance with the latest revised design schedule, or if notification of a proposed design schedule change is less than (7) days from the anticipated design submission receipt date, the Government review period may be extended up to seven (7) days due to reviewers' schedule conflicts. If the Government is late in meeting its review commitment and the delay purportedly increases the DB Contractor's cost or delays completion of the project, the DB Contractor shall follow the provisions as set forth in the appropriate Contract Clauses.

3.7.1 Submission Review

After receipt of an Interim Design submission, the Government requires 14 calendar days after receipt of the submission to review and comment on the interim design submittal. For smaller design packages, especially those that involve only one or a few separate design disciplines, the parties may agree on a shorter review period or alternative review methods (e.g., over-the-shoulder or electronic file sharing), through the partnering process.

- a. For each interim design review submittal, the Contracting Officer will

furnish a single consolidated, validated set of comments from the various design sections and from other concerned agencies involved in the review process using the DrChecks Design Review and Checking System. The review will be for conformance with the technical requirements of the Contract.

- b. The Government reserves the right to reject design document submittals if comments are deemed significant.
- c. Furnish disposition of all comments, in writing, through DrChecks. If there are technical disagreements with any comments, clearly outline, with justification, the reasons for disagreement and noncompliance within five calendar days after receipt of these comments.
- d. The Contractor is cautioned that if it believes the action required by any comment exceeds the requirements of this contract, that it should take no action and notify the Contracting Officer in writing immediately.

3.7.2 Interim Review Conference

Hold an Interim Review conference for each design submittal at either the installation or as agreed upon as part of the partnering process. Attendees include, at a minimum, the DOR(s) involved in development of the design submittal. Schedule the conference to take place the week after the receipt of the comments. Notify the Contracting Officer of any comments that with concurrence would require further design development.

In order to facilitate and accelerate the Government code and contract conformance reviews, the contractor shall identify, track, and maintain all comments and action items generated during the design process. Provide this information to the designers and reviewers prior to the Interim and subsequent design reviews.

For smaller fast-track packages that involve only a few reviewers, the parties may agree to alternative conferencing methods, such as teleconferencing, or televideo, where available, as determined through Partnering.

3.7.3 Conference Documentation

3.7.3.1 Minutes and Comment Process

Provide meeting minutes within two work days after the conference adjourns, and enter final resolution of all comments into DrChecks. Include copies of comments, annotated with comment action agreed on, with the minutes.

- a. Resolve issues remaining open after the conference adjourns by immediate follow-on action to close the issue within 30 calendar days.
- b. Participants shall determine if any comments are critical enough to require further design development prior to government concurrence.
- b. Incorporate comments as agreed upon during the conference.

3.7.3.2 Availability

In order to facilitate the Government code and contract conformance

reviews, identify, track resolution of, and maintain all comments and action items generated during the design review process. Make this available to the designers and reviewers prior to the subsequent design reviews.

3.8 FINAL DESIGN REQUIREMENTS

Provide final design submittals that consist of 100 percent complete drawings, specifications, submittal register, design analyses for Government review and acceptance.

- a. Include any permits required by the contract for each package submitted.
- b. In order to expedite the final design review, prior to the conference, ensure that the design configuration management data and all review comment resolutions are up-to-date.
- c. Perform independent technical reviews and back-checks of previous comment resolutions, as required by Section 01 45 00 QUALITY CONTROL.

3.8.1 Design Drawings

Submit drawings complete with all contract requirements incorporated into the documents to provide a 100 percent design for each package submitted. In addition to all native Advanced Modeling files, provide separate electronic files in a PDF format.

3.8.1.1 Geo-Referenced Data

Capture geo-referenced coordinates of all changes that will be made to the existing site (facility footprint, utility line installations and alterations, roads, parking areas, etc) as a result of this contract.

Close-out requirements at the as-built stage, require final geo-referenced GIS Database of the new facility along with all exterior modifications. The Government will incorporate this data set into the Installation's GIS Masterplan or Enterprise GIS System. See also, Section 01 78 00 CLOSEOUT SUBMITTALS.

3.8.2 Design Analysis

Provide a design analysis with calculations necessary to validate and support all design work submitted. Expand and advance calculations and information presented in the interim design stage to the current level of design. The responsible DOR(s) stamp, sign and date the design analysis.

3.8.3 Specifications

Provide specifications 100 percent complete and in final form.

3.8.4 Submittal Register

Provide an updated, cumulative submittal register with each design package that identifies the design and construction submittals required by that design package.

3.8.5 Final Framed Rendering and Copies

Provide the final original color rendering, one full size photographic reproduction(s) of the original rendering, and the photographic negative. Mount original and reproductions on acid free board, matted with metal frames, and utilizing non-glare glass. Print the project name, location, and Architect/Engineer/Contractor firm's name on the matting.

Ship the rendering, the photographic copies, and the negative in resilient packaging to ensure damage-free delivery. Deliver to the party identified by the Contracting Officer.

3.8.6 Preparation of DD Form 1354 (Transfer of Real Property)

This form itemizes the types, quantities and costs of various equipment and systems that comprise the project, for the purpose of transferring the new construction project from the Corps Construction Division to the Installation's inventory of real property. The Government will furnish the Contractor's design manager a DD Form 1354 checklist to use to produce a draft Form 1354. Submit the completed checklist and prepared draft Form DD 1354 with the 100 percent design. The Government will use these documents to complete interim and final DD 1354s for turnover of a portion or all of the construction project.

3.9 DESIGN COMPLETE CONSTRUCTION DOCUMENT REQUIREMENTS

A final design review and review conference will be held upon completion of final design at the project installation, by video teleconference, or a combination thereof, for any design package to receive Government acceptance to allow release of the design package for construction. For smaller separate design packages, the parties may agree on alternative reviews and conferences (e.g., conference calls and electronic file sharing, etc.) through the Partnering process. Include the final design conference in the project schedule and indicate what part of the design work is at 100% completion. The final design conference will be held after the Government has had ten (14) calendar days after receipt of the submission to review the final design package and supporting data. For smaller packages, especially those involving only one or a few design disciplines the parties may agree on a shorter period.

After the Final Design Submission and Review Conference, revise the design documents for the design package to incorporate the comments generated and resolved in the final review conference. Perform and document a back-check review and submit the final, design complete documents. The deliverable includes all documentation and supporting design analysis in final form, as well as the final review comments, disposition and the back-check. As part of the quality assurance process, the Government may perform a review of the released for construction documentation. Promptly correct any errors or omissions found during the Government review.

3.10 ACCEPTANCE AND RELEASE FOR CONSTRUCTION

At the conclusion of the Final Design Review (after resolutions to the comments have been agreed upon between DOR and Government reviewers), the Contracting Officer or the ACO may accept the "Design Complete Construction Documents" in writing and allow construction to start for that design package. The Government may withhold acceptance until all major corrections have been made or if the final design submission requires so many corrections, even though minor, that it isn't considered

acceptably complete.

Government review and acceptance of design submittals is for contract conformance only and does not relieve the Contractor from responsibility to fully adhere to the requirements of the contract, including the Contractor's accepted proposal, or limit the Contractor's responsibility of design as prescribed under Special Contract Requirement: "Responsibility of the Contractor for Design" or limit the Government's rights under the terms of the contract. The Government reserves the right to rescind inadvertent acceptance of design submittals containing contract deviations not separately and expressly identified in the submittal for Government consideration and approval.

3.11 AS-BUILT DOCUMENTS

Provide as-built drawings and specifications in accordance with Section 01 78 00, CLOSEOUT SUBMITTALS. Update GBI GP Compliance design phase documentation during construction as needed to reflect construction changes and advancing project completion status (example - Commissioning Plan updates during construction phase) and include updated GBI GP Compliance documentation in construction closeout submittal.

-- End of Section --

SECTION 01 33 29

SUSTAINABILITY REQUIREMENTS AND REPORTING

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.

COUNCIL ON ENVIRONMENTAL QUALITY (CEQ) (WHITE HOUSE)

HPSB Guiding Principles	(2016) Guiding Principles for Sustainable Federal Buildings and Determining Compliance with the Guiding Principles for Sustainable Federal Buildings
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GREEN BUILDING INITIATIVE (GBI)

GBI DOD GP Compliance	(2023) GBI Department of Defense Guiding Principles Compliance Program for New Construction
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GREEN BUSINESS CERTIFICATION INC. (GBCI)

GP Assessment (DOD)	Guiding Principles Assessment for Department of Defense
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INTERNATIONAL CODE COUNCIL (ICC)

ICC IgCC	(2018) International Green Construction Code
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U.S. DEPARTMENT OF AGRICULTURE (USDA)

FSRIA 9002	Farm Security and Rural Investment Act Section 9002 (USDA BioPreferred Program)
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U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-200-02	(2020; Change 2, 2022) High Performance and Sustainable Building Requirements
UFC 3-210-10	(2023) Low Impact Development
UFC 3-600-01	(2016; with Change 6, 2021) Fire Protection Engineering for Facilities

U.S. DEPARTMENT OF ENERGY (DOE)

Energy Star	(1992; R 2006) Energy Star Energy Efficiency Labeling System (FEMP)
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

10 CFR 433.300 Subpart C - Green Building Certification
for Federal Buildings

40 CFR 247 Comprehensive Procurement Guideline for
Products Containing Recovered Materials

1.2 SUMMARY

This section includes requirements for Sustainability documentation and reporting submittals per the federally mandated High Performance and Sustainable Building (HPSB) or HPSB "Guiding Principles" (GP), and Third Party Certification (TPC) requirements, in accordance with UFC 1-200-02 High Performance and Sustainable Building Requirements, and other identified requirements.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Preliminary High Performance and Sustainable Building Checklist; G, S

Sustainability Action Plan; G, S

Preliminary Sustainability eNotebook; G, S

SD-05 Design Data

Interim Design High Performance and Sustainable Building Checklist; G, S

Interim Design Sustainability eNotebook; G, S

Final Design High Performance and Sustainable Building Checklist; G, S

Final Design Sustainability eNotebook; G, S

SD-06 Test Reports

Third Party Certification Design Compliance Report; G, S

SD-11 Closeout Submittals

Final High Performance and Sustainable Building Checklist; G, S

Final Sustainability eNotebook; G, S

Amended Final Sustainability eNotebook; G, S

Amended Final High Performance and Sustainable Building Checklist;
G, S

Third Party Certification Certificate, Assessment, or Validation
and Compliance Report; G, S

1.4 GUIDING PRINCIPLES VALIDATION (GPV)

Provide the following sustainability activities and documentation to verify achievement of HPSB Guiding Principles Validation (GPV):

- a. Analysis of each Guiding Principle Requirement and how project complies. Include final government approved narrative(s) in the HPSB Checklist submittal. Multiple checklists indicate multiple buildings that require individual HPSB Checklist tracking.
- b. No changes to the HPSB Checklist are allowed without approval from the Contracting Officer, in accordance with Section 01 33 00 SUBMITTAL REQUIREMENTS. Immediately bring to the attention of the Contracting Officer any project changes that impact meeting the approved HPSB Guiding Principles Requirements for this project. Demonstrate the change will not increase the life-cycle cost and maintains or improves the building performance.
- c. Documentation of all work required to incorporate the applicable HPSB Guiding Principles requirements indicated on the HPSB Checklist and in this contract, including all "S" submittals.
- d. Sustainability Action Plan.
- e. Design and construction related documentation for the project Sustainability eNotebook and keep updated with regularly-scheduled Construction Quality Control Meetings. Include design and construction related documentation containing the following components:
 - e. Construction related documentation for the project Sustainability eNotebook and keep updated with regularly-scheduled Construction Quality Control Meetings. Include construction related documentation containing the following components:
 - (1) HPSB Checklist(s)
 - (2) Sustainability Action Plan
 - (3) Documentation illustrating HPSB Guiding Principles Requirements compliance, including "S" submittals

1.4.1 Sustainability Action Plan

Include the following information in the Sustainability Action Plan:

- a. Analysis of each HPSB Guiding Principles Requirement and how project will comply. Final government approved narrative(s) must be included in the HPSB Checklist submittal.
- b. Name and contact information for: Contractor's Point of Contact (POC) ensuring sustainability goals are accomplished and documentation is assembled. For TPC that include on-site visit by third party representative, provide list of required attendees.

- c. Indoor Air Quality plan.

1.4.2 Calculations

Provide all design data, calculations, product data, labels and product certifications required in this specification to demonstrate compliance with the HPSB Guiding Principles Requirements.

Provide all calculations, product data, labels and product certifications required in this specification to demonstrate compliance with the HPSB Guiding Principles Requirements.

1.5 SUSTAINABILITY SUBMITTALS

Provide HPSB Checklist and other documentation in the Sustainability eNotebook to indicate compliance with the sustainability requirements of the project.

1.5.1 High Performance Sustainable Building (HPSB) Checklist

Provide construction documentation that provides proof of, and supports compliance with, the completed HPSB Checklist.

1.5.1.1 HPSB Checklist Submittals

Submit updated HPSB Checklist with each Sustainability eNotebook submittal. Include the final HPSB Checklist(s) with the interim DD1354 Real Property Record Submittal.

1.5.2 "S" Submittals for Sustainability Documentation

"S" submittals are the sustainability documentation requirements cited in the various sections of this contract. Submit the GPV sustainability documentation required in this section as "S" submittals in all affected UFGS Sections.

- a. Highlight GPV compliance data in "S" submittal.
- b. Add "S" submittals to the Sustainability eNotebook only after submittal approval, and bookmark them as required in paragraph SUSTAINABILITY ENOTEBOOK below.
- c. Ensure all approved "S" submittals are included in each Sustainability eNotebook submittal.

1.5.3 Sustainability eNotebook

The Sustainability eNotebook is an electronic organizational file that serves as a repository for all required sustainability submittals. To support documentation of compliance with an approved HPSB checklist, provide and maintain a comprehensive and current Sustainability eNotebook. Include all required data in Sustainability eNotebook, to support full compliance with the HPSB Guiding Principles Requirements, including:

- a. HPSB checklist
- b. Sustainability Action Plan

- c. Calculations
- d. Labels
- e. "S" submittals
- f. Certifications, assessments, or validations and compliance report
- g. TPC documentation required in paragraph THIRD PARTY CERTIFICATION (TPC).

Until a selection of the TPC Rating system is made by the design-build contractor, GBI DOD GP Compliance must be used.

1.5.3.1 Sustainability eNotebook Format

Provide Sustainability eNotebook in the form of an Adobe PDF file; bookmark each HPSB Guiding Principles Requirement, TPC requirement, and sub-bookmark at each document. Match format to HPSB Guiding Principles numbering system indicated herein. Maintain up-to-date information, such as spreadsheets, templates, with each current submittals. For TPC projects, provide a second Table of Contents using TPC numbering system, for maintaining documentation unique to TPC.

Contracting Officer may deduct from the monthly progress payment accordingly if Sustainability eNotebook information is not current and on track per project goals.

1.5.3.2 Sustainability eNotebook Submittal Schedule

Provide Sustainability eNotebook Submittals at the following milestones of the project:

a. Preliminary Sustainability eNotebook

Submit preliminary Sustainability eNotebook with updated Preliminary High Performance and Sustainable Building Checklist and TPC checklist at the first post award meeting in accordance with Section 01 30 00 ADMINISTRATIVE REQUIREMENTS.

b. Interim Design Sustainability eNotebook

Submit updated Sustainability eNotebook with updated Interim Design High Performance and Sustainable Building Checklist with TPC Checklist with the final design, in accordance with Section 01 33 10.05 20 DESIGN SUBMITTAL PROCEDURES. If issues relating to achieving the sustainability goals of the project are subsequently identified, identify reasons and mitigation from DOR, and resubmit to the Contracting Officer for approval.

c. Final Design Sustainability eNotebook

Submit updated Sustainability eNotebook with updated Final Design High Performance and Sustainable Building Checklist with TPC Checklist with the final design, in accordance with Section 01 33 10.05 20 DESIGN SUBMITTAL PROCEDURES. If issues relating to achieving the sustainability goals of the project are subsequently identified, identify reasons and mitigation from DOR, and resubmit to the

Contracting Officer for approval.

d. Third Party Certification Design Compliance Report

Obtain Third Party Certification Design Compliance Report after final design submittal is approved. Submittal must indicate 100 percent compliance with applicable design requirements. File approved submittal in the Sustainability eNotebook.

e. Construction Quality Control Meetings.

Provide up-to-date GP and TPC documentation in the Sustainability eNotebook and TPC Online tool for each meeting.

f. Final Sustainability eNotebook

Submit updated Sustainability eNotebook with updated Final High Performance and Sustainable Building Checklist with TPC Checklist at Beneficial Occupancy Date (BOD). Final progress payment retainage may be held by Contracting Officer until Final Sustainability construction phase documentation is complete.

g. Amended Final Sustainability eNotebook

Amend and resubmit the Amended Final Sustainability eNotebook with Amended Final High Performance and Sustainable Building Checklist and amended TPC Checklist, to include post-occupancy corrections, updates, and requirements. Final progress payment retainage may be held by Contracting Officer until amended final sustainability documentation is complete. Submit the Amended Final Sustainability eNotebook Submittal on DVDs to the Contracting Officer no later than 30 days after final GP, TPC determination.

1.6 DOCUMENTATION REQUIREMENTS

a. Incorporate each of the following HPSB Guiding Principles requirements into project and provide documentation that proves compliance with each listed requirement. Items below are organized by HPSB Guiding Principles. For life-cycle cost analysis requirements, one document with all analyses is acceptable, with Contracting Officer approval.

b. For each of the following paragraphs that require the use of products listed on Government-required websites, provide documentation of the process used to select products, or process used to determine why listed products do not meet project performance requirements.

1.6.1 Integrated Design Process

For the submittal documentation below, demonstrate compliance with UFC 1-200-02.

1.6.1.1 Design Submittal Documentation

a. List the sustainability integrated design team, and a description of their roles in all stages of a project's planning and delivery:

(1) Include Contractor's Sustainability Coordinators; Architecture and Engineering disciplines involved on the project, and the DOR in

charge of the overall project and each discipline; Construction Subcontractors and the company representatives that align with each architectural and engineering discipline, Planning, Public Works, Environmental Specialist and other appropriate installation personnel.

- (2) Describe their roles and responsibilities and plan-of-action for how each team member will be involved to achieve the project sustainability requirements, and how the Contractor will coordinate with Government personnel.
- (3) Maintain an up-to-date list with descriptions throughout the project.

b. Provide narratives that:

- (1) Indicate performance goals for siting, energy, water, materials, and indoor environmental quality along with other comprehensive design goals and ensures incorporation of these goals throughout the design and life cycle of the building.
- (2) Demonstrate integration of the goals into design and construction.
- (3) Demonstrate collaboration with other providers, such as Commissioning Authority and Third Party Certification.

1.6.2 Commissioning (Cx)

Develop and incorporate Commissioning requirements into the documents, in accordance with Sections 01 91 00.15 BUILDING COMMISSIONING.

1.6.3 Optimize Energy Performance

For the submittal documentation below, demonstrate compliance with UFC 1-200-02.

1.6.3.1 Design Submittal Documentation

a. Narrative that provides a summary of:

- (1) The decision-making process leading to the selection of at least three energy-efficient solutions (for each system contributing to the energy footprint of the building) to be analyzed; and the selected design solution(s)
- (2) The specific energy standard and version utilized; and the software used in the analysis
- (3) The calculated energy consumption and energy use intensity (EUI in kBtu/sf/yr) of the baseline building and the proposed design alternatives

b. A minimum of the following energy modeling files and summaries for the baseline and proposed alternatives:

- (1) Input, schedules and libraries; and output
- (2) Calculated energy use by energy type

(3) Calculated energy use by building system

- c. The life-cycle cost analysis input and output files for the baseline and the proposed alternatives

1.6.3.2 Construction Submittal Documentation

Provide revised energy modeling for actual system constructed.

1.6.4 Energy Efficient Products

Provide only energy-using products that are Energy Star rated or have Federal Energy Management Program (FEMP) recommended efficiency. Where Energy Star or FEMP recommendations have not been established, provide most efficient products that are life-cycle cost-effective. Provide only energy using products that meet FEMP requirements for low standby power consumption. Energy efficient products can be found at: <https://www.energy.gov/eere/femp/federal-energy-management-program> and <http://www.energystar.gov/>.

For construction submittal documentation, provide proof that product is labeled energy efficient and complies with the cited requirements.

1.6.5 On-site Renewable Energy Generation

For the submittal documentation below, demonstrate compliance with UFC 1-200-02.

1.6.5.1 Design Submittal Documentation

Provide life-cycle cost analysis (LCCA). When found to be LCCE, do one of the following options:

- a. Provide design drawings and calculations that demonstrate total on-site renewable energy as an annual percentage of proposed building energy consumption in kBTU/year; and provide equipment ratings, and calculations that demonstrate the generation capacity of the system in kBTU/year for thermal and kwh for electricity.
- b. Provide documentation that renewable energy development at the Installation level is planned.

1.6.6 Solar Domestic Hot Water (SDHW)

For the submittal documentation below, demonstrate compliance with UFC 1-200-02.

1.6.6.1 Design Submittal Documentation

Provide life-cycle cost analysis (LCCA). When found to be LCCE, provide design drawings and calculations that demonstrate total on-site renewable energy as an annual percentage of proposed building energy consumption in kBTU/year; and provide equipment ratings, and calculations that demonstrate the generation capacity of the system in kBTU/year for thermal.

1.6.7 Building-level Power Metering

Provide building-level meters for electricity, natural gas, and steam where applicable.

1.6.7.1 Design Submittal Documentation

Provide design drawings that highlight meter locations on the site.

1.6.7.2 Construction Submittal Documentation

Provide manufacturer's data validating compatibility with base-wide system and component advanced meter requirements.

1.6.8 Indoor Water Use

Provide Construction Documentation proof that fixtures are labeled EPA WaterSense, for products available with EPA WaterSense labeling; for all other fixtures, proof they comply with EPA WaterSense efficiency requirements.

1.6.9 Indoor Water Metering

Provide building-level meters for potable water use. Provide the requirements cited in the following paragraphs:

1.6.9.1 Design Submittal Documentation

Provide design drawings that highlight meter locations on the site.

1.6.9.2 Construction Submittal Documentation

Provide manufacturer's data validating compatibility with base-wide system and component advanced meter requirements.

1.6.10 Outdoor Water Use

Where new irrigation is required, provide only non-potable sources. Provide the requirements cited in the following paragraphs:

1.6.10.1 Design Submittal Documentation

- a. Provide design drawings and analysis that identify the non-potable water source used and demonstrate the non-potable water source is appropriate for landscape irrigation.
- b. Provide life-cycle cost analysis (LCCA).

1.6.10.2 Construction Submittal Documentation

Provide manufacturer's data validating compatibility with base-wide system and component advanced meter requirements.

1.6.11 Outdoor Water Meters

Provide meters for outdoor systems that use potable water. Provide the requirements cited in the following paragraphs:

1.6.11.1 Design Submittal Documentation

- a. Provide design drawings that highlight meter locations on the site.
- b. Provide life-cycle cost analysis (LCCA).

1.6.11.2 Construction Submittal Documentation

Provide manufacturer's data validating compatibility with base-wide system and component advanced meter requirements.

1.6.12 Alternative Water

Use alternative sources of water to replace potable water usage, when life-cycle cost-effective and to the extent permitted by local laws and regulations.

1.6.12.1 Design Submittal Documentation

- a. Provide design drawings and calculations that demonstrate the alternative water sources used, potable water savings as compared to non-alternative water sourcing, and projected annual potable water savings.
- b. Provide life-cycle cost analysis (LCCA).

1.6.13 Stormwater Management

Develop and incorporate stormwater requirements into the documents. Submit design and construction documentation required by UFC 3-210-10 and Service processes, as proof of this tracking requirement.

1.6.14 Ventilation and Thermal Comfort

For the submittal documentation below, demonstrate compliance with UFC 1-200-02.

1.6.14.1 Design Submittal Documentation

Provide design drawings and calculations that demonstrate HVAC systems and the building envelope have been designed to meet the requirements.

1.6.15 Daylighting

For the submittal documentation below, demonstrate compliance with UFC 1-200-02.

1.6.15.1 Design Submittal Documentation

- a. Provide floor plans and elevations.
- b. Provide design analysis delineating requirements, to include compliant reflective surface locations and shading devices (where applicable).

1.6.16 Moisture Control

Provide the following:

1.6.16.1 Design Submittal Documentation

Provide drawings of building envelope details and HVAC humidity controls.

1.6.16.2 Construction Submittal Documentation

Ensure construction materials are separated and protected in accordance with other sections in this contract document, with adequate humidity controls during construction. In accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA, includes plan for ongoing building moisture control.

Coordinate with the moisture control requirements of Section 01 45 00.00 10 QUALITY CONTROL.

1.6.17 Reduce Volatile Organic Compounds (VOC) (Low-Emitting Materials)

Meet the requirements of Table 3-1 at the end of this specification.

For Construction submittal documentation, provide certifications or labels that demonstrate compliance with cited requirements, based on the attached TABLE 3-1.

1.6.18 Indoor Air Quality During Construction

Prior to construction, create indoor air quality plan. Develop and implement an IAQ construction management plan during construction and flush building air before occupancy.

For new construction and for renovation of unoccupied existing buildings, meet the requirements of ICC IgCC 1001.3.1.5 (10.3.1.4) Indoor Air Quality (IAQ) Construction Management. Coordinate with moisture control requirements in Section 01 45 00 QUALITY CONTROL.

Provide documentation showing that after construction ends and prior to occupancy, HVAC filters were replaced and building air was flushed out in accordance with the cited standard.

1.6.19 Recycled Content

Comply with 40 CFR 247. Refer to:
<https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>
for assistance identifying products cited in 40 CFR 247. Selected products must comply with non-proprietary requirements of the Federal Acquisition Regulation and must meet performance requirements.

1.6.19.1 Construction Submittal Documentation

- a. Provide manufacturers' documents stating the recycled content by material, or written justification for claiming one of the exceptions allowed on the cited website.
- b. Substitutions: Submit for Government approval for proposed alternative products or systems that provide equivalent performance and appearance and have greater contribution to project recycled content requirements. For all such proposed substitutions, submit with the Sustainability Action Plan accompanied by product data demonstrating equivalence.
- c. In order to complete compliance with FAR 52.223-9 Estimate of Percentage of Recovered Material Content for EPA Designated Items, refer to submittal requirement for recycled/recovered material content in Section 01 78 00 CLOSEOUT SUBMITTALS.

1.6.20 Bio-Based Products

Provide products and materials composed of the highest percentage of bio-based materials (including rapidly renewable resources and certified sustainably harvested products), consistent with FSRIA 9002 USDA BioPreferred Program, to the maximum extent possible without jeopardizing the intended end use or detracting from the overall quality delivered to the end user and when available at a reasonable cost. Use only supplies and materials of a type and quality that conform to applicable specifications and standards.

Comply with FSRIA 9002 USDA BioPreferred Program. Refer to www.biopreferred.gov for the product categories and BioPreferred Catalog. Selected products must comply with non-proprietary requirements of the Federal Acquisition Regulation and must meet performance requirements. Provide the following documentation:

- a. USDA BioPreferred label for each product; for bio-based products used on project but not listed with BioPreferred program, provide bio-based content and percentage.
- b. In order to complete compliance with FAR 52.223-1 Biobased Product Certification, refer to submittal requirement for biobased products in Section 01 78 00 CLOSEOUT SUBMITTALS, paragraphs CERTIFICATION OF EPA DESIGNATED ITEMS and CERTIFICATION OF USDA DESIGNATED ITEMS.

1.6.21 Waste Material Management (Recycling - Design)

For the submittal documentation below, demonstrate compliance with UFC 1-200-02.

For design submittal documentation, provide drawing showing an appropriately sized and placed dedicated storage area for recyclables.

1.6.22 Waste Material Management (Recycling - Construction)

Divert demolition and construction debris in accordance with Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.

1.6.23 Address Climate Change Risk

For design submittal documentation, provide narrative of decisions for design associated with scoped requirements.

1.6.24 Additional Sustainability Requirements

Provide the additional sustainability requirements cited in this paragraph.

1.6.24.1 Third Party Certification (TPC) Documentation

Third Party Certification certificate, assessment, or validation, and compliance report requirements are in addition to all requirements under header above GUIDING PRINCIPLES VALIDATION (GPV).

1.6.24.1.1 TPC Registration Required

Register and achieve Third Party Certification (TPC), by meeting all TPC and project requirements to achieve GP Assessment (DOD) , or

Government-approved equivalent TPC sustainability certification, assessment, or validation. An equivalent TPC organization must demonstrate equivalency for Government consideration and meet the requirements of 10 CFR 433.300, prior to use on the project. Third Party Certification is met when Government receives TPC organization certificate, assessment, or validation and compliance report and plaque.

Register project with TPC organization using the following format and content:

- a. Project Title First Line: Building Owner (US Army, US Air Force, US Navy or US Marine Corps), Building Name (if known)
- b. Project Title Second Line: MILCON P#, DD1391 Project Name
- c. Project Address: UIC (Installation code), Category code, RPUID (Real Property Unique Identifier) Number
- d. Project Owner Organization: US Army, US Air Force, US Navy or US Marine Corps
- e. Primary Contact, Project Owner: Executing DOD Service's Project Manager or Design Manager
- f. Building Owner Organization: US Army, US Air Force, US Navy or US Marine Corps
- g. Building Owner Organization Project Number
- h. Additional Contact, Building Owner: Base Civil Engineer or Designee.

1.6.24.1.2 TPC Management and Certification

Execute the following TPC Certification, assessment, or validation requirements:

- a. Refer to TPC Checklist at the end of this specification section. (Multiple checklists indicate multiple buildings that require TPC.)
- b. Immediately bring to the attention of the Contracting Officer any project changes that impact meeting the approved TPC Requirements for this project. Demonstrate the change will not increase the life-cycle cost and maintains or improves the building performance.
- c. Complete all design and construction work to incorporate the applicable TPC Requirements.
- d. Maintain the design and construction related information in the Sustainability eNotebook pertaining to additions and changes to the approved sustainability requirements. Maintain the Sustainability eNotebook in electronic format. Refer to explanation in the paragraph SUSTAINABILITY eNOTEBOOK. Provide the following components in the Sustainability eNotebook, in addition to the GPV components listed above:
 - (1) TPC Checklist
 - (2) Completed TPC forms. Transmit by the method required by TPC organization.

- (3) Copy of all correspondence with the TPC organization. Provide proof of TPC registration.
 - (4) Documentation illustrating compliance with TPC requirements and additional documentation as requested by the Third Party certifier.
 - (5) TPC Award Certificate, assessment or validation and compliance report.
- e. Provide the following information in the Sustainability Action Plan. Provide this TPC information in addition to the Sustainability Action Plan items above:
- (1) Planned method to achieve each TPC requirement.
 - (2) Provide analysis of each TPC credit and how project will comply.
 - (3) Provide names and contact information for: Contractor sustainability point of contact (POC) and other names of sustainability professionals on the Contractor's Staff responsible for ensuring TPC sustainability goals are accomplished and documentation is assembled.
- f. Bear all costs associated with designing, constructing, demonstrating, and documenting that project complies with approved TPC requirements, including but not limited to:
- (1) Registration, review, certification, assessment, or validation and plaque fees.
 - (2) Online (or offline with secure facilities) TPC management and documentation.
 - (3) Obtaining TPC certification, assessment, or validation based on Government-approved sustainability goals.
 - (4) Design and construction work required to incorporate TPC requirements.
 - (5) Submittals required to demonstrate compliance with Government approved TPC checklists.
- g. Provide all design data, calculations, product data, and certifications, assessments, or validations required in this specification to demonstrate compliance with the TPC Requirements.
- h. Provide all online (or offline, with secure facilities) TPC management and documentation.
- i. Provide all required responses to third party organization.
- j. Facilitate and participate in required TPC site visit. Coordinate with the Executing DOD Service's Project Manager and Design Manager, to determine participating team members. Include Commissioning provider on applicable projects.
- k. Provide TPC Plaque and Certificate, assessment, or validation. Provide TPC compliance report that includes level achieved and reasons

for non-compliance or not applicable elements. Use the following format to create the Plaque, Certificate, assessment, or validation, compliance report, and Letter of Congratulations. Forward to parties designated by Contracting Officer:

(1) Plaque:

Name: Final Building Name. If unknown, use the Form DD1391 Project Name.

(2) Certificate, Assessment, or Validation:

Project title, first line: P-(X); (1391 Project Name). Project title, second line: UIC (installation code)

(3) Letter of Congratulation (when provided):

Address letter to the Facility's Installation Commander Name. Address the letter to an individual person.

(4) Compliance Report:

Title page must cite Project title: P-(X); (1391 Project Name); Final Building Name if known; UIC (installation code); Owner Service; User organization if known; date of compliance.

Include TPC scoresheet if applicable.

1. Once Final Certification is achieved, turn over Administrative rights to online TPC to the Base Civil Engineer or designee, contact information provided by the Contracting Officer.

1.6.24.2 Third Party Certification (TPC) Documentation

Third Party Certification certificate, assessment, or validation, and compliance report requirements are in addition to all requirements under header above GUIDING PRINCIPLES VALIDATION (GPV).

1.6.24.2.1 TPC Registration Required

Pay all fees associated with registration and achievement of Third Party Certification (TPC), by meeting all TPC and project requirements to achieve GP Assessment (DOD), or Government-approved equivalent TPC sustainability certification, assessment, or validation. An equivalent TPC organization must demonstrate equivalency for Government consideration and meet the requirements of 10 CFR 433.300, prior to use on the project. Third Party Certification is met when Government receives TPC organization certificate, assessment, or validation and compliance report and plaque.

Register project with TPC organization using the following format and content:

- a. Project Title First Line: Building Owner (US Army, US Air Force, US Navy or US Marine Corps), Building Name (if known)
- b. Project Title Second Line: MILCON P#, DD1391 Project Name
- c. Project Address: UIC (Installation code), Category code, RPUID (Real Property Unique Identifier) Number

- d. Project Owner Organization: US Army, US Air Force, US Navy or US Marine Corps
- e. Primary Contact, Project Owner: Component Project Manager
- f. Building Owner Organization: US Army, US Air Force, US Navy or US Marine Corps
- g. Building Owner Organization Project Number
- h. Additional Contact, Building Owner: Department of Public Works, Public Works Officer, Base Civil Engineer, or Designee

1.6.24.2.2 TPC Management and Certification

Execute the following TPC Certification, assessment, or validation requirements:

- ba. Immediately bring to the attention of the Contracting Officer any project changes that impact meeting the approved TPC Requirements for this project. Demonstrate the change will not increase the life-cycle cost and maintains or improves the building performance.
- b. Complete all work required to incorporate the applicable TPC Requirements.
- c. Maintain the construction related information in the Sustainability eNotebook pertaining to additions and changes to the approved sustainability requirements. When construction changes are made that affect design sustainability requirements, provide all required updates to affected design requirements and update in the Sustainability eNotebook. Maintain the Sustainability eNotebook in electronic format. For more explanation, refer to paragraph SUSTAINABILITY eNOTEBOOK. Provide the following components in the Sustainability eNotebook, in addition to the GPV components above:
 - (1) TPC Checklist
 - (2) Completed TPC forms. Transmit by the method required by the TPC organization.
 - (3) Copy of all correspondence with the TPC organization including proof of TPC registration
 - (4) Documentation illustrating compliance with TPC requirements and additional documentation as requested by the TPC
 - (5) TPC Award Certificate, assessment, or validation and compliance report.
- d. Provide the following information in the Sustainability Action Plan. Provide this TPC information in addition to the Sustainability Action Plan items above:
 - (1) Planned method to achieve each TPC requirement.
 - (2) For each TPC requirement that is attempted but not achieved,

provide narrative explaining how mission or activity precludes achieving specific sustainability requirement or goal. Provide analysis of particular requirement and level to which project is able to comply.

- (3) Provide name and contact information for: Sustainability point of contact (POC) and other names of sustainability professionals responsible for ensuring TPC sustainability goals are accomplished and documentation is assembled. Sustainability POCs are also responsible for ensuring GPV required in paragraph GUIDING PRINCIPLES VALIDATION (GPV) above.
- e. Bear all costs associated with construction changes that affect sustainability design requirements, constructing, demonstrating, and documenting that project complies with approved TPC requirements, including but not limited to:
- (1) Final TPC review, certification, assessment, or validation and plaque fees.
 - (2) Online (or offline with secure facilities) TPC management and documentation.
 - (3) Obtaining TPC certification or validation based on Government-approved sustainability goals.
 - (4) Construction work required to incorporate TPC requirements.
 - (5) Submittals required to demonstrate compliance with Government approved TPC checklists.
- f. Provide all calculations, product data, and certifications, assessments, or validations required in this specification to demonstrate compliance with the TPC Requirements.
- g. Provide all TPC management and documentation. Transmit TPC requirements by the method required by TPC organization.
- h. Provide all required responses to third party organization.
- [i. Facilitate and participate in required TPC site visit, if applicable. Coordinate with the Contract Officer to determine participating team members. Include Commissioning provider on applicable projects.k. Provide TPC Plaque and Certificate, assessment, or validation. Provide TPC compliance report that includes level achieved and reasons for non-compliance or not applicable elements. Use format below to create the Plaque, Certificate, assessment or validation, compliance report, and Letter of Congratulations (when provided). Forward to parties designated by Contracting Officer:
- (1) Plaque:

Name: Final Building Name. If unknown, provide Form DD1391 Project Name.
 - (2) Certificate, Assessment or Validation:

Project Title, first line: P-(X); Form DD1391 Project Name).

Project Title, second line: UIC (Installation code)

(3) Letter Congratulations (when provided):

Address letter to Facility's Installation Commander Name. Address the letter to an individual person.

(4) Compliance Report:

Title page must cite Project title: P-(X); (1391 Project Name); Final Building Name if known; UIC (installation code); Owner Service; User organization if known; date of compliance.

Include TPC scoresheet if applicable.

1. Once Final Certification is achieved, turn over Administrative rights to online TPC to the Base Civil Engineer or designee, contact information provided by the Contracting Officer.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 SUSTAINABILITY COORDINATION

Provide sustainability focus and coordination at all meetings to achieve sustainability goals. Coordinate meeting requirements with other UFGS Sections meeting requirements in this project. Ensure the designated TPC accredited sustainability professional responsible for GP and TPC documentation participates in these meetings to coordinate documentation completion. Review GP and TPC sustainability requirements, HPSB Checklist and TPC documentation, Sustainability Action Plan, and completeness status of Sustainability eNotebook, and TPC status at the following meetings:

- a. Pre-Construction Conference
- b. Construction Quality Control Meetings

Refer to Section 01 30 00 ADMINISTRATIVE PROCEDURES for Post Award Meetings.

- c. Post Award Meeting
- d. Design Quality Assurance Meetings
- e. Design Complete Review Meetings

Conduct review no later than 60 days after final design complete submission and identify any outstanding issues that affect correct completion of all documentation requirements, and actions that will achieve requirements. Conduct corrective actions.

c. Facility Turnover Meetings

Conduct review no later than 60 days before final turnover and identify any outstanding issues that affect correct completion of all documentation and final TPC certification, assessment or validation,

and actions that will achieve requirements. Conduct corrective actions prior to turnover, to ensure all requirements are achieved.

3.2 THIRD PARTY CERTIFICATION CERTIFICATE, ASSESSMENT, OR VALIDATION AND COMPLIANCE REPORT

Finalize the process requirements and obtain the TPC Plaque and Certificate, assessment, or validation, and compliance report, indicating completion of the project's sustainability goals. Include TPC compliance report with final TPC scoresheet as applicable.

Provide and hang Plaque in accordance with contract documents. Deliver one original certificate, assessment, or validation, and compliance report to Contractor Officer, unless otherwise instructed. Provide and hang Plaque in a prominent interior location approved by the Contracting Officer.

3.3 TABLE 3-1 VOLATILE ORGANIC COMPOUNDS (VOC) (LOW EMITTING MATERIALS) REQUIREMENTS

<p>TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements</p> <p>Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)</p>				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Adhesives and Sealants	CDPH/EHLE/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	Adhesives (carpet, resilient, wood flooring; base cove; ceramic tile; drywall and panel; primers) Sealants (acoustical; firestop; HVAC Air duct; primers) Caulks	SCAQMD Rule 1168 (Use "other" category for HVAC duct sealant) (for firestop adhesive, UFC 3-600-01 overrides conflicting requirements)
			Aerosol adhesives	Section 3 of Green Seal Standard GS-36 (except: cleaners, solvent cements, and primers used with plastic piping and conduit in plumbing, fire suppression, and electrical systems; HVAC air duct sealants when the application space air temp is less than 40 F (4.5 C)).

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Paints and Coatings	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	Flat and nonflat, nonflat high-gloss, specialty, basement specialty, fire-resistive, floor, low-solids, rust preventative, wood, reflective wall coatings; concrete/masonry sealers; primers; sealers; undercoaters; shellacs (clear and opaque); stains; varnishes; conjugated oil varnish; lacquer; clear brushing lacquer	Green Seal Standard GS-11

<p>TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements</p> <p>Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)</p>				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Paints and Coatings	CDPH/EHLE/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	Concrete curing compounds; dry fog, faux finishing, graphic arts (sign paints), industrial maintenance, mastic texture, metallic pigmented, multicolor, recycled coatings; pretreatment wash primers, reactive penetrating sealers; specialty primers, wood preservatives, and zinc primers	California Air Resources Board (CARB) Suggested Control Measure for Architectural Coatings or SCAQMD Rule 1113r
Paints and Coatings	CDPH/EHLE/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	High-temperature coatings; stone consolidants; swimming-pool coatings; tub- and tile-refining coatings; and waterproofing membranes	California Air Resources Board (CARB) Suggested Control Measure for Architectural Coatings

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Floor Covering Materials	For carpet, all locations: CDPH/EHLE/Standard Method V1.1 (California Section 01350) or label for Section 9 of CDPH/EHLE/Standard Method V1.1 (California Section 01350)		none	none
Insulation	CDPH/EHLE/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)		none	none

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Composite Wood, Wood Structural Panel, and Agrifiber Products , no added urea-formaldehyde resins including laminating adhesives for composite wood and agrifiber assemblies - particleboard, medium density fiberboard (MDF), wheatboard, strawboard, panel substrates, door cores	Third-party certification (approved by CARB) of California Air Resource Board's (CARB) regulation , Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products	or	none	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications) (except: Structural panel components such as plywood, particle board, wafer board, and oriented strand board identified as "EXPOSURE 1," "EXTERIOR," or "HUD-APPROVED" are considered acceptable for interior use.)
Office Furniture Systems and Seating installed prior to occupancy	ANSI/BIFMA X7.1 ANSI/BIFMA X7.1: (95-percent of installed office furniture system workstations and seating units) Section 7.6.2 of ANSI/BIFMA e3 (50-percent of office furniture system workstations and seating units)		none	none

<p>TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements</p> <p>Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)</p>				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Ceiling and Wall assemblies and systems including: acoustical treatments; ceiling panels and tiles; tackable wall panels and coverings; wall coverings; wall and ceiling paneling and planking	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)		none	none

-- End of Section --

Air Force Sustainability Requirements Scoresheet

HPSB COMPLIANCE (Updated Jan 2017)

* required entry

General Information

INCOMPLETE



**SURVEY
INCOMPLETE**

		Project ID (e.g. ABCD12345)		*
		Real Property Unique ID (RPUID)		*
		Facility Number		*
		Building Name		*
		Installation		*
		City		
		State		
		CONUS		
		MAJCOM		
		Construction Agent		*
		AFCEC DM/CM (Last Name, First Name)		*
		PA		*
		Building Size (SF)		*
		Program Year (FY####)		*
		Project Phase		*
		Design Started (MM/DD/YY)		*
		BOD (MM/DD/YY)		*
		Guiding Principles Compliance Certification Method		*
		<input type="text"/> Date Project Registered (MM/DD/YY)		
		<input type="text"/> Date Project Certified (MM/DD/YY)		
0%		HPSB Compliant		
0%		Energy Efficiency Achieved (% below ANSI/ASHRAE/IESNA Standard 90.1-2013)		
2017V1		Scoresheet version		

Air Force Sustainability Requirements Scoresheet

HPSB COMPLIANCE (Updated Jan 2017)

* required entry

Color Coding: See Instructions Tab for more detail

Drop-Down Box	Yes or N/A
No Entry Required	No
Custom Entry	Recommended not Required

90.1-2013

HPSB I: Employ Integrated Design Principles (UFC 1-200-02 para 2-2)

Total Points	0	INCOMPLETE	Possible Points	2	
HPSB I.1	Integrated Design			1	*
HPSB I.2	Commissioning			1	*

HPSB II: Optimize Energy Performance (UFC 1-200-02 para 2-3)

Total Points	0	INCOMPLETE	Possible Points	5	
--------------	---	-------------------	-----------------	---	--

HPSB II.1	Energy Efficiency			1	
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	Reduce energy use 30% below ANSI/ASHRAE/IESNA Standard 90.1-2013 or IECC, or if not - achieve maximum energy efficiency that is lifecycle cost effective				*
	Insert percentage below ANSI/ASHRAE/IESNA Standard 90.1-2013 or IECC, in terms of energy use (e.g. 32)				*
	Insert building energy intensity (kBtu/yr-sqft) calculated IAW 10 CFR 433				*
	Roof Attributes (Recommended)				
	Select roof types (Check below)				

Cool roof Solar electric Solar Passive

Green roof Solar thermal

Energy Efficient Products				1	*
----------------------------------	--	--	--	---	---

HPSB II.2	On-site Renewable Energy			1	
-----------	---------------------------------	--	--	---	--

	Installed renewable energy elements or projects were not lifecycle cost effective				*
	Renewable energy types (check below)				

Solar PV Geothermal Hydro Waste to Energy

Solar CP GSHP Wind Renewables were not lifecycle cost effective

Solar Thermal Electric

	Insert generation capacity (kW)				*
	Insert percentage of total building				*

HPSB II.3	On-site Renewable Energy - Solar Hot Water Heater System			1	
-----------	---	--	--	---	--

	Installed solar hot water heater system or found installation not lifecycle cost effective				*
	Insert generation capacity (MMBtu/yr)				*
	Insert percentage of demand				*

HPSB II.4	Metering			1	
-----------	-----------------	--	--	---	--

	Electric Metering: Select N/A if no service				*
	Natural Gas Metering: Select N/A if no service				*
	Steam Metering: Select N/A if no service				*

HPSB III: Protect and Conserve Water (UFC 1-200-02 para 2-4)

Total Points	0	INCOMPLETE	Possible Points	6	
--------------	---	-------------------	-----------------	---	--

HPSB III.1	Indoor Water			1	*
------------	---------------------	--	--	---	---

	Indoor Water Metering			1	*
--	------------------------------	--	--	---	---

HPSB III.2	Outdoor Water			1	*
------------	----------------------	--	--	---	---

	Outdoor Water Metering			1	*
--	-------------------------------	--	--	---	---

HPSB III.3	Alternative Water			1	*
------------	--------------------------	--	--	---	---

HPSB III.4	Stormwater Management (LID Documentation per UFC 3-210-10)			1	
------------	---	--	--	---	--

	Change in Impervious Area (SF)				*
	Pre-Award Cost Estimate (\$)				*
	Project addressed EISA 438				*
	EISA Technical Constraints				

Retaining stormwater impact receiving water flow Shallow bedrock, contaminated soil, high ground water table, underground utilities Soil infiltration capacity limited

Site too small to infiltrate significant volume Non-potable water demand to small Structural, plumbing, and other mods not feasible

State or local restrict water harvesting State or local restrict use of green infrastructure or LID Other

	Percent Increase in Stormwater Runoff for 95 Percentile Storm (%) - or- Percent Increase in Stormwater Runoff from continuous simulation model, published data, studies, or other established tools (Reference UFC 3-210-10 Figure 2-1 Implementation of EISA Section 438)				*
--	--	--	--	--	---

	LID Features Locations				
--	-------------------------------	--	--	--	--

	Integrated Management Practices Employed				
--	---	--	--	--	--

Air Force Sustainability Requirements Scoresheet

HPSB COMPLIANCE (Updated Jan 2017)

* required entry

- | | | | |
|--|---|--|--|
| <input type="checkbox"/> Bio-Retention | <input type="checkbox"/> Dry Wells | <input type="checkbox"/> Filter Strips | <input type="checkbox"/> Grassed Swells |
| <input type="checkbox"/> Infiltration Trench | <input type="checkbox"/> Inlet Pollution Removal Device | <input type="checkbox"/> Permeable Pavement/Pavers | <input type="checkbox"/> Rain Barrels/Cisterns |
| <input type="checkbox"/> Soil Amendments | <input type="checkbox"/> Tree Box Filters | <input type="checkbox"/> Vegetated Buffers | <input type="checkbox"/> Vegetated Roof |
| <input type="checkbox"/> Other | | | |

	Final LID Construction Cost (\$)
	Post Construction Analysis (Name of DOR)

HPSB IV: Enhance Indoor Environmental Quality (UFC 1-200-02 para 2-5)				Possible Points	
Total Points	0	INCOMPLETE		8	
	HPSB IV.1	Thermal Comfort		1	*
	HPSB IV.2	Ventilation		1	*
	HPSB IV.3	Daylighting		1	*
	HPSB IV.4	Moisture Control		1	*
	HPSB IV.5	Low Emitting Materials		1	*
	HPSB IV.6	Protect Indoor Air Quality during Construction		1	*
	HPSB IV.7	Environmental Tobacco Smoke Control		1	*
	HPSB IV.8	Occupant Health and Wellness		1	*
HPSB V: Reduce Environmental Impact of Materials (UFC 1-200-02 para 2-6)				Possible Points	
Total Points	0	INCOMPLETE		5	
	HPSB V.1	Recycled Content		1	*
	HPSB V.2	Biologically-based Products		1	*
	HPSB V.3	Ozone Depleting Substances		1	*
	HPSB V.4	Waste and Materials Management - Recycling		1	*
	HPSB V.5	Waste and Materials Management - Divert 60% from Disposal		1	*
			60% or greater diverted		*
			Insert percentage diverted from landfill		*
HPSB VI: Address Climate Change Risk (UFC 1-200-02 para 2-7)				Possible Points	
Total Points	0	INCOMPLETE		1	
	HPSB VI.1	Address Climate Change Risk		1	*
				Possible Points	27
0	Federal Requirements - Yes or N/A				
0	Federal Requirements - No				
0%	Percentage of Federal Requirements Met				

SECTION 01 35 10.00 46

SPECIAL PROJECT PROCEDURES FOR EBBING FIELD

PART 1 GENERAL

This Section covers the project requirements unique to Ebbing Field, Arkansas. These unique requirements relate to items such as the Installation Entrance, Emergency Services, Required Training, Photographs, Controlled Areas, FAA Notice of Construction, and Work on the Airfield.

1.1 Installation Entrance Requirements

All personnel accessing Ebbing Field must have DOD affiliation or be vetted at the 188th Security Forces Squadron Base Defense Operations Center (BDOC) and issued a pass before being allowed onto Ebbing Field. Contractor employees working at Ebbing Field will be issued an extended pass once they have been vetted.

1.1.1 Ebbing ANGB Base Policies

- a. All persons entering the base must present valid identification at the base entrance.
- b. While operating any vehicle on base, all drivers must have in their possession a valid driver's license, valid vehicle registration, and proof of vehicle insurance. If a vehicle is registered to someone other than the operator, the operator must provide a notarized letter from the registered owner, authorizing the operator permission to operate the vehicle.
- c. Access to the base may sometimes be delayed by 60 minutes or more due to security precautions, including the checking of vehicle occupants IDs, vehicle manifests, and the searching of all vehicles. Longer wait times may occur in the event of an emergency.
- d. Contractors, Subcontractors, and all personnel who report for work and do not know the location of the charrette location/work site shall be held at the main gate to await escort service from the construction superintendent or other designated representative.
- e. Base speed limits are strictly enforced with the use of radar equipment. The speed limit on base is 20 mph. The Contractor and all employees shall abide by all posted speed limits.
- f. Motorcycle operators must have headlights always turned on. Passengers are not allowed on motorcycles unless the motorcycle is specifically designed to carry a passenger (determined by the manufacturer). Motorcycle operators/riders must wear headgear (helmets).
- g. Mandatory seatbelt laws are in effect on base and personnel are not permitted to ride in the beds of trucks. Seatbelts must be fastened prior to entering the base.

- h. No privately owned weapons or contraband (drugs, etc.) are permitted on any military installation, at any time. Violators shall be prosecuted through the Federal Magistrates Court.
- i. Ebbing ANGB is a closed facility. No unauthorized tours or visitors shall be allowed on the installation.
- j. Cell phone usage while driving on base is not permitted unless communication to device is "hands free".
- k. All personnel shall obey all posted directives and shall adhere to Security Forces directions and instructions.
- l. Failure to comply with base policies may result in loss of driving privileges or debarment.

1.1.2 Vetting Requirements

Entry Requirements for person without a Valid DOD ID Card requesting unescorted access:

- A valid purpose for entering the installation; (Attend Meeting, visit Museum, Job interview, etc.)
- Valid driver's license
- Current vehicle registration (If operating a vehicle)
- Proof of current insurance (If operating a vehicle)
- License plate number
- Provide the destination, name of facility, building number, street address, or unit name/designation

Upon satisfying the above criteria and vetting requirements an Installation access pass/badge will be issued to the person.

NOTE: All unescorted visitors and all vehicle passengers (riding in these vehicles) will proceed to the base Security Forces Center and receive a security screening. All vehicle occupant names will be included on an Installation Visitors Pass. Security personnel will verify all occupants ID with names on visitor passes at Installation Access Control Points (IACP) prior to providing installation access.

1.1.3 Ebbing ANGB Emergency Services

When dialing "911" from a cellular phone, inform operator that the individual is calling from a cellular phone and that the emergency is at Ebbing ANGB. For non-emergency security business, 24 hours a day, 7 days a week, call (479) 573-5200.

1.1.4 Ebbing ANGB Required Training (Specific)

- a. Prior to beginning construction, the Contractor must complete the course for OPSEC awareness for contractors. The course provides information on the basic need to protect unclassified information about operations and personal information. Contractor must provide proof of OPSEC if completed to the Contracting Officer.
- b. Link below is for OPSEC training: <https://jkodirect.jten.mil>

- c. The Contractor shall complete Security Education and Training Awareness (SETA) in accordance with DoDM5200.01V3_DAFMAN16-1404V3, Encl 5, Security Education and Training, Initial Orientation under Information Security Program. The 188 SFS (Pass and ID Section) will provide this training. 188 SFS/Pass and ID's contact number: 479-573-5106.
- d. Antiterrorism Force Protection (ATFP) will be required for all workers to be conducted during safety indoctrination. A slideshow for this training will be provided to the Contractor by the Contracting Officer.

1.2 PHOTOGRAPHS

- a. Cameras are to be used for construction documentation only. Any photographs that need to be taken relative to the construction site must be coordinated with the Contracting Officer, 188th CES, and 33rd PIO.
- b. The Contractor must notify the Contracting Officer and PM five (5) working days prior to taking any photographs of facilities and/or the airfield. The KO or PM shall coordinate with 188 WG/PA, 188 SFS, and Airfield Operations, as it is required for each contract. The KO shall inform the Contractor when photography has been approved and shall provide all necessary documentation required for the photographer. The photographer shall carry all letters of approval required to photograph a facility with them at all times while on site.
- c. All photographs produced by the Contractor under this contract, whether prints are produced from them or submitted against one of the requirements above, shall become property of the Government and shall be submitted to the Contracting Officer.
- d. The Contractor shall maintain a file of all photographs produced for each construction contract and provide PDF versions of them to the Government upon completion of the construction contract.
- e. Each photograph shall be numbered in a logical numbering system which is used to key photographic prints to the appropriate file. In taking photographs, the Contractor shall employ a device (such as a "data back" on the camera) to record date of the photographic shot on the film.

1.3 WORK IN CONTROLLED AREAS AND FREE ZONE REQUIREMENTS

- a. This portions of this project may be located within Controlled Areas on base. Access to Control Areas is strictly limited.
- b. The Contractor shall ensure that Contractor personnel employed on the base become familiar with and obey all special regulations for working in Controlled Areas.
- c. Under no circumstances shall the Contractor, any sub-contractors, or any contractor personnel enter Controlled Areas without a Government escort unless a Free Zone waiver is approved.
- d. The Contractor shall remain strictly within the limits of work inside Controlled Areas.

- e. The Contractor shall not take photographs inside of Controlled Areas without written authorization from the Contracting Officer. Individuals authorized to take photos should have a copy of the letter granting permission on their person at all times while taking pictures. Individuals taking photos without authorization or proof of authorization may be subject to legal action. Cameras and/or phones used to take unauthorized photos may be confiscated and any film, video, or other media destroyed by Security Forces. Contractor shall take pictures of the construction area prior to construction and at end of the construction period. Contractor shall invite Contracting Officer to be in attendance while taking pictures.
- f. During construction, a Free Zone will be established at the construction site for all projects that are inside of or have portions inside of a Controlled Area. A Free Zone package identifies all the security measures that will be employed during construction to ensure protection of the Controlled Areas within the limits of the project.
- g. The Government will supply all escorts required by the Free Zone package. The Contractor shall supply and maintain all barricades, markings, flags, signs, and other physical boundary markers as required by the Free Zone package at no additional cost to the Government.
- h. An approved Free Zone is required before any work is accomplished on the airfield.

1.4 WORK ON THE AIRFIELD AND SCHEDULING OF WORK ON THE AIRFIELD

- a. The airfield is considered a Controlled Area. Contractors working on the airfield shall adhere to all the requirements for Controlled Areas and additional requirements to ensure safe operation on the airfield and minimize impact to the Ebbing ANGB flying training mission.
- b. Aircraft operation will produce extremely high noise levels that will induce vibrations in pavements, structures, and equipment in the vicinity, and may result in high velocity flying debris in the area. The Contractor is responsible for providing all necessary protective eye and ear gear and other safety devices for personnel.
- c. Work on the airfield requires special attention to scheduling.
- d. All construction activities that will affect flying operations shall be completed when the airfield is closed unless prior arrangements are made to shut down only the affected runway. Operations on other runways may be ongoing during construction. This may require work at night and/or on weekends.
- e. The work shall be accomplished with minimal outage and closure time to the airfield and associated buildings. If required, outage(s) and closure(s) must be approved by the KO as dictated by the user's needs. Any utility outage affecting airfield lighting, signage, or controls shall be made to the KO in writing 21 days in advance of any activity requiring the outage. Typically, airfield outages should occur between Friday night and Sunday morning.

1.5 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submittals with an "S" are for inclusion in the Sustainability Notebook, in conformance with Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

FAA Form 7460-01

Fod Plan

Final Airfield Driving Training Record

1.6 FAA NOTICE OF CONSTRUCTION

- a. Prior to beginning construction, a Determination of No Hazard to Air Navigation for Temporary Structures must be obtained from the FAA. The Contractor shall fill out and submit to the Contracting Officer for approval, FAA Form 7460-01. The Contractor shall fill out the form completely. Item 2 should be filled out with the Contractor's information. The Contractor shall provide all additional information required by the form including the Quadrangle Map listed in item 20.
- b. Once the Form 7460-01, Notice of Proposed Construction or Alteration, is approved by the Contracting Officer, the Government will submit it to the FAA. The FAA may take up to 60 days to process the notice. The Contractor shall submit the Form 7460-01 as soon as possible after award, but not later than NTP#1 + 3 days.

1.7 CONTRACTOR EQUIPMENT AND DEBRIS (AIRFIELD)

- a. During daylight hours, mark stationary and mobile equipment with international orange and white checkered flags. At night, mark stationary and mobile equipment with battery or solar operated, low-intensity, red flasher lights. The Contractor shall keep the construction site, haul routes, and adjacent areas clean and free from dust and foreign object debris (FOD).
- b. Airfield pavement shall be continuously cleaned with a vacuum sweeper suitable for airfield pavement cleaning at all times. Debris that may result in foreign object damage shall be removed immediately. Airfield pavement used as a haul route shall be continuously cleaned by the Contractor.
- c. The Contractor shall employ pavement sweeping machines to keep FOD and dust to a minimum. Sweeping machines with metal brushes generate additional FOD and are prohibited from use on the airfield.
- d. The Contractor shall ensure that all Contractor personnel stop at all FOD checkpoints, physically inspect all tires for FOD, and remove FOD from tires before proceeding beyond the checkpoint.
- e. All debris from demolition shall be removed from the airfield immediately following demolition.

- f. Only open trenches for material which is on hand and ready for placement. As soon as possible after the material has been placed and work approved, backfill and compact trenches as specified.
 - g. The Contractor shall submit a FOD Plan to the Contracting Officer for approval prior to starting work. The FOD Plan shall fully describe the methods the Contractor will use to control FOD. The plan shall include the following items, at a minimum:
 - 1. The number of sweeping machines that will be onsite during construction to control FOD.
 - 2. A statement indicating understanding that sweeping machines with metal brushes will not be allowed on the airfield.
 - 3. Methods for ensuring that FOD generated by construction does not enter adjacent runways, taxiways, towing lanes, or parking aprons during construction.
 - 4. Methods for ensuring that the construction site and adjacent areas are 100% free from FOD and debris at the end of each work period.
 - 5. Methods for ensuring that all Contractor personnel adhere to the requirements for FOD checkpoints.
 - 6. Methods for securing all trash generated at the site. Examples of trash may include soda cans, spray paint cans, metal twist ties, and plastic packaging.
 - 7. Any other methods that will be used to control FOD during construction.
- 1.8 DRIVING ON THE AIRFIELD (As Applicable)
- a. The Contractor shall strictly limit construction traffic on the airfield to those vehicles absolutely required for the completion of work.
 - b. No personally owned vehicles will be allowed on the airfield. All personal vehicles shall be parked in authorized parking lots outside the flight line fence. Personnel walk-in access is by AF identification card only.
 - c. All Contractor-owned vehicles shall be conspicuously marked with the name and logo of company (minimum size 6 inches by 18 inches) on both front doors.
 - d. Supplier vehicles delivering materials to the site shall be escorted by the contractor company vehicles.
 - e. On the airfield, planes and emergency vehicles always have the right-of-way. Wherever the Contractor's haul route crosses parking aprons, tow-lanes, taxiways, or runways, flaggers will be required to ensure that no Contractor vehicles violate this right-of-way. When required, the Contractor shall supply flaggers at no additional cost to the Government.
 - f. Within 1 day of receiving Airfield Driver Training, the Contractor

shall provide an Airfield Driving Training Record to the Contracting Officer. The Airfield Driving Training Record shall include a list of names of personnel who attended training and the license plate number of and contractor name that will appear on their vehicle. This list will be reviewed by the Airfield Driving Program Manager to confirm that all the individuals listed did in fact receive training. The Airfield Driving Training Record will become the official list of approved drivers and vehicles for airfield access. Final Airfield Driving Training Record shall be submitted in accordance with the Submittal Register.

- g. Any unapproved personnel found driving on the airfield will be immediately escorted off the airfield. Vehicles that are not marked or are not included on the Airfield Driving Training Record will not be allowed on the airfield.
- h. Contractor vehicles shall stay on approved routes and within the limits of the construction area. Personnel driving in unapproved areas will be immediately escorted off the airfield and may lose their airfield driving privileges.
- i. All approved drivers shall strictly adhere to all rules and regulations described in training and included in this specification and any instructions from the Airfield Driving Program Manager, Airfield Manager, Fire Department, and/or Security Forces. Failure to adhere to regulations and instructions may result in the loss of airfield driving privileges.
- j. No cost additions, change orders, allowances, or extensions will be granted for project schedule delays related to airfield access if determined by the Contracting Officer that the project delays are a result of failure of the Contractor to coordinate training, provide accurate vehicle information, or adhere to proper rules, regulations, and instructions.

1.9 Landscaping and Tree Replacement

All native hardwood trees greater than 3 inches in diameter at breast height must be replaced at a ratio of 5 new native hardwood trees for every 1 removed. All plant species must be approved by the Ebbing ANGB 188th CES. Planting locations for the replacement trees will be determined by the Ebbing ANGB 188th CES. Newly planted trees must be maintained for 1 year. Any trees that die within that year must be replaced and maintained for an additional year.

1.10 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction in accordance with Contract Clause: "Cleaning Up". The Contractor shall, unless otherwise instructed in writing by the Contracting Officer, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled and the entire area stabilized unless otherwise indicated.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

-- End of Section --

SECTION 01 35 26

GOVERNMENTAL SAFETY REQUIREMENTS

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.

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

ASHRAE 52.2 (2012) Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B30.3 (2020) Tower Cranes

ASME B30.5 (2021) Mobile and Locomotive Cranes

ASME B30.7 (2021) Winches

ASME B30.8 (2020) Floating Cranes and Floating Derricks

ASME B30.9 (2018) Slings

ASME B30.20 (2018) Below-the-Hook Lifting Devices

ASME B30.22 (2023) Articulating Boom Cranes

ASME B30.23 (2022) Personnel Lifting Systems Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings

ASME B30.26 (2015; R 2020) Rigging Hardware

AMERICAN SOCIETY OF SAFETY PROFESSIONALS (ASSP)

ASSP A10.22 (2007; R 2017) Safety Requirements for Rope-Guided and Non-Guided Workers' Hoists

ASSP A10.34 (2021) Protection of the Public on or Adjacent to Construction Sites

ASSP A10.44 (2020) Control of Energy Sources (Lockout/Tagout) for Construction and Demolition Operations

ASSP Z244.1 (2016) The Control of Hazardous Energy Lockout, Tagout and Alternative Methods

ASSP Z359.0	(2018) Definitions and Nomenclature Used for Fall Protection and Fall Arrest
ASSP Z359.1	(2020) The Fall Protection Code
ASSP Z359.2	(2017) Minimum Requirements for a Comprehensive Managed Fall Protection Program
ASSP Z359.3	(2019) Safety Requirements for Lanyards and Positioning Lanyards
ASSP Z359.4	(2013) Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components
ASSP Z359.6	(2016) Specifications and Design Requirements for Active Fall Protection Systems
ASSP Z359.7	(2019) Qualification and Verification Testing of Fall Protection Products
ASSP Z359.11	(2014) Safety Requirements for Full Body Harnesses
ASSP Z359.12	(2019) Connecting Components for Personal Fall Arrest Systems
ASSP Z359.13	(2013) Personal Energy Absorbers and Energy Absorbing Lanyards
ASSP Z359.14	(2014) Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems
ASSP Z359.15	(2014) Safety Requirements for Single Anchor Lifelines and Fall Arresters for Personal Fall Arrest Systems
ASSP Z359.16	(2016) Safety Requirements for Climbing Ladder Fall Arrest Systems
ASSP Z359.18	(2017) Safety Requirements for Anchorage Connectors for Active Fall Protection Systems
ASSP Z490.1	(2016) Criteria for Accepted Practices in Safety, Health, and Environmental Training

ASTM INTERNATIONAL (ASTM)

ASTM D6245	(2012) Using Indoor Carbon Dioxide Concentrations to Evaluate Indoor Air Quality and Ventilation
ASTM D6345	(2010) Standard Guide for Selection of Methods for Active, Integrative Sampling of Volatile Organic Compounds in Air

ASTM F855 (2019) Standard Specifications for Temporary Protective Grounds to Be Used on De-energized Electric Power Lines and Equipment

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE 1048 (2016) Guide for Protective Grounding of Power Lines

IEEE C2 (2023) National Electrical Safety Code

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10 (2022; ERTA 1 2021) Standard for Portable Fire Extinguishers

NFPA 51B (2024) Standard for Fire Prevention During Welding, Cutting, and Other Hot Work

NFPA 70 (2023; ERTA 4 2023; ERTA 5 2023; ERTA 6 2023) National Electrical Code

NFPA 70E (2024) Standard for Electrical Safety in the Workplace

NFPA 241 (2022) Standard for Safeguarding Construction, Alteration, and Demolition Operations

SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)

ANSI/SMACNA 008 (2007) IAQ Guidelines for Occupied Buildings Under Construction, 2nd Edition

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA)

TIA-222 (2018H; Add 1 2019) Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures

TIA-1019 (2012; R 2016) Standard for Installation, Alteration and Maintenance of Antenna Supporting Structures and Antennas

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety and Health Requirements Manual

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

10 CFR 20 Standards for Protection Against Radiation

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1910.146	Permit-required Confined Spaces
29 CFR 1910.147	The Control of Hazardous Energy (Lock Out/Tag Out)
29 CFR 1910.333	Selection and Use of Work Practices
29 CFR 1915	Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment
29 CFR 1915.89	Control of Hazardous Energy (Lockout/Tags-Plus)
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 1926.16	Rules of Construction
29 CFR 1926.450	Scaffolds
29 CFR 1926.500	Fall Protection
29 CFR 1926.552	Material Hoists, Personal Hoists, and Elevators
29 CFR 1926.553	Base-Mounted Drum Hoists
29 CFR 1926.1400	Cranes and Derricks in Construction
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
CPL 02-01-056	(2014) Inspection Procedures for Accessing Communication Towers by Hoist
CPL 2.100	(1995) Application of the Permit-Required Confined Spaces (PRCS) Standards, 29 CFR 1910.146

1.2 DEFINITIONS

1.2.1 Competent Person (CP)

The CP is a person designated in writing, who, through training, knowledge and experience, is capable of identifying, evaluating, and addressing existing and predictable hazards in the working environment or working conditions that are dangerous to personnel, and who has authorization to take prompt corrective measures with regards to such hazards.

1.2.2 Competent Person, Confined Space

The CP, Confined Space, is a person meeting the competent person requirements as defined EM 385-1-1, with thorough knowledge of OSHA's Confined Space Standard, 29 CFR 1910.146, and designated in writing to be responsible for the immediate supervision, implementation and monitoring of the confined space program, who through training, knowledge and experience in confined space entry is capable of identifying, evaluating and addressing existing and potential confined space hazards and, who has

the authority to take prompt corrective measures with regard to such hazards.

1.2.3 Competent Person, Cranes and Rigging

The CP, Cranes and Rigging, as defined in EM 385-1-1, is a person meeting the competent person requirements, who has been designated in writing to be responsible for the immediate supervision, implementation and monitoring of the Crane and Rigging Program, who through training, knowledge and experience in crane and rigging is capable of identifying, evaluating and addressing existing and potential hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

1.2.4 Competent Person, Excavation/Trenching

A CP, Excavation/Trenching, is a person meeting the competent person requirements as defined in EM 385-1-1 and 29 CFR 1926, who has been designated in writing to be responsible for the immediate supervision, implementation and monitoring of the excavation/trenching program, who through training, knowledge and experience in excavation/trenching is capable of identifying, evaluating and addressing existing and potential hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

1.2.5 Competent Person, Fall Protection

The CP, Fall Protection, is a person meeting the competent person requirements as defined in EM 385-1-1 and in accordance with ASSP Z359.0, who has been designated in writing by the employer to be responsible for immediate supervising, implementing and monitoring of the fall protection program, who through training, knowledge and experience in fall protection and rescue systems and equipment, is capable of identifying, evaluating and addressing existing and potential fall hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

1.2.6 Competent Person, Scaffolding

The CP, Scaffolding is a person meeting the competent person requirements in EM 385-1-1, and designated in writing by the employer to be responsible for immediate supervising, implementing and monitoring of the scaffolding program. The CP for Scaffolding has enough training, knowledge and experience in scaffolding to correctly identify, evaluate and address existing and potential hazards and also has the authority to take prompt corrective measures with regard to these hazards. CP qualifications must be documented including experience on the specific scaffolding systems/types being used, assessment of the base material that the scaffold will be erected upon, load calculations for materials and personnel, and erection and dismantling. The CP for scaffolding must have a documented minimum of 8-hours of scaffold training to include training on the specific type of scaffold being used (e.g. mast-climbing, adjustable, tubular frame), in accordance with EM 385-1-1 Section 22-3.b.01.

1.2.7 Competent Person (CP) Trainer

A competent person trainer as defined in EM 385-1-1, who is qualified in the training material presented, and who possesses a working knowledge of applicable technical regulations, standards, equipment and systems related to the subject matter on which they are training Competent Persons. A competent person trainer must be familiar with the typical hazards and the

equipment used in the industry they are instructing. The training provided by the competent person trainer must be appropriate to that specific industry. The competent person trainer must evaluate the knowledge and skills of the competent persons as part of the training process.

1.2.8 High Risk Activities

High Risk Activities are activities that involve work at heights, crane and rigging, excavations and trenching, scaffolding, electrical work, and confined space entry.

1.2.9 High Visibility Accident

A High Visibility Accident is any mishap which may generate publicity or high visibility.

1.2.10 Load Handling Equipment (LHE)

LHE is a term used to describe cranes, hoists and all other hoisting equipment (hoisting equipment means equipment, including crane, derricks, hoists and power operated equipment used with rigging to raise, lower or horizontally move a load).

1.2.11 Medical Treatment

Medical Treatment is 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 when provided by a physician or registered personnel.

1.2.12 Near Miss

A Near Miss is a mishap resulting in no personal injury and zero property damage, but given a shift in time or position, damage or injury may have occurred (e.g., a worker falls off a scaffold and is not injured; a crane swings around to move the load and narrowly misses a parked vehicle).

1.2.13 Operating Envelope

The Operating Envelope is the area surrounding any crane or load handling equipment. Inside this "envelope" is the crane, the operator, riggers and crane walkers, other personnel involved in the operation, rigging gear between the hook, the load, the crane's supporting structure (i.e. ground or rail), the load's rigging path, the lift and rigging procedure.

1.2.14 Qualified Person (QP)

The QP is a person designated in writing, who, by possession of a recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems related to the subject matter, the work, or the project.

1.2.15 Qualified Person, Fall Protection (QP for FP)

A QP for FP is a person meeting the definition requirements of EM 385-1-1, and ASSP Z359.2 standard, having a recognized degree or professional certificate and with extensive knowledge, training and experience in the

fall protection and rescue field who is capable of designing, analyzing, and evaluating and specifying fall protection and rescue systems.

1.2.16 Recordable Injuries or Illnesses

Recordable Injuries or Illnesses are any work-related injury or illness that results in:

- a. Death, regardless of the time between the injury and death, or the length of the illness;
- b. Days away from work (any time lost after day of injury/illness onset);
- c. Restricted work;
- d. Transfer to another job;
- e. Medical treatment beyond first aid;
- f. Loss of consciousness; or
- g. A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (a) through (f) above

1.2.17 Government Property and Equipment

Interpret "USACE" property and equipment specified in USACE EM 385-1-1 as Government property and equipment.

1.2.18 Load Handling Equipment (LHE) Accident or Load Handling Equipment Mishap

A LHE accident occurs when any one or more of the eight elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; or collision, including unplanned contact between the load, crane, or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents, even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, or roll over). Document an LHE mishap using the Crane High Hazard working group mishap reporting form.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G

- Accident Prevention Plan (APP)
- Indoor Air Quality (IAQ) Management Plan; G
- [Final IAQ Management Plan; S
-] SD-06 Test Reports
 - Monthly Exposure Reports
 - Notifications and Reports
 - Accident Reports; G
 - LHE Inspection Reports
- SD-07 Certificates
 - Crane Operators/Riggers
 - Standard Lift Plan; G
 - Critical Lift Plan ; G
 - Activity Hazard Analysis (AHA)
 - Confined Space Entry Permit
 - Hot Work Permit
 - Certificate of Compliance
 - License Certificates
 - Radiography Operation Planning Work Sheet; G
 - Portable Gauge Operations Planning Worksheet; G

1.4 MONTHLY EXPOSURE REPORTS

Provide a Monthly Exposure Report and attach to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both Prime and subcontractor. Failure to submit the report may result in retention of up to 10 percent of the voucher.

1.5 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this Contract, comply with the most recent edition of USACE EM 385-1-1, and the following federal, state, and local laws, ordinances, criteria, rules and regulations. 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 govern.

1.6 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

1.6.1 Personnel Qualifications

1.6.1.1 Site Safety and Health Officer (SSHO)

Provide an SSHO that meets the requirements of EM 385-1-1 36-3. The SSHO must ensure that the requirements of 29 CFR 1926.16 are met for the project. Provide a Safety oversight team that includes a minimum of one person at each project site to function as the Site Safety and Health Officer (SSHO). The SSHO or an equally-qualified Alternate SSHO must be at the work site at all times to implement and administer the Contractor's safety program and Government-accepted Accident Prevention Plan. The SSHO and Alternate SSHO must have the required training, experience, and qualifications in accordance with EM 385-1-1 Section 36-3., and all associated sub-paragraphs.

If the SSHO is off-site for a period longer than 24 hours, an equally-qualified alternate SSHO must be provided and must fulfill the same roles and responsibilities as the primary SSHO. When the SSHO is temporarily (up to 24 hours) off-site, a Designated Representative (DR), as identified in the AHA may be used in lieu of an Alternate SSHO, and must be on the project site at all times when work is being performed. Note that the DR is a collateral duty safety position, with safety duties in addition to their full time occupation.

1.6.1.1.1 Additional Site Safety and Health Officer (SSHO) Requirements and Duties

The SSHO may not serve as the Quality Control Manager. The SSHO may not serve as the Superintendent.

The SSHO must have completed a 40 hour contract safety awareness course based on the content and principles of EM 385-1-1, and instructed in accordance with the guidelines of ASSP Z490.1, by a trainer meeting the qualifications of paragraph QUALIFIED TRAINER REQUIREMENTS. If the SSHO does not have a current certification, certification must be obtained within 60 days, maximum, of Contract award.

1.6.1.2 Competent Person Qualifications

Provide Competent Persons in accordance with EM 385-1-1. Competent Persons for high risk activities include confined space, cranes and rigging, excavation/trenching, fall protection, and electrical work. The CP for these activities must be designated in writing, and meet the requirements for the specific activity (i.e. competent person, fall protection).

The Competent Person identified in the Contractor's Safety and Health Program and accepted Accident Prevention Plan, must be on-site at all times when the work that presents the hazards associated with their professional expertise is being performed. Provide the credentials of the Competent Persons(s) to the Contracting Officer for information in consultation with the Safety Office.

1.6.1.2.1 Competent Person for Confined Space Entry

Provide a Confined Space (CP) Competent Person who meets the requirements of EM 385-1-1 Chapter 34. The CP for Confined Space Entry must supervise

the entry into each confined space in accordance with EM 385-1-1, Chapter 34.

1.6.1.2.2 Competent Person for Scaffolding

Provide a Competent Person for Scaffolding who meets the requirements of EM 385-1-1, Chapter 22 and herein.

1.6.1.2.3 Competent Person for Fall Protection

Provide a Competent Person for Fall Protection who meets the requirements of EM 385-1-1, Chapter 21, and herein.

1.6.1.3 Qualified Trainer Requirements

Individuals qualified to instruct the 40 hour contract safety awareness course, or portions thereof, must meet the definition of a Competent Person Trainer, and, at a minimum, possess a working knowledge of the following subject areas: EM 385-1-1, Electrical Standards, Lockout/Tagout, Fall Protection, Confined Space Entry for Construction; Excavation, Trenching and Soil Mechanics, and Scaffolds in accordance with 29 CFR 1926.450, Subpart L.

Instructors are required to:

- a. Prepare class presentations that cover construction-related safety requirements.
- b. Ensure that all attendees attend all sessions by using a class roster signed daily by each attendee. Maintain copies of the roster for at least five years. This is a certification class and must be attended 100 percent. In cases of emergency where an attendee cannot make it to a session, the attendee can make it up in another class session for the same subject.
- c. Update training course materials whenever an update of the EM 385-1-1 becomes available.
- d. Provide a written exam of at least 50 questions. Students are required to answer 80 percent correctly to pass.
- e. Request, review and incorporate student feedback into a continuous course improvement program.

1.6.1.4 Crane Operators/Riggers

Provide Operators, Signal Persons, and Riggers meeting the requirements in EM 385-1-1, Chapter 15 for Riggers and Chapter 16 for Load Handling Equipment. In addition, for mobile cranes with Original Equipment Manufacturer (OEM) rated capacities of 50,000 pounds or greater, designate crane operators qualified by a source that qualifies crane operators (i.e., union, a Government agency, or an organization that tests and qualifies crane operators). Provide proof of current qualification.

1.6.2 Personnel Duties

1.6.2.1 Duties of the Site Safety and Health Officer (SSHO)

The SSHO must:

- 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. Attach safety inspection logs to the Contractors' daily production report.
- b. Conduct mishap investigations and complete required accident reports. Report mishaps and near misses.
- c. Use and maintain OSHA's Form 300 to log work-related injuries and illnesses occurring on the project site for Prime Contractors and subcontractors, and make available to the Contracting Officer upon request. Post and maintain the Form 300A on the site Safety Bulletin Board.
- d. Maintain applicable safety reference material on the job site.
- e. Attend the pre-construction conference, pre-work meetings including preparatory meetings, and periodic in-progress meetings.
- f. Review the APP and AHAs for compliance with EM 385-1-1, and approve, sign, implement and enforce them.
- g. Establish a Safety and Occupational Health (SOH) Deficiency Tracking System that lists and monitors outstanding deficiencies until resolution.
- h. Ensure subcontractor compliance with safety and health requirements.
- i. Maintain a list of hazardous chemicals on site and their material Safety Data Sheets (SDS).
- j. Maintain a weekly list of high hazard activities involving energy, equipment, excavation, entry into confined space, and elevation, and be prepared to discuss details during QC Meetings.
- k. Provide and keep a record of site safety orientation and indoctrination for Contractor employees, subcontractor employees, and site visitors.

Superintendent, QC Manager, and SSO are subject to dismissal if the above or any other required duties are not being effectively carried out. If either the Superintendent, QC Manager, or SSO are dismissed, project work will be stopped and will not be allowed to resume until a suitable replacement is approved and the above duties are again being effectively carried out.

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 must attend the preconstruction conference. This includes the project superintendent, Site Safety and Occupational Health Officer, quality control manager, 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. 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 and an agreement will be reached between the Contractor and the Contracting Officer as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, and Government review of AHAs to preclude project delays.
- c. Deficiencies in the submitted APP, identified during the Contracting Officer's review, must be corrected, and the APP re-submitted for review prior to the start of construction. Work is not permitted to begin until an APP is established that is acceptable to the Contracting Officer.

1.6.3.2 Safety Meetings

Conduct safety meetings to review past activities, plan for new or changed operations, review pertinent aspects of appropriate AHA (by trade), establish safe working procedures for anticipated hazards, and provide pertinent Safety and Occupational Health (SOH) training and motivation. Conduct meetings at least once a month for all supervisors at the project location. The SSHO, supervisors, foremen, or CDSOs must conduct meetings at least once a week for the trade workers. Document meeting minutes to include the date, persons in attendance, subjects discussed, and names of individual(s) who conducted the meeting. Maintain documentation on-site and furnish copies to the Contracting Officer on request. Notify the Contracting Officer of all scheduled meetings 7 calendar days in advance.

1.7 ACCIDENT PREVENTION PLAN (APP)

Provide a site-specific Accident Prevention Plan (APP), including Activity Hazard Analyses (AHA), in accordance with EM 385-1-1 Chapter 37-7 Section a, for the design team to follow during site visits and investigations. For subsequent visits, update the plan if there are changes in the personnel who will be attending, or the tasks to be performed. Submit the APP for review and acceptance by the Government at least 15 calendar days prior to the start of the design field work. Field work may not begin until the design APP is accepted by the Contracting Officer.

If the design scope includes borings or other subsurface investigations, include in the APP the type of field investigation and verification techniques, such as visual, local utility locating service scanning and third party/subcontractor scanning, potholing, or hand digging within two feet of a known utility that will be required. Mark underground utilities before starting any ground-disturbing actions. Notify the Contracting Officer 15 days prior to the start of soil borings or sub-surface investigations.

Prior to the start of construction incorporate the Design APP into the Construction APP so that one site specific APP exists for the project and submit to the Contracting Officer for acceptance.

1.7.1 APP - Construction

A qualified person must prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of EM 385-1-1,

Chapter 37-7, and as supplemented herein. Cover all paragraph and subparagraph elements in EM 385-1-1, Chapter 37. The APP must be job-specific and address any unusual or unique aspects of the project or activity for which it is written. The APP must interface with the Contractor's overall safety and health program referenced in the APP in the applicable APP element, and made site-specific. Describe the methods to evaluate past safety performance of potential subcontractors in the selection process. Also, describe innovative methods used to ensure and monitor safe work practices of subcontractors. 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 must be signed by an officer of the firm (Prime Contractor senior person), the individual preparing the APP, the on-site superintendent, the designated SSHO, the Contractor Quality Control Manager, and any designated Certified Safety Professional (CSP) or Certified Health Physicist (CIH). The SSHO must provide and maintain the APP and a log of signatures by each subcontractor foreman, attesting that they have read and understand the APP, and make the APP and log available on-site to the Contracting Officer. If English is not the foreman's primary language, the Prime Contractor must provide an interpreter.

Submit the APP to the Contracting Officer within 30 calendar days of Contract award and not less than 10 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP. Once reviewed and 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 is cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified. Continuously review and amend the APP, as necessary, throughout the life of the Contract. Changes to the accepted APP must be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO and Quality Control Manager. Incorporate unusual or high-hazard activities not identified in the original APP as they are discovered. Should any severe hazard exposure (i.e. imminent danger) become evident, stop work in the area, secure the area, and develop a plan to remove the exposure and control the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate and remove the hazard. In the interim, take all necessary action to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by ASSP A10.34), and the environment.

1.7.2 Names and Qualifications

Provide plans in accordance with the requirements outlined in the EM 385-1-1 Chapter 30-7, including the following:

- a. Names and qualifications (resumes including education, training, experience and certifications) of 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 used. Specify the duties of each position.
- b. Qualifications of competent and of qualified persons. As a minimum,

designate and submit qualifications of competent persons 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; and personal protective equipment and clothing to include selection, use and maintenance.

1.7.3 Plans

Provide plans in the APP in accordance with the requirements outlined in Chapter 37 of EM 385-1-1, including the following:

1.7.3.1 Confined Space Entry Plan

Develop a confined or enclosed space entry plan in accordance with EM 385-1-1, applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, OSHA Directive CPL 2.100, 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.)

1.7.3.2 Standard Lift Plan (SLP)

Plan lifts to avoid situations where the operator cannot maintain safe control of the lift. Prepare a written SLP in accordance with EM 385-1-1, Chapter 16-7 b, using Form 16-2 for every lift or series of lifts (if duty cycle or routine lifts are being performed). The SLP must be developed, reviewed and accepted by all personnel involved in the lift in conjunction with the associated AHA. Signature on the AHA constitutes acceptance of the plan. Maintain the SLP on the LHE for the current lift(s) being made. Maintain historical SLPs for a minimum of three months.

1.7.3.3 Critical Lift Plan - Crane or Load Handling Equipment

Provide a Critical Lift Plan as required by EM 385-1-1, Paragraph 16-7 d, using Form 16-3. In addition, Critical Lift Plans are required for the following:

- a. Lifts over 50 percent of the capacity of barge mounted mobile crane's hoist.
- b. When working around energized power lines where the work will get closer than the minimum clearance distance in EM 385-1-1 Table 16-1.
- c. For lifts with anticipated binding conditions.
- d. When erecting cranes.

1.7.3.3.1 Critical Lift Plan Planning and Schedule

Critical lifts require detailed planning and additional or unusual safety precautions. Develop and submit a critical lift plan to the Contracting Officer 30 calendar days prior to critical lift. Comply with load testing requirements in accordance with EM 385-1-1, Paragraph 16-8.u.

1.7.3.3.2 Lifts of Personnel

In addition to the requirements of EM 385-1-1, Paragraph 16-7.d, for lifts of personnel, demonstrate compliance with the requirements of 29 CFR 1926.1400 and EM 385-1-1, Paragraph 16-8h.h.

1.7.3.4 Multi-Purpose Machines, Material Handling Equipment, and Construction Equipment Lift Plan

Multi-purpose machines, material handling equipment, and construction equipment used to lift loads that are suspended by rigging gear, require proof of authorization from the machine OEM that the machine is capable of making lifts of loads suspended by rigging equipment. Written approval from a qualified registered professional engineer, after a safety analysis is performed, is allowed in lieu of the OEM's approval. Demonstrate that the operator is properly trained and that the equipment is properly configured to make such lifts and is equipped with a load chart.

1.7.3.5 Fall Protection and Prevention (FP&P) Plan

The plan must be in accordance with the requirements of EM 385-1-1, Paragraph 21-7.a and ASSP Z359.2, be site specific, and address all fall hazards in the work place and during different phases of construction. Address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 6 feet. A competent person or qualified person for fall protection must prepare and sign the plan documentation. Include fall protection and prevention systems, equipment and methods employed for every phase of work, roles and responsibilities, assisted rescue, self-rescue and evacuation procedures, training requirements, and monitoring methods. Review and revise, as necessary, the Fall Protection and Prevention Plan documentation as conditions change, but at a minimum every six months, for lengthy projects, reflecting any changes during the course of construction due to changes in personnel, equipment, systems or work habits. Keep and maintain the accepted Fall Protection and Prevention Plan documentation at the job site for the duration of the project. Include the Fall Protection and Prevention Plan documentation in the Accident Prevention Plan (APP).

1.7.3.6 Rescue and Evacuation Plan

Provide a Rescue and Evacuation Plan in accordance with EM 385-1-1 Paragraph 21-7,b and ASSP Z359.2, and include in the FP&P Plan and as part of the APP. 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.

1.7.3.7 Hazardous Energy Control Program (HECP)

Develop a HECP in accordance with EM 385-1-1 Section 12, 29 CFR 1910.147, 29 CFR 1910.333, 29 CFR 1915.89, ASSP Z244.1, and ASSP A10.44. Submit this HECP as part of the Accident Prevention Plan (APP). Conduct a preparatory meeting and inspection with all effected personnel to coordinate all HECP activities. Document this meeting and inspection in accordance with EM 385-1-1, Paragraph 12-5.a. Ensure that each employee is familiar with and complies with these procedures.

1.7.3.8 Excavation Plan

Identify the safety and health aspects of excavation, and provide and prepare the plan in accordance with EM 385-1-1, Paragraph 25-7 and Section 31 00 00 EARTHWORK.

1.7.3.9 Lead, Cadmium, and Chromium Compliance Plan

Identify the safety and health aspects of work involving lead, cadmium and chromium, and prepare in accordance with Section 02 83 00 LEAD REMEDIATION.

1.7.3.10 Asbestos Hazard Abatement Plan

Identify the safety and health aspects of asbestos work, and prepare in accordance with Section 02 82 00 ASBESTOS REMEDIATION.

1.7.3.11 Site Safety and Health Plan

Identify the safety and health aspects, and prepare in accordance with Section 01 35 29.13 HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES FOR CONTAMINATED SITES.

1.7.3.12 Polychlorinated Biphenyls (PCB) Plan

Identify the safety and health aspects of Polychlorinated Biphenyls work, and prepare in accordance with Sections 02 84 33 REMOVAL AND DISPOSAL OF POLYCHLORINATED BIPHENYLS (PCBs) and 02 61 23 REMOVAL AND DISPOSAL OF PCB CONTAMINATED SOILS.

1.7.3.13 Site Demolition Plan

Identify the safety and health aspects, and prepare in accordance with Section 02 41 00 DEMOLITION AND DECONSTRUCTION and referenced sources.

1.8 ACTIVITY HAZARD ANALYSIS (AHA)

Before beginning each activity, task or Definable Feature of Work (DFOW) 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, the Contractor(s) performing that work activity must prepare an AHA. AHAs must be developed by the Prime Contractor, subcontractor, or supplier performing the work, and provided for Prime Contractor review and approval before submitting to the Contracting Officer. AHAs must be signed by the SSHO, Superintendent, QC Manager and the subcontractor Foreman performing the work. Format the AHA in accordance with EM 385-1-1, Section 1 or as directed by the Contracting Officer. Submit the AHA for review at least 15 working days prior to the start of each activity task, or DFOW. The Government reserves the right to require the Contractor to revise and resubmit the AHA if it fails to effectively identify the work sequences, specific anticipated hazards, site conditions, equipment, materials, personnel and the control measures to be implemented.

AHAs must identify competent persons required for phases involving high risk activities, including confined entry, crane and rigging, excavations, trenching, electrical work, fall protection, and scaffolding.

1.8.1 AHA Management

Review the AHA list periodically (at least monthly) at the Contractor supervisory safety meeting, and update as necessary when procedures, scheduling, or hazards change. Use the AHA during daily inspections by the SSHO to ensure the implementation and effectiveness of the required safety and health controls for that work activity.

1.8.2 AHA Signature Log

Each employee performing work as part of an activity, task or DFOV must review the AHA for that work and sign a signature log specifically maintained for that AHA prior to starting work on that activity. The SSHO must maintain a signature log on site for every AHA. Provide employees whose primary language is other than English, with an interpreter to ensure a clear understanding of the AHA and its contents.

1.9 DISPLAY OF SAFETY INFORMATION

1.9.1 Safety Bulletin Board

Prior to commencement of work, erect a safety bulletin board at the job site. Where size, duration, or logistics of project do not facilitate a bulletin board, an alternative method, acceptable to the Contracting Officer, that is accessible and includes all mandatory information for employee and visitor review, may be deemed as meeting the requirement for a bulletin board. Include and maintain information on safety bulletin board as required by EM 385-1-1, Paragraph 1-8.f(2). Additional items required to be posted include:

- a. Confined space entry permit.
- b. Hot work permit.

1.9.2 Safety and Occupational Health (SOH) Deficiency Tracking System

Establish a SOH deficiency tracking system that lists and monitors the status of SOH deficiencies in chronological order. Use the tracking system to evaluate the effectiveness of the APP. A monthly evaluation of the data must be discussed in the QC or SOH meeting with everyone on the project. The list must be posted on the project bulletin board and updated daily, and provide the following information:

- a. Date deficiency identified;
- b. Description of deficiency;
- c. Name of person responsible for correcting deficiency;
- d. Projected resolution date;
- e. Date actually resolved.

1.10 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in paragraph REFERENCES. Maintain applicable equipment manufacturer's manuals.

1.11 EMERGENCY MEDICAL TREATMENT

Contractors must arrange for their own emergency medical treatment in accordance with EM 385-1-1. Government has no responsibility to provide emergency medical treatment.

1.12 NOTIFICATIONS and REPORTS

1.12.1 Mishap Notification

Notify the Contracting Officer as soon as practical, but no more than twenty-four hours, after any mishaps, including recordable accidents, incidents, and near misses, as defined in EM 385-1-1, any report of injury, illness, or any property damage. For LHE or rigging mishaps, notify the Contracting Officer as soon as practical but not more than four hours after mishap. The Contractor is responsible for obtaining appropriate medical and emergency assistance and for notifying fire, law enforcement, and regulatory agencies. Immediate reporting is required for electrical mishaps, to include Arc Flash; shock; uncontrolled release of hazardous energy (includes electrical and non-electrical); load handling equipment or rigging; fall from height (any level other than same surface); and underwater diving. These mishaps must be investigated in depth to identify all causes and to recommend hazard control measures.

Within notification 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 (for example, type of construction equipment used and PPE used). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted. Assist and cooperate fully with the Government's investigation(s) of any mishap.

1.12.2 Accident Reports

- a. Conduct an accident investigation for recordable injuries and illnesses, property damage, and near misses as defined in EM 385-1-1, to establish the root cause(s) of the accident. Complete the applicable USACE Accident Report Form 3394, and provide the report to the Contracting Officer within 5 calendar days of the accident. The Contracting Officer will provide copies of any required or special forms.
- b. Near Misses: For Army projects, report all "Near Misses" to the GDA, using local mishap reporting procedures, within 24 hrs. The Contracting Officer will provide the Contractor the required forms. Near miss reports are considered positive and proactive Contractor safety management actions.
- c. Conduct an accident investigation for any load handling equipment accident (including rigging accidents) to establish the root cause(s) of the accident. Complete the LHE Accident Report (Crane and Rigging Accident Report) form and provide the report to the Contracting Officer within 30 calendar days of the accident. Do not proceed with crane operations until cause is determined and corrective actions have been implemented to the satisfaction of the Contracting Officer. The Contracting Officer will provide a blank copy of the accident report form.

1.12.3 LHE Inspection Reports

Submit LHE inspection reports required in accordance with EM 385-1-1 and as specified herein with Daily Reports of Inspections.

1.12.4 Certificate of Compliance and Pre-lift Plan/Checklist for LHE and Rigging

Provide a FORM 16-1 Certificate of Compliance for LHE entering an activity under this Contract and in accordance with EM 385-1-1. Post certifications on the crane.

Develop a Standard Lift Plan (SLP) in accordance with EM 385-1-1 , Paragraph 16-7.b for each lift planned using Form 16-2 Standard Pre-Lift Crane Plan/Checklist for each lift planned. Submit SLP to the Contracting Officer for approval within 15 calendar days in advance of planned lift.

1.13 HOT WORK

1.13.1 Permit and Personnel Requirements

Submit and obtain a written permit prior to performing "Hot Work" (i.e. welding or cutting) or operating other flame-producing/spark producing devices, from the [Base Fire Depart 479-573-5217]. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. Provide at least two 20 pound 4A:20 BC rated extinguishers for normal "Hot Work". The extinguishers must be current inspection tagged, and contain an 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 must be trained in accordance with NFPA 51B and remain on-site for a minimum of one hour after completion of the task or as specified on the hot work permit.

When starting work in the facility, require personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency Fire Division 479-573-5217 phone number. REPORT ANY FIRE, NO MATTER HOW SMALL, TO THE RESPONSIBLE FIRE DIVISION IMMEDIATELY.

1.13.2 Work Around Flammable Materials

Obtain permit approval from a NFPA Certified Marine Chemist, or Certified Industrial Hygienist for "HOT WORK" within or around flammable materials (such as fuel systems or welding/cutting on fuel pipes) or confined spaces (such as sewer wet wells, manholes, or vaults) that have the potential for flammable or explosive atmospheres.

Whenever these materials, except beryllium and chromium (VI), are encountered in indoor operations, local mechanical exhaust ventilation systems that are sufficient to reduce and maintain personal exposures to within acceptable limits must be used and maintained in accordance with manufacturer's instruction and supplemented by exceptions noted in EM 385-1-1, Paragraph 6-8.j.

1.14 RADIATION SAFETY REQUIREMENTS

Submit License Certificates, employee training records, and Leak Test Reports for radiation materials and equipment to the Contracting Officer

and Radiation Safety Office (RSO) for all specialized and licensed material and equipment proposed for use on the construction project (excludes portable machine sources of ionizing radiation including moisture density and X-Ray Fluorescence (XRF)). Maintain on-site records whenever licensed radiological materials or ionizing equipment are on Government property.

Protect workers from radiation exposure in accordance with 10 CFR 20, ensuring any personnel exposures are maintained As Low As Reasonably Achievable.

1.14.1 Radiography Operation Planning Work Sheet

Submit a Gamma and X-Ray Radiography Operation Planning Work Sheet to Contracting Officer 14 days prior to commencement of operations involving radioactive materials or radiation generating devices. For portable machine sources of ionizing radiation, including moisture density and XRF, use and submit the Portable Gauge Operations Planning Worksheet instead. The Contracting Officer will review the submitted worksheet and provide questions and comments.

Contractors must use primary dosimeters process by a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory.

1.14.2 Site Access and Security

Coordinate site access and security requirements with the Contracting Officer for all radiological materials and equipment containing ionizing radiation that are proposed for use on a government facility. For gamma radiography materials and equipment, a Government escort is required for any travels on the Installation. The Government authorized representative will meet the Contractor at a designated location outside the Installation, ensure safety of the materials being transported, and will escort the Contractor for gamma sources onto the Installation, to the job site, and off the Installation. For portable machine sources of ionizing radiation, including moisture density and XRF, the Government authorized representative will meet the Contractor at the job site.

Provide a copy of all calibration records, and utilization records for radiological operations performed on the site.

1.14.3 Loss or Release and Unplanned Personnel Exposure

Loss or release of radioactive materials, and unplanned personnel exposures must be reported immediately to the Contracting Officer, RSO, and Base Security Department Emergency Number.

1.14.4 Site Demarcation and Barricade

Properly demark and barricade an area surrounding radiological operations to preclude personnel entrance, in accordance with EM 385-1-1, Nuclear Regulatory Commission, and Applicable State regulations and license requirements, and in accordance with requirements established in the accepted Radiography Operation Planning Work Sheet.

Do not close or obstruct streets, walks, and other facilities occupied and used by the Government without written permission from the Contracting Officer.

1.14.5 Security of Material and Equipment

Properly secure the radiological material and ionizing radiation equipment at all times, including keeping the devices in a properly marked and locked container, and secondarily locking the container to a secure point in the Contractor's vehicle or other approved storage location during transportation and while not in use. While in use, maintain a continuous visual observation on the radiological material and ionizing radiation equipment. In instances where radiography is scheduled near or adjacent to buildings or areas having limited access or one-way doors, make no assumptions as to building occupancy. Where necessary, the Contracting Officer will direct the Contractor to conduct an actual building entry, search, and alert. Where removal of personnel from such a building cannot be accomplished and it is otherwise safe to proceed with the radiography, position a fully instructed employee inside the building or area to prevent exiting while external radiographic operations are in process.

1.14.6 Transportation of Material

Comply with 49 CFR 173 for Transportation of Regulated Amounts of Radioactive Material. Notify Local Fire authorities and the site Radiation Safety Officer (RSO) of any Radioactive Material use.

1.14.7 Schedule for Exposure or Unshielding

Actual exposure of the radiographic film or unshielding the source must not be initiated until after 5 p.m. on weekdays.

1.14.8 Transmitter Requirements

Adhere to the base policy concerning the use of transmitters, such as radios and cell phones. Obey Emissions control (EMCON) restrictions.

1.15 CONFINED SPACE ENTRY REQUIREMENTS

Confined space entry must comply with Section 34 of EM 385-1-1, OSHA 29 CFR 1926, OSHA 29 CFR 1910, OSHA 29 CFR 1910.146, and OSHA Directive CPL 2.100. Any potential for a hazard in the confined space requires a permit system to be used.

1.15.1 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. Comply with EM 385-1-1, Chapter 34 for entry procedures. Hazards pertaining to the space must be reviewed with each employee during review of the AHA.

1.15.2 Forced Air Ventilation

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.

1.15.3 Sewer Wet Wells

Sewer wet wells require continuous atmosphere monitoring with audible

alarm for toxic gas detection.

1.15.4 Rescue Procedures and Coordination with Local Emergency Responders

Develop and implement an on-site rescue and recovery plan and procedures. The rescue plan must not rely on local emergency responders for rescue from a confined space.

1.16 CONSTRUCTION INDOOR AIR QUALITY (IAQ) MANAGEMENT PLAN

Submit an IAQ Management Plan not less than 10 calendar days before the preconstruction meeting. Revise and resubmit Plan as required by the Contracting Officer. Make copies of the final plan available to all workers on site. Include provisions in the Plan to meet the requirements specified below and to ensure safe, healthy air for construction workers and building occupants. [Submit Final IAQ Management Plan for inclusion in the Sustainability eNotebook, in accordance with Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING.]

1.16.1 Requirements During Construction

Provide for evaluation of indoor Carbon Dioxide concentrations in accordance with ASTM D6245. Provide for evaluation of volatile organic compounds (VOCs) in indoor air in accordance with ASTM D6345. Use filters with a Minimum Efficiency Reporting Value (MERV) of 8 in permanently installed air handlers during construction.

1.16.1.1 Control Measures

Meet or exceed the requirements of ANSI/SMACNA 008, Chapter 3, to help minimize contamination of the building from construction activities. The five requirements of this manual which must be adhered to are described below:

- a. HVAC protection: Isolate return side of HVAC system from surrounding environment to prevent construction dust and debris from entering the duct work and spaces.
- b. Source control: Use low emitting paints and other finishes, sealants, adhesives, and other materials as specified. When available, cleaning products must have a low VOC content and be non-toxic to minimize building contamination. Utilize cleaning techniques that minimize dust generation. Cycle equipment off when not needed. Prohibit idling motor vehicles where emissions could be drawn into building. Designate receiving/storage areas for incoming material that minimize IAQ impacts.
- c. Pathway interruption: When pollutants are generated use strategies such as 100 percent outside air ventilation or erection of physical barriers between work and non-work areas to prevent contamination.
- d. Housekeeping: Clean frequently to remove construction dust and debris. Promptly clean up spills. Remove accumulated water and keep work areas dry to discourage the growth of mold and bacteria. Take extra measures when hazardous materials are involved.
- e. Scheduling: Control the sequence of construction to minimize the absorption of VOCs by other building materials.

1.16.1.2 Moisture Contamination

- a. Remove accumulated water and keep work dry.
- b. Use dehumidification to remove moist, humid air from a work area.
- c. Do not use combustion heaters or generators inside the building.
- d. Protect porous materials from exposure to moisture.
- e. Remove and replace items which remain damp for more than a few hours.

1.16.2 Requirements After Construction

After construction ends and prior to occupancy, conduct a building flush-out or test the indoor air contaminant levels. Flush-out must be a minimum two-weeks with MERV-13 filtration media as determined by ASHRAE 52.2 at 100 percent outside air. Air contamination testing must be consistent with EPA's current Compendium of Methods for the Determination of Air Pollutants in Indoor Air. After building flush-out or testing and prior to occupancy, replace filtration media. Filtration media must have a MERV of 13 as determined by ASHRAE 52.2.

1.17 SEVERE STORM PLAN

In the event of a severe storm warning, the Contractor must comply with the applicable Storm Plan and:

- a. Secure outside equipment and materials and place materials that could be damaged in protected areas.
- b. Check surrounding area, including roof, for loose material, equipment, debris, and other objects that could be blown away or against existing facilities.
- c. Ensure that temporary erosion controls are adequate.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK

Comply with EM 385-1-1, NFPA 70, NFPA 70E, NFPA 241, the APP, the AHA, Federal and State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard prevails.

PPE is governed in all areas by the nature of the work the employee is performing. Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks. Safety glasses must be worn or carried/available on each person. Mandatory PPE includes:

- a. Hard Hat
- b. Long Pants

- c. Appropriate Safety Shoes
- d. Appropriate Class Reflective Vests

3.1.1 Worksite Communication

Employees working alone in a remote location or away from other workers must be provided an effective means of emergency communications (i.e., cellular phone, two-way radios, land-line telephones or other acceptable means). The selected communication must be readily available (easily within the immediate reach) of the employee and must be tested prior to the start of work to verify that it effectively operates in the area/environment. Develop an employee check-in/check-out communication procedure to ensure employee safety.

3.1.2 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 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, and hexavalent chromium, are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials. Low mercury lamps used within fluorescent lighting fixtures are allowed as an exception without further Contracting Officer approval. Notify the Radiation Safety Officer (RSO) prior to excepted items of radioactive material and devices being brought on base.

3.1.3 Unforeseen Hazardous Material

Contract documents identify materials such as PCB, lead paint, and friable and non-friable asbestos and other OSHA regulated chemicals (i.e. 29 CFR Part 1910.1000). If material(s) that may be hazardous to human health upon disturbance are encountered during construction operations, 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 UTILITY OUTAGE REQUIREMENTS

Apply for utility outages at least 14 days in advance. At a minimum, the written request must include the location of the outage, utilities being affected, duration of outage, any necessary sketches, and a description of the means to fulfill energy isolation requirements in accordance with EM 385-1-1, Section 11.A.02 (Isolation). In accordance with EM 385-1-1, Paragraph 12-7, where outages involve Government or Utility personnel, coordinate with the Government on all activities involving the control of hazardous energy.

These activities include, but are not limited to, a review of HECF and HEC

procedures, as well as applicable Activity Hazard Analyses (AHAs). In accordance with EM 385-1-1, Section 11.A.02 and NFPA 70E, work on energized electrical circuits must not be performed without prior Government authorization. Government permission is considered through the permit process and submission of a detailed AHA. Energized work permits are considered only when de-energizing introduces additional or increased hazard or when de-energizing is infeasible.

3.3 OUTAGE COORDINATION MEETING

After the utility outage request is approved and prior to beginning work on the utility system requiring shut-down, conduct a pre-outage coordination meeting in accordance with EM 385-1-1, Paragraph 12-5.a. This meeting must include the Prime Contractor, the Prime and subcontractors performing the work, the Contracting Officer, and the Installation representative. All parties must fully coordinate HEC activities with one another. During the coordination meeting, all parties must discuss and coordinate on the scope of work, HEC procedures (specifically, the lock-out/tag-out procedures for worker and utility protection), the AHA, assurance of trade personnel qualifications, identification of competent persons, and compliance with HECP training in accordance with EM 385-1-1, Paragraph 12-3. Clarify when personal protective equipment is required during switching operations, inspection, and verification.

3.4 CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

Provide and operate a Hazardous Energy Control Program (HECP) in accordance with EM 385-1-1 Chapter 12, 29 CFR 1910.333, 29 CFR 1915.89, ASSP A10.44, NFPA 70E, and paragraph HAZARDOUS ENERGY CONTROL PROGRAM (HECP).

3.4.1 Safety Preparatory Inspection Coordination Meeting with the Government or Utility

For electrical distribution equipment that is to be operated by Government or Utility personnel, the Prime Contractor and the subcontractor performing the work must attend the safety preparatory inspection coordination meeting, which will also be attended by the Contracting Officer's Representative, and required by EM 385-1-1, Paragraph 12-5.a. The meeting will occur immediately preceding the start of work and following the completion of the outage coordination meeting. Both the safety preparatory inspection coordination meeting and the outage coordination meeting must occur prior to conducting the outage and commencing with lockout/tagout procedures.

3.4.2 Lockout/Tagout Isolation

Where the Government or Utility performs equipment isolation and lockout/tagout, the Contractor must place their own locks and tags on each energy-isolating device and proceed in accordance with the HECP. Before any work begins, both the Contractor and the Government or Utility must perform energy isolation verification testing while wearing required PPE detailed in the Contractor's AHA and required by EM 385-1-1, Paragraphs 5-8.k and 11-8.b(2). Install personal protective grounds, with tags, to eliminate the potential for induced voltage in accordance with EM 385-1-1, Paragraph 11-8.1(10)..

3.4.3 Lockout/Tagout Removal

Upon completion of work, conduct lockout/tagout removal procedure in accordance with the HECF. In accordance with EM 385-1-1, Paragraph 12-8.b(9), each lock and tag must be removed from each energy isolating device by the authorized individual or systems operator who applied the device. Provide formal notification to the Government (by completing the Government form if provided by Contracting Officer's Representative), confirming that steps of de-energization and lockout/tagout removal procedure have been conducted and certified through inspection and verification. Government or Utility locks and tags used to support the Contractor's work will not be removed until the authorized Government employee receives the formal notification.

3.5 FALL PROTECTION PROGRAM

Establish a fall protection program, for the protection of all employees exposed to fall hazards. Within the program include company policy, identify roles and 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 in accordance with ASSP Z359.2 and EM 385-1-1, Chapter 21.

3.5.1 Training

Institute a fall protection training program. As part of the Fall Protection Program, provide training for each employee who might be exposed to fall hazards and using personal fall protection equipment. Provide training by a competent person for fall protection in accordance with EM 385-1-1, Paragraph 21-3. Document training and practical application of the competent person in accordance with EM 385-1-1, Paragraph 21-3.c(2) and ASSP Z359.2 in the AHA.

3.5.2 Fall Protection Equipment and Systems

Enforce use of personal fall protection equipment and systems designated (to include fall arrest, restraint, and positioning) for each specific work activity in the Site Specific Fall Protection and Prevention Plan and AHA at all times when an employee is exposed to a fall hazard. Protect employees from fall hazards as specified in EM 385-1-1, Chapter 21.

Provide personal fall protection equipment, systems, subsystems, and components that comply with EM 385-1-1, 29 CFR 1926.500 Subpart M, ASSP Z359.0, ASSP Z359.1, ASSP Z359.2, ASSP Z359.3, ASSP Z359.4, ASSP Z359.6, ASSP Z359.7, ASSP Z359.11, ASSP Z359.12, ASSP Z359.13, ASSP Z359.14, ASSP Z359.15, ASSP Z359.16 and ASSP Z359.18.

3.5.2.1 Additional Personal Fall Protection Measures

In addition to the required fall protection systems, other protective measures such as safety skiffs, personal floatation devices, and life rings, are required when working above or next to water in accordance with EM 385-1-1. Personal fall protection systems and equipment are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall protection systems are required when operating other equipment such as scissor lifts. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, travel, or while performing

work.

3.5.2.2 Personal Fall Protection Equipment

Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. The use of body belts is not acceptable. Harnesses must 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. Snap hooks and carabineers must be self-closing and self-locking, capable of being opened only by at least two consecutive deliberate actions and have a minimum gate strength of 3,600 lbs in all directions. Use webbing, straps, and ropes made of synthetic fiber. The maximum free fall distance when using fall arrest equipment must not exceed 6 feet, unless the proper energy absorbing lanyard is used. Always take into consideration the total fall distance and any swinging of the worker (pendulum-like motion), that can occur during a fall, when attaching a person to a fall arrest system. Equip all full body harnesses with Suspension Trauma Preventers such as stirrups, relief steps, or similar in order to provide short-term relief from the effects of orthostatic intolerance in accordance with EM 385-1-1, Paragraph 21-8.c(8)(f).

3.5.3 Fall Protection for Roofing Work

Implement fall protection controls based on the type of roof being constructed and work being performed. Evaluate the roof area to be accessed for its structural integrity including weight-bearing capabilities for the projected loading.

a. Low Sloped Roofs:

- (1) For work within 6 feet from unprotected edge of a roof having a slope less than or equal to 4:12 (vertical to horizontal), protect personnel from falling by the use of conventional fall protection systems (personal fall arrest/restraint systems, guardrails, or safety nets) in accordance with EM 385-1-1, Chapter 21 and 29 CFR 1926.500. A safety monitoring system is not adequate fall protection and is not authorized.
- (2) For work greater than 6 feet from the unprotected roof edge, addition to the use of conventional fall protection systems the use of a warning line system is also permitted, in accordance with 29 CFR 1926.500 and EM 385-1-1, Paragraph 21-8.i.

b. Steep-Sloped Roofs: Work on a roof having a slope greater than 4:12 (vertical to horizontal) requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also applies to residential or housing type construction.

3.5.4 Horizontal Lifelines (HLL)

Provide HLL in accordance with EM 385-1-1, Paragraph 21-8.b(10). Commercially manufactured horizontal lifelines (HLL) must 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 (29 CFR 1926.500). The competent person for fall protection may (if deemed appropriate by the qualified person) supervise the assembly, disassembly, use and inspection of the HLL system under the direction of the qualified person. Locally manufactured HLLs

are not acceptable unless they are custom designed for limited or site specific applications by a Registered Professional Engineer who is qualified in designing HLL systems.

3.5.5 Guardrails and Safety Nets

Design, install and use guardrails and safety nets in accordance with EM 385-1-1, Paragraph 21-8.d and 29 CFR 1926 Subpart M.

3.5.6 Rescue and Evacuation Plan and Procedures

When personal fall arrest systems are used, ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. Prepare a Rescue and Evacuation Plan and include a detailed discussion of the following: methods of rescue; methods of self-rescue or assisted-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. Include the Rescue and Evacuation Plan within 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). The plan must be in accordance with the requirements of EM 385-1-1, ASSP Z359.2, and ASSP Z359.4.

3.6 WORK PLATFORMS

3.6.1 Scaffolding

Provide employees 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. Comply with the following requirements:

- a. Scaffold platforms greater than 20 feet in height must be accessed by use of a scaffold stair system.
- b. Ladders commonly provided by scaffold system manufacturers are prohibited for accessing scaffold platforms greater than 20 feet maximum in height.
- c. An adequate gate is required.
- d. Employees performing scaffold erection and dismantling must be qualified.
- e. Scaffold must be capable of supporting at least four times the maximum intended load, and provide appropriate fall protection as delineated in the accepted fall protection and prevention plan.
- f. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward.
- g. Special care must be given to ensure scaffold systems are not overloaded.
- h. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material are prohibited. The first tie-in must be at the height equal to 4 times the width of the smallest dimension of the scaffold base.
- i. Scaffolding other than suspended types must bear on base plates upon

wood mudsills (2 in x 10 in x 8 in minimum) or other adequate firm foundation.

- j. Scaffold or work platform erectors must have fall protection during the erection and dismantling of scaffolding or work platforms that are more than 6 feet.
- k. Delineate fall protection requirements when working above 6 feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

3.6.2 Elevated Aerial Work Platforms (AWPs)

Workers must be anchored to the basket or bucket in accordance with manufacturer's specifications and instructions (anchoring to the boom may only be used when allowed by the manufacturer and permitted by the CP). Lanyards used must be sufficiently short to prohibit worker from climbing out of basket. The climbing of rails is prohibited. Lanyards with built-in shock absorbers are acceptable. Self-retracting devices are not acceptable. Tying off to an adjacent pole or structure is not permitted unless a safe device for 100 percent tie-off is used for the transfer.

Use of AWPs must be operated, inspected, and maintained as specified in the operating manual for the equipment and delineated in the AHA. Operators of AWPs must be designated as qualified operators by the Prime Contractor. Maintain proof of qualifications on site for review and include in the AHA.

3.7 EQUIPMENT

3.7.1 Material Handling Equipment (MHE)

- a. Material handling equipment such as forklifts must not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions. Material handling equipment fitted with personnel work platform attachments are prohibited from traveling or positioning while personnel are working on the platform.
- b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions. Material Handling Equipment Operators must be trained in accordance with OSHA 29 CFR 1910, Subpart N.
- c. Operators of forklifts or power industrial trucks must be licensed in accordance with OSHA.

3.7.2 Load Handling Equipment (LHE)

The following requirements apply. In exception, these requirements do not apply to commercial truck mounted and articulating boom cranes used solely to deliver material and supplies (not prefabricated components, structural steel, or components of a systems-engineered metal building) where the lift consists of moving materials and supplies from a truck or trailer to the ground; to cranes installed on mechanics trucks that are used solely in the repair of shore-based equipment; to crane that enter the activity but are not used for lifting; nor to other machines not used to lift loads suspended by rigging equipment. However, LHE accidents occurring during such operations must be reported.

- a. Equip cranes and derricks as specified in EM 385-1-1, Chapter 16.
- b. Notify the Contracting Officer 15 working days in advance of any LHE entering the activity, in accordance with EM 385-1-1, Paragraph 16-8.ii), so that necessary quality assurance spot checks can be coordinated. Contractor's operator must remain with the crane during the spot check. Rigging gear must be in accordance with OSHA, ASME B30.9 Standards safety standards.
- c. Comply with the LHE manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30.5). Perform all testing in accordance with the manufacturer's recommended procedures.
- d. Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, ASME B30.8 for floating cranes and floating derricks, ASME B30.9 for slings, ASME B30.20 for below the hook lifting devices and ASME B30.26 for rigging hardware.
- e. When operating in the vicinity of overhead transmission lines, operators and riggers must be alert to this special hazard and follow the requirements of EM 385-1-1 Chapter 11, and ASME B30.5 or ASME B30.22 as applicable.
- f. Do not use crane suspended personnel work platforms (baskets) unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Do not lift personnel with a line hoist or friction crane. Additionally, submit a specific AHA for this work to the Contracting Officer. Ensure the activity and AHA are thoroughly reviewed by all involved personnel.
- g. Inspect, maintain, and recharge portable fire extinguishers as specified in NFPA 10, Standard for Portable Fire Extinguishers.
- h. All employees must keep clear of loads about to be lifted and of suspended loads, except for employees required to handle the load.
- i. 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 access where accessible areas of the LHE's rotating superstructure poses a risk of striking, pinching or crushing personnel.
- l. Maintain inspection records in accordance by EM 385-1-1, Paragraph 16-5, including shift, monthly, and annual inspections, the signature of the person performing the inspection, and the serial number or other identifier of the LHE that was inspected. Records must be available for review by the Contracting Officer.
- m. Maintain written reports of operational and load testing in accordance with EM 385-1-1, Chapter 16, listing the load test procedures used along with any repairs or alterations performed on the LHE. Reports

must be available for review by the Contracting Officer.

- n. Certify that all LHE 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. At wind speeds greater than 20 mph, the operator, rigger and lift supervisor must cease all crane operations, evaluate conditions and determine if the lift may proceed. Base the determination to proceed or not on wind calculations per the manufacturer and a reduction in LHE rated capacity if applicable. Include this maximum wind speed determination as part of the activity hazard analysis plan for that operation.
- q. Follow FAA guidelines when required based on project location.

3.7.3 Machinery and Mechanized Equipment

- a. Proof of qualifications for operator must be kept on the project site for review.
- b. Manufacture specifications or owner's manual for the equipment must be on-site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA or USACE EM 385-1-1. Incorporate such additional safety precautions or requirements into the AHAs.

3.7.4 Base Mounted Drum Hoists

- a. Operation of base mounted drum hoists must be in accordance with EM 385-1-1 and ASSP A10.22.
- b. Rigging gear must be in accordance with applicable ASME/OSHA standards.
- c. When used on telecommunication towers, base mounted drum hoists must be in accordance with TIA-1019, TIA-222, ASME B30.7, 29 CFR 1926.552, and 29 CFR 1926.553.
- d. When used to hoist personnel, the AHA must include a written standard operating procedure. Operators must have a physical examination in accordance with EM 385-1-1 Chapter 16 and trained, at a minimum, in accordance with EM 385-1-1 Chapter 16. The base mounted drum hoist must also comply with OSHA Instruction CPL 02-01-056 and ASME B30.23.
- e. Material and personnel must not be hoisted simultaneously.
- f. Personnel cage must be marked with the capacity (in number of persons) and load limit in pounds.
- g. Construction equipment must not be used for hoisting material or personnel or with trolley/tag lines. Construction equipment may be used for towing and assisting with anchoring guy lines.

3.7.5 Use of Explosives

Explosives must not be used or brought to the project site without prior written approval from the Contracting Officer. Such approval does not relieve the Contractor of responsibility for injury to persons or for damage to property due to blasting operations.

Storage of explosives, when permitted on Government property, must be only where directed and in approved storage facilities. These facilities must be kept locked at all times except for inspection, delivery, and withdrawal of explosives.

3.8 EXCAVATIONS

Soil classification must be performed by a competent person in accordance with 29 CFR 1926 and EM 385-1-1.

3.8.1 Utility Locations

Provide a third party, independent, private utility locating company to positively identify underground utilities in the work area in addition to any station locating service and coordinated with the station utility department.

3.8.2 Utility Location Verification

Physically verify underground utility locations, including utility depth, by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within 3 feet of the underground system.

3.8.3 Utilities Within and Under Concrete, Bituminous Asphalt, and Other Impervious Surfaces

Utilities located within and under concrete slabs or pier structures, bridges, parking areas, and the like, are extremely difficult to identify. Whenever Contract work involves chipping, saw cutting, or core drilling through concrete, bituminous asphalt or other impervious surfaces, the existing utility location must be coordinated with station utility departments in addition to location and depth verification by a third party, independent, private locating company. The third party, independent, private locating company must locate utility depth by use of Ground Penetrating Radar (GPR), X-ray, bore scope, or ultrasound prior to the start of demolition and construction. Outages to isolate utility systems must 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.

3.9 ELECTRICAL

Perform electrical work in accordance with EM 385-1-1, Chapters 11 and 12.

3.9.1 Conduct of Electrical Work

As delineated in EM 385-1-1, electrical work is to be conducted in a de-energized state unless there is no alternative method for accomplishing the work. In those cases obtain an energized work permit from the Contracting Officer. The energized work permit application must be accompanied by the AHA and a summary of why the equipment/circuit needs to be worked energized. 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. Attach temporary grounds in accordance with ASTM F855 and IEEE 1048. 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 is 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 are permitted to enter. When work requires work near energized circuits as defined by NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves and 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. Ensure that each employee is familiar with and complies with these procedures and 29 CFR 1910.147.

3.9.2 Qualifications

Electrical work must be performed by QP with verifiable credentials who are familiar with applicable code requirements. Verifiable credentials consist of State, National and Local Certifications or Licenses that a Master or Journeyman Electrician may hold, depending on work being performed, and must be identified in the appropriate AHA. Journeyman/Apprentice ratio must be in accordance with State, Local requirements applicable to where work is being performed.

3.9.3 Arc Flash

Conduct a hazard analysis/arc flash hazard analysis whenever work on or near energized parts greater than 50 volts is necessary, in accordance with NFPA 70E.

All personnel entering the identified arc flash protection boundary must be QPs and properly trained in NFPA 70E requirements and procedures. Unless permitted by NFPA 70E, no Unqualified Person is permitted to approach nearer than the Limited Approach Boundary of energized conductors and circuit parts. Training must be administered by an electrically qualified source and documented.

3.9.4 Grounding

Ground electrical circuits, equipment and enclosures in accordance with NFPA 70 and IEEE C2 to provide a permanent, continuous and effective path to ground unless otherwise noted by EM 385-1-1.

Check grounding circuits to ensure that the circuit between the ground and a grounded power conductor has a resistance low enough to permit sufficient current flow to allow the fuse or circuit breaker to interrupt the current.

3.9.5 Testing

Temporary electrical distribution systems and devices must be inspected,

tested and found acceptable for Ground-Fault Circuit Interrupter (GFCI) protection, polarity, ground continuity, and ground resistance before initial use, before use after modification and at least monthly. Monthly inspections and tests must be maintained for each temporary electrical distribution system, and signed by the electrical CP or QP.

-- End of Section --

SECTION 01 35 29.13

HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES FOR CONTAMINATED SITES

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.

AMERICAN PETROLEUM INSTITUTE (API)

API RP 2219 (2016) Safe Operation of Vacuum Trucks Handling Flammable and Combustible Liquids in Petroleum Service

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION (ISEA)

ANSI/ISEA Z358.1 (2014; R 2020) American National Standard for Emergency Eyewash and Shower Equipment

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

NIOSH 85-115 (1985) Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety and Health Requirements Manual

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1904 Recording and Reporting Occupational Injuries and Illnesses

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1910.120 Hazardous Waste Operations and Emergency Response

29 CFR 1926 Safety and Health Regulations for Construction

29 CFR 1926.65 Hazardous Waste Operations and Emergency Response

49 CFR 171 General Information, Regulations, and Definitions

49 CFR 172 Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

1.2 PRECONSTRUCTION SAFETY CONFERENCE

Conduct a preconstruction safety conference prior to the start of site activities and after submission of the Accident Prevention Plan/Site Safety And Health Plan (APP/SSHP). The objective of the meeting is to discuss health and safety concerns related to the impending work, discuss project health and safety organization and expectations, review and answer comments and concerns regarding the APP/SSHP or other health and safety concerns. Ensure that those individuals responsible for health and safety at the project level are available and attend this meeting.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Work Zones; G

SD-03 Product Data

Amendments to the APP/SSHP; G

Exposure Monitoring/Air Sampling Program

Site Control Log

SSHO's Daily Inspection Logs

SD-07 Certificates

Certificate Of Worker/Visitor Acknowledgement

SD-11 Closeout Submittals

Safety And Health Phase-Out Report; G

1.4 ACCIDENT PREVENTION PLAN/SITE SAFETY AND HEALTH PLAN (APP/SSHP)

Develop and implement a Site Safety and Health Plan in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS, and attach to the Accident Prevention Plan (APP) as an appendix (APP/SSHP). Address all occupational safety and health hazards (traditional construction as well as contaminant-related hazards) associated with cleanup operations within the APP/SSHP. Cover each SSHP element in Paragraph 36-7.a of EM 385-1-1 and each APP element in Paragraph 2-7.b of EM 385-1-1. There are overlapping elements in Paragraphs 36-7.a and 2-7.b of EM 385-1-1. SSHP appendix elements that overlap with APP elements need not be duplicated in the APP/SSHP provided each safety and occupational health (SOH) issue receives adequate attention and is documented in the APP/SSHP. The APP/SSHP is a dynamic document, subject to change as project operations/execution change. Modify the APP/SSHP to address changing and previously unidentified health and safety conditions. Ensure

that the APP/SSHP is updated accordingly. Submit amendments to the APP/SSHP to the Contracting Officer as the APP/SSHP is updated. For long duration projects resubmit the APP/SSHP to the Contracting Officer annually for review. The APP/SSHP must contain all updates.

1.4.1 Acceptance and Modifications

Prior to submittal, the APP/SSHP must be signed and dated by the Safety and Health Manager and the Site Superintendent. Submit for review 30 days prior to the Preconstruction Safety Conference. Deficiencies in the APP/SSHP will be discussed at the preconstruction safety conference, and must be revised to correct the deficiencies and resubmitted for acceptance. Onsite work must not begin until the plan has been accepted. Maintain a copy of the written APP/SSHP onsite. Changes and modifications to the APP/SSHP must be made with the knowledge and concurrence of the Safety and Health Manager, the Site Superintendent, and the Contracting Officer. Bring to the attention of the Safety and Health Manager, the Site Superintendent, and the Contracting Officer any unforeseen hazard that becomes evident during the performance of the work, through the Site Safety and Health Officer (SSHO) for resolution as soon as possible. In the interim, take necessary action to re-establish and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public, and the environment. Disregard for the provisions of this specification or the accepted APP/SSHP is cause for stopping work until the matter has been rectified.

1.4.2 Availability

Make available the APP/SSHP in accordance with 29 CFR 1910.120, (b)(1)(v) and 29 CFR 1926.65, (b)(1)(v).

1.5 STAFF ORGANIZATION, QUALIFICATION AND RESPONSIBILITIES

Provide hazardous waste operations and emergency response organization in accordance with EM 385-1-1, Chapter 33.

1.5.1 Safety and Health Manager

Safety and Health Manager must be an Industrial Hygienist certified by the American Board of Industrial Hygiene, a safety professional certified by the Board of Certified Safety Professionals, or a health physicist certified by the American Board of Health Physicists.

Apply the following in conjunction with the required qualifications and responsibilities stated in EM 385-1-1, Paragraph 36-3.

1.5.1.1 Additional Qualifications

The Safety and Health Manager must have the following qualifications:

- a. A minimum of 5 years experience in developing and implementing similar safety and occupational health programs at HTRW sites.
- b. Documented experience in supervising professional and technician level personnel.
- c. Documented experience in developing worker exposure assessment programs and air monitoring programs and techniques.

- d. Documented experience in managing personal protective equipment (PPE) programs and conducting PPE hazard evaluations for the types of activities and hazards likely to be encountered on the project.
- e. Working knowledge of state and Federal occupational safety and health regulations.

1.5.1.2 Responsibilities and Duties

- a. Development, implementation, oversight, and enforcement of the APP/SSHP.
- b. Provide onsite consultation as needed to ensure the APP/SSHP is fully implemented.
- c. Conduct initial site-specific training.
- d. Be present onsite during the first 3 days of remedial activities and at the startup of each new major phase of work.
- e. Visit the site as needed and at least once per month for the duration of activities, to audit the effectiveness of the APP/SSHP.
- f. Be available for emergencies.
- g. Coordinate any modifications to the APP/SSHP with the Site Superintendent, the SSHO, and the Contracting Officer.
- h. Be responsible for evaluating air monitoring data and recommending changes to engineering controls, work practices, and PPE.
- i. Provide continued support for upgrading/downgrading of the level of personal protection.
- j. Serve as a member of the quality control staff.
- k. Review accident reports and results of daily inspections.
- l. Sign and date the APP/SSHP prior to submittal.

1.5.2 Site Safety and Health Officer

Designate an individual and one alternate as the Site Safety and Health Officer (SSHO). Include the name, qualifications (education and training summary and documentation), and work experience of the Site Safety and Health Officer and alternate in the APP/SSHP.

The Apply the following in conjunction with the required qualifications and responsibilities stated in EM 385-1-1, Paragraph 36-3.

1.5.2.1 Qualifications

The following requirements are in addition to those in Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS.

- a. A minimum of 1 year experience in implementing SOH programs at HTRW sites where [Level B][Level C] personal protective equipment was required.

- b. Meet 29 CFR 1910.120/29 CFR 1926.65 requirements for 40-hour initial and 8-hour supervisor training and, maintain 8-hour refresher training requirements.
- c. Specific training in personal and respiratory protective equipment, confined space entry and in the proper use of air monitoring instruments and air sampling methods including monitoring for ionizing radiation.
- d. Documented experience in construction techniques and construction safety procedures.
- e. Working knowledge of Federal and state occupational SOH regulations.

1.5.2.2 Responsibilities and Duties

The following requirements are in addition to those in Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS.

- a. Assist and represent the Safety and Health Manager in onsite training and the day to day onsite implementation and enforcement of the accepted APP/SSHP.
- b. Be assigned to the site on a full time basis for the duration of field activities. The SSHO will have no duties other than SOH related duties. If operations are performed during more than 1 work shift per day, a site Safety and Health Officer must be present for each shift and when applicable, act as the radiation safety officer (RSO) on radioactive waste cleanup projects.
- c. Have authority to stop work if unacceptable health or safety conditions exist, and take necessary action to re-establish and maintain safe working conditions.
- d. Have authority to ensure site compliance with specified SOH requirements, Federal, state and OSHA regulations and all aspects of the APP/SSHP including, but not limited to, activity hazard analyses, air monitoring, monitoring for ionizing radiation, use of PPE, decontamination, site control, standard operating procedures used to minimize hazards, safe use of engineering controls, the emergency response plan, confined space entry procedures, spill containment program, and preparation of records by performing a daily SOH inspection and documenting results on the Daily Safety Inspection Log in accordance with 29 CFR 1904.
- e. In coordination with site management and the Safety and Health Manager, recommend corrective actions for identified deficiencies and oversee the corrective actions.
- f. Consult with and coordinate any modifications to the APP/SSHP with the Safety and Health Manager, the Site Superintendent, and the Contracting Officer.
- g. Conduct daily safety inspection and document SOH findings into the Daily Safety Inspection Log. Track noted SOH deficiencies to ensure that they are corrected.
- h. Conduct accident investigations and prepare accident reports.

- i. Serve as a member of the quality control staff on matters relating to SOH.

1.5.3 Additional Certified Health and Safety Support Personnel

Retain industrial hygiene support from an industrial hygienist certified by the American Board of Industrial Hygiene to develop occupational health practices for the APP/SSHP and, if necessary, visit the site to help implement APP/SSHP requirements.

1.5.4 Occupational Physician

Utilize the services of a licensed physician, who is certified in occupational medicine by the American Board of Preventative Medicine, or who, by necessary training and experience is Board eligible. The physician must be familiar with the site's hazards and the scope of this project. Include the medical consultant's name, qualifications, and knowledge of the site's conditions and proposed activities in the APP/SSHP. The physician is responsible for the determination of medical surveillance protocols and for review of examination/test results performed in compliance with 29 CFR 1910.120, (f) and 29 CFR 1926.65, (f) and paragraph MEDICAL SURVEILLANCE PROGRAM.

1.5.5 Persons Certified in First Aid and CPR

At least two persons who are currently certified in first aid and CPR by the American Red Cross or other approved agency must be onsite at all times during site operations. They must be trained in universal precautions and the use of PPE as described in the Bloodborne Pathogens Standard of 29 CFR 1910, Section .1030. These persons may perform other duties but must be immediately available to render first aid when needed.

1.5.6 Safety and Health Technicians

For each work crew in the exclusion zone, one person, designated as a Safety and Health technician, must perform activities such as air monitoring, decontamination, and safety oversight on behalf of the SSHO. They must have appropriate training equivalent to the SSHO in each specific area for which they have responsibility and report to and be under the supervision of the SSHO.

1.6 EMERGENCY RESPONSE AND CONTINGENCY PROCEDURES

Develop and implement an Emergency Response Plan, that meets the requirements of EM 385-1-1 paragraph 36-7.a(13), 29 CFR 1910.120 (1) and 29 CFR 1926.65 (1), as a section of the APP/SSHP. In the event of any emergency associated with remedial action, without delay, alert all onsite employees and as necessary offsite emergency responders that there is an emergency situation; take action to remove or otherwise minimize the cause of the emergency; alert the Contracting Officer; and institute measures necessary to prevent repetition of the conditions or actions leading to, or resulting in, the emergency. Train employees that are required to respond to hazardous emergency situations to their level of responsibility according to 29 CFR 1910.120 (q) and 29 CFR 1926.65 (q) requirements. Rehearse the plan regularly as part of the overall training program for site operations. Review the plan periodically and revised as necessary to reflect new or changing site conditions or information. Provide copies of the Emergency Response Portion of the accepted APP/SSHP to the affected

local emergency response agencies. Address, as a minimum, the following elements in the plan:

- a. Pre-emergency planning. Coordinate with local emergency response providers during preparation of the Emergency Response Plan. At a minimum, coordinate with local fire, rescue, hazardous materials response teams, police and emergency medical providers to assure all organizations are capable and willing to respond to and provide services for on-site emergencies. Ensure the Emergency Response Plan for the site is compatible and integrated with the local fire, rescue, medical and police security services available from local emergency response planning agencies.
- b. Personnel roles, lines of authority, communications for emergencies.
- c. Emergency recognition and prevention.
- d. Site topography, layout, and prevailing weather conditions.
- e. Criteria and procedures for site evacuation (emergency alerting procedures, employee alarm system, emergency PPE and equipment, safe distances, places of refuge, evacuation routes, site security and control).
- f. Route maps to nearest prenotified medical facility. Site-support vehicles must be equipped with maps. At the beginning of project operations, drivers of the support vehicles must become familiar with the emergency route and the travel time required.
- g. Specific procedures for decontamination and medical treatment of injured personnel.
- h. Emergency alerting and response procedures including posted instructions and a list of names and telephone numbers of emergency contacts (physician, nearby medical facility, fire and police departments, ambulance service, Federal, state, and local environmental agencies; as well as Safety and Health Manager, the Site Superintendent, the Contracting Officer and their alternates).
- i. Criteria for initiating community alert program, contacts, and responsibilities.
- j. Procedures for reporting incidents to appropriate government agencies. In the event that an incident such as an explosion or fire, or a spill or release of toxic materials occurs during the course of the project, the appropriate government agencies must be immediately notified. In addition, verbally notify the Contracting Officer and the local district safety office immediately and submit a written notification within 24 hours. Include within the report the following items:
 - (1) Name, organization, telephone number, and location of the Contractor.
 - (2) Name and title of the person(s) reporting.
 - (3) Date and time of the incident.
 - (4) Location of the incident, i.e., site location, facility name.

- (5) Brief summary of the incident giving pertinent details including type of operation ongoing at the time of the incident.
- (6) Cause of the incident, if known.
- (7) Casualties (fatalities, disabling injuries).
- (8) Details of any existing chemical hazard or contamination.
- (9) Estimated property damage, if applicable.
- (10) Nature of damage, effect on contract schedule.
- (11) Action taken to ensure safety and security.
- (12) Other damage or injuries sustained, public or private.

k. Procedures for critique of emergency responses and follow-up.

1.7 CERTIFICATE OF WORKER/VISITOR ACKNOWLEDGEMENT

A copy of a certificate of worker/visitor acknowledgement must be completed and submitted for each visitor allowed to enter contamination reduction or exclusion zones, and for each employee, following the Example Certificate Of Worker/Visitor Acknowledgement at the end of this section.

1.8 INSPECTIONS

Attach to and submit with the Daily Quality Control reports the SSHO's Daily Inspection Logs. Include with each entry the following: date, work area checked, employees present in work area, PPE and work equipment being used in each area, special SOH issues and notes, and signature of preparer.

1.9 SAFETY AND HEALTH PHASE-OUT REPORT

Submit a Safety and Health Phase-Out Report in conjunction with the project close out report, prior to final acceptance of the work. Include the following minimum information :

- a. Summary of the overall performance of SOH (e.g., accidents or incidents including near misses, unusual events, lessons learned).
- b. Final decontamination documentation including procedures and techniques used to decontaminate equipment, vehicles, and on site facilities.
- c. Summary of exposure monitoring and air sampling accomplished during the project.
- d. Signatures of Safety and Health Manager and SSHO.

PART 2 PRODUCTS

2.1 REGULATORY REQUIREMENTS

Comply with EM 385-1-1, 29 CFR 1926.65, 29 CFR 1910.120, OSHA requirements in 29 CFR 1910 and 29 CFR 1926 with work performed under this contract, and state specific OSHA requirements where applicable. Submit to the

Contracting Officer for resolution matters of interpretation of standards before starting work. The most stringent requirements apply where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary.

2.2 PERSONAL PROTECTIVE EQUIPMENT

2.2.1 Site Specific PPE Program

Provide onsite personnel exposed to contaminants with appropriate personal protective equipment. Components of levels of protection (B, C, D and modifications) must be relevant to site-specific conditions, including heat and cold stress potential and safety hazards. Use only respirators approved by NIOSH.

Keep protective equipment and clothing clean and well maintained. Include site-specific procedures to determine PPE program effectiveness and for onsite fit-testing of respirators, cleaning, maintenance, inspection, cartridge change out, and storage of PPE within the PPE section of the APP/SSHP.

2.2.2 Levels of Protection

The Safety and Health Manager must establish and evaluate as the work progresses the levels of protection for each work activity. Also establish action levels for upgrade or downgrade in levels of PPE. Describe in the SSHP the protocols and the communication network for changing the level of protection. Address air monitoring results, potential for exposure, changes in site conditions, work phases, job tasks, weather, temperature extremes, and individual medical considerations within the PPE evaluation protocol.

2.2.3 PPE for Government Personnel

Two clean sets daily of personal protective equipment and clothing (excluding air-purifying negative-pressure respirators and safety shoes, which will be provided by individual visitors), as required for entry into the Exclusion Zone and Contamination Reduction Zone, must be available for use by the Contracting Officer or official visitors.

2.3 EMERGENCY EQUIPMENT AND FIRST AID REQUIREMENTS

Maintain, as a minimum, the following items onsite and available for immediate use:

- a. First aid equipment and supplies required by EM 385-1-1.
- b. Emergency eyewashes that comply with ANSI/ISEA Z358.1.
- c. Provide fire extinguishers of sufficient size and type at site facilities and in all vehicles and at any other site locations where flammable or combustible materials present a fire risk.

PART 3 EXECUTION

3.1 SITE DESCRIPTION AND CONTAMINATION CHARACTERIZATION

3.2 TASK SPECIFIC HAZARDS, INITIAL PPE, HAZWOPER MEDICAL SURVEILLANCE AND TRAINING APPLICABILITY

Task specific occupational hazards, task specific HAZWOPER medical surveillance and training applicability and task specific initial PPE requirements for the project are listed on the Task Hazard and Control Sheets at the end of this section. Reevaluate occupational safety and health hazards as the work progresses and to adjust the PPE and onsite operations, if necessary, so that the work is performed safely and in compliance with occupational safety and health regulations.

3.3 TRAINING

In conjunction with EM 385-1-1, Paragraph 36-3, meet the training program requirements for workers performing cleanup operations and who will be exposed to contaminants.

3.3.1 [General HTRW Operations Training

All Personnel performing duties with potential for exposure to onsite contaminants must meet and maintain the following 29 CFR 1910.120/29 CFR 1926.65 (e) training requirements:

- a. 40 hours of off site HTRW instruction.
- b. 3 days actual on-the-job field experience under the direct supervision of a trained, experienced supervisor.
- c. 8 hours refresher training annually.

Onsite supervisors must have an additional 8 hours management and supervisor training specified in 29 CFR 1910.120/29 CFR 1926.65 (e) (4).]

3.3.2 Pre-Entry Briefing

Prior to commencement of onsite field activities, all site employees, including those assigned only to the Support Zone, must attend a site-specific SOH training session. This session will be conducted by the Safety and Health Manager and the Site Safety and Health Officer to ensure that all personnel are familiar with requirements and responsibilities for maintaining a safe and healthful work environment. Thoroughly discuss procedures and contents of the accepted APP/SSHP and Paragraph 1-3.a(6) of EM 385-1-1 . Each employee must sign a training log to acknowledge attendance and understanding of the training. Notify the Contracting Officer at least 5 days prior to the initial site-specific training session so government personnel involved in the project may attend.

3.3.3 Periodic Sessions

Conduct periodic onsite training by the SSHO at least daily for personnel assigned to work at the site during the following day. Address SOH procedures, work practices, any changes in the APP/SSHP, activity hazard analyses, work tasks, or schedule; results of previous week's air monitoring, review of safety discrepancies and accidents. Convene a meeting prior to implementation of the change should an operational change

affecting onsite field work be made, to explain SOH procedures. Conduct a site-specific training sessions for new personnel, visitors, and suppliers by the SSHO using the training curriculum outlines developed by the Safety and Health Manager. Each employee must sign a training log to acknowledge attendance and understanding of the training.

3.3.4 Other Training

a. other training as outlined in specification [spec section Ebbing 01 35 10.00 46]

3.4 MEDICAL SURVEILLANCE PROGRAM

Meet all requirements of 29 CFR 1910.120/29 CFR 1926.65 medical surveillance program and EM 385-1-1, Paragraph 36-3.b, for workers performing cleanup operations and who will be exposed to contaminants. Ensure the Occupational Physician or the physician's designee performs the physical examinations and reviews examination results. Participation in the medical surveillance program is without cost to the employee, without loss of pay and at a reasonable time and place.

3.5 EXPOSURE MONITORING/AIR SAMPLING PROGRAM

Prepare and implement by the Safety and Health Manager an exposure monitoring/air sampling program to identify and quantify SOH hazards and airborne levels of hazardous substances in order to assure proper selection of engineering controls, work practices and personal protective equipment for affected site personnel. Include action levels for upgrading/downgrading PPE in the program. Submit personnel exposure monitoring/sampling results.

3.6 HEAT STRESS MONITORING AND MANAGEMENT

Document in the APP/SSHP and implement the procedures and practices in section. in EM 385-1-1 to monitor and manage heat stress.

3.7 SPILL AND DISCHARGE CONTROL

Develop and implement written spill and discharge containment/control procedures. Describe prevention measures, such as building berms or dikes; spill control measures and material to be used (e.g. booms, vermiculite); location of the spill control material; personal protective equipment required to cleanup spills; disposal of contaminated material; and who is responsible to report the spill. Storage of contaminated material or hazardous materials must be appropriately bermed, diked and contained to prevent any spillage of material on uncontaminated soil. If the spill or discharge is reportable, or human health or the environment are threatened, notify the National Response Center, the state, and the Contracting Officer as soon as possible. Provide control as required by Section 01 57 19 TEMPORARY ENVIRONMENT CONTROLS.

3.8 MATERIALS TRANSFER SAFETY

Remove liquids and residues from the tanks using explosion-proof or air-driven pumps. In accordance with EM 385-1-1, Chapter 9, electrically bond the tank and ground pump motors and suction hoses to prevent electrostatic ignition hazards. Use of a hand pump will be permitted to remove the last of the liquid from the bottom of the tanks. If a vacuum truck is used for removal of liquids or residues, the area of operation

for the vacuum truck must be vapor free. Locate the truck upwind from the tank and outside the path of probable vapor travel. Discharge the vacuum pump exhaust gases through a hose of adequate size and length downwind of the truck and tank area. Vacuum truck operating and safety practices must conform to API RP 2219. Collect tank residues in drums, tanks, or tank trucks labeled according to 49 CFR 171 and 49 CFR 172 and disposed of as specified. Disconnect and drain fittings and lines of their contents after the materials have been transferred and the tanks have been exposed. Do not spill contents into the environment during cutting or disconnecting of tank fittings. Transfer materials drained into DOT-approved drums for storage and transportation. Use only non-sparking or non-heat producing tools to disconnect and drain or to cut through tank fittings. Electrical equipment (e.g., pumps, portable hand tools) used for tank preparation must be explosion-proof. Following cutting or disconnecting of the fittings, plug openings leading to the tanks.

3.9 SITE CONTROL MEASURES

Coordinate site control measures with Section 01 57 19 TEMPORARY ENVIRONMENT CONTROLS.

3.9.1 Work Zones

Initial anticipated work zone boundaries (exclusion zone, contamination reduction zone, support zone, all access points and decontamination areas) are to be clearly delineated on the site drawings. Base delineation of work zone boundaries on the contamination characterization data and the hazard/risk analysis to be performed as described in EM 385-1-1 Paragraph 6-8. As work progresses and field conditions are monitored, work zone boundaries may be modified (and site drawings modified) with approval of the Contracting Officer. Clearly identify work zones and mark in the field (using fences, tape, or signs). Submit and post a site map, showing work zone boundaries and locations of decontamination facilities in the onsite office. Work zones must consist of the following:

3.9.1.1 Exclusion Zone (EZ)

The exclusion zone is the area where hazardous contamination is either known or expected to occur and the greatest potential for exposure exists. Control entry into this area and exit may only be made through the Contamination Reduction Zone (CRZ).

3.9.1.2 Contamination Reduction Zone (CRZ)

The CRZ is the transition area between the Exclusion Zone and the Support Zone. The personnel and equipment decontamination areas must be separate and unique areas located in the CRZ.

3.9.1.3 Support Zone (SZ)

The Support Zone is defined as areas of the site, other than exclusion zones and contamination reduction zones, where workers do not have the potential to be exposed to hazardous substances or dangerous conditions resulting from HTRW operations. Secure the Support Zone against active or passive contamination. Site offices, parking areas, and other support facilities must be located in the Support Zone.

3.9.2 Site Control Log

A log of personnel visiting, entering, or working on the site must be maintained. Include the following: date, name, agency or company, time entering and exiting site, time entering and exiting the exclusion zone (if applicable). Before visitors are allowed to enter the Contamination Reduction Zone or Exclusion Zone, they must show proof of current training, medical surveillance and respirator fit testing (if respirators are required for the tasks to be performed) and fill out a Certificate of Worker or Visitor Acknowledgment. Record this visitor information, including date, in the log.

3.10 PERSONAL HYGIENE AND DECONTAMINATION

Personnel entering the Exclusion or Contamination Reduction Zones or otherwise exposed to hazardous chemical vapors, gases, liquids, or contaminated solids must decontaminate themselves and their equipment prior to exiting the contamination reduction zone (CRZ) and entering the support zone. Consult Chapter 10.0 of NIOSH 85-115 when preparing decontamination procedures. Submit a detailed discussion of personal hygiene and decontamination facilities and procedures to be followed by site workers as part of the APP/SSHP. Train employees in the procedures and enforce the procedures throughout site operations.

-- End of Section --

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization (e.g., ASTM B564 Standard Specification for Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided.

AACE INTERNATIONAL (AACE)
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Internet: <https://acousticalsociety.org/>

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC. (AIA/NAS)
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AIR CONDITIONING CONTRACTORS OF AMERICA (ACCA)
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U.S. DEFENSE INTELLIGENCE AGENCY (DIA)
Defense Intelligence Agency
7400 Pentagon
Office of Corporate Communications
Washington DC 20301-2400
Ph: 202-231-5554
Fax: 202-231-0851
E-mail: DIA-PAO@dodiis.mil
Internet: <http://www.dia.mil>

U.S. DEFENSE LOGISTICS AGENCY (DLA)
Andrew T. McNamara Building
8725 John J. Kingman Road
Fort Belvoir, VA 22060-6221
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Internet: <http://www.dla.mil>

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Philadelphia, PA 19111-5094
Ph: 215-697-6396 - for account/password issues
Internet: <https://assist.dla.mil/online/start/>; account registration required
Obtain Unified Facilities Criteria (UFC) from:
Whole Building Design Guide (WBDG)
National Institute of Building Sciences (NIBS)
1090 Vermont Avenue NW, Suite 700
Washington, DC 20005
Ph: 202-289-7800
Fax: 202-289-1092
Internet:
<https://www.wbdg.org/ffc/dod/unified-facilities-criteria-ufc>

U.S. DEPARTMENT OF ENERGY (DOE)
1000 Independence Avenue Southwest
Washington, D.C. 20585
Ph: 202-586-5000
Fax: 202-586-4403
E-mail: The.Secretary@hq.doe.gov
Internet: <https://www.energy.gov/>

U.S. DEPARTMENT OF ENERGY FEDERAL ENERGY MANAGEMENT PROGRAM (FEMP)
Forrestal Building
1000 Independence Avenue, SW
Washington, DC 20585
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<https://www.energy.gov/eere/femp/federal-energy-management-program>

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Chief of Information
Attn: US Navy
1200 Navy Pentagon
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Internet: <https://www.state.gov/>

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1200 New Jersey Ave., SE
Washington, DC 20590
Ph: 202-366-4000
Internet: <https://www.transportation.gov/>

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
1200 Pennsylvania Avenue, N.W.
Washington, DC 20004
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Washington, DC 20037
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Internet: <https://new.usgbc.org/>

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U.S. NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)
1322 Patterson Ave. SE, Suite 1000
Washington Navy Yard, DC 20374-5065
Ph: 202-685-9387
Internet: <http://www.navfac.navy.mil>

U.S. NAVAL SEA SYSTEMS COMMAND (NAVSEA)
Commander Naval Sea Systems Command
1333 Isaac Hull Ave., SE
Washington Navy Yard, DC 20376
Ph: 202-781-0000
Internet: <https://www.navsea.navy.mil/>

UL ENVIRONMENT (ULE)
2211 Newmarket Parkway, Suite 106
Marietta, GA 30067
Ph: 888-485-4733
E-mail: environment@ul.com
Intertet: <https://industries.ul.com/environment/>

UNDERWRITERS LABORATORIES (UL)
2600 N.W. Lake Road
Camas, WA 98607-8542

Ph: 877-854-3577 or 360-817-5500
E-mail: CustomerExperienceCenter@ul.com
Internet: <https://www.ul.com/>
UL Directories available through IHS at <https://ihsmarkit.com/>

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Internet: <https://canada.ul.com/>

UNI-BELL PVC PIPE ASSOCIATION (UBPPA)
Corporate Headquarters
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Dallas, TX 75234
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Fax: 972-243-3907
E-mail: info@uni-bell.org
Internet: <https://www.uni-bell.org/>

VIBRATION ISOLATION AND SEISMIC CONTROL MANUFACTURERS ASSOCIATION
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994 Old Eagle School Road
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Wayne, PA 19087-1866
Ph: 610-971-4850
E-mail: info@viscma.com
Internet: <http://www.viscma.com>

WALLCOVERINGS ASSOCIATION (WA)
330 N. Wabash Avenue
Suite 2000
Chicago, IL 60611
Ph: 312-321-5166
E-mail: info@wallcoverings.org
Internet: <https://www.wallcoverings.org>

WASHINGTON STATE ADMINISTRATIVE CODE (WAC)
Legislative Information Center
Cheri Randich, Manager
110 Legislative Building
Olympia, WA 98504-0600
Ph: 360-786-7573
E-mail: support@leg.wa.gov
Internet: <https://app.leg.wa.gov/wac/>

WASHINGTON STATE DEPARTMENT OF ECOLOGY (WSDE)
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Lacey, WA 98503
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Fax: 360-407-6989
Internet:
<https://ecology.wa.gov/About-us/Online-tools-publications/Publications-forms>

WATER ENVIRONMENT FEDERATION (WEF)
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Alexandria, VA 22314

Ph: 800-666-0206
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E-mail: csc@wef.org
Internet: <https://www.wef.org/>

WATER QUALITY ASSOCIATION (WQA)
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Lisle, IL 60532-3696
Ph: 630-505-0160
Fax: 630-505-9637
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6980 S.W. Varns
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Ph: 503-639-0651
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Ph: 360-693-9958
Internet: <https://wwpinstitute.org/>

WESTERN WOOD PRODUCTS ASSOCIATION (WWPA)
1500 SW First Ave., Suite 870
Portland, OR 97201
Ph: 503-224-3930
E-mail: info@wwpa.org
Internet: <http://www.wwpa.org>

WINDOW AND DOOR MANUFACTURERS ASSOCIATION (WDMA)
2025 M Street, NW, Suite 800
Washington, DC 20036-3309
Ph: 202-367-1157

or

330 N Wabash Avenue, Suite 2000
Chicago, IL 60611
Ph: 312-321-6802
E-mail: membersupport@wdma.com
Internet: <https://www.wdma.com/>

WIRE ROPE TECHNICAL BOARD (WRTB)
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Alexandria, VA 22315-8550
Ph: 703-299-8550
Fax: 703-299-9253
E-mail: wrtb@usa.net
Internet: <http://www.wireropetechnicalboard.org>

WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR)
101 S. Webster Street
PO Box 7921
Madison, WI 53707-7921
Ph: 1-888-936-7463
Internet: dnr.wisconsin.gov/

WOOD MOULDING AND MILLWORK PRODUCERS ASSOCIATION (WMPMA)
507 First Street
Woodland, CA 95695
Ph: 530-661-9591
Fax: 530-661-9586
E-mail: info@wmpma.com
Internet: <https://www.wmpma.com/>

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Internet: <https://woodworkinstitute.com>

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10000 Washington Blvd
Culver City, CA 90232
Ph: 347-767-3160
E-mail: woolmark.americas@wool.com
internet: <https://www.woolmark.com/>

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

-- End of Section --

SECTION 01 45 00

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 in the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM D3740 (2019) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

ASTM E90 (2023) Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

ASTM E329 (2023) Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety and Health Requirements Manual

ER 1110-3-12 (2021) Military Engineering and Design Quality Management

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program. Include all associated costs in the applicable Bid Pricing Schedule item.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.

SD-01 Preconstruction Submittals

Contractor Quality Control (CQC) Plan; G

Additional Requirements For Design Quality Control (DQC) Plan; G

SD-05 Design Data

Design Quality Control

Discipline-Specific Checklists

SD-06 Test Reports

Verification Statement

SD-07 Certificates

Certificate Of Readiness; G

1.4 GENERAL REQUIREMENTS

Establish and maintain an effective quality control (QC) system that complies with FAR 52.246-12 Inspection of Construction. QC is comprised of plans, procedures, and organization necessary to produce an end product that complies with the Contract requirements. The QC system covers all design and construction operations, both onsite and offsite, and must be keyed to the proposed design and construction sequence. The Quality Control Manager, Superintendent, Site Safety and Health Officer (SSHO), and all on-site supervisors are responsible for the quality of work and are subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the Contract. The Quality Control Manager must maintain a physical presence at the work site at all times and is the primary individual responsible for all quality control.

1.5 QUALITY CONTROL (QC) PROGRAM REQUIREMENTS

Establish and maintain a QC program as described in this section. This QC program is a key element in meeting the objectives of the Commissioning Process (Cx). The QC program consists of a QC Organization, QC Plan, QC Plan Meeting(s), a Coordination and Mutual Understanding Meeting, QC meetings, three phases of control, submittal review and approval, testing, completion inspections, QC certifications, independent Special Inspections in accordance with Section 01 45 35 SPECIAL INSPECTIONS, and documentation necessary to provide materials, equipment, workmanship, fabrication, construction and operations that comply with the requirements of this Contract. The QC program must cover on-site and off-site work and be keyed to the work sequence. No construction work or testing may be performed unless the QC Manager is on the work site. The QC Manager must report to an officer of the firm and not be subordinate to the Project Superintendent or the Project Manager. The QC Manager, Project Superintendent and Project Manager must work together effectively. Although the QC Manager is the primary individual responsible for quality control, all individuals will be held responsible for the quality of work on the job.

1.5.1 Meetings

1.5.1.1 Quality Control Plan Meeting

Prior to submission of the QC Plan, the Contractor may request a meeting with the Contracting Officer to discuss the QC Plan requirements of this Contract.

The purpose of this meeting is to develop a mutual understanding of the QC Plan requirements prior to plan development and submission and to agree on

the Contractor's list of Definable Feature of Work (DFOW).

1.5.1.2 Coordination and Mutual Understanding Meeting

After the Preconstruction Conference, Post Award Conference, before start of design or construction, and prior to acceptance by the Government of the CQC Plan, meet with the Contracting Officer and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details must be developed, including the forms for recording the CQC operations, design activities, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting will be prepared by the QC Manager and signed by the Contractor, the Architect/Engineer (A/E), and the Government. Provide a copy of the signed minutes to all attendees and include in the QC Plan. At a minimum the Coordination and Mutual Understanding Meeting must be repeated when a new QC Manager is appointed. There can be other occasions when subsequent conferences will be called by either party to reconfirm mutual understandings or address deficiencies in the CQC system or procedures which can require corrective action by the Contractor.

1.5.1.2.1 Purpose

The purpose of this meeting is to develop a mutual understanding of the QC details, including documentation, administration for on-site and off-site work, design intent, Cx in accordance with Section 01 91 00.15 BUILDING COMMISSIONING, environmental requirements and procedures, coordination of activities to be performed, Special Inspections, and the coordination of the Contractor's management, production, and QC personnel. At the meeting, the Contractor must explain in detail how three phases of control will be implemented for each DFOW, as well as how each DFOW will be affected by each management plan or requirement as listed below:

- a. Waste Management Plan.
- b. Procedures for noise and acoustics management.
- c. Environmental Protection Plan.
- d. Environmental regulatory requirements.
- [e]. Cx Plan requirements in accordance with Section 01 91 00.15 BUILDING COMMISSIONING.
- [e][f]. Special Inspections.
- [e][f][g]. Indoor Air Quality (IAQ) Management Plan.

1.5.1.2.2 Coordination of Activities

Coordinate activities included in various sections to assure efficient and orderly installation of each component. Coordinate operations included under different sections that are dependent on each other for proper installation and operation. Schedule construction operations with consideration for indoor air quality as specified in the IAQ Management

Plan.Coordinate Special Inspections.

1.5.1.2.3 Attendees

As a minimum, the Contractor's personnel required to attend include an officer of the firm, the Project Manager, Project Superintendent, QC Manager, Alternate QC Manager, Assistant QC Manager, Commissioning Provider (CxC), Environmental Manager, and subcontractor representatives. Each subcontractor who will be assigned QC responsibilities must have a principal of the firm at the meeting.

1.5.1.3 Quality Control (QC) Meetings

After the start of construction, conduct weekly QC meetings led by the QC Manager at the work site with the Project Superintendent, [the QC Specialists,] the Special Inspector, CxC, and the other personnel as necessary. The QC Manager is to prepare the minutes of the meeting and provide a copy to the Contracting Officer within 2 working days after the meeting. The Contracting Officer may attend these meetings. As a minimum, accomplish the following at each meeting:

- a. Review the minutes of the previous meeting.
 - b. Review the schedule and the status of work and deficiencies/rework. Review the most current approved schedule (in accordance with schedule specification) and the status of work and deficiencies/rework.
 - c. Review the status of submittals and Request For Information (RFIs).
 - d. Review the work to be accomplished in the next 3 weeks as defined by the schedule section paragraph WEEKLY PROGRESS MEETINGS in Section 01 32 01.00 10 PROJECT SCHEDULE and all documentation required for that work.
 - e. Review Testing Plan and Log including status of tests performed since last QC Meeting.
 - f. Resolve QC and production problems. Discuss status of pending change orders.
 - g. Address items that may require revising the QC Plan.
 - h. Review Accident Prevention Plan (APP) and effectiveness of the safety program.
 - i. Review environmental requirements and procedures.
 - j. Review Environmental Management Plan.
 - k. Review Waste Management Plan.
 - l. Review the status of training completion.
 - m. Review Cx Plan and progress. Review Issues Log and resolution.
- [m][n]. Review IAQ Management Plan.

1.5.2 Contractor Quality Control (CQC) Plan

Submit no later than 30 days after receipt of notice to proceed, the CQC Plan proposed to implement the requirements FAR 52.246-12 Inspection of Construction. The Government will consider an interim plan for the first 60 days of operation. Design and Construction will be permitted to begin only after acceptance of the CQC Plan and other Contract requirements or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional work. Design work is not permitted to start prior to approval of a Design Quality Control Plan.

1.5.2.1 Content of Contractor Quality Control (CQC) Plan

Provide a CQC Plan, prior to start of construction that includes a table of contents, with major sections identified, pages numbered sequentially, and that documents the proposed methods and responsibilities for accomplishing quality control during the construction of the project. The CQC Plan must at a minimum include the following sections:

- a. A description of the quality control organization and acknowledgment that the CQC staff will implement the three phase control system for all aspects of the work specified.
- b. An organizational chart showing the quality control organization with individual names and job titles and lines of authority up to an executive of the company at the home office.
- c. NAMES AND QUALIFICATIONS: Names and qualifications, in resume format, (including position titles and durations for qualifying experiences) for each person in the QC organization. Include the Construction Quality Management (CQM) for Contractors course certifications for the QC personnel as required by the paragraph CONSTRUCTION QUALITY MANAGEMENT TRAINING.
- d. DUTIES, RESPONSIBILITY AND AUTHORITY OF QC PERSONNEL: Duties, responsibilities, and authorities of each person in the QC organization.
- e. OUTSIDE ORGANIZATIONS: A listing of outside organizations, such as architectural and consulting engineering firms, that will be employed by the Contractor and a description of the services these firms will provide.
- f. APPOINTMENT LETTERS: Letters signed by an officer of the firm appointing the QC Manager and Alternate QC Manager, Design Quality Control Manager, CxC, and stating that they are responsible for implementing and managing the QC program as described in this Contract. Include in this letter the responsibility of the QC Manager and Alternate QC Manager to implement and manage the three phases of control, and their authority to stop work that is not in compliance with the Contract. Letters of direction are to be issued by the QC Manager to[the Assistant QC Manager and] all other QC Specialists or quality control representatives outlining their duties, authorities, and responsibilities. Include copies of the letters in the QC Plan.
- g. SUBMITTAL PROCEDURES AND INITIAL SUBMITTAL REGISTER: Procedures for reviewing, approving, scheduling, and managing submittals, including

those of subcontractors, designers of record, consultants, architect-engineers (AE), offsite fabricators, suppliers, and purchasing agents. Provide the name(s) of the person(s) in the QC organization authorized to review and certify submittals prior to approval. Provide the initial submittal of the Submittal Register as specified in Section 01 33 00 SUBMITTAL PROCEDURES.

- h. TESTING LABORATORY INFORMATION: Testing laboratory information required by the paragraph ACCREDITATION REQUIREMENTS, as applicable.
- i. TESTING PLAN AND LOG: A Testing Plan and Log that includes the tests required, associated feature of work required, referenced by the specification paragraph number requiring the test, the frequency, and the person responsible for each test.
- j. Procedures to complete design and construction deficiencies from identification through acceptable corrective action. Establish verification procedures that identified deficiencies have been corrected. This phase is performed prior to beginning work on each definable feature of work, after all required plans, documents, materials are approved, and after copies are at the work site.
- k. Reporting procedures, including proposed reporting formats.
- l. Procedures for submitting and reviewing design changes/variations prior to submission to the Contracting Officer.
- m. LIST OF DEFINABLE FEATURES: A Definable Feature of Work (DFOW) is a task that is separate and distinct from other tasks and has control requirements and work crews unique to that task. A DFOW is identified by different trades or disciplines, or it is work by the same trade in a different environment. A DFOW is by definition any item or activity on the construction schedule, and the schedule specification provides direction regarding how the DFOWs are to be structured. Include in the list of DFOWs for all activities on the Construction Schedule. Provide separate DFOWs in the Network Analysis Schedule for each design development stage and submittal package. Although each section of the specifications can generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. Identify the specification section number and schedule activity ID for each DFOW listed. The DFOW list will be reviewed in coordination with the construction schedule and agreed upon during the Coordination of Mutual Understanding Meeting.
- n. PROCEDURES FOR PERFORMING AND TRACKING THE THREE PHASES OF CONTROL: Identify procedures used to ensure the three phases of control to manage the quality on this project. For each Definable Feature of Work (DFOW), a Preparatory and Initial phase checklist will be filled out during the Preparatory and Initial phase meetings. Conduct the Preparatory and Initial Phases and meetings with a view towards obtaining quality construction by planning ahead and identifying potential problems for each DFOW.
- o. Coordinate scheduled work with Special Inspections required by Section 01 45 35 SPECIAL INSPECTIONS, the Statement of Special Inspections and the Special Inspections Project Manual. Where the applicable code issued by the International Code Council (ICC) calls for inspections by the Building Official, the Contractor must include the inspections in the Quality Control Plan and must perform the inspections required

by the applicable ICC. The Contractor must perform these inspections using independent qualified inspectors. Include the Special Inspections Project Manual requirements in the QC Plan.

- p. PROCEDURES FOR COMPLETION INSPECTION: Procedures for identifying and documenting the completion inspection process. Include in these procedures the responsible party for punch out inspection, pre-final inspection, and final acceptance inspection.
- q. TRAINING PROCEDURES AND TRAINING LOG: Procedures for coordinating and documenting the training of personnel required by the Contract.
- r. ORGANIZATION AND PERSONNEL CERTIFICATIONS LOG: Procedures for coordinating, tracking and documenting all certifications required for entities such as subcontractors, testing laboratories, suppliers, and personnel. The QC Manager will ensure that certifications are current, appropriate for the work being performed, and will not lapse during any period of the Contract that the work is being performed.

1.5.2.2 Additional Requirements for Design Quality Control (DQC) Plan

The following additional requirements apply to the DQC Plan:

- a. Submit and maintain a DQC Plan as an effective quality control program which assures that all services required by this Contract are performed and provided in a manner that meets professional architectural and engineering quality standards. As a minimum, all documents must be technically reviewed by competent, independent reviewers identified in the DQC Plan. The same element that produced the product may not perform the Independent Technical Review. Correct errors and deficiencies in the design documents prior to submitting them to the Government.
- b. 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. Schedule must include sufficient detail to identify all major design tasks, including those that control the flow of work. Include review and correction periods associated with each item. Schedule must 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, submit a revised schedule reflecting the change within 7 calendar days.
- c. Include in the DQC Plan the discipline-specific checklists to be used during the design and quality control of each submittal. Submit at each design phase as part of the project documentation these completed discipline-specific checklists. ER 1110-3-12 provides some useful information in developing checklists.
- d. Implement the DQC Plan 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 and who coordinates work with and reports to the Contracting Officer via the QC Manager. Notify the Contracting Officer, in writing, of the name of the individual and the name of an alternate person assigned to the position.
- e. Provide Quality Control Documentation procedures such as QC review sets and QC comments to demonstrate that cross checking of all

engineering discipline's design drawings and specifications has taken place. The QC review documentation must exhibit a checking process of the design documents for completeness, accuracy, and constructability.

1.5.3 Acceptance of the Quality Control (QC) and Design Quality Control (DQC) Plan

The Contracting Officer's acceptance of the Contractor QC Plan, or interim plan applicable to the particular feature of work to be started, and Design Quality Control Plan is required prior to the start of design and construction. The Government will consider an interim plan for the first 60 days of operation. Work outside of the accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional work. The Contracting Officer reserves the right to require changes in the QC and DQC Plan and operations as necessary, including removal or addition of personnel, to ensure the specified quality of work. The Contracting Officer reserves the right to interview any member of the QC and DQC organization at any time to verify the submitted qualifications. All QC and DQC organization personnel are subject to acceptance by the Contracting Officer. The Contracting Officer may require the removal of any individual for non-compliance with quality requirements specified in the Contract.

1.5.4 Notification of Changes

Notify the Contracting Officer, in writing, of any proposed changes in the QC Plan or changes to the QC organization personnel. Proposed changes are subject to acceptance by the Contracting Officer.

1.5.5 Special Inspections

Perform all required Special Inspections per Section 01 45 35 SPECIAL INSPECTIONS, the statement of Special Inspections and the Schedule of Special Inspections.

1.6 QUALITY CONTROL (QC) ORGANIZATION

1.6.1 Personnel Requirements

The requirements for the CQC organization are a Site Safety and Health Officer (SSHO), QC Manager, a Design Quality Manager, and enough qualified personnel to ensure safety and Contract compliance. The SSHO reports directly to a senior project (or corporate) official independent from the QC Manager. The SSHO will also serve as a member of the CQC Staff Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly. The CQC staff always maintains a presence at the site during progress of the work and have complete authority and responsibility to take any action necessary to ensure Contract compliance. The CQC staff will be subject to acceptance by the Contracting Officer. Provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Promptly complete and furnish all letters, material submittals, shop drawing submittals, schedules, and all other project documentation to the CQC organization. The CQC organization is responsible for always maintaining these documents and records at the site, except as otherwise acceptable to the Contracting Officer.

1.6.2 Quality Control (QC) Manager

1.6.2.1 Duties

Provide a QC Manager at the work site to implement and manage the QC program. The QC Manager must be employed by the Prime Contractor. The only duties and responsibilities of the QC Manager are to manage and implement the QC program on this Contract. The QC Manager must attend the Coordination and Mutual Understanding Meeting, perform the three phases of control except for those phases of control designated to be performed by QC Specialists, perform submittal review and approval, ensure testing is performed and provide QC certifications and documentation required in this Contract. The QC Manager is responsible for managing and coordinating the three phases of control and documentation performed by the QC Specialists, testing laboratory personnel and any other inspection and testing personnel required by this Contract. The QC Manager is the manager of all QC activities. The QC manager is responsible for notifying the Special Inspector and Special Inspector of Record of activities which require their review. The QC manager is responsible for coordinating the Special Inspection activities, see paragraph CONTRACTOR'S QUALITY CONTROL (QC) MANAGER, in Section 01 45 35 SPECIAL INSPECTIONS. The QC manager is responsible for the quality control for Secure Spaces, Controlled Areas, Sound Rated, and perimeter construction.

1.6.2.2 Qualifications

The QC Manager must be an individual with a minimum of 10 years combined experience in the following positions: Project Superintendent, QC Manager, Project Manager, Project Engineer or Construction Manager on similar size and type construction Contracts which included the major trades that are part of this Contract. The individual must have at least 2 years experience as a QC Manager. The individual must be familiar with the requirements of EM 385-1-1 and have experience in the areas of hazard identification, safety compliance, and sustainability.

The QC Manager and all members of the QC organization must be capable of reading, writing, and conversing fluently in the English language.

1.6.2.3 Construction Quality Management Training

In addition to the above experience and education requirements, the QC Manager and all members of the QC team must have completed the CQM for Contractors course. If the QC Manager does not have a current certification, obtain the CQM for Contractors course certification within 90 days of award. This course is periodically offered by the Naval Facilities Engineering Systems Command and the Army Corps of Engineers. Contact the Contracting Officer for information on the next scheduled class.

The Construction Quality Management Training certificate expires after 5 years. If the QC Manager's certificate has expired, retake the course to remain current.

1.6.3 Organizational Changes

Maintain the QC staff with personnel as required by the specification section at all times. When it is necessary to make changes to the QC staff, revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

1.6.4 Design Quality Control (DQC) Manager

The DQC Manager must be a member of the QC organization, must coordinate actions with the QC Manager, and must not be subordinate to the Project Superintendent or the Project Manager. The DQC Manager may also act as the CxC if all CxC qualifications are met.

1.6.4.1 Qualifications

- a. Must be a person who has verifiable engineering or architectural design experience and is a registered professional engineer or architect.

1.6.4.2 Responsibilities

- a. Be responsible for the design integrity, professional design standards, and all design services required.

1.6.5 Alternate Quality Control (QC) Manager Duties and Qualifications

Designate an alternate for the QC Manager at the work site to serve in the event of the designated QC Manager's absence. The qualification requirements for the Alternate QC Manager must be the same as for the QC Manager.

1.6.6 Assistant Quality Control (QC) Manager Duties and Qualifications

Provide a full-time assistant to the QC Manager at the work site to perform the three phases of control, perform submittal review, ensure testing is performed, and prepare QC certifications and documentation required by this Contract. The Assistant QC Manager must be on the work site during supplemental work shifts[beyond the regular shift] and perform the duties of the QC Manager during such supplemental shift work. The individual must be familiar with the requirements of EM 385-1-1 and have experience in the areas of hazard identification and safety compliance.

The Assistant QC Manager must be capable of reading, writing, and conversing fluently in the English language.

1.6.7 Commissioning

Commissioning (Cx) is a systematic, quality-focused process for delivery of a project focusing on verifying and documenting all commissioned systems and assemblies are installed, tested, and operating as they were planned and designed to meet the project requirements. The Quality Control requirements outlined in this specification section are key in supporting the objectives of the Cx process, specifically coordinating testing, documenting, and verifying proper system operation. Properly executed the Quality Control support of Cx ensures timely execution of necessary tasks to deliver the fully commissioned and operating systems in coordination with the overall construction and project schedule.

Provide Cx in addition to the quality control requirements of this section and not as a substitute for quality control requirements. The QC Manager is responsible for carrying out the three phases of control while ensuring the functional performance and integrated systems tests are coordinated

with the Cx provider as required for each system to be commissioned.

1.6.7.1 Certificate of Readiness

The QC Manager must issue a Certificate of Readiness for Government approval for each system to be commissioned. Schedule Functional Performance Tests for each system only after the Certificate of Readiness has been approved by the Government for the system. The Certificate of Readiness certifies that all required inspections have been completed and deficiencies that were identified through any prior review, inspection, or test activity have been corrected before the start of Functional Performance Tests. Refer to Cx requirements in Section 01 91 00.15 BUILDING COMMISSIONING for a list of systems to be commissioned and detailed requirements for the Cx provider.

1.6.8 Quality Control (QC) Specialists

Provide a separate QC Specialist at the work site for each of the areas as listed in the Matrix listed below, who must assist and report to the QC Manager and who may perform production related duties but must be allowed sufficient time to perform their assigned quality control duties. These individuals or specialized technical companies are directly employed by the Prime Contractor and cannot be employed by a supplier or subcontractor on this project. A single person can cover more than one area provided that the single person is qualified to perform quality control activities in each designated and that workload allows. QC Specialists must be physically present at the work site with frequency as indicated in the Experience Matrix below, to participate in the QC Meetings, perform the three phases of control, including participation in Preparatory and Initial Phase meetings, and to perform and document Follow-up inspections as an extension of the QC Manager for each definable feature of work in their area of responsibility. QC Specialist must assist and be present for training events, and Critical System Acceptance inspections by the Government. Qualification, experience, Area of Responsibility, and frequency of QC surveillance are provided in Matrix listed herein.

Experience Matrix		
1. Area	2-1. Qualification 2-2. Experience	3-1. Area of Responsibility 3-2. Frequency
[Civil]	[2-1. Graduate Civil Engineer or Construction Manager with [a professional engineer registration [in the state of [____]], and] 2-2. 2 years experience in the type of work being performed on this project or technician with 5 years related experience]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]

[Mechanical]	[2-1. Graduate Mechanical Engineer with [a professional engineer registration [in the state of [____]], and] 2-2. 2 years experience or person with 5 years of experience supervising mechanical features of work in the field with a construction company]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Electrical]	[2-1. Graduate Electrical Engineer with [a professional engineer registration [in the state of [____]], and] 2-2. 2 years related experience or person 5 years of experience supervising electrical features of work in the field with a construction company]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Structural]	[2-1. Graduate Civil Engineer (with Structural Track or Focus) or Construction Manager with [a professional engineer registration [in the state of [____]], and] 2-2. 2 years experience or person 5 years of experience supervising structural features of work in the field with a construction company]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Architectural]	[2-1. Graduate Architect with [a registered architect [in the state of [____]], and] 2-2. 2 years experience or person with 5 years related experience]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Environmental]	[2-1. Graduate Environmental Engineer with [a professional engineer registration [in the state of [____]], and] 2-2. 3 years experience]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]

[Submittals]	[2-1. Submittal Clerk 2-2. 1 year experience]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Occupied Family Housing]	[2-1. Person, customer relations type, 2-2. Coordinator experience]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Concrete, Pavements and Soils]	[2-1. Materials Technician 2-2. 2 years experience for the appropriate area]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Testing, Adjusting and Balancing (TAB) Personnel]	[2.1. TAB Team Field Leader must be a member of AABC or an experienced technician of the firm certified by the NEBB 2-2. 3 years experience immediately preceding this Contract]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Roofing Manufacturer's Technical Representative]	[2-1. Installation and testing of roofing systems, Section 07 53 23 ETHYLENE-PROPYLENE-DIENE-MONOMER ROOFING 2-2. 5 years experience minimum]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [Full-time] during installation and including final inspection.]
[Mechanical Inspector, International Code Council (ICC) Certified]	[2-1. Installation and testing of boilers, Section 23 52 49.00 20 STEAM BOILERS AND EQUIPMENT (500,000 - 18,000,000 BTU/HR) 2-2. 5 years experience minimum]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [Minimum three times a week during installation and full-time during testing] during installation and including final inspection.]

[Geotechnical]	[2-1. [____] 2-2. [____] years of experience]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Telecommunications]	[2-1. [____] 2-2. [____] years of experience]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Low-Voltage Specialties/ESS]	[2-1. [____] 2-2. [____] years of experience]	[3-1. Area of Responsibility: [____] 3-2. Frequency of QC surveillance and inspection will be [____] during installation and including final inspection.]
[Fire Protection QC Specialist (FPQC)]	[Note: See paragraph FIRE PROTECTION QC SPECIALIST (FPQC)]	[Note: See paragraph FIRE PROTECTION QC SPECIALIST (FPQC)]
[Building Envelope QC Specialist]	[2-1. Roofing Manufacturer's Technical Representative 2-2. 5 years minimum with roofing system used]	[3-1. Area of Responsibility: Installation and testing of roofing. 3-2. Frequency of QC surveillance and inspection will be once a week during installation, once a week during flashing installation and full-time during roof testing.]
[____]	[____]	[____]

1.6.8.1 Fire Protection QC Specialist (FPQC)

Provide a Fire Protection Quality Control Specialist (FPQC) within the QC organization to perform quality control related activities as specified herein on fire protection and life safety systems installed under this Contract.

1.6.8.1.1 Qualifications

The FPQC must have the following qualifications:

- a. Be a registered Professional Engineer (P.E.) licensed by a Licensing

Board in the United States, the District of Columbia, Guam or Puerto Rico, having passed the National Council of Examiners for Engineering and Surveying (NCEES) examination specifically in the discipline of Fire Protection Engineering.

- b. Have a minimum of 5 years of Fire Protection Engineering experience on projects of similar relevance and complexity to the fire protection work specified under this Contract.
- c. Other than the contractual obligations with the Prime Contractor, the FPQC must have no other business relationship (i.e., employee, owner, partner, operating officer, distributor, salesman, technical representative, family relationship, or financial investment) with the Prime Contractor or subcontractors.
- d. Be employed by an independent engineering firm or company or be the Fire Protection Engineer on the Prime Contractor's Design-Build team. The firm may identify multiple, to a maximum of five, licensed Fire Protection Engineers for the performance of the duties under this Contract but must submit the names and qualifications for Government approval for all individuals identified prior to them performing any work under this Contract. These individuals may not be substituted without prior approval from the Contracting Officer.

1.6.8.1.2 Responsibilities

FPQC duties and responsibilities:

- a. Assist in the development of the QC Plan including the Testing Plan and Log and executing the three phases of control for work involving the installation and testing of fire protection and life safety systems as an extension of the QC Manager.
- b. Participate in project QC Meetings. Participate in Preparatory and Initial Phase meetings and perform and Follow-up inspections for work involving the installation and testing of fire protection and life safety systems.
- c. Review and certify that all submittals pertaining to fire protection and life safety systems are complete and accurate prior to submission to the Government for surveillance approval. Forward each submittal reviewed by the FPQC to the Government for surveillance within 10 working days of FPQC certification. The FPQC Specialist is responsible for ensuring submittals are complete and accurate and all corrections have been made prior to submission to the Government. The Government reserves the right to reject any submittal that has not first been reviewed and certified by the FPQC and so marked, in writing, attesting to such review and completeness of the submittal.
- d. The Government reserves the right to reject any submittal or construction that is not in compliance to Contract. Government reviews do not relieve the Contractor responsibility for providing adequate quality control measures and do not constitute or imply acceptance of Contract variation.
- e. Perform construction surveillance in accordance with the Schedule of Fire Protection System Inspections. Construction surveillance includes but is not limited to performing periodic on-site inspections during construction at specified milestones, performing a pre-final

inspection of installed systems and witnessing functional testing; and participating and documenting in an on-site final acceptance inspection of fire protection and life safety systems with the Government FPE.

- f. Document inspection results on a FPQC report prepared each day inspections are performed. The report must include a description of the visual inspection or observation performed, a written summary of findings, a conclusion on compliance with the Contract documents, and signature of the FPQC Specialist. In person inspection and Remote inspections must be documented via video (.mp4) or photo (.jpeg). Video/photographic documentation must include before and after conditions and physical measurements.] Forward the FPQC daily report to the QC Manager who must include the report with the submission of their daily QC Report to the Government each day. Every site visit by the FPQC must be documented on a FPQC daily report.

1.6.8.1.3 Schedule of Fire Protection System Inspections

A schedule, prepared by the Fire Protection DOR, which lists each of the required visual inspections and observations required by the FPQC. The schedule is included at the end of this UFGS section.

1.6.8.2 Quality Control (QC) for Secure Spaces, Controlled Areas, and Sound Rated Perimeter Construction

1.6.8.2.1 Periodic (Follow-Up Phase) Inspections

Once construction begins, perform periodic inspections of [Secure Space][Controlled Area][Sound Rated Area] identified in the Contract drawings at least once every 2 weeks. Increase frequency to weekly inspections within 30 days of planned acceptance testing. Coordinate periodic inspections with the appointed Government Site Security Manager (SSM) responsible for ensuring the assembly meets the requirements for accreditation. Inspections must verify that construction and materials comply with the Contract documents, the description of the assembly in the ASTM E90 Factory Report for acoustical testing, and the approved submittals. Focus inspections on the construction of the sound rated assemblies, perimeter penetrations, perimeter doors, electronic security system, man-bar installation, inspection ports, and TEMPEST countermeasures]. Document periodic inspections in Daily QC Reports.

1.6.8.2.2 Preliminary Inspection

The Government and QC Manager will perform a joint preliminary inspection of the [Secure Space][Controlled Area][Sound Rated Area] after construction of the assembly is complete to verify compliance with the design requirements and other Contract documents. The Contracting Officer [and the appointed Government SSM] will participate in the preliminary inspection. Provide the Contracting Officer a minimum 14 calendar days notification in advance of the preliminary inspection.

As a result of the preliminary inspection, prepare a [Secure Space][Controlled Area][Sound Rated Area] punch list with deficiencies identified. Include with the punch list the estimated date by which the deficiencies will be corrected. Document the preliminary inspection in the Daily QC Report and attach the punch list. Notify the Contracting Officer when deficiencies are corrected. Deficiencies from the Preliminary Inspection must be corrected prior to scheduling the Final

Acceptance Inspection.

1.6.8.2.3 Acceptance Testing for Sound Attenuation

Perform acceptance testing for sound transmission loss of sound rated door assemblies as required in Section 08 34 73 SOUND CONTROL DOOR ASSEMBLIES and Section 09 29 00 GYPSUM BOARD for sound rated assemblies. Acceptance testing must be performed during the preliminary inspection. The Contracting Officer and the appointed Government SSM must witness acceptance testing. Deficiencies identified during acceptance testing must be included in the[Secure Space][Controlled Area][Sound Rated Area] punch list and corrected prior to the final acceptance inspection.

1.6.8.2.4 Acceptance Testing for Electronic Security Systems

Perform acceptance testing for Electronic Security Systems in accordance with Section 28 08 10 ELECTRONIC SECURITY SYSTEM ACCEPTANCE TESTING. Acceptance testing must be performed during the preliminary inspection. The Contracting Officer[and the appointed Government SSM] must witness acceptance testing. Deficiencies identified during acceptance testing must be included in the[Secure Space][Controlled Area][Sound Rated Area] punch list and corrected prior to the Final Inspection.

1.6.8.2.5 Final Inspection

Perform a final inspection of the[Secure Space][Controlled Area][Sound Rated Area] after required testing has been successfully completed as part of the preliminary inspection and all punch list items corrected. Testing is not permitted during the final inspection. QC Manager and Superintendent must attend the final inspection and Government attendees will include the Contracting Officer[and appointed Government SSM]. Request a final inspection by the Contracting Officer a minimum of 14 calendar days in advance.

1.6.9 Special Inspector [and Special Inspector of Record]

The Special Inspector (SI)[and Special Inspector of Record (SIOR)] must be an independent third party hired directly by the Prime Contractor. The SI[and SIOR] must not be a company employee of the Contractor or any subcontractor performing the work to be inspected. The qualifications of the SI and SIOR are defined in Section 01 45 35 SPECIAL INSPECTION.

1.6.10 Submittal Reviewer[s] Duties and Qualifications

Provide[a] Submittal Reviewer[s], other than the QC Manager or CxC, qualified in the discipline[s] being reviewed, to review and certify that the submittals meet the requirements of this Contract prior to certification or approval by the QC Manager.

Each submittal must be reviewed by an individual with 10 years of construction experience.

Each submittal must be reviewed by a registered architect or professional engineer, as applicable.

1.7 SUBMITTAL AND DELIVERABLES REVIEW AND APPROVAL

Procedures for submission, review and approval of submittals are described in Section 01 33 00 SUBMITTAL PROCEDURES. Procedures must include field

verification of relevant dimensions and component characteristics by the QC organization prior to submittal being sent to the Contracting Officer. The CQC organization is responsible for certifying that all submittals and deliverables are in compliance with the Contract. When Section 01 91 00.15 BUILDING COMMISSIONING are included in the Contract, the submittals required by those sections have to be coordinated with Section 01 33 00 SUBMITTAL PROCEDURES to ensure adequate time is allowed for each type of submittal required.

1.8 THREE PHASES OF CONTROL

CQC enables the Contractor to ensure that the construction, including that of subcontractors and suppliers, complies with the requirements of the Contract. At least three phases of control must be conducted by the QC Manager to adequately cover both on-site and off-site work for each definable feature of the construction work as follows:

1.8.1 Preparatory Phase

Document the results of the preparatory phase actions by separate minutes prepared by the QC Manager and attach to the daily CQC report. Instruct applicable workers as to the acceptable level of workmanship required to meet Contract specifications.

Notify the Contracting Officer at least 2 business days in advance of each preparatory phase meeting. The meeting will be conducted by the QC Manager and attended by the QC Specialists, the Project Superintendent, the CxC, the Special Inspector, the Special Inspector of Record, and the foreman responsible for the DFOW. When the DFOW will be accomplished by a subcontractor, that subcontractor's foreman must attend the preparatory phase meeting. This phase is performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. Perform the following prior to beginning work on each DFOW:

- a. Review each paragraph of the applicable specification sections, reference codes, and standards. Make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field. Maintain and make available in the field for use by Government personnel until final acceptance of the work.
- b. Review the Contract drawings.
- c. Verify that field measurements are as indicated on construction or shop drawings or both before confirming product orders, to minimize waste due to excessive materials.
- d. Verify that appropriate shop drawings and submittals for materials and equipment have been submitted and approved. Verify receipt of approved factory test results, when required.
- e. Review the testing plan and ensure that provisions have been made to provide the required QC testing.
- f. Examine the work area to ensure that the required preliminary work has been completed and complies with the Contract and ensure any deficiencies/rework items in the preliminary work have been corrected and confirmed by the Contracting Officer.

- g. Review coordination of product/material delivery to designated prepared areas to execute the work.
- h. Examine the required materials, equipment and sample work to ensure that they are on hand and conform to the approved shop drawings and submitted data and are properly stored.
- i. Check to assure that all materials and equipment have been tested, submitted, and approved.
- j. Discuss specific controls to be used, construction methods, construction tolerances, workmanship standards, and the approach that will be used to provide quality construction by planning ahead and identifying potential problems for each DFOW. Ensure any portion of the plan requiring separate Contracting Officer acceptance has been approved.
- k. Review the APP and appropriate Activity Hazard Analysis (AHA) to ensure that applicable safety requirements are met, and that required Safety Data Sheets (SDS) are submitted.
- l. Review the Cx requirements in accordance with Section 01 91 00.15 BUILDING COMMISSIONING and ensure all preliminary work items have been completed and documented.
- [1][m]. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- [m][n]. Discuss schedule and execution of the initial control phase and confirmation or construction quality compliance.
- [1][m][n][o]. Review Special Inspections required by Section 01 45 35 SPECIAL INSPECTION, the Statement of Special Inspections and the Schedule of Special Inspections.

1.8.2 Initial Phase

Notify the Contracting Officer at least 2 business days in advance of each initial phase. When construction crews are ready to start work on a DFOW, conduct the initial phase with the QC Specialists, the Project Superintendent, the Special Inspector, the Special Inspector of Record, and the foreman responsible for that DFOW. Observe the initial segment of the DFOW to ensure that the work complies with Contract requirements. Document the results of the initial phase in the [daily CQC Report and in the] Initial Phase Checklist. Repeat the initial phase for each new crew to work on-site when acceptable levels of specified quality are not being met. Indicate the exact location of initial phase for definable feature of work for future reference and comparison with follow-up phases. Perform the following for each DFOW:

- a. Check work to ensure that it is in full compliance with Contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full Contract compliance.

Verify required control inspection and testing comply with the Contract.

- c. Establish level of workmanship and verify that it meets the minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve any workmanship issues.
- e. Ensure that testing is performed by the approved laboratory.
- f. Check work procedures for compliance with the APP and the appropriate AHA to ensure that applicable safety requirements are met.
- g. Review project specific work plans (i.e., Cx, HAZMAT Abatement, Stormwater Management) to ensure all preparatory work items have been completed and documented.
- h. Coordinate scheduled work with Special Inspections required by Section 01 45 35 SPECIAL INSPECTIONS, the Statement of Special Inspections and the Schedule of Special Inspections.

1.8.3 Follow-Up Phase

Perform the following for on-going DFOW daily, or more frequently as necessary, until the completion of each DFOW. The Final Follow-Up for any DFOW will clearly note in the daily report the DFOW is completed, and all deficiencies/rework items have been completed in accordance with the paragraph DEFICIENCY/REWORK ITEMS LIST. Each DFOW that has completed the Initial Phase and has not completed the Final Follow-up must be included on each daily report. If no work was performed on that DFOW for the period of that daily report, it must be so noted. Document all Follow-Up activities for DFOWs in the daily CQC Report:

- a. Ensure the work including control testing complies with Contract requirements until completion of that particular work feature. Record checks in the CQC documentation.
- b. Maintain the quality of workmanship required.
- c. Ensure that testing is performed by the approved laboratory.
- d. Ensure that deficiencies/rework items are being corrected. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of work which may be affected by the deficient work.
- e. Do not build upon nor conceal non-conforming work.
- f. Assure manufacturers' representatives have performed necessary inspections if required and perform safety inspections.
- g. Review the Cx requirements in accordance with Section 01 91 00.15 BUILDING COMMISSIONING.

[g][h]. Coordinate scheduled work with Special Inspections required by

Section 01 45 35 SPECIAL INSPECTIONS, the Statement of Special Inspections and the Schedule of Special Inspections.

1.8.4 Additional Preparatory and Initial Phases

Conduct additional preparatory and initial phases on the same DFOW if the quality of on-going work is unacceptable, if there are changes in the applicable QC organization, if there are changes in the on-site production supervision or work crew, if work on a DFOW has not started within 45 days of the initial preparatory meeting or has resumed after 45 days of inactivity, or if other problems develop.

1.8.5 Notification of Three Phases of Control for Off-Site Work

Notify the Contracting Officer at least 2 weeks prior to the start of the preparatory and initial phases.

1.8.6 Deficiency/Rework Items List

The QC Manager must maintain a list of work that does not comply with the Contract, identifying what items need to be corrected, the activity ID number associated with the item, the date the item was originally discovered, the date the item will be corrected by, and the date the item was corrected.

The QC Manager reviews the list at each weekly QC Meeting:

- a. There is no requirement to report a deficiency/rework item that is corrected the same day it is discovered.
- b. No successor task may be advanced beyond the preparatory phase meeting until all deficiencies/rework items have been cleared by the QC Manager and concurred with by the Contracting Officer. This must be confirmed as part of the Preparatory Phase activities.
- c. Attach a copy of the "Deficiency/Rework Items List" to the last daily CQC Report of each month.
- d. The Contractor is responsible for including those items identified by the Contracting Officer.
- e. All deficiencies/rework items must be confirmed as corrected by the QC Manager, and concurred by the Contracting Officer, prior to commencement of any completion inspections per paragraph COMPLETION INSPECTIONS unless specifically exempted by the Contracting Officer.
- f. Non-Compliance with these requirements is grounds for removal in accordance with paragraph ACCEPTANCE OF THE QUALITY CONTROL (QC) and DESIGN QUALITY CONTROL (DQC) PLAN.
- g. All delays, concurrent or related to failure to manage, monitor, control, and correct deficiencies/rework items are entirely the responsibility of the Contractor and can not be made the subject, or any component of any request for additional time or compensation.

1.9 TESTING

Perform specified or required tests to verify that control measures are adequate to provide a product which conforms to Contract requirements.

Upon request, furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and acceptance tests when specified. Procure the services of an U.S. Army Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site or within 10 miles. 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 test documentation requirements, have been prepared.
- e. Record results of all tests taken, both passing and failing on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test. If approved by the Contracting Officer, actual test reports are submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility directly to the Contracting Officer. Failure to submit timely test reports as stated results in nonpayment for related work performed and disapproval of the test facility for this Contract.

1.9.1 Laboratory Accreditation Authorities

All testing laboratories must be validated by the USACE Material Testing Center (MTC) for the tests to be performed. Information on the USACE MTC with web-links to both a list of validated testing laboratories and for the laboratory inspection request for can be found at:
<https://mtc.erdcdren.mil>

1.9.2 Capability Check

The Contracting Officer retains the right to check laboratory equipment in the proposed laboratory and the laboratory technician's testing procedures, techniques, and other items pertinent to testing, for compliance with the standards set forth in this Contract. Laboratories utilized for testing soils, concrete, asphalt, and steel must meet criteria detailed in ASTM D3740 and ASTM E329.

1.9.2.1 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$1,500 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the Contract amount due the Contractor.

1.9.2.2 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no

additional cost to the Government.

1.9.3 Test Results

Cite applicable Contract requirements, tests or analytical procedures used. Provide actual results and include a statement that the item tested or analyzed conforms or fails to conform to specified requirements. If the item fails to conform, notify the Contracting Officer immediately. Conspicuously stamp the cover sheet for each report in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements, whichever is applicable. Test results must be signed by a testing laboratory representative authorized to sign certified test reports. Furnish the signed reports, certifications, and other documentation to the Contracting Officer via the QC Manager.

1.10 COMPLETION INSPECTIONS

1.10.1 Punch-Out Inspection

Near the completion of all work or any increment thereof, established by a completion time stated in the Contract Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the QC Manager must conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings, specifications, and Contract. Include in the punch list any remaining items on the "Deficiency/Rework Items List", that were not corrected prior to the Punch-Out Inspection as approved by the Contracting Officer in accordance with the paragraph DEFICIENCY/REWORK ITEMS LIST. Include within the punch list the estimated date by which the deficiencies will be corrected. Provide a copy of the punch list to the Contracting Officer.

The QC Manager, or staff, must make follow-on inspections to ascertain that all deficiencies have been corrected. All punch list items must be confirmed as corrected by the QC Manager and concurred by the Contracting Officer. Once this is accomplished, notify the Government that the facility is ready for the Government "Pre-Final Inspection".

1.10.2 Pre-Final Inspection

The Government and QC Manager will perform this inspection to verify that the facility is complete and ready to be occupied. A Government "Pre-Final Punch List" will be documented by the QC Manager as a result of this inspection. The QC Manager will ensure that all items on this list are corrected and concurred by the Contracting Officer prior to notifying the Government that a "Final" inspection with the Client can be scheduled. All items noted on the "Pre-Final" inspection must be corrected and concurred by the Contracting Officer in a timely manner and be accomplished before the Contract completion date for the work, or any increment thereof, if the project is divided into increments by separate completion dates unless exceptions are directed by the Contracting Officer.

1.10.3 Final Acceptance Inspection

Notify the Contracting Officer at least 14 calendar days prior to the date a final acceptance inspection can be held. State within the notice that all items previously identified on the pre-final punch list will be corrected and acceptable, along with any other unfinished Contract work, by the date of the final acceptance inspection. The Contractor must be

represented by the QC Manager, the Project Superintendent, and others deemed necessary. Attendees for the Government will include the Contracting Officer, other Government QA personnel, and personnel representing the Client. 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 entitled "Inspection of Construction."

1.11 QUALITY CONTROL (QC) CERTIFICATIONS

1.11.1 Contractor Quality Control (CQC) Report Certification

Contain the following statement within the CQC Report: "On behalf of the Contractor, I certify that this report is complete and correct and equipment and material used, and work performed during this reporting period is in compliance with the Contract drawings and specifications to the best of my knowledge, except as noted in this report."

1.11.2 Completion Certification

Upon completion of work under this Contract, the QC Manager must furnish a certificate to the Contracting Officer attesting that "the work has been completed, inspected, tested and is in compliance with the Contract." Provide a copy of this final QC Certification for completion to the preparer of the Operation & Maintenance (O&M) documentation.

1.12 DOCUMENTATION AND INFORMATION FOR THE CONTRACTING OFFICER

Maintain current and complete records of on-site and off-site QC program operations and activities.

Contact the Contracting Officer for sample forms or print from RMS-QCS as needed. Prior to commencing work on construction, the Contractor must obtain a copy set of the current report forms. The report forms will consist of the Contractor Quality Control (CQC) Report, CQC Report (Continuation Sheet), Contractor Production Report, Contractor Production Report (Continuation Sheet), Preparatory Phase Checklist, Initial Phase Checklist, Testing Plan and Log, and Rework Items List. Unless otherwise provided by the Contracting Officer, Contractor may use the forms provided as related material located at <https://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-45-00>.

1.12.1 Construction Documentation

Reports are required for each day that work is performed and must be attached to the Contractor Quality Control Report prepared for the same day. Maintain current and complete records of on-site and off-site QC program operations and activities. Reports are required for each day work is performed. Account for each calendar day throughout the life of the Contract.

The Project Superintendent and the QC Manager must prepare and sign the Contractor Production and CQC Reports, respectively. Every space on the forms must be filled in. Use N/A if nothing can be reported in one of the spaces. The reporting of work must be identified by terminology consistent with the construction schedule. In the "Remarks" sections of the reports, enter pertinent information including directions received, problems encountered during construction, work progress and delays,

conflicts or errors in the drawings or specifications, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered, a record of visitors to the work site, quality control problem areas, deviations from the QC Plan, construction deficiencies encountered, and meetings held. For each entry in the report(s), identify the Schedule Activity No. that is associated with the entered remark.

1.12.2 Quality Control Activities

CQC and Contractor Production reports will be prepared daily to maintain current records providing factual evidence that required quality control activities and tests have been performed. Include in these records the work of subcontractors and suppliers on an acceptable form that includes, as a minimum, the following information:

- a. The name and area of responsibility of the Contractors and any subcontractors.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When a Network Analysis Schedule (NAS) is used, identify each item of work performed each day by NAS activity number.
- d. Control phase activities performed. Preparatory, and Initial phase Checklists associated with the DFOW referenced to the construction schedule. Follow-up phase activities identified to the DFOW. If testing or specific QC Specialist activities are associated with the Follow-up phase activities for a specific DFOW note this and include those reports.
- e. Test and control activities performed with results and references to specifications and drawings requirements. Identify the control phase (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action in accordance with the paragraph DEFICIENCY/REWORK ITEMS LIST.
- f. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications and drawings requirements.
- g. Submittals and deliverables reviewed, with Contract reference, by whom, and action taken.
- h. Offsite surveillance activities, including actions taken.
- i. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- j. Instructions given/received and conflicts in plans and specifications.
- k. Provide documentation of design quality control activities. For independent design reviews, provide, as a minimum, identification of the[Independent Technical Review (ITR)][Agency Technical Review (ATR)] team and their review comments, responses and the record of resolution of the comments.

1.12.3 Verification Statement

Indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. Cover both conforming and deficient features and include a statement that equipment and materials incorporated in the work and workmanship comply with the Contract.

Furnish the original and one copy of these records in report form to the Government by 10:00 AM the next working day after the date covered by the report. As a minimum, prepare and submit one report for every 7 days of no work and on the last day of a no work period. All calendar days need to be accounted for throughout the life of the Contract. The first report following a day of no work will be for that day only. Reports need to be signed and dated by the QC Manager. Include copies of test reports and copies of reports prepared by all subordinate quality control personnel within the QC Manager Report.

[1.12.4 Reports from the Quality Control (QC) Specialist(s)

Document inspection results on a QC specialist report prepared each day work is performed in their area of responsibility. The report must include a description of the visual inspection or observation performed, a written summary of findings, a conclusion on compliance with the Contract documents, and signature of the QC Specialist. In person inspections must be documented with Video/photographs. Video/photographic documentation of deficiencies must include before and after conditions and physical measurements, as necessary. Forward the QC daily report to the QC Manager who must include the report with the submission of their daily QC Report to the Government each day. Every site visit by the QC Specialist must be documented on a QC Specialist daily report.

]1.12.5 Quality Control Validation

Establish and maintain the following in an electronic folder. Divide folder into a series of tabbed sections as shown below. Ensure folder is updated at each required progress meeting.

- a. CQC Meeting minutes in accordance with paragraph QUALITY CONTROL (QC) MEETINGS.
- b. All completed Preparatory and Initial Phase Checklists, arranged by specification section, further sorted by DFOW referenced to the construction schedule. Submit each individual Phase Checklist the day the phase event occurs as part of the CQC daily report.
- c. All milestone inspections, arranged by Activity Number referenced to the construction schedule.
- d. An up-to-date copy of the Testing Plan and Log with supporting field test reports, arranged by specification section referenced to the DFOW to which individual reports results are associated. Individual field test reports will be submitted within 2 working days after the test is performed in accordance with the paragraph QUALITY CONTROL ACTIVITIES.
- e. Copies of all Contract modifications, arranged in numerical order. Also include documentation that modified work was accomplished.
- f. An up-to-date copy of the paragraph DEFICIENCY/REWORK ITEMS LIST.

- g. Cx documentation in accordance with Section 01 91 00.15 BUILDING COMMISSIONING.

[g][h]. Special Inspection reports.

[g][h][i]. Upon commencement of Completion Inspections of the entire project or any defined portion, maintain up-to-date copies of all punch lists issued by the QC staff to the Contractor and subcontractors and all punch lists issued by the Government in accordance with the paragraph COMPLETION INSPECTIONS.

1.12.6 Testing Plan and Log

As tests are performed, the CxC and the QC Manager will record on the "Testing Plan and Log" the date the test was performed and the date the test results were forwarded to the Contracting Officer. Attach a copy of the updated "Testing Plan and Log" to the last daily CQC Report of each month. Provide a copy of the final "Testing Plan and Log" to the preparer of the Operation & Maintenance (O&M) documentation.

1.12.7 As-Built Drawings

The QC Manager must ensure the as-built drawings, required by Section 01 78 00 CLOSEOUT SUBMITTALS are kept current on a daily basis and marked to show deviations which have been made from the Contract drawings. The as-built drawings document commences with the QC Manager ensuring all amendments, or changes to the Contract prior to Contract award are accurately noted in the initial document set creating the accurate baseline of the Contract prior to any work starting. Ensure each deviation has been identified with the appropriate modifying documentation (e.g., PC No., Modification No., Request for Information No.). The QC Manager [or QC Specialist assigned to an area of responsibility] must initial each revision. Upon completion of work, the QC Manager will furnish a certificate attesting to the accuracy of the as-built drawings prior to submission to the Contracting Officer.

1.13 NOTIFICATION ON NON-COMPLIANCE

The Contracting Officer will notify the Contractor of any detected non-compliance with the Contract. Take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, is 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 will be made the subject of a claim for extension of time for excess costs or damages by the Contractor.

1.14 DELIVERY, STORAGE, AND HANDLING

Designate receiving/storage areas for incoming material to be delivered according to installation schedule and to be placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. Store and handle materials in a manner as to prevent loss from weather and other damage. Keep materials, products, and accessories covered and off the ground, and store in a dry, secure area. Prevent

contact with material that may cause corrosion, discoloration, or staining. Protect all materials and installations from damage by the activities of other trades.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 45 00.15 10

RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)

PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety and Health Requirements Manual

1.2 MEASUREMENT AND PAYMENT

The work of this section is not measured for payment. The Contractor is responsible for the work of this section, without any direct compensation other than the payment received for contract items.

1.3 CONTRACT ADMINISTRATION

The Government will use the Resident Management System (RMS) to assist in its monitoring and administration of this contract. The Government accesses the system using the Government Mode of RMS (RMS GM) and the Contractor accesses the system using the Contractor Mode (RMS CM). The term RMS will be used in the remainder of this section for both RMS GM and RMS CM. The joint Government-Contractor use of RMS facilitates electronic exchange of information and overall management of the contract. The Contractor accesses RMS to record, maintain, input, track, and electronically share information with the Government throughout the contract period in the following areas:

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

1.3.1 Correspondence and Electronic Communications

For ease and speed of communications, exchange correspondence and other documents in electronic format to the maximum extent feasible. [Some documents [such as correspondence, including pay requests and payrolls,] may be required in paper format with original signatures. Paper documents will govern in the event of discrepancy with the electronic version. Contracting Officer will determine which documents require submission of paper copies.???

1.3.2 Other Factors

Other portions of this document have a direct relationship to the

reporting accomplished through RMS. Particular attention is directed to FAR 52.236-15 Schedules for Construction Contracts; FAR 52.232-27 Prompt Payment for Construction Contracts; FAR 52.232-5 Payments Under Fixed-Priced Construction Contracts; Section 01 32 01.00 10 PROJECT SCHEDULE; Section 01 33 00 SUBMITTAL PROCEDURES; Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS; and Section 01 45 00 QUALITY CONTROL.

1.4 RMS SOFTWARE

RMS is a web based application. Download, install and be able to utilize the latest version of RMS within 7 calendar days of receipt of the Notice to Proceed. RMS software, user manuals, access and installation instructions, program updates and training information are available from the RMS website (<https://rms.usace.army.mil>). The Government and the Contractor will have different access authorities to the same contract database through RMS. The common database will be updated automatically each time a user finalizes an entry or change.

1.5 CONTRACT DATABASE - GOVERNMENT

The Government will enter the basic contract award data in RMS prior to granting the Contractor access. The Government entries into RMS will generally be related to submittal reviews, correspondence status, and Quality Assurance(QA)comments, as well as other miscellaneous administrative information.

1.6 CONTRACT DATABASE - CONTRACTOR

Contractor entries into RMS establish, maintain, and update data throughout the duration of the contract. Contractor entries generally include prime and subcontractor information, daily reports, submittals, RFI's, schedule updates and payment requests. RMS includes the ability to import attachments and export reports in many of the modules, including submittals. The Contractor responsibilities for entries in RMS typically include the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

Enter all current Contractor administrative data and information into RMS within 7 calendar days of receiving access to the contract in RMS. This includes, but is not limited to, Contractor's name, address, telephone numbers, management staff, and other required items.

1.6.1.2 Subcontractor Information

Enter all missing subcontractor administrative data and information into RMS CM within seven calendar days of receiving access to the Contract in RMS or within seven calendar days of the signing of the subcontractor agreement for agreements signed at a later date. This includes name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor is listed separately for each trade to be performed.

1.6.1.3 Correspondence

Identify all Contractor correspondence to the Government with a serial number. Prefix correspondence initiated by the Contractor's site office

with "S". Prefix letters initiated by the Contractor's home (main) office with "H". Letters are numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C" or "RFP".

1.6.1.4 Equipment

Enter and maintain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates in accordance with Section 01 45 00 QUALITY CONTROL. Documentation for equipment checks is to be entered under the "Equipment Checks" module of RMS CM.

1.6.1.5 Reports

Track the status of the project using the reports available in RMS. The value of these reports reflects the quality of the data input. These reports include but are not limited to the Progress Payment Request worksheet, Quality Control (QC) comments, Deficiency Tracking Log, Submittal Register Status, and Three-Phase Control worksheets in accordance with Sections 01 22 00.00 10 PRICE AND PAYMENT PROCEDURES, Section 01 32 01.00 10 PROJECT SCHEDULE, 01 33 00 SUBMITTAL PROCEDURES, and 01 45 00 QUALITY CONTROL. Reports are to be entered into their respective modules in RMS CM. These include but are not limited to:

- a. Deficiencies are to be entered under the "QC/QA Deficiencies" module on the QC Daily Report for the date they are identified and corrected.
- b. QC tests are to be entered under the "QC Requirements" module on the QC Daily Report for the date they are performed. For items where multiple tests are done on one sample (e.g. concrete) all tests reports are to be tied to one (CT #)QC Requirements entry for the date the sample was taken. In addition, all field testing and lab reports shall be uploaded under the respective test in the Contractor package.

1.6.1.6 Request For Information (RFI)

Create and track all Requests For Information (RFI) in the RMS Administration Module for Government review and response. Provide status at weekly progress meeting in accordance with Section 01 32 01.00 10 PROJECT SCHEDULE.

1.6.2 Finances

1.6.2.1 Pay Activity Data

Develop and enter a list of pay activities in conjunction with the project schedule in accordance with Section 01 32 01.00 10 PROJECT SCHEDULE. The sum of pay activities equals the total Contract amount, including modifications. Each pay activity must be assigned to a Contract Line Item Number (CLIN). The sum of the activities assigned to a CLIN equals the amount of each CLIN.

1.6.2.2 Payment Requests

Prepare all progress payment requests using RMS. Update the work completed under the Contract at least monthly, measured as percent or as specific quantities. After the update, generate a payment request and

prompt payment certification using RMS. Submit the signed prompt payment certification and payment request as well as supporting data, either electronically or by hard copy. The date the payment request was successfully received by the Government without errors will be the official date of receipt for the Payment Request that starts the Payment Request.

1.6.3 Quality Control (QC)

Enter and track implementation of the 3-phase QC Control System, QC testing, transferred and installed property and warranties in RMS. Prepare daily reports, identify and track deficiencies, document progress of work, and support other Contractor QC requirements in RMS. Maintain all data on a daily basis. Ensure that RMS reflects all quality control methods, tests and actions contained within the Contractor Quality Control (CQC) Plan and Government review comments. Provide within seven calendar days of Government acceptance of the CQC Plan.

1.6.3.1 Quality Control (QC) Reports

The Contractor's Quality Control (QC) Daily Report in RMS is the official report. The Contractor can use other supplemental formats to record QC data, but information from any supplemental formats are to be consolidated and entered into the RMS QC Daily Report. Any supplemental information may be entered into RMS as an attachment to the report. QC Daily Reports must be finalized and signed in RMS within 24 hours after the date covered by the report. Provide the Government a printed signed copy of the QC Daily Report, unless waived by the Contracting Officer. Items to be included in the QC Daily Report include but are not limited to: Preparatory Meeting Material, Initial Inspection Sheets, Testing (Field and Lab), Hot Work Permits, Equipment Inspections, Weekly Toolbox Meetings (sign-in plus training documents) Daily Sign-in Sheets, Photos (especially if they are related to deficiency), Lift Checklists (Standard and Critical), Subcontractor Daily Reports, Weekly Progress Meeting Minutes. All documents uploaded to the QC Daily Report Document Package shall be separate .pdf files.

1.6.3.2 Deficiency Tracking.

Use the QC Daily Report Module to enter and track deficiencies. Deficiencies identified and entered into RMS by the Contractor or the Government will be sequentially numbered with a QC or QA prefix for tracking purposes. Enter each deficiency into RMS the same day that the deficiency is identified. Monitor, track and resolve all QC and QA entered deficiencies. A deficiency is not considered to be corrected until the Government indicates concurrence in RMS.

1.6.3.3 Three-Phase Control Meetings

Maintain scheduled and actual dates and times of preparatory and initial control meetings in RMS, and upload meeting minutes of the meetings to the QC Daily Report document package for the date they are conducted. Worksheets for the three-phase control meetings are generated within RMS. Dates of the three-phase control meetings are to be documented in the "Preparatory/Initial Inspections" module on the QC Report for the date they are conducted.

1.6.3.4 Labor and Equipment Hours

Enter labor and equipment exposure hours on a daily basis. Roll up the labor and equipment exposure data into a monthly exposure report. Labor and Equipment hours are to be tracked via the "Labor/Equipment Hours" module in RMS. Total equipment hours (idle + working) for each piece of equipment on site should equal the number of hours in the work day unless it was mobilized or demobilized on that day.

1.6.3.5 Accident/Safety Reporting

Both the Contractor and the Government enter safety related comments in RMS. The Contractor must monitor, track and show resolution for safety issues in the "Mishap Reporting" module of the QC Daily Report area of RMS. In addition, follow all reporting requirements for accidents and incidents as required in EM 385-1-1, Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS and as required by any other applicable Federal, State or local agencies.

1.6.3.6 Definable Features of Work

Enter each feature of work, as defined in the approved CQC Plan, into the RMS QC Module. Any DFOW not titled a specification section in the contract, or multiple DFOW within the same specification shall include the specification number along with the title. A feature of work may be associated with a single or multiple pay activities, however a pay activity is only to be linked to a single feature of work.

1.6.3.7 Activity Hazard Analysis

Import activity hazard analysis electronic document files into the RMS QC Module utilizing the document package manager. Prepare activity hazard analysis in accordance with Section 01 35 26 GOVERNMENT SAFETY REQUIREMENTS.

1.6.4 Submittal Management

The Government will provide the initial submittal register in electronic format. Thereafter, maintain a complete list of submittals, including completion of data columns. Dates when submittals are received and returned by the Government will be included. Use RMS CM to track and transmit submittals. ENG Form 4025, submittal transmittal form, and the submittal register update is produced using RMS. RMS will be used to update, store and exchange submittal registers and transmittals. In addition to requirements stated in specification 01 33 00 SUBMITTAL PROCEDURES, actual submittals are to be stored in RMS CM, using the document package feature, with hard copies also provided. Exception will be where the Contracting Officer specifies only hard copies required, where size of document cannot be saved in RMS CM, and where samples, spare parts, color boards, and full size drawings are to be provided. All submittal items in the submittal register shall be linked to an activity.

1.6.5 Schedule

Enter and update the contract project schedule in RMS by either manually entering all schedule data or by importing the Standard Data Exchange Format (SDEF) file, based on the requirements in Section 01 32 01.00 13 PROJECT SCHEDULE.

1.6.6 Closeout

Closeout documents, processes and forms are managed and tracked in RMS by both the Contractor and the Government. Ensure that all closeout documents are entered, completed and documented within RMS.

1.7 IMPLEMENTATION

Use of RMS as described in the preceding paragraphs is mandatory. Ensure that sufficient resources are available to maintain contract data within the RMS system. RMS is an integral part of the Contractor's required management of quality control.

1.8 NOTIFICATION OF NONCOMPLIANCE

Take corrective action within seven calendar days after receipt of notice of RMS non-compliance by the Contracting Officer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 45 35

SPECIAL INSPECTIONS

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.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 7-16 (2017; Errata 2018; Supp 1 2018) Minimum Design Loads and Associated Criteria for Buildings and Other Structures

INTERNATIONAL CODE COUNCIL (ICC)

ICC IBC (2021) International Building Code

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 3-301-01 (2023) Structural Engineering

1.2 GENERAL REQUIREMENTS

Perform Special Inspections in accordance with the Statement of Special Inspections, Schedule of Special Inspections and Chapter 17 of ICC IBC. The Statement of Special Inspections and Schedule of Special Inspections are to be generated by the Designer(s) of Record and submitted for approval. Special Inspections are to be performed by an independent third party and are intended to ensure that the work of the Prime Contractor is in accordance with the Contract Documents and applicable building codes. Special inspections do not take the place of the three phases of control inspections performed by the Contractor's QC Manager or any testing and inspections required by other sections of the specifications.

Structural observations will be performed by the Structural Engineer of Record on the Contractor's Design-Build team. The Contractor must provide notification to the Structural Engineer of Record and Contracting Officer 14 days prior to the following points of construction to allow for structural observation:

- a. Points of construction that require structural observations are to be identified by the SER and accepted by the Government during the design phase.

1.3 DEFINITIONS

1.3.1 Continuous Special Inspections

Continuous Special Inspections is the constant monitoring of specific tasks by a special inspector. These inspections must be carried out continuously over the duration of the particular tasks.

1.3.2 Perform

Perform these Special Inspections tasks for each welded joint or member.

1.3.3 Observe

Observe these Special Inspections items on a periodic daily basis. Operations need not be delayed pending these inspections.

1.3.4 Special Inspector (SI)

A qualified person retained by the Contractor and approved by the Contracting Officer as having the competence necessary to inspect a particular type of construction requiring Special Inspections. The SI must be an independent third party hired directly by the Prime Contractor.

1.3.5 Associate Special Inspector (ASI)

A qualified person who assists the SI in performing Special Inspections but must perform inspection under the direct supervision of the SI and cannot perform inspections without the SI on site.

1.3.6 Third Party

A Special inspector must not be an employee of the Contractor or of any Sub-Contractor performing the work to be inspected.

1.3.7 Special Inspector of Record (SIOR)

A licensed engineer in responsible charge of supervision of all special inspectors for the project and approved by the Contracting Officer. The SIOR must be an independent third party entity hired directly by the Prime Contractor.

1.3.8 Contracting Officer

The Government official having overall authority for administrative contracting actions. Certain contracting actions may be delegated to the Contracting Officer's Representative (COR).

1.3.9 Contractor's Quality Control (QC) Manager

An individual retained by the Prime Contractor and qualified in accordance with the Section 01 45 00 QUALITY CONTROL having the overall responsibility for the Contractor's QC organization.

1.3.10 Structural Engineer of Record (SER)

A registered design professional retained by the Prime Contractor responsible for the overall design and review of submittal documents prepared by others. The SER is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws in the state in which the design professional works. The SER is also referred to as the Engineer of Record (EOR) in design code documents.

1.3.11 Statement of Special Inspections (SSI)

A document developed by the SER identifying the material, systems,

components and work required to have Special Inspections. This statement is to be developed by the SER during the design phase.

1.3.12 Schedule of Special Inspections (SSI)

A schedule which lists each of the required Special Inspections, the extent to which each Special Inspection is to be performed, and the required frequency for each in accordance with ICC IBC Chapter 17. This schedule is to be developed by the SER during the design phase.

1.3.13 Designated Seismic Systems (DSS)

Those nonstructural components that require design in accordance with ASCE 7-16 Chapter 13 and for which the component importance factor, I_p , is greater than 1.0. This designation applies to systems that are required to be operational following the Design Earthquake for RC I - IV structures and following the MCER for RC V structures. All systems in RC V facilities designated as MC-1 in accordance with UFC 3-301-02 are considered part of the Designated Seismic Systems. [Designated Seismic Systems will have an Importance Factor $I_p = 1.5$].

1.3.14 Definable Feature of Work (DFOW)

An inspection group that is separate and distinct from other inspection groups, having inspection requirements or inspectors that are unique.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.]for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

SIOR Letter of Acceptance; G

Special Inspections Project Manual; G

Special Inspections Agency's Written NDT Practices with method and evidence of regular equipment calibration where applicable

Statement Of Special Inspections; G

Schedule Of Special Inspections; G

SD-06 Test Reports

Special Inspections Daily Reports

Special Inspections Biweekly Reports

SD-07 Certificates

AISC Certified Steel Fabricator

Steel Truss Plant Quality Assurance Program

Wood Truss Plant Quality Assurance Program

AC472 Accreditation

Steel Joist Institute Membership

Precast Concrete Institute (PCI) Certified Plant

Certificate of Compliance

Special Inspector of Record Qualifications; G

Special Inspector Qualifications; G

Qualification Records for NDT technicians

SD-11 Closeout Submittals

Comprehensive Final Report of Special Inspections; G

1.5 SPECIAL INSPECTOR QUALIFICATIONS

Submit qualifications for each special inspector and the special inspector of record.

1.5.1 Steel Construction and High Strength Bolting

1.5.1.1 Special Inspector

- a. ICC Structural Steel and Bolting Special Inspector certificate with one year of related experience, or
- b. Registered Professional Engineer with three years of related experience

1.5.1.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.2 Welding Structural Steel

1.5.2.1 Special Inspector

- a. ICC Structural Welding Special Inspector certificate with one year of related experience, or
- b. AWS Certified Welding Inspector

1.5.2.2 Associate Special Inspector

AWS Certified Associate Welding Inspector

1.5.3 Nondestructive Testing of Welds

1.5.3.1 Special Inspector

NDT Level III Certificate

1.5.3.2 Associate Special Inspector

NDT Level II Certificate plus one year of related experience

1.5.4 Cold Formed Steel Framing

1.5.4.1 Special Inspector

- a. ICC Structural Steel and Bolting Special Inspector certificate with one year of related experience, or
- b. ICC Commercial Building Inspector with one year of experience, or
- c. ICC Residential Building Inspector with one year of experience, or
- d. Registered Professional Engineer with three years related experience

1.5.4.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.5 Concrete Construction

1.5.5.1 Special Inspector

- a. ICC Reinforced Concrete Special Inspector Certificate with one year of related experience, or
- b. ACI Concrete Construction Special Inspector, or
- c. Registered Professional Engineer with three years of related experience

1.5.5.2 Associate Special Inspector

- a. ACI Concrete Construction Special Inspector in Training, or
- b. Engineer-In-Training with one year of related experience

1.5.6 Prestressed Concrete Construction

1.5.6.1 Special Inspector

- a. ICC Pre-stressed Special Inspector Certificate with one year of related experience, or
- b. PCI Quality Control Technician/ Inspector Level II Certificate with one year of related experience, or
- c. Registered Professional Engineer with three years of related experience

1.5.6.2 Associate Special Inspector

- a. PCI Quality Control Technician/ Inspector Level I Certificate with one year of related experience, or
- b. Engineer-In-Training with one year of related experience

1.5.7 Post-tensioned Concrete Construction

1.5.7.1 Special Inspector

- a. PTI Level 2 Unbonded PT Inspector Certificate, or
- b. Registered Professional Engineer with three years of related experience

1.5.7.2 Associate Special Inspector

- a. PTI Level 1 Unbonded PT Inspector Certificate with one year of related experience, or
- b. Engineer-In-Training with one year of related experience

1.5.8 Masonry Construction

1.5.8.1 Special Inspector

- a. ICC Structural Masonry Special Inspector Certificate with one year of related experience, or
- b. Registered Professional Engineer with three years of related experience

1.5.8.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.9 Wood

1.5.9.1 Special Inspector

- a. ICC Commercial Building Inspector Certificate with one year of related experience, or
- b. ICC Residential Building Inspector with one year of experience, or
- c. Registered Professional Engineer with three years of related experience

1.5.9.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.10 Verification of Site Soil Condition, Fill Placement and Load-Bearing Requirements

1.5.10.1 Special Inspector

- a. ICC Soils Special Inspector Certificate with one year of related experience, or
- b. NICET Soils Technician Level II Certificate in Construction Material Testing, or
- c. Geologist-In-Training with three years of related experience, or
- d. Registered Professional Engineer with three years of related experience

1.5.10.2 Associate Special Inspector

- a. NICET Soils Technician Level I Certificate in Construction Material Testing with one year of related experience, or
- b. Engineer-In-Training with one year of related experience

1.5.11 Deep Foundations

1.5.11.1 Special Inspector

- a. NICET Soils Technician Level II Certificate in Construction Material Testing, or
- b. Geologist-In-Training with three years of related experience, or
- c. Registered Professional Engineer with three years of related experience

1.5.11.2 Associate Special Inspector

- a. NICET Soils Technician Level I Certificate in Construction Material Testing with one year of related experience, or
- b. NICET Geotechnical Engineering Technician Level I Construction or Generalist Certificate with one year of related experience, or
- c. Engineer-In-Training with one year of related experience

1.5.12 Sprayed Fire Resistant Material

1.5.12.1 Special Inspector

- a. ICC Spray-applied Fireproofing Special Inspector Certificate, or
- b. ICC Fire Inspector I Certificate with one year of related experience, or
- c. Registered Professional Engineer or Architect with related experience

1.5.12.2 Associate Special Inspector

Engineer-In-Training with one year of related experience

1.5.13 Mastic and Intumescent Fire Resistant Coatings

1.5.13.1 Special Inspector

- a. ICC Spray-applied Fireproofing Special Inspector Certificate, or
- b. ICC Fire Inspector I Certificate with one year of related experience, or
- c. Registered Professional Engineer or Architect with related experience

1.5.13.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.14 Exterior Insulation and Finish System (EIFS)

1.5.14.1 Special Inspector

- a. AWCI EIFS Inspector Certificate, or
- b. Exterior Design Institute Certificate, or
- c. Registered Professional Engineer or Architect with related experience

1.5.14.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.15 Fire-Resistant Penetrations and Joints

1.5.15.1 Special Inspector

- a. Passed the UL Firestop Exam with one year of related experience, or
- b. Passed the FM Firestop Exam with one year of related experience, or
- c. Registered Professional Engineer with related experience

1.5.15.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.16 Smoke Control

1.5.16.1 Special Inspector

- a. AABC Technician Certification with one year of related experience, or
- b. Registered Professional Engineer with related experience

1.5.16.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.17 Special Inspector of Record (SIOR)

Registered Professional Engineer with five years of related experience.

PART 2 PRODUCTS

2.1 FABRICATOR SPECIAL INSPECTIONS

Special Inspections of fabricator's work performed in the fabricator's shop is required to be inspected in accordance with the Statement of Special Inspections and the Schedule of Special Inspections unless the fabricator is certified by the approved agency to perform such work without Special Inspections. Submit the following certification certifications, as applicable to the Contracting Officer for information to allow work performed in the fabricator's shop to not be subjected to Special Inspections.

AISC Certified Steel Fabricator.

Truss Plate Institute (TPI) steel truss plant quality assurance program certification.

Truss Plate Institute (TPI) wood truss plant quality assurance program certification.

International Accreditation Service, AC472 Accreditation

Steel Joist Institute Membership

Precast Concrete Institute (PCI) Certified Plant, Group C

At the completion of fabrication, submit a certificate of compliance, to be included with the comprehensive final report of Special Inspections, stating that the materials supplied and work performed by the fabricator are in accordance with the construction documents.

PART 3 EXECUTION

3.1 RESPONSIBILITIES

[3.1.1 Special Inspector of Record

- a. Supervise all Special Inspectors required by the Contract Documents and the IBC.
- b. Submit a SIOR Letter of Acceptance to the Contracting Officer attesting to acceptance of the duties of SIOR, signed and sealed by the SIOR.
- c. Verify the qualifications of all of the Special Inspectors.
- d. Verify the qualifications of fabricators.
- [e. Submit Special Inspections agency's written NDT practices for the monitoring and control of the agency's operations to include the following:
 - (1) The agency's procedures for the selection and administration of inspection personnel, describing the training, experience and examination requirements for qualifications and certification of inspection personnel.
 - (2) The agency's inspection procedures, including general inspection, material controls, and visual welding inspection.
- f. Submit qualification records for nondestructive testing (NDT) technicians designated for the project.
- g. Submit NDT procedures and equipment calibration records for NDT to be performed and equipment to be used for the project.
-] h. Prepare a Special Inspections Project Manual, which must cover the following:
 - (1) Roles and responsibilities of the following individuals during Special Inspections: SIOR, SI, ASI, General Contractor's QC Manager and SER.
 - (2) Organizational chart or communication plan, indicating lines of

communication.

- (3) Contractor's internal plan for scheduling inspections. Address items such as timeliness of inspection requests, who to contact for inspection requests, and availability of alternate inspectors.
- (4) Indicate the Government reporting requirements.
- (5) Propose forms or templates to be used by SI and SIOR to document inspections.
- (6) Indicate procedures for tracking nonconforming work and verification that corrective work is complete.
- (7) Indicate how the SIOR and SI will participate in weekly QC meetings.
- (8) Indicate how Special Inspections of shop fabricated items will be handled when the fabricator's shop is not certified in accordance with paragraph FABRICATOR SPECIAL INSPECTIONS.
- (9) Include a section in the manual that covers each specific item requiring Special Inspections that is indicated on the Schedule of Special Inspections. Provide names and qualifications of each special inspector who will be performing the Special Inspections for each specific item. Provide detail on how the Special Inspections are to be carried out for each item so that the expectations are clear for the General Contractor and the Subcontractor performing the work.

Make a copy of the Special Inspections Project Manual available on the job site during construction. Submit a copy of the Special Inspections Project Manual for approval.

- i. Attend coordination and mutual understanding meeting where the information in the Special Inspections Project Manual will be reviewed to verify that all parties have a clear understanding of the Special Inspections provisions and the individual duties and responsibilities of each party.
- j. Maintain a 3-ring binder for the Special Inspector's daily and biweekly reports and the Special Inspections Project Manual. This file must be located in a conspicuous place in the project trailer/office to allow review by the Contracting Officer and the SER.
- k. Submit a copy of the Special Inspector's daily reports to the QC Manager.
- l. Discrepancies that are observed during Special Inspections must be reported to the QC Manager for correction. If discrepancies are not corrected before the special inspector leaves the site the observed discrepancies must be documented in the daily report.
- m. Submit a biweekly Special Inspections report until all work requiring Special Inspections is complete. A report is required for each biweekly period in which Special Inspections activity occurs, and must include the following:
 - (1) A brief summary of the work performed during the reporting time

frame.

- (2) Changes and discrepancies with the drawings, specifications[and mechanical or electrical component certification,] that were observed during the reporting period.
- (3) Discrepancies which were resolved or corrected.
- (4) A list of nonconforming items requiring resolution.
- (5) All applicable test results including nondestructive testing reports.

- n. At the completion of the project submit a comprehensive final report of Special Inspections that documents the Special Inspections completed for the project including corrections of all discrepancies noted in the daily reports. The comprehensive final report of Special Inspections must be signed, dated and bear the seal of the SIOR.

]3.1.2 Quality Control Manager

- [a. Supervise all Special Inspectors required by the Contract Documents and the IBC.
 - b. Verify the qualifications of all of the Special Inspectors.
 - c. Verify the qualifications of fabricators.
 - d. Maintain a 3-ring binder for the Special Inspector's daily and biweekly reports. This file must be located in a conspicuous place in the project trailer/office to allow review by the Contracting Officer and the SER.
-] [a.][e.] Maintain a rework items list that includes discrepancies noted on the Special Inspectors daily report.

3.1.3 Special Inspectors

- a. Inspect all elements of the project for which the special inspector is qualified to inspect and are identified in the Schedule of Special Inspections.
- b. Attend preparatory phase meetings related to the Definable Feature of Work (DFOW) for which the special inspector is qualified to inspect.
- [c. Submit Special Inspections agency's written NDT practices for the monitoring and control of the agency's operations to include the following:
 - (1) The agency's procedures for the selection and administration of inspection personnel, describing the training, experience and examination requirements for qualifications and certification of inspection personnel.
 - (2) The agency's inspection procedures, including general inspection, material controls, and visual welding inspection.
- d. Submit qualification records for nondestructive testing (NDT) technicians designated for the project.

- e. Submit NDT procedures and equipment calibration records for NDT to be performed and equipment to be used for the project.
-] f. Submit a copy of the daily reports to the QC Manager.
- g. Report discrepancies that are observed during Special Inspections to the QC Manager for correction. If discrepancies are not corrected before the special inspector leaves the site the observed discrepancies must be documented in the daily report.
- h. Submit a biweekly Special Inspection Report until all inspections are complete. A report is required for each biweekly period in which Special Inspections activity occurs, and must include the following:
 - (1) A brief summary of the work performed during the reporting time frame.
 - (2) Changes and discrepancies with the drawings, specifications[and mechanical or electrical component certification,] that were observed during the reporting period.
 - (3) Discrepancies which were resolved or corrected.
 - (4) A list of nonconforming items requiring resolution.
 - (5) All applicable test result including nondestructive testing reports.
- i. At the completion of the project submit a comprehensive final report of Special Inspections that documents the Special Inspections completed for the project and corrections of all discrepancies noted in the daily reports. The comprehensive final report of Special Inspections must be signed, dated and indicate the certification of the special inspector qualifying them to conduct the inspection.
- [k. Submit daily reports to the SIOR.

] [3.1.4 Structural Engineer of Record (SER)

- a. Develop the Statement of Special Inspections and the Schedule of Special Inspections as defined in Chapter 17 of ICC IBC. Submit the Statement of Special Inspections and the Schedule of Special Inspections for approval by the Contracting Officer.

The Statement of Special Inspection must include the following information:

- (1) List of Architectural Designated Seismic Systems.
- (2) List of Mechanical Designated Seismic Systems.
- (3) List of the Electrical Designated Seismic Systems.
- (4) Define the periodic walk-down inspections required by UFC 3-301-01.
- (5) List of elements that are part of the progressive collapse resistance system.

Develop Schedule of Special Inspection using the template located on

the Whole Building Design Guide website at: www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-45-35

- [b. Prior to the start of structural observations submit a written statement identifying the frequency and delineation wind/seismic force resisting system requiring structural observations.
- c. At the conclusion of the structural observations submit a final report of structural observations indicating that the structural observation site visits have been made and identify any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved.
-] [d. Perform a final walk-down inspection of the designated seismic systems for mechanical and electrical components[with the Nonstructural Component Design Review Panel] to ensure that the non-structural elements satisfy life safety mounting requirements as defined in the Statement of Special Inspections.
- e. Submit a report of the final walk-down inspection that includes the following:
 - (1) Record/observations of final site visit
 - (2) Documentation that all required inspections were performed in accordance with the Statement of Special Inspections.
 - (3) Documentation that the Designated Seismic Systems were installed in accordance with the construction documents and the requirements of ICC IBC Chapter 17, as modified by UFC 3-301-01.

]3.2 DEFECTIVE WORK

Check work as it progresses, but failure to detect any defective work or materials must in no way prevent later rejection if defective work or materials are discovered, nor obligate the Contracting Officer to accept such work.

-- End of Section --

SECTION 01 50 00

TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS

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.

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C511 (2017; R 2021) Reduced-Pressure Principle Backflow Prevention Assembly

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (2023; ERTA 4 2023; ERTA 5 2023; ERTA 6 2023) National Electrical Code

NFPA 241 (2022) Standard for Safeguarding Construction, Alteration, and Demolition Operations

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety and Health Requirements Manual

U.S. FEDERAL AVIATION ADMINISTRATION (FAA)

FAA AC 70/7460-1 (2016; Rev L; Change 2) Obstruction Marking and Lighting

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)

MUTCD (2009; Rev 2012) Manual on Uniform Traffic Control Devices

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Site Plan; G

Traffic Control Plan; G

Haul Road Plan; G

Contractor Computer Cybersecurity Compliance Statements

Contractor Temporary Network Cybersecurity Compliance Statements

Permits

SD-06 Test Reports

Backflow Preventer Tests

SD-07 Certificates

Backflow Tester Certification; G

Backflow Preventers Certificate of Full Approval

1.3 CONSTRUCTION SITE PLAN

Prior to the start of work, submit for Government approval a site plan showing the locations and dimensions of temporary facilities (including layouts and details, equipment and material storage area (onsite and offsite), and access and haul routes, avenues of ingress/egress to the fenced area and details of the fence installation. Identify any areas which may have to be graveled to prevent the tracking of mud. Indicate if the use of a supplemental or other staging area is desired. Show locations of safety and construction fences, site trailers, construction entrances, trash dumpsters, temporary sanitary facilities, and worker parking areas.

1.4 BACKFLOW PREVENTERS CERTIFICATE

1.4.1 Backflow Tester Certificate

Prior to testing, submit to the Contracting Officer certification issued by the State or local regulatory agency attesting that the backflow tester has successfully completed a certification course sponsored by the regulatory agency. Tester must not be affiliated with a company participating in other phases of this Contract.

1.4.2 Backflow Prevention Training Certificate

Submit a certificate recognized by the State or local authority that states the Contractor has completed at least 10 hours of training in backflow preventer installations. The certificate must be current.

1.5 CYBERSECURITY DURING CONSTRUCTION

{For Reference Only: This subpart (and its subparts) relates to AC-18, SA-3, CCI-00258.} Meet the following requirements throughout the construction process.

1.5.1 Contractor Computer Equipment

Contractor owned computers may be used for construction. When used, contractor computers must meet the following requirements:

1.5.1.1 Operating System

The operating system must be an operating system currently supported by

the manufacturer of the operating system. The operating system must be current on security patches and operating system manufacturer required updates.

1.5.1.2 Anti-Malware Software

The computer must run anti-malware software from a reputable software manufacturer. Anti-malware software must be a version currently supported by the software manufacturer, must be current on all patches and updates, and must use the latest definitions file. All computers used on this project must be scanned using the installed software at least once per day.

1.5.1.3 Passwords and Passphrases

The passwords and passphrases for all computers must be changed from their default values. Passwords must be a minimum of eight characters with a minimum of one uppercase letter, one lowercase letter, one number and one special character.

1.5.1.4 Contractor Computer Cybersecurity Compliance Statements

Provide a single submittal containing completed Contractor Computer Cybersecurity Compliance Statements for each company using contractor owned computers. Contractor Computer Cybersecurity Compliance Statements must use the template published at <http://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/forms-graphics-tables>. Each Statement must be signed by a cybersecurity representative for the relevant company.

1.5.2 Temporary IP Networks

Temporary contractor-installed IP networks may be used during construction. When used, temporary contractor-installed IP networks must meet the following requirements:

1.5.2.1 Network Boundaries and Connections

The network must not extend outside the project site and must not connect to any IP network other than IP networks provided under this project or Government furnished IP networks provided for this purpose. Any and all network access from outside the project site is prohibited.

1.5.3 Government Access to Network

Government personnel, as defined, prescribed, and identified by the Contracting Officer, must be allowed to have complete and immediate access to the network at any time in order to verify compliance with this specification. Or if there is a Government agency that's responsible, identify that agency.

1.5.4 Temporary Wireless IP Networks

In addition to the other requirements on temporary IP networks, temporary wireless IP (WiFi) networks must not interfere with existing wireless network and must use WPA2 security. Network names (SSID) for wireless networks must be changed from their default values.

1.5.5 Passwords and Passphrases

The passwords and passphrases for all network devices and network access must be changed from their default values. Passwords must be a minimum 8 characters with a minimum of one uppercase letter, one lowercase letter, one number and one special character.

1.5.6 Contractor Temporary Network Cybersecurity Compliance Statements

Provide a single submittal containing completed Contractor Temporary Network Cybersecurity Compliance Statements for each company implementing a temporary IP network. Contractor Temporary Network Cybersecurity Compliance Statements must use the template published at <http://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/forms-graphics-tables>. Each Statement must be signed by a cybersecurity representative for the relevant company. If no temporary IP networks will be used, provide a single copy of the Statement indicating this.

PART 2 PRODUCTS

2.1 TEMPORARY SIGNAGE

2.1.1 Bulletin Board

Immediately upon beginning of work, the Contractor shall provide, and maintain for the duration of the contract, a 36 by 48 inches weather tight bulletin board, having hinged or sliding glazed doors, on which shall be displayed legible copies of (1) the poster entitled "equal employment opportunity is the law" (OFCCP Publication 1420) as required by CONTRACT CLAUSES: EQUAL OPPORTUNITY, AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION, AFFIRMATIVE ACTION FOR SPECIAL DISABLED AND VIETNAM ERA VETERANS, AND AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS; (2) the Notice to Employees Poster (WH Publication 1321); (3) the schedule of minimum wage rates for the contract as required by CONTRACT CLAUSE: DAVIS-BACON ACT; and (4) current safety posters. The bulletin board shall be mounted where and as approved by the Contracting Officer, in a prominent place accessible to all employees of the Contractor and subcontractors, and to applicants for employment. The bulletin board shall remain the property of the Contractor and shall be removed by him upon completion of the contract work.

2.1.2 Project Identification Signs

Erect signs within 15 days after receipt of the notice to proceed. Correct the data required by the safety sign daily, with light colored metallic or non-metallic numerals. Exact location and name of sponsor, to be placed on the sign, shall be determined by the Contracting Officer. Verify with the Contracting Officer, the exact text to be placed on the signs prior to construction of the signs.

2.1.3 Warning Signs

Post temporary signs, tags, and labels to give workers and the public adequate warning and caution of construction hazards according to the EM 385-1-1 Chapter 04. Attach signs to the perimeter fencing every 150 feet warning the public of the presence of construction hazards. Signs must require unauthorized persons to keep out of the construction site. Correct the data required by safety signs daily. Post signs at all points of entry designating the construction site as a hard hat area.

2.2 TEMPORARY TRAFFIC CONTROL

2.2.1 Haul Roads

Construct access and haul roads necessary for proper prosecution of the work under this Contract in accordance with EM 385-1-1 Chapter 04. Construct with suitable grades and widths; avoid sharp curves, blind corners, and dangerous cross traffic. Submit haul road plan for approval. Provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, must be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and haul roads are subject to approval by the Contracting Officer. Lighting must be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations.

2.2.2 Barricades

Erect and maintain temporary barricades to limit public access to hazardous areas. Barricades are 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. Securely place barricades clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

2.3 FENCING

Provide fencing along the construction site and at all open excavations and tunnels to control access by unauthorized personnel. Safety fencing must be highly visible to be seen by pedestrians and vehicular traffic. All fencing must meet the requirements of EM 385-1-1. Remove the fence upon completion and acceptance of the work.

2.3.1 Polyethylene Mesh Safety Fencing

Temporary safety fencing must be a high visibility orange colored, high density polyethylene grid, a minimum of 48 inches high and maximum mesh size of 2 inches. Fencing must extend from the grade to a minimum of 48 inches above the grade and be tightly secured to T-posts spaced as necessary to maintain a rigid and taut fence. Fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection.

2.4 TEMPORARY WIRING

Provide temporary wiring in accordance with EM 385-1-1 Chapter 11, NFPA 241 and NFPA 70. Include monthly inspection and testing of all equipment and apparatus.

2.5 BACKFLOW PREVENTERS

Certificate of Full Approval from FCCCHR List, University of Southern California, attesting that the design, size and make of each backflow preventer has satisfactorily passed the complete sequence of performance testing and evaluation for the respective level of approval. Certificate of Provisional Approval is not acceptable.

Reduced pressure principle type conforming to the applicable requirements AWWA C511. Provide backflow preventers complete with 150 pound flanged cast iron, bronze, or brass mounted gate valve and strainer, stainless steel or bronze, internal parts.

PART 3 EXECUTION

3.1 EMPLOYEE PARKING

Construction Contract employees must park privately owned vehicles in an area designated by the Contracting Officer. Employee parking must not interfere with existing and established parking requirements of the Government installation. It should be noted that contractor and subcontractor employee parking at Ebbing ANGB may be limited and that consideration should be given to off site parking with carpooling to the site.

3.2 AVAILABILITY AND USE OF UTILITY SERVICES

3.2.1 Temporary Utilities

Provide temporary utilities required for construction services and associated testing. Materials may be new or used, must be adequate for the required usage, not create unsafe conditions, and not violate applicable codes and standards.

3.2.2 Payment for Utility Services

- a. All utilities including, water, sewer, electricity, comm, and gas, will be procured and paid for by the Contractor. This includes any utilities which are needed for construction services and performance/acceptance testing. The Contractor is responsible for coordinating with the applicable service provider(s), such as OG&E, and the 188th CES to locate required taps and meter locations.
 - 1) Water. Backflow preventers and separate meters are required when using water from existing service, a main line or fire hydrant. The backflow preventer must be tested for proper operation each time that it's moved. The contractor must have documentation of the testing in-hand to demonstrate that the backflow preventer was tested in its current location.
 - 2) Electricity. Electricity will be available from existing electrical utility service lines on the Ebbing ANGB. Any required extension of the primary electrical distribution system to provide temporary power to the construction site, including contractor temporary buildings or trailers, shall be metered and paid for by the contractor directly to OG&E or other service provider as applicable. Coordinate all work and applicable permits with the service provider and the 188th CES. Contractor shall also pay for the removal of any temporary primary and "service provider" installed secondary lines at the time the extension is constructed and/or removed from service. The Contractor shall furnish all meters, panels, circuit breakers, wiring, transformers and all other incidentals necessary to meet the needs of the equipment and plant used in the work.
- b. The Contractor shall pay all costs incurred in connecting, converting, and transferring the utilities to the work. Make connections, including providing backflow-preventing devices on connections to

domestic water lines; providing meters; and providing transformers; and make disconnections.

- c. The Contractor must provide their own utilities as outlined in paragraph a.

3.2.3 Meters and Temporary Connections

Provide and maintain necessary temporary connections, distribution lines, meters, and meter bases required to measure the amount of each utility used

3.2.4 Initial and Final Meter Reading

Prior to the start of formal construction activities (for existing meters) coordinate with and obtain the current meter readings with the Government and utility providers for proper transfer and billing purposes. Readings for all new meters and accounts will be the responsibility of the contractor. Before completion of the work and final acceptance of the work by the Government, notify the Contracting Officer, in writing, 5 working days before termination is desired. The Government and utility provider will take a final meter reading. Then remove all the temporary distribution lines, meter bases, and associated appurtenances.

3.2.5 Sanitation

Provide and maintain within the construction area minimum field-type, portable, sanitary facilities in accordance with EM 385-1-1 Chapter 02. Locate the facilities behind the construction fence or out of the public view. Clean units and empty wastes at least once a week or more frequently into a municipal, district, or station sanitary sewage system, or remove waste to a commercial facility. Obtain approval from the system owner prior to discharge into a municipal, district, or commercial sanitary sewer system. Penalties or fines associated with improper discharge will be the responsibility of the Contractor. Coordinate with the Contracting Officer and follow station regulations and procedures when discharging into the station sanitary sewer system. Maintain these conveniences at all times. Include provisions for pest control and elimination of odors. Government toilet facilities will not be available to Contractor's personnel.

3.2.6 Telephone and Internet Service

Make arrangements and pay all costs for the installation of contractor telephone and internet service facilities as desired.

3.2.7 Fire Protection

The Contractor shall be responsible for conformance with base fire regulations and NFPA 241, including Appendix A. These regulations are available for review during duty hours at the Base Fire Station located in Building 239. Fire extinguishers required during the construction period shall be furnished and maintained by the Contractor and removed by the Contractor upon acceptance of the facility by the Contracting Officer. No welding/cutting and open flame operation shall be allowed in facilities when automatic fire detection and suppression systems are out of service unless the Contractor posts a fire guard for 24 hours after welding/cutting and open flame operation or certifies the facility fire safe. Remove debris and flammable materials weekly to minimize potential hazards.

3.3 Crane Requirements

Permits will be required for all cranes. The Contractor shall complete Form FAA 7460-1, Notice of Proposed Construction or Alteration and submit to the Federal Aviation Administration (FAA) and Ebbing Field for approval. Contractor shall submit Form FAA 7460-1 to the FAA a minimum 120 days prior to use. Failure to do so may result in delay due to FAA approval. The Contractor shall lower crane booms at the end of each shift when not in use. Also see section 01 35 10.00 46 SPECIAL PROJECT PROCEDURES FOR EBBING FIELD for additional information on FAA 7460.

3.4 Obstruction Lighting of Cranes

Provide a minimum of 2 aviation red or high intensity white obstruction lights on temporary structures (including cranes) over 100 feet above ground level. Light construction and installation must comply with FAA AC 70/7460-1. Lights must be operational during periods of reduced visibility, darkness, and as directed by the Contracting Officer.

3.5 TRAFFIC PROVISIONS

3.5.1 Maintenance of Traffic

- a. Conduct operations in a manner that will not close a thoroughfare or interfere with traffic on railways or highways except with written permission of the Contracting Officer at least 21 calendar days prior to the proposed modification date, and provide a Traffic Control Plan for Government approval detailing the proposed controls to traffic movement for approval. The plan must be in accordance with State and local regulations and the MUTCD, Part VI. Make all notifications and obtain all permits required for modification to traffic movements outside Station's jurisdiction.. Contractor may move oversized and slow-moving vehicles to the worksite provided requirements of the highway authority have been met.
- b. Conduct work so as to minimize obstruction of traffic, and maintain traffic on at least half of the roadway width at all times. Obtain approval from the Contracting Officer prior to starting any activity that will obstruct traffic.
- c. Provide, erect, and maintain, at Contractor's expense, lights, barriers, signals, passageways, detours, and other items, that may be required by the Life Safety Signage, overhead protection authority having jurisdiction.
- d. Provide cones, signs, barricades, lights, or other traffic control devices and personnel required to control traffic. Do not use foil-backed material for temporary pavement marking because of its potential to conduct electricity during accidents involving downed power lines.

3.5.2 Protection of Traffic

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 the work, and the erection and

maintenance of adequate warning, danger, and direction signs, will be as required by the State and local authorities having jurisdiction. Provide self-illuminated (lighted) barricades during hours of darkness. Brightly-colored (orange) vests are required for all personnel working in roadways. Protect the traveling public from damage to person and property. Minimize the interference with public traffic on roads selected for hauling material to and from the site. Investigate the adequacy of existing roads and their allowable load limit. Contractor is responsible for the repair of damage to roads caused by construction operations.

3.5.3 Rush Hour Restrictions

Do not interfere with the peak traffic flows preceding and during normal operations for the duration of the contract without notification to and approval by the Contracting Officer.

3.5.4 Dust Control

Dust control methods and procedures must be approved by the Contracting Officer. Coordinate dust control methods with 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS.

3.6 REDUCED PRESSURE BACKFLOW PREVENTERS

Provide an approved reduced pressure backflow prevention assembly at each location where the Contractor taps into the Government potable water supply.

Perform backflow preventer tests using test equipment, procedures, and certification forms conforming to those outlined in the latest edition of the Manual of Cross-Connection Control published by the FCCCHR Manual. Test and tag each reduced pressure backflow preventer upon initial installation (prior to continued water use) and as required by Ebbing Field and utility provider. Tag must contain the following information: make, model, serial number, dates of tests, results, maintenance performed, and signature of tester. Record test results on certification forms conforming to requirements cited earlier in this paragraph.

3.7 CONTRACTOR'S TEMPORARY FACILITIES

The Contractor's work and storage areas will be assigned by the Contracting Officer. Contractor-owned or -leased trailers must be identified by Government assigned numbers. Apply the number to the trailer within 14 calendar days of notification, or sooner, if directed by the Government. Size and location of the number will comply with the airfield standards. Contractor is responsible for security of their property. Provide adequate outside security lighting at the temporary facilities. Trailers must be anchored to resist high winds and meet applicable state or local standards for anchoring mobile trailers. Coordinate anchoring with EM 385-1-1 Chapter 04. The Contract Clause entitled "FAR 52.236-10, Operations and Storage Areas" and the following apply:

3.7.1 Administrative Field Offices

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

In the event a new building is constructed for the temporary project field office, it must be a minimum 12 feet in width, 16 feet in length and have a minimum of 7 feet headroom. Equip the building with approved electrical wiring, at least one double convenience outlet and the required switches and fuses to provide 110-120 volt power. Provide a work table with stool, desk with chair, two additional chairs, and one legal size file cabinet that can be locked. The building must be waterproof, supplied with a heater, have a minimum of two doors, electric lights, a telephone, a battery-operated smoke detector alarm, a sufficient number of adjustable windows for adequate light and ventilation, and a supply of approved drinking water. Provide approved sanitary facilities. Screen the windows and doors and provide the doors with deadbolt type locking devices or a padlock and heavy-duty hasp bolted to the door. Door hinge pins must be non-removable. Arrange the windows to open and to be securely fastened from the inside. Protect glass panels in windows by bars or heavy mesh screens to prevent easy access. In warm weather, provide air conditioning capable of maintaining the office at 50 percent relative humidity and a room temperature 20 degrees F below the outside temperature when the outside temperature is 95 degrees F. Unless otherwise directed by the Contracting Officer, remove the building from the site upon completion and acceptance of the work.

3.7.2 Quality Control Manager Records and Field Office

Provide on the jobsite an office with approximately 200 square feet of useful floor area for the exclusive use of the QC Manager and dedicated administrative support specialist. Provide a weathertight structure with adequate heating and cooling, toilet facilities, lighting, ventilation, a 4 by 8 foot plan table, a standard size office desk and chair, computer station, and working communications facilities. [Provide either a 1,500 watt radiant heater and a window-mounted air conditioner rated at 9,000 Btus minimum or a window-mounted heat pump of the same minimum heating and cooling ratings. Provide a door with a cylinder lock and windows with locking hardware. Make utility connections. Locate as directed. File quality control records in the office and make available at all times to the Government. After completion of the work, remove the entire structure from the site.

3.7.3 Storage Area

Construct a temporary 8 foot high chain link fence around trailers and materials. Include plastic strip inserts, colored brown, so that visibility through the fence is obstructed. Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Do not place or store trailers, materials, or equipment outside the fenced area unless such trailers, materials, or equipment are assigned a separate and distinct storage area by the Contracting Officer away from the vicinity of the construction site but within the installation boundaries. Trailers, equipment, or materials must not be open to public view with the exception of those items which are in support of ongoing work on the current day. Do not stockpile materials outside the fence in preparation for the next day's work. Park mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks, and like equipment within the fenced area at the end of each work day.

Keep fencing in a state of good repair and proper alignment. If the Contractor elects to traverse grassed or unpaved areas which are not established roadways with construction equipment or other vehicles, cover

the grassed or unpaved areas with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation must be at the Contractor's discretion. Mow and maintain grass located within the boundaries of the construction site for the duration of the project. Grass and vegetation shall be mowed to a height of three inches when it reaches a height of six inches. The Government may, after notice to the Contractor and at the discretion of the Contracting Officer, mow the Contractor's areas at any time the vegetation height exceeds 6 inches and all costs incurred by the Government for performing such work will be deducted from the contract. Grass and vegetation along fences, structures, under trailers, and in areas not accessible to mowers must be edged or trimmed neatly.

3.7.4 Supplemental Storage Area

Upon request, and pending availability, the Contracting Officer will designate another or supplemental area for the use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site but will be within the installation boundaries. Maintain the area in a clean and orderly fashion and secured if needed to protect supplies and equipment. Utilities will not be provided to this area by the Government.

3.7.5 Appearance of Trailers

- a. Trailers must be roadworthy and comply with all appropriate state and local vehicle requirements. Trailers which are rusted, have peeling paint or are otherwise in need of repair will not be allowed on Installation property. Trailers must present a clean and neat exterior appearance and be in a state of good repair.
- b. Maintain the temporary facilities. Failure to do so will be sufficient reason to require their removal at the Contractor's expense.

3.7.6 Safety Systems

Protect the integrity of all installed safety systems or personnel safety devices. Obtain prior approval from the Contracting Officer if entrance into systems serving safety devices is required. If it is temporarily necessary to remove or disable personnel safety devices in order to accomplish Contract requirements, provide alternative means of protection prior to removing or disabling any permanently installed safety devices or equipment and obtain approval from the Contracting Officer.

3.7.7 Weather Protection of Temporary Facilities and Stored Materials

Take necessary precautions to ensure that roof openings and other critical openings in the building are monitored carefully. Take immediate actions required to seal off such openings when rain or other detrimental weather is imminent, and at the end of each workday. Ensure that the openings are completely sealed off to protect materials and equipment in the building from damage.

3.7.7.1 Building and Site Storm Protection

When a warning of gale force winds is issued, take precautions to minimize danger to persons, and protect the work and nearby Government property. Precautions must include, but are not limited to, closing openings; removing loose materials, tools and equipment from exposed locations; and

removing or securing scaffolding and other temporary work. Close openings in the work when storms of lesser intensity pose a threat to the work or any nearby Government property.

3.8 PLANT COMMUNICATIONS

Whenever the individual elements of the plant are located so that operation by normal voice between these elements is not satisfactory, install a satisfactory means of communication, such as telephone or other suitable devices and make available for use by Government personnel.

3.9 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, furnish and erect temporary project safety fencing at the work site. The safety fencing must be chainlink or approved equal, a minimum of 72 inches high, supported and tightly secured to steel posts located on maximum 10 foot centers, constructed at the approved location. Maintain the safety fencing during the life of the contract and, upon completion and acceptance of the work, will become the property of the Contractor and be removed from the work site.

3.10 CLEANUP

Remove construction debris, waste materials, packaging material and the like from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways must be cleaned away. Store all salvageable materials resulting from demolition activities within the fenced area described above or at the supplemental storage area. Neatly stack stored materials not in trailers, whether new or salvaged.

3.11 RESTORATION OF STORAGE AREA

Upon completion of the project remove the bulletin board, signs, barricades, haul roads, and all other temporary products from the site. After removal of trailers, materials, and equipment from within the fenced area, remove the fence. Restore areas used during the performance of the Contract to the original or better condition. Remove gravel used to traverse grassed areas and restore the area to its original condition, including top soil and seeding as necessary.

-- End of Section --

SECTION 01 56 00.00 46

DUST CONTROL

PART 1 GENERAL

1.1 SUMMARY

The work covered by this section consists of furnishing all labor, materials and equipment and performing all work required for the control and prevention of fugitive dust during and as the result of construction operations under this contract except for those measures set forth in other Technical Provisions of these specifications. For the purpose of this specification, fugitive dust entails the generation of solid particles by the forces of wind or machinery acting upon exposed materials. Provisions of this specification shall prevent fugitive dust from adversely affecting human health or welfare; unfavorably altering ecological balances of importance to human life; affecting other species of importance to man; or degrading the utility of the environment for aesthetic and recreational purposes. Dust Control is a requirement in the EPA and state pollutant discharge elimination system or permit for discharging storm water during construction.

1.2 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety and Health Requirements Manual

1.3 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 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Dust Control; G.
Products and Procedures; G

Prior to commencement of the work, submit in writing a proposal to the Contracting Officer for implementing the provisions of this section for fugitive dust control. Address the plans, and the products to be used, to prevent and control fugitive dust through specific mitigative and preventative measures. The effectiveness of the dust control program shall be periodically checked and reviewed. Revisions to the dust control plan shall be submitted to the Contracting Officer as changes are necessary during the

duration of this contract.

Material Safety Data Sheets; G.

- Material Safety Data Sheets include those for soil stabilization products.

Sandblasting; G.

SD-02 Shop Drawings

Recordkeeping; .

- Maintain and furnish records in accordance with PART 1 paragraph RECORDKEEPING.

1.4 IMPLEMENTATION MEETING

Prior to commencement of the work the Contractor shall meet with representatives of the Contracting Officer to develop mutual understandings relative to compliance with these provisions and administration of the dust control program.

1.5 APPLICABLE REGULATIONS

In order to prevent and to provide control of pollution arising from the construction activities of the Contractor and his subcontractors in the performance of this contract, all applicable Federal, State, and local laws and regulations concerning environmental pollution control and abatement, and all applicable provisions of the EM 385-1-1 as well as the specific requirements stated in this section and elsewhere in the contract specifications. Compliance with the provisions of this section by subcontractors will be the responsibility of the Contractor.

1.6 NOTIFICATION OF NON-COMPLIANCE

The Contracting Officer will notify the Contractor in writing of any observed non-compliance with the foregoing provisions. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. 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 part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it was later determined that the Contractor was in compliance.

1.7 RECORDKEEPING

The Contractor shall, at a minimum, maintain records indicating dust control measures taken. Information provided shall be sufficient to answer any questions regarding control methods utilized, products used, application rates, inspections performed. Additional information to be recorded, but not limited to reporting, includes treated area, operator, date and time of treatment, meteorological conditions and inspection and monitoring reports. Records shall be submitted every 30 days to the Contracting Officer.

PART 2 PRODUCTS

2.1 PRODUCTS AND PROCEDURES

Products and procedures used in controlling particulates and dust shall be in accordance with the Contractor's Environmental Protection Plan and the dust control plan required by this Section. Material Safety Data Sheets for soil binders for use in dust control shall be approved prior to application. Soil binders containing carcinogenic substances (e.g. acrylamides) are prohibited.

PART 3 EXECUTION

3.1 DUST CONTROL

Control techniques for fugitive dust sources shall involve watering. For arid regions and dusty work areas, dust control shall include water application with soil binders that is environmental sustainable and non-toxic. The methods utilized shall be cost effective, water conservation, and appropriate for the size and scope of the fugitive dust source. Methods and controls shall not have an adverse effects on plant and animal life, ecosystem, and facility air intakes, or contaminate the treated material.

Repeat methods at such intervals as to keep all parts of the disturbed area(s) treated at all times. Have sufficient competent equipment on the job to accomplish control techniques. Products shall provide a method to reduce dust-related environmental concerns and aid in complying with applicable regulations. Products shall not in any form produce any adverse environmental effects through their use and shall provide an effective, clean, safe control of airborne dust and protection against soil erosion.

3.1.1 Preventative Techniques

The reduction of source extent, the incorporation of process modifications, or adjusted work practices, which reduce the amount of dust-generation, are preventative techniques for the control of fugitive dust emissions. These techniques include the elimination of mud and dirt carry-out onto paved roads at construction sites.

3.1.2 Mitigative Techniques

Mitigative measures entail the periodic removal of dust-producing material. Examples of mitigative control measures include clean-up of spillage on paved or unpaved travel surfaces and clean-up of material spillage at transfer points.

3.2 MATERIALS HANDLING

The Contractor shall take the following minimum precautions to limit fugitive dust emissions from material handling and transportation to achieve control of dust emissions to the extent practicable:

- a. Stockpiles

Apply water with an approved soil binder. Other alternatives include laydown top soil with organic matters that are removed from the disturbed area or placing a compounded fiber erosion control blanket to cover material stockpiles and other surfaces which can create airborne dust. BMP perimeter controls around the stockpile shall be placed at least 10 feet away from the toe of stockpiled material.

b. Transportation

At a minimum, complete covering, maintain a minimum 12 inch free-board space, and moistening of materials hauled from the construction site. Open truck beds, since they create airborne particulate matter, are prohibited. Additional application of water with approved soil binder shall be required if additional controls are considered necessary by the Contracting Officer.

c. Off-Site Tracking

Perform dust control as the work proceeds to minimize vehicle off-site tracking of sediment and generation of dust. Provide every effort, such as temporary paved roadways, to keep vehicles from tracking soils from the construction site. Gravel construction access roadways shall be at least 80 feet long and 30 feet wide for construction sites 5 acres or larger. The access roadway gravel blanket shall be 6-inch minimum in depth with gravel size of 3-inch minimum. Overlay gravel blankets on two layers of 0.015 mm 6-mil thick geotextile fabric or a single layer of 10-mil thick geotextile fabric. Control dust generation by water sprinkling. For water conservation, water may be applied with an approved soil binder.

3.3 CONSTRUCTION AND DEMOLITION

Control dust resulting from demolition and construction activities. No person may cause, suffer, allow, or permit a structure, road, street, alley, or parking area to be constructed, altered, repaired, or demolished, or land to be cleared without taking minimum precautions to achieve control of dust emissions.

3.3.1 Demolition

Control the amount of dust resulting from demolition to prevent the spread of dust to occupied portions of the construction site and to avoid creation of a nuisance in the surrounding area. The use of water or chemical treatment for control of dust in the demolition of structures, in construction operations, in work performed on a road, parking area, or in the clearing of land is required.

3.3.2 Sandblasting and demolition

Utilize adequate methods, including enclosure of work areas and debris, to prevent airborne particulate matter during sandblasting of painted and non-painted structures or other similar operations including demolition activities. Blast media and containment systems shall be approved prior to use.

3.4 ACCESS ROADS AND PARKING LOTS

No person may cause, suffer, allow, or permit any public, industrial, commercial, or private road, street, or alley to be used without taking precautions to achieve control of dust emissions.

In addition to mitigation and control techniques, the removal of soil or other materials shall be periodically performed by mechanical sweepers or their equivalent. Spot clean dirty roadways and parking lots. These activities shall be performed as deemed necessary. Remove sand which is applied for the specific purpose of snow or ice control as soon as such control is no longer necessary.

3.4.1 Access Roads

The use of temporary asphalt pavement is required for major access roadways at extensive development sites (10 acres or larger) and/or construction periods longer than 3 months. Alternative method of dust control for access roads with uniform gravel cover (and geotextile fabric beneath gravel cover) is acceptable for site less than 10 acres of total disturbed area, and if construction period is shorter than 3 months. Site access roads may use uniform gravel cover (with geotextile fabric beneath gravel cover) and water sprinkling with soil binders for dust control.

The use of temporary asphalt or uniform gravel cover , as described above for control of Off-Site Tracking, with wheel wash is an acceptable method of dust control for roads leading to and from areas of construction activity.

3.4.2 Parking Lots

Parking surfaces with more than five parking spaces shall be paved. Temporary parking area(s) to be used 30 calendar days or more for the Contractor's equipment or personal vehicles shall be paved with temporary asphalt. Temporary lots used for less than one month may use uniform gravel, if required by Corps Area Office Contracting Officer (AOCO), applying water with approved soil binder may be necessary.

3.5 CONTROL STRUCTURES

Activities performed under this Contract shall conform with the specifications described herein along with other technical specifications, particularly Sections 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS.

If the Contractor proposes to construct temporary structures, he shall submit the proposal for approval at least ten (10) days prior to the scheduled start of such temporary work. Modification of the Contractor's plans shall be made only with the written approval of the Contracting Officer.

3.6 MAINTENANCE

During the life of this contract, the Contractor shall maintain all facilities constructed for pollution control under this Contract as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created. Re-application of water by sprinkling or approved soil binder with water shall be required when the disturbed areas are not stabilized.

During the construction period the Contractor shall conduct frequent training courses for his maintenance personnel. The curricula shall include methods of dust control, familiarity with pollution standards, and

care of controls and measures to prevent and correct fugitive dust pollution.

The Contractor shall furnish daily services for the temporary control measures at the project site and perform any required maintenance as deemed necessary by and to the satisfaction of the Corps AOCO during the entire life of the Contract. Services shall be performed at such a time and in such a manner to least interfere with the operations.

The Contractor's designated Site Inspector shall inspect all pollution prevention measures in accordance with Sections 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS or at the Contracting Officer's request. Application of soil binder with water is an acceptable temporary stabilization protocol when approved by the Contracting Officer.

-- End of Section --

SECTION 01 57 19

TEMPORARY ENVIRONMENTAL CONTROLS

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. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.1053	Respirable Crystalline Silica
29 CFR 1910.1200	Hazard Communication
29 CFR 1926.1153	Respirable Crystalline Silica
40 CFR 50	National Primary and Secondary Ambient Air Quality Standards
40 CFR 60	Standards of Performance for New Stationary Sources
40 CFR 63	National Emission Standards for Hazardous Air Pollutants for Source Categories
40 CFR 64	Compliance Assurance Monitoring
40 CFR 82	Protection of Stratospheric Ozone
40 CFR 112	Oil Pollution Prevention
40 CFR 122.26	Storm Water Discharges (Applicable to State NPDES Programs, see section 123.25)
40 CFR 152	Pesticide Registration and Classification Procedures
40 CFR 152 - 186	Pesticide Programs
40 CFR 241	Guidelines for Disposal of Solid Waste
40 CFR 243	Guidelines for the Storage and Collection of Residential, Commercial, and Institutional Solid Waste
40 CFR 258	Subtitle D Landfill Requirements
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 261.7	Residues of Hazardous Waste in Empty

Containers

40 CFR 262.11	Hazardous Waste Determination and Recordkeeping
40 CFR 268	Land Disposal Restrictions
40 CFR 273	Standards for Universal Waste Management
40 CFR 279	Standards for the Management of Used Oil
40 CFR 300	National Oil and Hazardous Substances Pollution Contingency Plan
40 CFR 300.125	National Oil and Hazardous Substances Pollution Contingency Plan - Notification and Communications
40 CFR 355	Emergency Planning and Notification
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
49 CFR 173	Shippers - General Requirements for Shipments and Packagings

WASHINGTON STATE ADMINISTRATIVE CODE (WAC)

WAC-173-303-573	Standards for Universal Waste Management
WAC-173-303-573(2)	Standards for Universal Waste Management - Batteries
WAC-173-303-573(3)	Standards for Universal Waste Management - Mercury-containing Equipment
WAC-173-303-573(5)	Standards for Universal Waste Management - Lamps

1.2 DEFINITIONS

1.2.1 Class I and II Ozone Depleting Substance (ODS)

Class I ODS is defined in Section 602(a) of The Clean Air Act. A list of Class I ODS can be found on the EPA website at the following weblink.
<https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances>.

Class II ODS is defined in Section 602(s) of The Clean Air Act. A list of Class II ODS can be found on the EPA website at the following weblink.
<https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances>.

1.2.2 Contractor Generated Hazardous Waste

Contractor generated hazardous waste is materials that, if abandoned or

disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e., methyl ethyl ketone, toluene), waste thinners, excess paints, excess solvents, waste solvents, excess pesticides, and contaminated pesticide equipment rinse water.

1.2.3 Electronics Waste

Electronics waste is discarded electronic devices intended for salvage, recycling, or disposal.

1.2.4 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally or historically.

1.2.5 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.6 Hazardous Debris

As defined in paragraph SOLID WASTE, debris that contains listed hazardous waste (either on the debris surface, or in its interstices, such as pore structure) in accordance with 40 CFR 261. Hazardous debris also includes debris that exhibits a characteristic of hazardous waste in accordance with 40 CFR 261.

1.2.7 Hazardous Materials

Hazardous material is any material that: Is defined in 49 CFR 171, listed in 49 CFR 172, regulated as a hazardous material in accordance with 49 CFR 173; or requires a Safety Data Sheet (SDS) in accordance with 29 CFR 1910.1200; or during end use, treatment, handling, packaging, storage, transportation, or disposal meets or has components that meet or have potential to meet the definition of a hazardous waste as defined by 40 CFR 261 Subparts A, B, C, or D. Designation of a material by this definition, when separately regulated or controlled by other sections or directives, does not eliminate the need for adherence to that hazard-specific guidance which takes precedence over this section for "control" purposes. Such material includes ammunition, weapons, explosive actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical supplies, medical waste and infectious materials, bulk fuels, radioactive materials, and other materials such as asbestos, mercury, and polychlorinated biphenyls (PCBs).

1.2.8 Hazardous Waste

Hazardous Waste is any material that meets the definition of a solid waste and exhibits a hazardous characteristic (ignitability, corrosivity, reactivity, or toxicity) as specified in 40 CFR 261, Subpart C, or contains a listed hazardous waste as identified in 40 CFR 261, Subpart D, or meets a state, local, or host nation definition of a hazardous waste.

1.2.9 Installation Pest Management Coordinator

Installation Pest Management Coordinator (IPMC) is the individual officially designated by the Installation Commander to oversee the Installation Pest Management Program and the Installation Pest Management Plan.

1.2.10 Land Application

Land Application means spreading or spraying discharge water at a rate that allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" must occur. Comply with federal, state, and local laws and regulations.

1.2.11 Municipal Separate Storm Sewer System (MS4) Permit

MS4 permits are those held by municipalities or installations to obtain NPDES permit coverage for their stormwater discharges.

1.2.12 National Pollutant Discharge Elimination System (NPDES)

The NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

1.2.13 Oily Waste

Oily waste are those materials that are, or were, mixed with Petroleum, Oils, and Lubricants (POLs) and have become separated from that POLs. Oily wastes also means materials, including wastewaters, centrifuge solids, filter residues or sludges, bottom sediments, tank bottoms, and sorbents which have come into contact with and have been contaminated by, POLs and may be appropriately tested and discarded in a manner which is in compliance with other state and local requirements.

This definition includes materials such as oily rags, "kitty litter" sorbent clay and organic sorbent material. These materials may be land filled provided that: It is not prohibited in other state regulations or local ordinances; the amount generated is "de minimus" (a small amount); it is the result of minor leaks or spills resulting from normal process operations; and free-flowing oil has been removed to the practicable extent possible. Large quantities of this material, generated as a result of a major spill or in lieu of proper maintenance of the processing equipment, are a solid waste. As a solid waste, perform a hazardous waste determination prior to disposal. As this can be an expensive process, it is recommended that this type of waste be minimized through good housekeeping practices and employee education.

1.2.14 Pesticide

Pesticide is any substance or mixture of substances intended for

preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

1.2.15 Pesticide Treatment Plan

A plan for the prevention, monitoring, and control to eliminate pest infestation.

1.2.16 Pests

Pests are arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

1.2.17 Project Pesticide Coordinator

The Project Pesticide Coordinator (PPC) is an individual who resides at a Civil Works Project office and who is responsible overseeing of pesticide application on project grounds.

1.2.18 Regulated Waste

Regulated waste are solid wastes that have specific additional federal, state, or local controls for handling, storage, or disposal.

1.2.19 Sediment

Sediment is soil and other debris that have eroded and have been transported by runoff water or wind.

1.2.20 Solid Waste

Solid waste is a solid, liquid, semi-solid or contained gaseous waste. A solid waste can be a hazardous waste, non-hazardous waste, or non-Resource Conservation and Recovery Act (RCRA) regulated waste. Types of solid waste typically generated at construction sites may include:

1.2.20.1 Debris

Debris is non-hazardous solid material generated during the construction, demolition, or renovation of a structure that exceeds 2.5-inch particle size that is: a manufactured object; plant or animal matter; or natural geologic material (for example, cobbles and boulders), broken or removed concrete, masonry, and rock asphalt paving; ceramics; roofing paper and shingles. Inert materials may be reinforced with or contain ferrous wire, rods, accessories and weldments. A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

1.2.20.2 Green Waste

Green waste is the vegetative matter from landscaping, land clearing and grubbing, including, but not limited to, grass, bushes, scrubs, small trees and saplings, tree stumps and plant roots. Marketable trees, grasses and plants that are indicated to remain, be re-located, or be

re-used are not included.

1.2.20.3 Material Not Regulated As Solid Waste

Material not regulated as solid waste is nuclear source or byproduct materials regulated under the Federal Atomic Energy Act of 1954 as amended; suspended or dissolved materials in domestic sewage effluent or irrigation return flows, or other regulated point source discharges; regulated air emissions; and fluids or wastes associated with natural gas or crude oil exploration or production.

1.2.20.4 Non-Hazardous Waste

Non-hazardous waste is waste that is excluded from, or does not meet, hazardous waste criteria in accordance with 40 CFR 261.

1.2.20.5 Recyclables

Recyclables are materials, equipment and assemblies such as doors, windows, door and window frames, plumbing fixtures, glazing and mirrors that are recovered and sold as recyclable, and structural components. It also includes commercial-grade refrigeration equipment with Freon removed, household appliances where the basic material content is metal, clean polyethylene terephthalate bottles, cooking oil, used fuel oil, textiles, high-grade paper products and corrugated cardboard, stackable pallets in good condition, clean crating material, and clean rubber/vehicle tires. Metal meeting the definition of lead contaminated or lead based paint contaminated may not be included as recyclable if sold to a scrap metal company. Paint cans that meet the definition of empty containers in accordance with 40 CFR 261.7 may be included as recyclable if sold to a scrap metal company.

1.2.20.6 Surplus Soil

Surplus soil is existing soil that is in excess of what is required for this work, including aggregates intended, but not used, for on-site mixing of concrete, mortars, and paving. Contaminated soil meeting the definition of hazardous material or hazardous waste is not included and must be managed in accordance with paragraph HAZARDOUS MATERIAL MANAGEMENT.

1.2.20.7 Scrap Metal

This includes scrap and excess ferrous and non-ferrous metals such as reinforcing steel, structural shapes, pipe, and wire that are recovered or collected and disposed of as scrap. Scrap metal meeting the definition of hazardous material or hazardous waste is not included.

1.2.20.8 Wood

Wood is dimension and non-dimension lumber, plywood, chipboard, hardboard. Treated or painted wood that meets the definition of lead contaminated or lead based contaminated paint is not included. Treated wood includes, but is not limited to, lumber, utility poles, crossties, and other wood products with chemical treatment.

1.2.21 Surface Discharge

Surface discharge means discharge of water into drainage ditches, storm sewers, or creeks meeting the definition of "waters of the United

States". Surface discharges from construction sites are discrete, identifiable sources and require a permit from the governing agency. Comply with federal, state, and local laws and regulations.

1.2.22 Wastewater

Wastewater is the used water and solids that flow through a sanitary sewer to a treatment plant.

1.2.22.1 Stormwater

Stormwater is any precipitation in an urban or suburban area that does not evaporate or soak into the ground, but instead collects and flows into storm drains, rivers, and streams.

1.2.23 Waters of the United States

Waters of the United States means Federally jurisdictional waters, including wetlands, that are subject to regulation under Section 404 of the Clean Water Act or navigable waters, as defined under the Rivers and Harbors Act.

1.2.24 Wetlands

Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

1.2.25 Universal Waste

The universal waste regulations streamline collection requirements for certain hazardous wastes in the following categories: batteries, pesticides, mercury-containing equipment (for example, thermostats), and lamps (for example, fluorescent bulbs). The rule is designed to reduce hazardous waste in the municipal solid waste (MSW) stream by making it easier for universal waste handlers to collect these items and send them for recycling or proper disposal. These regulations can be found at 40 CFR 273.

1.2.26 Location Specific Universal Waste

Any of the following dangerous waste that are subject to the universal waste requirements of WAC-173-303-573: Batteries as described in WAC-173-303-573(2); Lamps as described in WAC-173-303-573(5); Mercury-containing equipment as described in WAC-173-303-573(3).

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Preconstruction Survey

Regulatory Notifications; G

Environmental Manager Qualifications; G

Employee Training Records; G

Environmental Protection Plan; G

Dirt and Dust Control Plan; G

Solid Waste Management Permit; G

Stormwater Pollution Prevention Plan (SWPPP); G

Stormwater Notice of Intent (for NPDES coverage under the general permit for construction activities); G

Borrow Permits

SD-06 Test Reports

Monthly Solid Waste Disposal Report; G

Inspection Reports

SD-07 Certificates

Employee Training Records; G

Erosion and Sediment Control Inspector Qualifications

Certificate of Competency

SD-11 Closeout Submittals

Regulatory Notifications; G

Assembled Employee Training Records; G

Solid Waste Management Permit; G

Stormwater Pollution Prevention Plan Compliance Notebook; G

Stormwater Notice of Termination (for NPDES coverage under the general permit for construction activities); G

Waste Determination Documentation; G

Project Solid Waste Disposal Documentation Report; G

Sales Documentation; G

Contractor Certification

1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during construction practice.

Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Protect the environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire duration of this Contract. Comply with federal, state, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

Tests and procedures assessing whether construction operations comply with Applicable Environmental Laws may be required. Analytical work must be performed by qualified laboratories; and where required by law, the laboratories must be certified.

1.4.1 Conformance with the Environmental Management System

Perform work under this contract consistent with the policy and objectives identified in the installation's Environmental Management System (EMS). Perform work in a manner that conforms to objectives and targets of the environmental programs and operational controls identified by the EMS. Support Government personnel when environmental compliance and EMS audits are conducted by escorting auditors at the Project site, answering questions, and providing proof of records being maintained. Provide monitoring and measurement information as necessary to address environmental performance relative to environmental, energy, and transportation management goals. In the event an EMS nonconformance or environmental noncompliance associated with the contracted services, tasks, or actions occurs, take corrective and preventative actions. In addition, employees must be aware of their roles and responsibilities under the installation EMS and of how these EMS roles and responsibilities affect work performed under the contract.

Coordinate with the installation's EMS coordinator to identify training needs associated with environmental aspects and the EMS, and arrange training or take other action to meet these needs. Provide training documentation to the Contracting Officer. The Installation Environmental Office will retain associated environmental compliance records. Make EMS Awareness training completion certificates available to Government auditors during EMS audits and include the certificates in the Employee Training Records. See paragraph EMPLOYEE TRAINING RECORDS.

1.5 QUALITY ASSURANCE

1.5.1 Preconstruction Survey and Protection of Features

This paragraph supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any onsite construction activities, perform a Preconstruction Survey of the project site with the Contracting Officer, and take photographs showing existing environmental conditions in and adjacent to the site. Submit a report for the record. Include in the report a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. The Contractor and the Contracting Officer will sign this survey report upon mutual agreement regarding its accuracy and completeness. Protect those environmental features included in the survey

report and any indicated on the drawings, regardless of interference that their preservation may cause to the work under the Contract.

1.5.2 Regulatory Notifications

Provide regulatory notification requirements in accordance with federal, state and local regulations. In cases where the Government will also provide public notification (such as stormwater permitting), coordinate with the Contracting Officer. Submit copies of regulatory notifications to the Contracting Officer at least 30 days prior to commencement of work activities. Typically, regulatory notifications must be provided for the following (this listing is not all-inclusive): demolition, renovation, NPDES defined site work, construction, removal or use of a permitted air emissions source, and remediation of controlled substances (asbestos, hazardous waste, lead paint).

1.5.3 Environmental Brief

Attend an environmental brief to be included in the preconstruction meeting. Provide the following information: types, quantities, and use of hazardous materials that will be brought onto the installation; and types and quantities of wastes/wastewater that may be generated during the Contract. Discuss the results of the Preconstruction Survey at this time.

Prior to initiating any work on site, meet with the Contracting Officer and installation Environmental Office to discuss the proposed Environmental Protection Plan (EPP) or equipment local requirement. Develop a mutual understanding relative to the details of environmental protection, including measures for protecting natural and cultural resources, required reports, required permits, permit requirements (such as mitigation measures), and other measures to be taken.

1.5.4 Environmental Manager

Appoint in writing an Environmental Manager for the project site. The Environmental Manager is directly responsible for coordinating contractor compliance with federal, state, local, and installation requirements. The Environmental Manager must ensure compliance with Hazardous Waste Program requirements (including hazardous waste handling, storage, manifesting, and disposal); implement the EPP; ensure environmental permits are obtained, maintained, and closed out; ensure compliance with Stormwater Program requirements; ensure compliance with Hazardous Materials (storage, handling, and reporting) requirements; and coordinate any remediation of regulated substances (lead, asbestos, PCB transformers). This can be a collateral position; however, the person in this position must be trained to adequately accomplish the following duties: ensure waste segregation and storage compatibility requirements are met; inspect and manage Satellite Accumulation areas; ensure only authorized personnel add wastes to containers; ensure Contractor personnel are trained in 40 CFR requirements in accordance with their position requirements; coordinate removal of waste containers; and maintain the Environmental Records binder and required documentation, including environmental permits compliance and close-out. Submit Environmental Manager Qualifications to the Contracting Officer.

1.5.5 Employee Training Records

Prepare and maintain Employee Training Records throughout the term of the contract meeting applicable 40 CFR requirements. Provide Employee

Training Records in the Environmental Records Binder. Submit these Assembled Employee Training Records to the Contracting Officer at the conclusion of the project, unless otherwise directed.

Train personnel to meet EPA and state requirements. Conduct environmental protection/pollution control meetings for personnel prior to commencing construction activities. Conduct additional meetings for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, waters of the United States, and endangered species and their habitat that are known to be in the area. Provide copy of the Erosion and Sediment Control Inspector Certification as required by the state.

1.5.5.1 Pest Control Training

Trained personnel in pest control. Conduct a pest control meeting for personnel prior to commencing construction activities. Conduct additional meetings for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and pest infestation; familiarization with statutory and contractual pest control standards; installation and care of devices, and instruments, if required, for monitoring purposes to ensure adequate and continuous pest control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of waters of the United States, and endangered species and their habitat that are known to be in the area. Provide a Certificate of Competency for the personnel who will be conducting the pesticide application and management of pest control.

1.5.6 Non-Compliance Notifications

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with federal, state or local environmental laws or regulations, permits, and other elements of the Contractor's EPP. After receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. FAR 52.242-14 Suspension of Work provides that a suspension, delay, or interruption of work due to the fault or negligence of the Contractor allows for no adjustments to the contract for time extensions or equitable adjustments. In addition to a suspension of work, the Contracting Officer may use additional authorities under the contract or law.

1.6 ENVIRONMENTAL PROTECTION PLAN

The purpose of the EPP is to present an overview of known or potential environmental issues that must be considered and addressed during construction. Incorporate construction related objectives and targets from the installation's EMS into the EPP. Include in the EPP measures for protecting natural and cultural resources, required reports, and other measures to be taken. Meet with the Contracting Officer or Contracting Officer Representative to discuss the EPP and develop a mutual understanding relative to the details for environmental protection

including measures for protecting natural resources, required reports, and other measures to be taken. Submit the EPP within 30 days after Contractor award and not less than 10 days before the preconstruction meeting. Revise the EPP throughout the project to include any reporting requirements, changes in site conditions, or contract modifications that change the project scope of work in a way that could have an environmental impact. No requirement in this section will relieve the Contractor of any applicable federal, state, and local environmental protection laws and regulations. During Construction, identify, implement, and submit for approval any additional requirements to be included in the EPP. Maintain the current version onsite.

The EPP includes, but is not limited to, the following elements:

1.6.1 General Overview and Purpose

1.6.1.1 Descriptions

A brief description of each specific plan required by environmental permit or elsewhere in this Contract such as stormwater pollution prevention plan, spill control plan, solid waste management plan, wastewater management plan, air pollution control plan, contaminant prevention plan, pesticide treatment plan, traffic control plan Non-Hazardous Solid Waste Disposal Plan borrowing material plan.

1.6.1.2 Duties

The duties and level of authority assigned to the person(s) on the job site who oversee environmental compliance, such as who is responsible for adherence to the EPP, who is responsible for spill cleanup and training personnel on spill response procedures, who is responsible for manifesting hazardous waste to be removed from the site (if applicable), and who is responsible for training the Contractor's environmental protection personnel.

1.6.1.3 Procedures

A copy of any standard or project-specific operating procedures that will be used to effectively manage and protect the environment on the project site.

1.6.1.4 Communications

Communication and training procedures that will be used to convey environmental management requirements to Contractor employees and subcontractors.

1.6.1.5 Contact Information

Emergency contact information contact information (office phone number, cell phone number, and e-mail address).

1.6.2 General Site Information

1.6.2.1 Drawings

Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, jurisdictional wetlands, material storage areas, structures, sanitary facilities, storm drains and

conveyances, and stockpiles of excess soil.

1.6.2.2 Work Area

Work area plan showing the proposed activity in each portion of the area and identify the areas of limited use or nonuse. Include measures for marking the limits of use areas, including methods for protection of features to be preserved within authorized work areas and methods to control runoff and to contain materials on site, and a traffic control plan.

Show where any fuels, hazardous substances, solvents, or lubricants will be stored. Provide a spill plan to address any releases of those materials.

1.6.2.3 Documentation

A letter signed by an officer of the firm appointing the Environmental Manager and stating that person is responsible for managing and implementing the Environmental Program as described in this contract. Include in this letter the Environmental Manager's authority to direct the removal and replacement of non-conforming work.

1.6.3 Management of Natural Resources

- a. Land resources
- b. Tree protection
- c. Replacement of damaged landscape features
- d. Temporary construction
- e. Stream crossings
- f. Fish and wildlife resources
- g. Wetland areas

1.6.4 Protection of Historical and Archaeological Resources

- a. Objectives
- b. Methods

1.6.5 Stormwater Management and Control

- a. Ground cover
- b. Erodible soils
- c. Temporary measures
 - (1) Structural Practices
 - (2) Temporary and permanent stabilization
- d. Effective selection, implementation and maintenance of Best Management Practices (BMPs).

- e. Stormwater Pollution Prevention Plan (SWPPP).

1.6.6 Protection of the Environment from Waste Derived from Contractor Operations

Control and disposal of solid and sanitary waste.

Control and disposal of hazardous waste.

This item consist of the management procedures for hazardous waste to be generated. The elements of those procedures will coincide with the Installation Hazardous Waste Management Plan when within an installation. The Contracting Officer will provide a copy of the Installation Hazardous Waste Management Plan as applicable.

As a minimum, include the following:

- a. List of the types of hazardous wastes expected to be generated
- b. Procedures to ensure a written waste determination is made for appropriate wastes that are to be generated
- c. Sampling/analysis plan, including laboratory method(s) that will be used for waste determinations and copies of relevant laboratory certifications
- d. Methods and proposed locations for hazardous waste accumulation/storage (that is, in tanks or containers)
- e. Management procedures for storage, labeling, transportation, and disposal of waste (treatment of waste is not allowed unless specifically noted)
- f. Management procedures and regulatory documentation ensuring disposal of hazardous waste complies with Land Disposal Restrictions (40 CFR 268)
- g. Management procedures for recyclable hazardous materials such as lead-acid batteries, used oil, and similar
- h. Used oil management procedures in accordance with 40 CFR 279; Hazardous waste minimization procedures
- i. Plans for the disposal of hazardous waste by permitted facilities; and Procedures to be employed to ensure required employee training records are maintained.

1.6.7 Prevention of Releases to the Environment

Procedures to prevent releases to the environment

Notifications in the event of a release to the environment

1.6.8 Regulatory Notification and Permits

List what notifications and permit applications must be made. Some permits require up to 180 days to obtain. Demonstrate that those permits have been obtained or applied for by including copies of applicable

environmental permits. The EPP will not be approved until the permits have been obtained.

1.6.9 Clean Air Act Compliance

1.6.9.1 Haul Route

Submit truck and material haul routes along with a Dirt and Dust Control Plan for controlling dirt, debris, and dust on Installation roadways. As a minimum, identify in the plan the subcontractor and equipment for cleaning along the haul route and measures to reduce dirt, dust, and debris from roadways.

1.6.9.2 Pollution Generating Equipment

Identify air pollution generating equipment or processes that may require federal, state, or local permits under the Clean Air Act. Determine requirements based on any current installation permits and the impacts of the project. Provide a list of all fixed or mobile equipment, machinery or operations that could generate air emissions during the project to the Installation Environmental Office (Air Program Manager). Ensure required permits are obtained prior to installing and operating applicable equipment/processes.

1.6.9.3 Stationary Internal Combustion Engines

Identify portable and stationary internal combustion engines that will be supplied, used or serviced. Comply with 40 CFR 60 Subpart IIII, 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ, and local regulations as applicable. At minimum, include the make, model, serial number, manufacture date, size (engine brake horsepower), and EPA emission certification status of each engine. Maintain applicable records and log hours of operation and fuel use. Logs must include reasons for operation and delineate between maintenance/testing, emergency, and non-emergency operation.

1.6.9.4 Refrigerants

Identify management practices to ensure that heating, ventilation, and air conditioning (HVAC) work involving refrigerants complies with 40 CFR 82 requirements. Technicians must be certified, maintain copies of certification on site, use certified equipment and log work that requires the addition or removal of refrigerant. Any refrigerant reclaimed is the property of the Government, coordinate with the Installation Environmental Office to determine the appropriate turn in location.

1.6.9.5 Air Pollution-engineering Processes

Identify planned air pollution-generating processes and management control measures (including, but not limited to, spray painting, abrasive blasting, demolition, material handling, fugitive dust, and fugitive emissions). Log hours of operations and track quantities of materials used.

1.6.9.6 Compliant Materials

Provide the Government a list of SDSs for all hazardous materials proposed for use on site. Materials must be compliant with all Clean Air Act regulations for emissions including solvent and volatile organic compound

contents, and applicable National Emission Standards for Hazardous Air Pollutants requirements. The Government may alter or limit use of specific materials as needed to meet installation permit requirements for emissions.

1.7 LICENSES AND PERMITS

Obtain licenses and permits required for the construction of the project and in accordance with FAR 52.236-7 Permits and Responsibilities. Notify the Government of all equipment that may require permits or special approvals that the Contractor plans to use on site. This paragraph supplements the Contractor's responsibility under FAR 52.236-7 Permits and Responsibilities.

1.8 ENVIRONMENTAL RECORDS BINDER

Maintain on-site a separate three-ring Environmental Records Binder and submit at the completion of the project. Make separate parts within the binder that correspond to each submittal listed under paragraph CLOSEOUT SUBMITTALS in this section.

1.9 PESTICIDE DELIVERY, STORAGE, AND HANDLING

1.9.1 Delivery and Storage

Deliver pesticides to the site in the original, unopened containers bearing legible labels indicating the EPA registration number and the manufacturer's registered uses. Store pesticides according to manufacturer's instructions and under lock and key when unattended.

1.9.2 Handling Requirements

Formulate, treat with, and dispose of pesticides and associated containers in accordance with label directions and use the clothing and personal protective equipment specified on the labeling for use during each phases of the application. Furnish SDSs for pesticide products.

1.10 SOLID WASTE MANAGEMENT PERMIT

Provide the Contracting Officer with written notification of the quantity of anticipated solid waste or debris that is anticipated or estimated to be generated by construction. Include in the report the locations where various types of waste will be disposed or recycled. Include letters of acceptance from the receiving location or as applicable; submit one copy of the receiving location state and local Solid Waste Management Permit or license showing such agency's approval of the disposal plan before transporting wastes off Government property.

1.10.1 Monthly Solid Waste Disposal Report

Monthly, submit a solid waste disposal report to the Contracting Officer. For each waste, the report will state the classification (using the definitions provided in this section), amount, location, and name of the business receiving the solid waste.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

Minimize interference with, disturbance to, and damage to fish, wildlife, and plants, including their habitats. Prior to the commencement of activities, consult with the Installation Environmental Office as applicable, regarding rare species or sensitive habitats that need to be protected. The protection of rare, threatened, and endangered animal and plant species identified, including their habitats, is the Contractor's responsibility.

Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work that is consistent with the requirements of the Installation Environmental Office or as otherwise specified. Confine construction activities to within the limits of the work indicated or specified.

3.1.1 Flow Ways

Do not alter water flows or otherwise significantly disturb the native habitat adjacent to the project and critical to the survival of fish and wildlife, except as specified and permitted.

3.1.2 Vegetation

Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without the Contracting Officer's permission. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by the Contracting Officer. Where such use of attached ropes, cables, or guys is authorized, the Contractor is responsible for any resultant damage.

Protect existing trees that are to remain to ensure they are not injured, bruised, defaced, or otherwise damaged by construction operations. Remove displaced rocks from uncleared areas. Coordinate with the Contracting Officer and Installation Environmental Office to determine appropriate action for trees and other landscape features scarred or damaged by equipment operations.

3.1.3 Streams

Stream crossings must allow movement of materials or equipment without violating water pollution control standards of the federal, state, and local governments. Construction of stream crossing structures must be in compliance with all required permits including, but not limited to, Clean Water Act Section 404, and Section 401 Water Quality.

The Contracting Officer's approval and appropriate permits are required before any equipment will be permitted to ford live streams. In areas where frequent crossings are required, install temporary culverts or bridges. Obtain Contracting Officer's approval prior to installation. Remove temporary culverts or bridges upon completion of work, and repair the area to its original condition unless otherwise required by the Contracting Officer.

3.2 STORMWATER

Do not discharge stormwater from construction sites to the sanitary sewer. If the water is noted or suspected of being contaminated, it may only be released to the storm drain system if the discharge is specifically permitted. Obtain authorization in advance from the Installation Environmental Office for any release of contaminated water.

3.2.1 Construction General Permit

Provide a Construction General Permit as required by 40 CFR 122.26 and the State of Arkansas General Permit. Under the terms and conditions of the permit, install, inspect, maintain BMPs, prepare stormwater erosion and sediment control inspection reports, and submit SWPPP inspection reports. Maintain construction operations and management in compliance with the terms and conditions of the general permit for stormwater discharges from construction activities.

3.2.1.1 Stormwater Pollution Prevention Plan

Submit a project-specific Stormwater Pollution Prevention Plan (SWPPP) to the Contracting Officer for approval, prior to the commencement of work. The SWPPP must meet the requirements of 40 CFR 122.26 and the Arkansas State General Permit for stormwater discharges from construction sites.

Include the following:

- a. Comply with terms of the state general permit for stormwater discharges from construction activities. Prepare SWPPP in accordance with state requirements. Use state guide Developing your Stormwater Pollution Prevention Plan located at <https://www.epa.gov/npdes/developing-stormwater-pollution-prevention-plan-swppp> to prepare the SWPPP.
- b. Select applicable BMPs from EPA Fact Sheets located at <https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#constr> or in accordance with applicable state or local requirements.
- c. Include a completed copy of the Notice of Intent, BMP Inspection Report Template, and Stormwater Notice of Termination, except for the effective date.

3.2.1.2 Stormwater Notice of Intent for Construction Activities

Prepare and submit the Notice of Intent for NPDES coverage under the general permit for construction activities to the Contracting Officer for review.

Submit the approved NOI and appropriate permit fees onto the appropriate federal or state agency for approval. No land disturbing activities may commence without permit coverage. Maintain an approved copy of the SWPPP at the onsite construction office, and continually update as regulations require, reflecting current site conditions.

3.2.1.3 Inspection Reports

Submit "Inspection Reports" to the Contracting Officer in accordance with the State of Arkansas Construction General Permit.

3.2.1.4 Stormwater Pollution Prevention Plan Compliance Notebook

Create and maintain a three ring binder of documents that demonstrate compliance with the Construction General Permit. Include a copy of the permit Notice of Intent, proof of permit fee payment, SWPPP and SWPPP update amendments, inspection reports and related corrective action records, copies of correspondence with the Arkansas State Permitting Agency, and a copy of the permit Notice of Termination in the binder. At project completion, the notebook becomes property of the Government. Provide the compliance notebook to the Contracting Officer.

3.2.1.5 Stormwater Notice of Termination for Construction Activities

Submit a Notice of Termination to the Contracting Officer for approval once construction is complete and final stabilization has been achieved on all portions of the site for which the permittee is responsible. Once approved, submit the Notice of Termination to the appropriate state or federal agency.

3.2.2 Erosion and Sediment Control Measures

Provide erosion and sediment control measures in accordance with state and local laws and regulations. Preserve vegetation to the maximum extent practicable.

Erosion control inspection reports may be compiled as part of a stormwater pollution prevention plan inspection reports.

3.2.2.1 Erosion Control

Prevent erosion by mulching, Compost Blankets, Geotextiles, or temporary slope drains. Stabilize slopes by chemical stabilization, sodding, seeding, or such combination of these methods necessary for effective erosion control. Use of hay bales is prohibited.

3.2.2.2 Sediment Control Practices

Implement sediment control practices to divert flows from exposed soils, temporarily store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Implement sediment control practices prior to soil disturbance and prior to creating areas with concentrated flow, during the construction process to minimize erosion and sediment laden runoff. Include the following devices: silt fence, temporary diversion dikes, storm drain inlet protection, or other acceptable measures.

3.2.3 Work Area Limits

Mark the areas that need not be disturbed under this Contract prior to commencing construction activities. Mark or fence isolated areas within the general work area that are not to be disturbed. Protect monuments and markers before construction operations commence. Where construction operations are to be conducted during darkness, all markers must be visible in the dark. Personnel must be knowledgeable of the purpose for marking and protecting particular objects.

3.2.4 Contractor Facilities and Work Areas

Place field offices, staging areas, stockpile storage, and temporary buildings in areas designated on the drawings or as directed by the Contracting Officer. Move or relocate the Contractor facilities only when approved by the Government. Provide erosion and sediment controls for onsite borrow and spoil areas to prevent sediment from entering nearby waters. Control temporary excavation and embankments for plant or work areas to protect adjacent areas.

3.2.5 Municipal Separate Storm Sewer System (MS4) Management

Comply with the Installation's MS4 permit requirements.

3.3 PROTECTION OF CULTURAL RESOURCES

3.3.1 Archaeological Resources

For the protection of cultural, historic and prehistoric resources, the Contractor must submit a signed certification that the selected land borrow permits is free of all materials of this type. This includes anything of an archeological nature as well as any Native American sites to include tribal burial ground. Section 106 of the National Historic Preservation Act requires all cultural resources to be taken into account for all federal actions or permits. The source for all fill material/top soil must be checked for cultural resources by an accepted professional archeologist, as determined necessary by the U.S. Army Corps. of Engineers.

If, during excavation or other construction activities, any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, activities that may damage or alter such resources will be suspended. Resources covered by this paragraph include, but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. Cease all activities that may result in impact to or the destruction of these resources. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources. The Government retains ownership and control over archaeological resources.

3.4 AIR RESOURCES

Equipment operation, activities, or processes will be in accordance with 40 CFR 64 and state air emission and performance laws and standards.

3.4.1 Preconstruction Air Permits

Notify the Air Program Manager, through the Contracting Officer, at least 6 months prior to bringing equipment, assembled or unassembled, onto the Installation, so that air permits can be secured. Necessary permitting time must be considered in regard to construction activities. Clean Air Act (CAA) permits must be obtained prior to bringing equipment, assembled or unassembled, onto the Installation.

3.4.2 Oil or Dual-fuel Boilers and Furnaces

Provide product data and details for new, replacement, or relocated fuel fired boilers, heaters, or furnaces to the Installation Environmental Office (Air Program Manager) through the Contracting Officer. Data to be reported include: equipment purpose (water heater, building heat, process), manufacturer, model number, serial number, fuel type (oil type, gas type) size (MMBTU heat input). Provide in accordance with paragraph PRECONSTRUCTION AIR PERMITS.

3.4.3 Burning

Burning is prohibited on the Government premises.

3.4.4 Venting of Refrigerant

Accidental venting of a refrigerant is a release and must be reported immediately to the Contracting Officer. Intentional venting of refrigerants (including most Non-ODS substitute refrigerants) is prohibited per 40 CFR 82.

3.4.5 EPA Certification Requirements

Heating and air conditioning technicians must be certified through an EPA-approved program. Maintain copies of certifications at the employees' places of business; technicians must carry certification wallet cards, as provided by environmental law.

3.4.6 Dust Control

Keep dust down at all times, including during nonworking periods. Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning nonparticulate debris such as steel reinforcing bars. Only wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Do not unnecessarily shake bags of cement, concrete mortar, or plaster. Since these products contain Crystalline Silica, comply with the applicable OSHA standard, 29 CFR 1910.1053 or 29 CFR 1926.1153 for controlling exposure to Crystalline Silica Dust.

3.4.6.1 Particulates

Dust particles, aerosols and gaseous by-products from construction activities, and processing and preparation of materials (such as from asphaltic batch plants) must be controlled at all times, including weekends, holidays, and hours when work is not in progress. Maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates that would exceed 40 CFR 50, state, and local air pollution standards or that would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators, or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp. Provide sufficient, competent equipment available to accomplish these tasks. Perform particulate control as the work proceeds and whenever a

particulate nuisance or hazard occurs. Comply with state and local visibility regulations.

3.4.6.2 Abrasive Blasting

Blasting operations cannot be performed without prior approval of the Installation Air Program Manager. The use of silica sand is prohibited in sandblasting.

Provide tarpaulin drop cloths and windscreens to enclose abrasive blasting operations to confine and collect dust, abrasive agent, paint chips, and other debris.

3.4.7 Odors

Control odors from construction activities. The odors must be in compliance with state regulations and local ordinances and may not constitute a health hazard.

3.5 WASTE MINIMIZATION

Minimize the use of hazardous materials and the generation of waste. Include procedures for pollution prevention/ hazardous waste minimization in the Hazardous Waste Management Section of the EPP. Obtain a copy of the installation's Pollution Prevention/Hazardous Waste Minimization Plan for reference material when preparing this part of the EPP. If no written plan exists, obtain information by contacting the Contracting Officer. Describe the anticipated types of the hazardous materials to be used in the construction when requesting information.

3.5.1 Salvage, Reuse and Recycle

Identify anticipated materials and waste for salvage, reuse, and recycling. Describe actions to promote material reuse, resale or recycling. To the extent practicable, all scrap metal must be sent for reuse or recycling and will not be disposed of in a landfill.

Include the name, physical address, and telephone number of the hauler, if transported by a franchised solid waste hauler. Include the destination and, unless exempted, provide a copy of the state or local permit (cover) or license for recycling.

3.5.2 Nonhazardous Solid Waste Diversion Report

Maintain an inventory of nonhazardous solid waste diversion and disposal of construction and demolition debris. Submit a report through the Contracting Officer on the first working day after each fiscal year quarter, starting the first quarter that nonhazardous solid waste has been generated. Include the following in the report:

Construction and Demolition (C&D) Debris Disposed	cubic yards or tons, as appropriate
C&D Debris Recycled	cubic yards or tons, as appropriate

Construction and Demolition (C&D) Debris Disposed	cubic yards or tons, as appropriate
C&D Debris Composted	cubic yards or tons, as appropriate
Total C&D Debris Generated	cubic yards or tons, as appropriate
Waste Sent to Waste-To-Energy Incineration Plant (This amount should not be included in the recycled amount)	cubic yards or tons, as appropriate

3.6 WASTE MANAGEMENT AND DISPOSAL

3.6.1 Waste Determination Documentation

Complete a Waste Determination form (provided at the pre-construction conference) for Contractor-derived wastes to be generated. All potentially hazardous solid waste streams that are not subject to a specific exclusion or exemption from the hazardous waste regulations (e.g., scrap metal, domestic sewage) or subject to special rules, (lead-acid batteries and precious metals) must be characterized in accordance with the requirements of 40 CFR 262.11 or corresponding applicable state or local regulations. Base waste determination on user knowledge of the processes and materials used, and analytical data when necessary. Consult with the Installation environmental staff for guidance on specific requirements. Attach support documentation to the Waste Determination form. As a minimum, provide a Waste Determination form for the following waste (this listing is not exhaustive): oil- and latex-based painting and caulking products, solvents, adhesives, aerosols, petroleum products, and containers of the original materials.

3.6.2 Solid Waste Management

3.6.2.1 Project Solid Waste Disposal Documentation Report

Provide copies of the waste handling facilities' weight tickets, receipts, bills of sale, and other sales documentation. In lieu of sales documentation, a statement indicating the disposal location for the solid waste that is signed by an employee authorized to legally obligate or bind the firm may be submitted. The sales documentation Contractor certification must include the receiver's tax identification number and business, EPA or state registration number, along with the receiver's delivery and business addresses and telephone numbers. For each solid waste retained for the Contractor's own use, submit the information previously described in this paragraph on the solid waste disposal report. Prices paid or received do not have to be reported to the Contracting Officer unless required by other provisions or specifications of this Contract or public law.

3.6.2.2 Control and Management of Solid Wastes

Pick up solid wastes, and place in covered containers that are regularly emptied. Do not prepare or cook food on the project site. Prevent contamination of the site or other areas when handling and disposing of wastes. At project completion, leave the areas clean. Employ segregation measures so that no hazardous or toxic waste will become co-mingled with

non-hazardous solid waste. Transport solid waste off Government property and dispose of it in compliance with 40 CFR 260, state, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill is the minimum acceptable offsite solid waste disposal option. Verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate. Solid waste disposal offsite must comply with most stringent local, state, and federal requirements, including 40 CFR 241, 40 CFR 243, and 40 CFR 258.

Manage hazardous material used in construction, including but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, and used rags, in accordance with 49 CFR 173.

3.6.3 Releases/Spills of Oil and Hazardous Substances

3.6.3.1 Response and Notifications

Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, and other substances regulated in accordance with 40 CFR 300. Maintain spill cleanup equipment and materials at the work site. In the event of a spill, take prompt, effective action to stop, contain, curtail, or otherwise limit the amount, duration, and severity of the spill/release. In the event of any releases of oil and hazardous substances, chemicals, or gases; immediately (within 15 minutes) notify the Installation Fire Department, the Installation Command Duty Officer, the Installation Environmental Office, the Contracting Officer and the state or local authority.

Submit verbal and written notifications as required by the federal (40 CFR 300.125 and 40 CFR 355), state, local regulations and instructions. Provide copies of the written notification and documentation that a verbal notification was made within 20 days. Spill response must be in accordance with 40 CFR 300 and applicable state and local regulations. Contain and clean up these spills without cost to the Government.

3.6.3.2 Clean Up

Clean up hazardous and non-hazardous waste spills. Reimburse the Government for costs incurred including sample analysis materials, clothing, equipment, and labor if the Government will initiate its own spill cleanup procedures, for Contractor-responsible spills, when: Spill cleanup procedures have not begun within one hour of spill discovery/occurrence; or, in the Government's judgment, spill cleanup is inadequate and the spill remains a threat to human health or the environment.

3.6.4 Mercury Materials

Immediately report to the Environmental Office and the Contracting Officer instances of breakage or mercury spillage. Clean mercury spill area to the satisfaction of the Contracting Officer.

Do not recycle a mercury spill cleanup; manage it as a hazardous waste for disposal.

3.6.5 Wastewater

3.6.5.1 Disposal of Wastewater

Disposal of wastewater must be as specified below.

3.6.5.1.1 Treatment

Do not allow wastewater from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, and forms to enter water ways or to be discharged prior to being treated to remove pollutants. Dispose of the construction- related waste water by collecting and placing it in a retention pond where suspended material can be settled out or the water can evaporate to separate pollutants from the water. The site for the retention pond must be coordinated and approved with the Contracting Officer. The residue left in the pond prior to completion of the project must be removed, tested, and disposed of off- Government property in accordance with federal, state, and local laws and regulations. Backfill the area to the original grade, top-soiled, and seeded or sodded.

3.6.5.1.2 Surface Discharge

Surface discharge in accordance with federal, state, and local laws and regulations.

3.6.5.1.3 Land Application

Water generated from the flushing of lines after disinfection or disinfection in conjunction with hydrostatic testing must be land- applied in accordance with federal, state, and local laws and regulations for land application.

3.6.5.2 Concrete Washings

The Contractor shall direct all concrete washings, or slurries resulting from saw cutting activities that contain Portland cement to areas on the construction site where the sediments will be filtered out into the soil. Do not allow washings to enter the storm drain system or any water course. The Contractor shall coordinate with the Contracting Officer's Representative prior to any concrete truck arriving on Base to determine an appropriate wash out area. If concrete wash water cannot be directed to a suitable area on the construction site, it must be properly contained, collected and disposed of as construction debris. Excess concrete not used in construction activities shall not be dumped and must be removed and disposed of off Base. Spills of concrete, concrete wash water or chemicals used with exposed aggregate must be contained and cleaned up immediately to prevent the spill from entering any part of the storm sewer system.

3.7 HAZARDOUS MATERIAL MANAGEMENT

Include hazardous material control procedures in the Safety Plan, in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS. Address procedures and proper handling of hazardous materials, including the appropriate transportation requirements. Do not bring hazardous material onto Government property that does not directly relate to requirements for the performance of this contract. Submit an SDS and estimated quantities to be used for each hazardous material to the Contracting Officer prior to bringing the material on the installation.

Typical materials requiring SDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, and petroleum products. Use hazardous materials in a manner that minimizes the amount of hazardous waste generated. Containers of hazardous materials must have National Fire Protection Association labels or their equivalent. Certify that hazardous materials removed from the site are hazardous materials and do not meet the definition of hazardous waste, in accordance with 40 CFR 261 and state requirements.

3.8 Electrical Equipment Disposal

Oil filled transformers and medium voltage equipment that is removed shall be tested by the Contractor for polychlorinated biphenyls (PCB's) and disposed of through DRMO. The turn in procedure is as follows:

- a. Oil filled transformers and other equipment containing insulating liquid must be tested for the presence of PCB's by the Contractor at the Contractor's expense.
- b. Equipment cannot be leaking. All caps/covers etc. must be tight.
- c. Contractor shall present the Hazardous Materials Office (HAZMO)/Centralized Accumulation Point (CAP) (Bldg. 1575, 501-987-5247) with analytical results and ORG shop code, KVA rating, serial number, manufacturer, date equipment was taken out of service and an estimate of the original cost of the equipment. HAZMO will send proper forms to DRMO and inform contractor to set up a turn-in appointment with DRMO.
- d. The Contractor shall call DRMO in advance of delivering the equipment to DRMO for a turn-in appointment.
- e. The contractor shall provide DRMO a copy of the complete analysis at the time of turn-in. Affix a single page of the analysis that reflects the PCB results for that particular piece of equipment to the side of the equipment.
- f. The Contractor must package all equipment for long distance shipping securely to a pallet prior to transport to DRMO. Any equipment containing PCB's must be packaged separately.
- g. Contractor shall deliver and unload equipment to DRMO site on base per scheduled appointment. There is no forklift support at DRMO.
- h. Other reusable equipment can be turned in to DRMO at the same time as long as it is packaged separately.

3.9 PREVIOUSLY USED EQUIPMENT

Clean previously used construction equipment prior to bringing it onto the project site. Equipment must be free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the U.S. Department of Agriculture jurisdictional office for additional cleaning requirements.

3.10 MILITARY MUNITIONS

In the event military munitions, as defined in 40 CFR 260, are discovered or uncovered, immediately stop work in that area and immediately inform the Contracting Officer.

3.11 PETROLEUM, OIL, LUBRICANT (POL) STORAGE AND FUELING

POL products include flammable or combustible liquids, such as gasoline, diesel, lubricating oil, used engine oil, hydraulic oil, mineral oil, and cooking oil. Store POL products and fuel equipment and motor vehicles in

a manner that affords the maximum protection against spills into the environment. Manage and store POL products in accordance with EPA 40 CFR 112, and other federal, state, regional, and local laws and regulations. Use secondary containments, dikes, curbs, and other barriers, to prevent POL products from spilling and entering the ground, storm or sewer drains, stormwater ditches or canals, or navigable waters of the United States. Describe in the EPP (see paragraph ENVIRONMENTAL PROTECTION PLAN) how POL tanks and containers must be stored, managed, and inspected and what protections must be provided. Storage of fuel on the project site must be in accordance with EPA, state, and local laws and regulations and paragraph OIL STORAGE INCLUDING FUEL TANKS.

3.11.1 Used Oil Management

Manage used oil generated on site in accordance with 40 CFR 279. Determine if any used oil generated while onsite exhibits a characteristic of hazardous waste. Used oil containing 1,000 parts per million of solvents is considered a hazardous waste and disposed of at the Contractor's expense. Used oil mixed with a hazardous waste is also considered a hazardous waste. Dispose in accordance with paragraph HAZARDOUS WASTE DISPOSAL.

3.11.2 Oil Storage Including Fuel Tanks

Provide secondary containment and overflow protection for oil storage tanks. A berm used to provide secondary containment must be of sufficient size and strength to contain the contents of the tanks plus 5 inches freeboard for precipitation. Construct the berm to be impervious to oil for 72 hours that no discharge will permeate, drain, infiltrate, or otherwise escape before cleanup occurs. Use drip pans during oil transfer operations; adequate absorbent material must be onsite to clean up any spills and prevent releases to the environment. Cover tanks and drip pans during inclement weather. Provide procedures and equipment to prevent overfilling of tanks. No bulk storage of fuels or oils is allowed on site except as approved in writing by the Contracting Officer.

Monitor and remove any rainwater that accumulates in open containment dikes or berms. Inspect the accumulated rainwater prior to draining from a containment dike to the environment, to determine there is no oil sheen present.

3.12 INADVERTENT DISCOVERY OF PETROLEUM-CONTAMINATED SOIL OR HAZARDOUS WASTES

If petroleum-contaminated soil, or suspected hazardous waste is found during construction that was not identified in the Contract documents, immediately notify the Contracting Officer. Do not disturb this material until authorized by the Contracting Officer.

3.13 PEST MANAGEMENT

In order to minimize impacts to existing fauna and flora, coordinate with the Installation Pest Management Coordinator (IPMC) or Project Pesticide Coordinator (PPC), through the Contracting Officer, at the earliest possible time prior to pesticide application. Discuss integrated pest management strategies including prevention of invasive species as applicable with the IPMC and receive concurrence from the IPMC through the Contracting Officer prior to the application of any pesticide associated with these specifications. Provide Installation Project Office Pest

Management personnel the opportunity to be present at meetings concerning treatment measures for pest or disease control and during application of the pesticide. For termiticide requirements, see other specification in the Contract. The use and management of pesticides are regulated under 40 CFR 152 - 186.

3.13.1 Application

Apply pesticides using a state-certified pesticide applicator in accordance with EPA label restrictions and recommendation. The certified applicator must wear clothing and personal protective equipment as specified on the pesticide label. The Contracting Officer will designate locations for water used in formulating. Do not allow the equipment to overflow. Inspect equipment for leaks, clogging, wear, or damage and repair prior to application of pesticide.

3.13.2 Pesticide Treatment Plan

Include and update a pesticide treatment plan, as information becomes available. Include in the plan the sequence of treatment, dates, times, locations, pesticide trade name, EPA registration numbers, authorized uses, chemical composition, formulation, original and applied concentration, application rates of active ingredient (that is, pounds of active ingredient applied), equipment used for application and calibration of equipment. Comply with 40 CFR 152-189, state, regional, and local pest management record-keeping and reporting requirements as well as any additional Installation Project Office specific requirements in conformance with [DA AR 200-1 Chapter 5, Pest Management, Section 5-4 "Program requirements"] for data required to be reported to the Installation.

3.14 SOUND INTRUSION

Make the maximum use of low-noise emission products, as certified by the EPA. Blasting or use of explosives are not permitted without written permission from the Contracting Officer, and then only during the designated times. Confine pile-driving operations to the period between 8 a.m. and 4 p.m., Monday through Friday, exclusive of holidays, unless otherwise specified.

Keep construction activities under surveillance and control to minimize environment damage by noise.

3.15 POST CONSTRUCTION CLEANUP

Clean up areas used for construction in accordance with Contract Clause: "Cleaning Up". Unless otherwise instructed in writing by the Contracting Officer, remove traces of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. Grade parking area and similar temporarily used areas to conform with surrounding contours.

-- End of Section --

SECTION 01 71 23.00 44

SURVEY, LAYOUT, AND OTHER DATA

PART 1 GENERAL (NOT USED)

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 D6432 (2010) Standard Guide for Using the Surface Ground Penetrating Radar Method for Subsurface Investigation

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only or as otherwise designated. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Survey Data

GPRS Report

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 Ground Penetrating Radar Survey

In areas where there is not existing structure the Contractor is to perform a Ground Penetrating Radar Survey (GPRS) in accordance with ASTM D6432, and submit a GPRS Report.

a. Coverage: When permitted by site conditions the area of survey shall be larger than the area of interest by ten percent in each dimension. Background conditions shall be noted preceding and following the survey. Survey lines shall be oriented perpendicular to any linear feature that is expected including but not limited to buried channels, pipelines, tanks, trenches, faults, and fractures.

b. Survey Lines:

i. Station marks shall be placed at equal intervals along the survey line using survey flags and tape, measuring wheel,

electronic measuring device, global positioning system, or other location system.

ii. Survey lines shall be referred to a permanent location.

c. Quality Control (QC):

i. The surveyor shall begin the survey with a test line to establish system settings and record all system settings and parameters.

The AE shall:

Maintain a filed log that records the equipment, system settings, and field operational procedures used for the project.

Document any changes to the planned field procedures.

Record any changes in GPR control settings that are made and the locations in the survey where they were made.

Document any conditions (weather conditions and natural and cultural noise) that could impact survey results.

Note any problems with the equipment, what steps were taken to correct the problem, and how the problem could affect the data.

Review data as soon as possible, if the data are being recorded (by a computer or digital-acquisition system) with no visible means of observing the data.

Rerun test lines(s) as needed to confirm that the system is running properly.

d. Reporting Requirements

i. Purpose and Scope of the GPRS

ii. Geologic Setting

iii. Limitations of the GPRS (sources of noise, interferences, logistical constraints)

iv. Assumptions made

v. Field Approach used along with a description of the equipment and the data acquisition and display parameters such as date of acquisition, gains, filters, antenna frequency, and geometry.

vi. Location of radar transects on a site map, directions of antenna motion along transects, and orientations of antenna polarizations.

vii. Corrections applied to field data and justification for their use.

viii. Measured results.

- ix. How depths to reflectors were determined.
- x. What software program(s) and steps for processing and interpretation were used.
- xi. Interpreted results and qualifications and possible alternate interpretations, and appropriate references or comments for supporting data used in interpretation.

-- End of Section --

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

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. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 273	Standards for Universal Waste Management
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
49 CFR 178	Specifications for Packagings

1.2 DEFINITIONS

1.2.1 Co-mingle

The practice of placing unrelated materials together in a single container, usually for benefits of convenience and speed.

1.2.2 Construction Waste

Waste generated by construction activities, such as scrap materials, damaged or spoiled materials, temporary and expendable construction materials, and other waste generated by the workforce during construction activities.

1.2.3 Demolition Debris/Waste

Waste generated from demolition activities, including minor incidental demolition waste materials generated as a result of intentional dismantling of all or portions of a building, to include clearing of building contents that have been destroyed or damaged.

1.2.4 Disposal

Depositing waste in a solid waste disposal facility, usually a managed landfill, regulated in the US under the Resource Conservation and Recovery Act (RCRA).

1.2.5 Diversion

The practice of diverting waste from disposal in a landfill, by means of eliminating or minimizing waste, or reuse of materials.

1.2.6 Final Construction Waste Diversion Report

A written assertion by a material recovery facility operator identifying

constituent materials diverted from disposal, usually including summary tabulations of materials, weight in short-ton.

1.2.7 Recycling

The series of activities, including collection, separation, and processing, by which products or other materials are diverted from the solid waste stream for use in the form of raw materials in the manufacture of new products sold or distributed in commerce, or the reuse of such materials as substitutes for goods made of virgin materials, other than fuel.

1.2.8 Reuse

The use of a product or materials again for the same purpose, in its original form or with little enhancement or change.

1.2.9 Salvage

Usable, salable items derived from buildings undergoing demolition or deconstruction, parts from vehicles, machinery, other equipment, or other components.

1.2.10 Source Separation

The practice of administering and implementing a management strategy to identify and segregate unrelated waste at the first opportunity.

1.3 CONSTRUCTION WASTE (INCLUDES DEMOLITION DEBRIS/WASTE)

Divert a minimum of 60 percent by weight of the project construction waste and demolition debris/waste from the landfill. Follow applicable industry standards in the management of waste. Apply sound environmental principles in the management of waste. (1) Practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction waste and demolition debris/waste from landfills and incinerators and to facilitate the recycling or reuse of excess construction materials.

1.4 CONSTRUCTION WASTE MANAGEMENT

Implement a construction waste management program for the project. Take a pro-active, responsible role in the management of construction construction waste, recycling process, disposal of demolition debris/waste, and require all subcontractors, vendors, and suppliers to participate in the construction waste management program. Establish a process for clear tracking, and documentation of construction waste and demolition debris/waste.

1.4.1 Implementation of Construction Waste Management Program

Develop and document how the construction waste management program will be implemented in a construction waste management plan. Submit a Construction Waste Management Plan to the Contracting Officer for approval. Construction waste and demolition debris/waste materials include un-used construction materials not incorporated in the final work, as well as demolition debris/waste materials from demolition activities or deconstruction activities. In the management of waste, consider the availability of viable markets, the condition of materials, the ability to

provide material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates.

1.4.2 Oversight

The Quality Control Manager, as specified in Section 01 45 00 QUALITY CONTROL, is responsible for overseeing and documenting results from executing the construction waste management plan for the project. The Environmental Manager, as specified in Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS, is responsible for overseeing and documenting results from executing the construction waste management plan for the project.

1.4.3 Special Programs

Implement any special programs involving rebates or similar incentives related to recycling of construction waste and demolition debris/waste materials. Retain revenue or savings from salvaged or recycling, unless otherwise directed. Ensure firms and facilities used for recycling, reuse, and disposal are permitted for the intended use to the extent required by federal, state, and local regulations.

1.4.4 Special Instructions

Provide on-site instruction of appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the projects. Designation of single source separating or commingling will be clearly marked on the containers.

1.4.5 Waste Streams

Delineate waste streams and characterization, including estimated material types and quantities of waste, in the construction waste management plan. Manage all waste streams associated with the project. Typical waste streams are listed below. Include additional waste streams not listed:

- a. Land Clearing Debris
- b. Asphalt
- c. Masonry and CMU
- d. Concrete
- e. Metals (e.g. banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, bronze, etc.)
- f. Wood (nails and staples allowed)
- g. Glass
- h. Paper
- i. Plastics (PET, HDPE, PVC, LDPE, PP, PS, Other)
- j. Gypsum
- k. Non-hazardous paint and paint cans
- l. Carpet
- m. Ceiling Tiles
- n. Insulation
- o. Beverage Containers

1.5 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When

used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Waste Management Plan; G

SD-06 Test Reports

Quarterly Reports

Annual Report

SD-11 Closeout Submittals

Final Construction Waste Diversion Report; S

1.6 MEETINGS

Conduct Construction Waste Management meetings. After award of the Contract and prior to commencement of work, schedule and conduct a meeting with the Contracting Officer to discuss the proposed construction waste management plan and to develop a mutual understanding relative to the management of the construction waste management program and how waste diversion requirements will be met.

The requirements of this meeting may be fulfilled during the coordination and mutual Understanding meeting outlined in Section 01 45 00 QUALITY CONTROL. At a minimum, discuss and document waste management goals at following meetings:

- a. Preconstruction meeting.
- b. Regular site meetings.
- c. Work safety meeting (if applicable).

1.7 CONSTRUCTION WASTE MANAGEMENT PLAN

Submit Construction Waste Management Plan within 15 days after contract award. Revise and resubmit Construction Waste Management Plan until it receives final approval from the Contracting Officer, in order for construction to begin. Manage demolition debris/waste or deconstruction materials in accordance with the approved construction waste management plan.

An approved construction waste management plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting project cumulative waste diversion requirement. Ensure all subcontractors receive a copy of the approved Construction Waste Management Plan. The plan demonstrates how to meet the project waste diversion requirement. Also, include the following in the plan:

- a. Identify the names of individuals responsible for waste management and waste management tracking, along with roles and responsibilities on the project.

- b. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.
- c. Description of the regular meetings to be held to address waste management.
- d. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site and equipment to be used for processing, sorting, and temporary storage of materials.
- e. Name of landfill and/or incinerator to be used.
- f. Identification of local and regional re-use programs, including non-profit organizations such as schools, local housing agencies, and organization that accept used materials such as material exchange networks and resale stores. Include the name, location, phone number for each re-use facility identified, and provide a copy of the permit or license for each facility.
- g. List of specific materials, by type and quantity, that will be salvaged for resale, salvaged and reused on the current project, salvaged and stored for reuse on a future project, or recycled. Identify the recycling facilities by name, address, and phone number.
- h. Identification of materials that cannot be recycled or reused with an explanation or justification, to be approved by the Contracting Officer.
- i. Description of the means by which any materials identified in item (g) above will be protected from contamination.
- j. Description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site).
- k. Copy of training plan for subcontractors and other services to prevent contamination by co-mingling materials identified for diversion and waste materials.
- l. Identification of at least 5 construction or demolition material streams for diversion.
- m. Detailed plan and distribution of waste diversion between buildings, when project is a part of a campus.
- n. Facilities or subcontractors offering construction waste transport on-site or off-site must ensure that proper shipping orders, bill of lading, manifests, or other shipping documents containing waste diversion information meet requirements of 40 CFR 273 Universal Waste Management, 49 CFR 173 Shippers - General Requirements for Shipments and Packagings, and 49 CFR 178 Specifications for Packaging. Individuals signing manifests or other shipping documents should meet the minimum training requirements.
- o. List each supplier who deliver construction materials, in bulk, or package products in returnable containers or returnable packaging, or

have take-back programs. List each program and the applicable material to actively monitor and track to assist in meeting waste diversion requirements on the project.

Distribute copies of the waste management plan to each subcontractor, Environmental Manager, and the Contracting Officer.

1.8 RECORDS (DOCUMENTATION)

1.8.1 General

Maintain records to document the types and quantities of waste generated and diverted through re-use, recycling and/or sale to third parties; through disposal to a landfill or incinerator facility. Provide explanations for any materials not recycled, reused or sold. Collect and retain manifests, weight tickets, sales receipts, and invoices specifically identifying diverted project waste materials or disposed materials.

1.8.2 Accumulated

Maintain a running record of materials generated and diverted from landfill disposal, including accumulated diversion rates for the project. Make records available to the Contracting Officer during construction or incidental demolition activities. Provide a copy of the diversion records to the Contracting Officer upon completion of the construction, incidental demolitions or minor deconstruction activities.

1.9 REPORTS

1.9.1 General

Maintain current construction waste diversion information on site for periodic inspection by the Contracting Officer. Include in the quarterly reports, annual reports and final reports: the project name, contract information, information for waste generated, diverted and disposed of for the current reporting period and show cumulative totals for the project. Reports must identify quantities of waste by type and disposal method. Also include in each report, supporting documentation to include manifests, weigh tickets, receipts, and invoices specifically identifying the project and waste material type and weighted sum.

1.9.2 Quarterly Reporting

Provide cumulative reports at the end of each quarter (December, March, June, and September, corresponding with the federal fiscal year for reporting purposes). Submit quarterly reports not later than 15 calendar days after the preceding quarter has ended. Submit Quarterly Reports to the appropriate office or identified point of contact.

1.9.3 Annual Reporting

Provide a cumulative construction waste diversion report annually. Submit annual report not later than 30 calendar days after the preceding fourth quarter has ended. Provide copy of annual construction waste diversion report to the installation POC.

1.10 FINAL CONSTRUCTION WASTE DIVERSION REPORT

A Final Construction Waste Diversion Report is required at the end of the project. Provide Final Construction Waste Diversion Report 60 days prior to the Beneficial Occupancy Date (BOD). The final Construction Waste Diversion Report must be included in the Sustainability eNotebook in accordance with Section 01 33 29 SUSTAINABILITY REPORTING.

1.11 COLLECTION

Collect, store, protect, and handle reusable and recyclable materials at the site in a manner which prevents contamination, and provides protection from the elements to preserve their usefulness and monetary value. Provide receptacles and storage areas designated specifically for recyclable and reusable materials and label them clearly and appropriately to prevent contamination from other waste materials. Keep receptacles or storage areas neat and clean.

Train subcontractors and other service providers to either separate waste streams or use the co-mingling method as described in the construction waste management plan. Handle hazardous waste and hazardous materials in accordance with applicable regulations and coordinate with Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS. Separate materials by one of the following methods described herein:

1.11.1 Source Separation Method

Separate waste products and materials that are recyclable from trash and sort as described below into appropriately marked separate containers and then transport to the respective recycling facility for further processing. Deliver materials in accordance with recycling or reuse facility requirements (e.g., free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process). Separate materials into the category types as defined in the construction waste management plan.

1.11.2 Co-Mingled Method

Place waste products and recyclable materials into a single container and then transport to an authorized recycling facility, which meets all applicable requirements to accept and dispose of recyclable materials in accordance with all applicable local, state and federal regulations. The Co-mingled materials must be sorted and processed in accordance with the approved construction waste management plan.

1.11.3 Other Methods

Other methods proposed by the Contractor may be used when approved by the Contracting Officer.

1.12 DISPOSAL

Control accumulation of waste materials and trash. Recycle or dispose of collected materials off-site at intervals approved by the Contracting Officer and in compliance with waste management procedures as described in the waste management plan. Except as otherwise specified in other sections of the specifications, dispose of in accordance with the following:

1.12.1 Reuse

Give first consideration to reusing construction and demolition materials as a disposition strategy. Recover for reuse materials, products, and components as described in the approved construction waste management plan. Coordinate with the Contracting Officer to identify onsite reuse opportunities or material sales or donation available through Government resale or donation programs. Sale of recovered materials is not allowed on the Installation.

1.12.2 Recycle

Recycle non-hazardous construction and demolition/debris materials that are not suitable for reuse. Track rejection of contaminated recyclable materials by the recycling facility. Rejected recyclables materials will not be counted as a percentage of diversion calculation. Recycle all fluorescent lamps, HID lamps, mercury (Hg) -containing thermostats and ampoules, and PCBs-containing ballasts and electrical components as directed by the Contracting Officer. Do not crush lamps on site as this creates a hazardous waste stream with additional handling requirements.

1.12.3 Waste

Dispose by landfill or incineration only those waste materials with no practical use, economic benefit, or recycling opportunity.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used. -- End of Section --

SECTION 01 78 00

CLOSEOUT SUBMITTALS

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)

ERDC/ITL TR-19-7 (2019) A/E/C CAD Standard - Release 6.1

ERDC/ITL SR-23-1 (2023) A/E/C Graphics Standard

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-300-08 (2023) Criteria for Transfer and
Acceptance of DoD Real Property

1.2 DEFINITIONS

1.2.1 As-Built Drawings

As-built drawings are developed and maintained by the Contractor and depict actual conditions, including deviations from the Contract Documents. These deviations and additions may result from coordination required by, but not limited to: contract modifications; official responses to Contractor submitted Requests for Information; direction from the Contracting Officer; designs which are the responsibility of the Contractor, and differing site conditions. Maintain the as-builts throughout construction as red-lined hard copies on site and red-lined PDF files. These files serve as the basis for the creation of the record drawings.

1.2.2 Record Drawings

The record drawings are the final compilation of actual conditions reflected in the as-built drawings.

1.3 SOURCE DRAWING FILES

Request the full set of electronic drawings, in the source format, for Record Drawing preparation, after award and at least 30 days prior to required use.

1.3.1 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction drawings and data for the referenced project. Any other use or reuse shall be at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim and waives to the fullest extent permitted by law, any claim or cause of action of any

nature against the Government, its agents or sub consultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic CAD drawing files are not construction documents. Differences may exist between the CAD files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic CAD files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished Source drawing files, the signed and sealed construction documents govern. The Contractor is responsible for determining if any conflict exists. Use of these Source Drawing files does not relieve the Contractor of duty to fully comply with the contract documents, including and without limitation, the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic source drawing files for use in producing construction drawings and data related to this contract, remove all previous indicia of ownership (seals, logos, signatures, initials and dates).

1.4 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. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

- Warranty Management Plan
- Warranty Tags
- Spare Parts Data

SD-07 Certificates

- Certification Of Usda Designated Items

SD-08 Manufacturer's Instructions

- Posted Instructions

SD-10 Operation and Maintenance Data

- Operation and Maintenance Manuals; G

SD-11 Closeout Submittals

- As-Built Drawings; G
- Record Drawings; G
- As-Built Record of Equipment and Materials
- Final Approved Shop Drawings
- Construction Contract Specifications
- Certification of EPA Designated Items; G

Interim DD FORM 1354; G
Checklist for DD FORM 1354; G
High Performance And Sustainable Building (Hpsb) Checklist
List Of Installed Building Equipmnet Items For Dd Form 1354

1.5 SPARE PARTS DATA

Submit two copies of the Spare Parts Data list.

- a. Indicate manufacturer's name, part number, nomenclature, and stock level required for maintenance and repair. List those items that may be standard to the normal maintenance of the system.
- b. At acceptance of commissioning, ensure the required stock level is supplied as indicated in subparagraph a for maintenance and repair activities through the facilities warranty period. Provision of spare parts does not relieve the Contractor of responsibilities listed under the contract guarantee provisions.

1.6 QUALITY CONTROL

Additions and corrections to the contract drawings must be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols must conform ERDC/ITL TR-19-7.

1.7 WARRANTY MANAGEMENT

1.7.1 Warranty Management Plan

Develop a warranty management plan which contains information relevant to the clause Warranty of Construction. At least 30 days before the planned pre-warranty conference, submit four sets of the warranty management plan. Include within the warranty management plan all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan must 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 must include due date and whether item has been submitted or was accomplished. Warranty information made available during the construction phase must be submitted to the Contracting Officer for approval prior to each monthly pay estimate. Assemble approved information in a binder and turn over to the Government upon acceptance of the work. The construction warranty period will begin on the date of project acceptance and continue for the full product warranty period. A joint 4 month and 9 month warranty inspection will be conducted, measured from time of acceptance, by the Contractor, Contracting Officer and the Customer Representative. Include within the warranty management plan, but not 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. Furnish with each warranty the name, address, and telephone number of each of the guarantor's representatives nearest to the project location.

- c. 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.
- d. 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. Include one-year overall warranty of construction, including the starting date of warranty of construction. Items which have extended warranties must 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.
- e. The plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.
- f. Procedure and status of tagging of all equipment covered by extended warranties.
- g. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.7.2 Performance Bond

The Performance Bond must remain effective throughout the construction period.

- a. 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.
- b. In the event sufficient funds are not available to cover the construction warranty work performed by the Government at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.
- c. Following oral or written notification of required construction warranty repair work, respond in a timely manner. Written verification will follow oral instructions. Failure to respond will be cause for the Contracting Officer to proceed against the Contractor.

1.7.3 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, 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 will be established/reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, 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, be continuously available, and 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.

1.7.4 Contractor's Response to Construction Warranty Service Requirements

Following oral or written notification by the Contracting Officer, respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the three categories of priorities listed below. Submit a report on any warranty item that has been repaired during the warranty period. Include within the report 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 timeframe 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 onsite 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-Systems directly impacting aircraft maintenance or operations.

Code 1-Elevator Related Calls.

Code 1-Life Safety Systems

- (1) Fire suppression systems.
- (2) Fire alarm system(s) in place in the building.

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.

1.7.5 Warranty Tags

At the time of installation, tag each warranted item with a durable, oil and water resistant tag approved by the Contracting Officer. Attach each tag with a copper wire and spray with a silicone waterproof coating. Also, submit two record copies of the warranty tags showing the layout and design. The date of acceptance and the QC signature must remain blank until the project is accepted for beneficial occupancy. Show the following information on the tag.

Type of product/material	
Model number	
Serial number	
Contract number	
Warranty period from/to	
Inspector's signature	
Construction Contractor	
Address	
Telephone number	
Warranty contact	
Address	
Telephone number	
Warranty response time priority code	
WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.	

PART 2 PRODUCTS

2.1 GOVERNMENT FURNISHED MATERIALS

The Government will provide an optical disc (CD or DVD) at the preconstruction conference that contains the following:

- a. One set of "as-designed" electronic CAD files in the specified software and format revised to reflect all amendments and the final contract PDF drawings. The CAD files are provided to enable preparation of as-built or as-constructed drawings. If discrepancies exist between the CAD files and the contract PDF drawings, correct the CAD files to show the contract PDF drawings.
- b. A submittal register data file in comma separated value (CSV) format for import into the Resident Management System (RMS).

2.2 SYSTEM DESCRIPTION

Prepare the CAD drawing files in AutoCAD format compatible with a Windows 10 operating system.

2.2.1 Additional Drawings

If additional drawings are required, prepare them using the specified electronic file format applying ERDC/ITL TR-19-7 and ERDC/ITL SR-23-1. The title block and drawing border to be used for any new final record drawings must be identical to that used on the contract drawings.

2.2.1.1 Sheet Numbers and File Names

If a sheet needs to be added between two sequential sheets, append a Supplemental Drawing Designator in accordance with ERDC/ITL TR-19-7 Adding a drawing sheet, and ERDC/ITL SR-23-1 Adding or deleting drawing sheets and index sheet procedures.

2.3 CERTIFICATION OF EPA DESIGNATED ITEMS

Submit the Certification of EPA Designated Items as required by FAR 52.223-9, "Certification and Estimate of Percentage of Recovered Material Content for EPA Designated Items". Include on the certification form the following information: project name, project number, Contractor name, license number, Contractor address, and certification. The certification will read as follows and be signed and dated by the Contractor. "I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current EPA standards for recycled/recovered materials content. The following exemptions may apply to the non-procurement of recycled/recovered content materials:

- 1) The product does not meet appropriate performance standards;
- 2) The product is not available within a reasonable time frame;
- 3) The product is not available competitively (from two or more sources);
- 4) The product is only available at an unreasonable price (compared with a comparable non-recycled content product)."

Record each product used in the project that has a requirement or option of containing recycled[or biobased] content in accordance with SECTION 01 33 29 SUSTAINABILITY REPORTING, noting total price, total value of

post-industrial recycled content, total value of post-consumer recycled content, [total value of biobased content,] exemptions (1, 2, 3, or 4, as indicated), and comments. Recycled [and biobased] content values may be determined by weight or volume percent, but must be consistent throughout.

2.4 CERTIFICATION OF USDA DESIGNATED ITEMS

Submit the Certification of USDA Designated Items as required by FAR 52-223-1 Bio-based Products Under Service and Construction Contracts. Include on the certification the following information: project name, project number, Contractor name, license number, Contractor address, and certification. The certification will read as follows and be signed and dated by the Contractor.

- a. The product does not meet appropriate performance standards;
- b. The product is not available within a reasonable time frame;
- c. The product is not available competitively (from two or more sources);
- d. The product is only available at an unreasonable price (compared with a comparable bio-based content product)."

Record each product used in the project that has a requirement or option of containing biobased content in accordance with SECTION 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING, noting total price, total value of post-industrial recycle content, total value of post-consumer recycled content, total value of biobased content, exemptions (a, b, c, or d, as indicated), and comments. Biobased content values may be determined by weight or volume percent, but must be consistent throughout.

PART 3 EXECUTION

3.1 AS-BUILT DRAWINGS

Provide and maintain two black line print copies of the PDF contract drawings for As-Built Drawings.

3.1.1 Markup Guidelines

Make comments and markup the drawings complete without reference to letters, memos, or materials that are not part of the As-Built drawing. Show what was changed, how it was changed, where items(s) were relocated and change related details. These working as-built markup prints must be neat, legible and accurate as follows:

- a. Use base colors of red, green, and blue. Color code for changes as follows:
 - (1) Special (Blue) - Items requiring special information, coordination, or special detailing or detailing notes.
 - (2) Deletions (Red) - Over-strike deleted graphic items (lines), lettering in notes and leaders.
 - (3) Additions (Green) - Added items, lettering in notes and leaders.

- b. Provide a legend if colors other than the "base" colors of red, green, and blue are used.
- c. Add and denote any additional equipment or material facilities, service lines, incorporated under As-Built Revisions if not already shown in legend.
- d. Use frequent written explanations on markup drawings to describe changes. Do not totally rely on graphic means to convey the revision.
- e. Use legible lettering and precise and clear digital values when marking prints. Clarify ambiguities concerning the nature and application of change involved.
- f. Wherever a revision is made, also make changes to related section views, details, legend, profiles, plans and elevation views, schedules, notes and call out designations, and mark accordingly to avoid conflicting data on all other sheets.
- g. For deletions, cross out all features, data and captions that relate to that revision.
- h. For changes on small-scale drawings and in restricted areas, provide large-scale inserts, with leaders to the applicable location.
- i. Indicate one of the following when attaching a print or sketch to a markup print:
 - 1) Add an entire drawing to contract drawings
 - 2) Change the contract drawing to show
 - 3) Provided for reference only to further detail the initial design.
- j. Incorporate all shop and fabrication drawings into the markup drawings.

3.1.2 As-Built Drawings Content

Revise As-Built Drawings in accordance with ERDC/ITL TR-19-7 and ERDC/ITL SR-23-1. Provide 2 sets of paper copies from PDF drawings to show the as-built conditions by red-line process during the execution of the project. Keep these working as-built markup drawings current on a weekly basis and at least one set available on the jobsite at all times. Changes from the contract drawings which are made during construction or additional information which might be uncovered in the course of construction must be accurately and neatly recorded as they occur by means of details and notes. Submit the working as-built markup drawings for approval prior to submission of each monthly pay estimate. For failure to maintain the working and final record drawings as specified herein, the Contracting Officer will withhold 10 percent of the monthly progress payment until approval of updated drawings. Show on the as-built drawings, but not 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, show by offset dimensions to two permanently fixed surface features the end of each run including each change in direction on the record drawings. Locate valves, splice

boxes and similar appurtenances by dimensioning along the utility run from a reference point. Also record the average depth below the surface of each run.

- b. The location and dimensions of any changes within the building structure.
- c. Layout and schematic drawings of electrical circuits and piping.
- d. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.
- 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 shop drawings, fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.
- f. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.
- g. Changes or Revisions which result from the final inspection.
- h. Where contract drawings or specifications present options, show only the option selected for construction on the working as-built markup drawings.
- i. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, furnish a contour map of the final borrow pit/spoil area elevations.
- j. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.
- k. Changes in location of equipment and architectural features.
- j. Modifications (include within change order price the cost to change working as-built markup drawings to reflect modifications).
- l. Actual location of anchors, construction and control joints, etc., in concrete.
- m. Unusual or uncharted obstructions that are encountered in the contract work area during construction.
- n. Location, extent, thickness, and size of stone protection particularly where it will be normally submerged by water.

3.2 RECORD DRAWING FILES

If additional drawings are required, prepare them using the specified electronic file format applying ERDC/ITL TR-19-7 and ERDC/ITL SR-23-1. The title block and drawing border to be used for any new final record drawings must be identical to that used on the contract drawings. Accomplish additions and corrections to the contract drawings using CAD files. Provide all program files and hardware necessary to prepare final PDF record drawings. The Contracting Officer will review final PDF record drawings for accuracy and return them to the Contractor for required

corrections, changes, additions, and deletions.

3.2.1 Rename the CAD Drawing files

Rename the CAD Drawing files using the contract number as the Project Code field, (e.g., W91238-15-C-10A-102.DWGDGN) as instructed in the Pre-Construction conference. Use only those renamed files for the Marked-up changes. Make all changes on the layer/level as the original item.

- a. For AutoCAD files (DWG), enter all as-built delta changes and notations on the AS-BUILT layer. For MicroStation files (DGN), enter all as-built delta changes and notations on:
 - Level #63
 - Level/Layer Name contains: ANNO-REVS
 - Level/Layer Description: Revisions
- c. When final revisions have been completed, show the wording "RECORD DRAWING AS-BUILTS" followed by the name of the Contractor in letters at least 3/16 inch high on the cover sheet drawing. Date RECORD DRAWING AS-BUILTS" drawing revisions in the revision block.
- d. Within 20 days after Government approval of all of the working record drawings for a phase of work, prepare the final CAD record drawings for that phase of work and submit PDF drawing files and two sets of prints for review and approval. The Government will promptly return one set of prints annotated with any necessary corrections. Within 10 days revise the CAD 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 of substantial completion of all phases of work, submit the final record drawing package for the entire project. Submit one set of electronic CAD files, and one set of the approved working record PDF files on three optical discs with two sets of prints. The CAD files must be complete in all details and identical in form and function to the CAD drawing files supplied by the Government. Prepare AutoCAD files for transmittal using e-Transmit. Prepare MicroStation files for transmittal using the Packager (Archive). Make any transactions or adjustments necessary to accomplish this. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CAD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit final record PDF drawing files, CAD files and marked prints as specified will be cause for withholding any payment due under this contract. Approval and acceptance of final record drawings must be accomplished before final payment is made.

3.3 RECORD DRAWINGS

Prepare final record drawings after the completion of each definable phase of work as listed in the Contractor Quality Control Plan (Foundations, Utilities, Structural Steel, etc., as appropriate for the project). Transfer the changes from the approved working as-built markup drawings to the original electronic CAD drawing files. Modify the as-built CAD drawing files to correctly show the features of the project as-built by bringing the working CAD drawing set into agreement with approved working as-built markup drawings, and adding such additional drawings as may be necessary. Refer to ERDC/ITL TR-19-7 Chapter 11 Drawing Revisions. Refer

to ERDC/ITL SR-23-1. Jointly review the working as-built markup drawings with printouts from working as-built CAD drawing PDF files for accuracy and completeness. Monthly review of working as-built CAD drawing PDF file printouts must cover all sheets revised since the previous review. These PDF drawing files are part of the permanent records of this project. Any drawings damaged or lost must be satisfactorily replaced at no expense to the Government.

- a. Drawing revisions (include within change order price the cost to change working and final record drawings to reflect revisions) and compliance with the following procedures.
 - (1) Follow directions in the revision for posting descriptive changes.
 - (2) The revision delta size must be 5/16 inch unless the area where the delta is to be placed is crowded. Use a smaller size delta for crowded areas.
 - (3) Place a revision delta at the location of each deletion.
 - (4) For new details or sections which are added to a drawing, place a revision delta by the detail or section title.
 - (5) For minor changes, place a revision delta by the area changed on the drawing (each location).
 - (6) For major changes to a drawing, place a revision delta by the title of the affected plan, section, or detail at each location.
 - (7) For changes to schedules or drawings, place a revision delta either by the schedule heading or by the change in the schedule.

3.3.1 Final Record Drawing Package

Submit the final record PDF and CAD drawings package for the entire project within 20 days of substantial completion of all phases of work. Submit one set of ANSI D size PDF and CAD files on optical disc, read-only memory (ROM), two sets of ANSI D size prints and one set of the approved working record drawings. The package must be complete in all details and identical in form and function to the contract drawing files supplied by the Government.

3.4 FINAL APPROVED SHOP DRAWINGS

Submit final approved project shop drawings 30 days after transfer of the completed facility.

3.5 CONSTRUCTION CONTRACT SPECIFICATIONS

Submit final PDF file record construction contract specifications, including revisions thereto, 30 days after transfer of the completed facility.

3.6 AS-BUILT RECORD OF EQUIPMENT AND MATERIALS

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. Submit Two sets of final record of equipment and

materials 10 days after final inspection. Key the designations to the related area depicted on the contract drawings. 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

3.7 OPERATION AND MAINTENANCE MANUALS

Provide project operation and maintenance manuals as specified in Section 01 78 23 OPERATION AND MAINTENANCE MANUALS DATA. Provide four electronic copies of the Operation and Maintenance Manual files and one hard copy of the Operation and Maintenance Manuals. Submit to the Contracting Officer for approval within 30 calendar days of the Beneficial Occupancy Date (BOD). Update and resubmit files for final approval at BOD.

3.8 CLEANUP

Leave premises "broom clean." Clean interior and exterior glass surfaces exposed to view; remove temporary labels, stains and foreign substances; polish transparent and glossy surfaces; vacuum carpeted and soft surfaces. Clean equipment and fixtures to a sanitary condition. Clean filters of operating equipment. Clean debris from roofs, gutters, downspouts and drainage systems. Sweep paved areas and rake clean landscaped areas. Remove waste and surplus materials, rubbish and construction facilities from the site..

3.9 REAL PROPERTY RECORD

Near the completion of Project, but a minimum of 60 days prior to final acceptance of the work, complete DD FORM 1354 and submit an accounting of all installed property with Interim DD FORM 1354. Include any additional assets, improvements, and alterations from the Draft DD FORM 1354. <https://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd1354.pdf>> Refer to UFC 1-300-08 for instruction on completing the DD FORM 1354. Contact the Contracting Officer for any project specific information necessary to complete the Checklist for DD FORM 1354.

3.9.1 Interim DD Form 1354

Near the completion of Project, but a minimum of 60 days prior to final acceptance of the work, complete, update draft DD FORM 1354, and submit an accounting of all installed property with Interim DD FORM 1354. Include any additional assets, improvements, and alterations from the Draft DD FORM 1354.

3.9.2 Completed DD FORM 1354

Attach the Real Property receiving Components's completed High Performance

and Sustainable Building (HPSB) Checklist for each applicable building to the completed DD 1354, in accordance with Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING. For convenience, a blank fillable PDF DD FORM 1354 may be obtained at the following link:

<https://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd1354.pdf>

Submit the completed List of Installed Building Equipent items for DD FORM 1354. Attach this list to the updated DD FORM 1354.

-- End of Section --

SECTION 01 78 23

OPERATION AND MAINTENANCE DATA

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.

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

ASHRAE GUIDELINE 1.4 (2019) Preparing Systems Manuals for Facilities

ASTM INTERNATIONAL (ASTM)

ASTM E1971 (2005; R 2011) Standard Guide for Stewardship for the Cleaning of Commercial and Institutional Buildings

ASTM E2166 (2016; R 2023) Standard Practice for Organizing and Managing Building Data

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-10 Operation and Maintenance Data

[Facility Data Workbook; G[, [____]]
] Training Plan; G[, [____]]
 Training Outline; G[, [____]]
 Training Content; G[, [____]]
 Operation And Maintenance Manual, Progress Submittal; G[, [____]]
 Operation And Maintenance Manual, Prefinal Submittal; G[, [____]]
 Operation And Maintenance Manual, Final Submittal; G[, [____]]

SD-11 Closeout Submittals

Training Video Recording; G[, [____]]
 Validation of Training Completion; G[, [____]]

Training Plan; G[, [_____]]

Record Drawings And Utility Systems; G[, [_____]]

1.3 MEETINGS

To assure that Operation and Maintenance Manual and Facility Data Workbook requirements are being met through the duration of the project, organize the following meetings and discuss the subsequent topics:

1.3.1 [Post-Award Kickoff Meeting] [Pre-Construction Meeting]

At a minimum, discuss the following:

- a. The requirement for Operation and Maintenance Manuals and Facility Data deliverables under this contract including coordination meetings
- b. Processes and method of gathering Facility Data information during construction
- c. Primary roles and responsibilities associated with the development and delivery of the Operation and Maintenance Manuals and Facility Data deliverables, and
- d. Identify and agree upon a date and attendance list for the meetings described below:

1.3.2 Operation and Maintenance Manual and Facility Data Workbook Coordination Meeting

Facilitate a meeting after the [Pre-Construction Meeting] [Post-Award Kickoff Meeting] prior to the submission of the Operation and Maintenance Manual Progress Submittal. Meeting attendance must include the Contractor's Operation and Maintenance Manual and Facility Data Workbook Preparer, [Designer of Record (DOR),]Quality Control Manager, [the Commissioning Authority (CxA),]the Government's Design Manager (DM), Contracting Officer's Representative, and Government's facility data reviewer. Include any Mechanical, Electrical, and Fire Protection Sub-Contractors.

The purpose of this meeting is to reach a mutual understanding of the scope of work concerning the contract requirements for Operation and Maintenance Manual and coordinate the efforts necessary by both the Government and Contractor to ensure an accurate collection, preparation and timely Government review of Operation and Maintenance Manual.

1.3.3 Submittal Coordination Meeting

Facilitate a meeting following submission and Government review of each design or progress submittal of the Operation and Maintenance Manual and Facility Data Workbook.

- a. Include personnel from the Coordination meeting and any additional personnel identified.
- b. The purpose of this meeting is to demonstrate ongoing compliance with the requirements identified in this specification. Discuss Government review comments and unresolved items preventing completion and

Government approval of the Operation and Maintenance Manuals and Facility Data Workbook (FDW).

- c. The applicable deliverables, along with Government remarks associated with review of these submittals serve as the primary guide and agenda for this meeting.

1.3.4 Facility Turnover Meeting

Include Operation and Maintenance Manual in NAVFAC Red Zone (NRZ) facility turnover meetings as specified in Section 01 30 00, ADMINISTRATIVE REQUIREMENTS.

1.4 FACILITY DATA WORKBOOK

Develop an editable, electronic spreadsheet based on the equipment in the Operation and Maintenance Manuals that contains the information required to start a preventive maintenance program as outlined in 01 78 24.00 10 FACILITY DATA REQUIREMENTS.

1.5 OPERATION AND MAINTENANCE MANUAL MEDIA

Assemble Operation and Maintenance Manual into an electronically bookmarked file using the most current version of Adobe Acrobat or similar software capable of producing PDF file format. Provide compact disks (CD) or data digital versatile disk (DVD) as appropriate, so that each one contains operation, maintenance and record files, project record documents, and training videos. Include a complete bookmarked operation and maintenance directory.

1.5.1 CD or DVD Label and Disk Holder or Case

Provide the following information on the disk label and disk holder or case:

- a. Building Number
- b. Project Title
- c. Activity and Location
- d. Construction Contract Number
- e. Prepared For: (Contracting Agency)
- f. Prepared By: (Name, title, phone number and email address)
- g. Include the disk content on the disk label
- h. Date
- i. Virus scanning program used

1.5.2 O&M Manual Tabbed Hard Copy

Provide a hard copy of the O&M manual upon completion of the project. Provide tabs for each section and subsection for ease of navigation by the user.

1.6 O&M MANUAL CONTENT

Organize the bookmarked Operation and Maintenance Manual into the following Parts in accordance with ASHRAE GUIDELINE 1.4, and as modified and detailed below. Word template for O&M Manual is available at: <https://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-78-23>.

1.6.1 Part 1: Executive Summary

Provide a summary of the information found in the O&M manual including the purpose of the manual and a description of the manual's organization.

1.6.2 Part 2: Facility Design and Construction

1.6.2.1 General Facility and Systems Description

Provide an overview of the intent for design and use of the facility. Provide a PDF of the Record Drawings prepared in accordance with 01 78 00 CLOSEOUT SUBMITTALS and bookmarked using the sheet title and sheet number. Include uncluttered 11 by 17 inches floor plans with room numbers, type or function of space, and overall facility dimensions on the floor plans. Do not include items such as construction instructions, references, or frame numbers.

Detail the overall dimensions of the facility, number of floors, foundation type, expected number of occupants, and facility Category Code list and generally describe all the facility systems and any special building features (for example, HVAC Controls, Sprinkler Systems, Cranes, Elevators, and Generators). Include photographs marked up and labeled to show key operating components and the overall facility appearance.

1.6.2.2 Basis of Design

Provide a copy of the contract Basis of Design.

1.6.2.3 Contract Documents, RFP, Amendments, and Modifications

Provide the contract construction documents complete, to include specifications, drawings, Request for Proposal, amendments, and modifications.

1.6.2.4 Room Inventory of Real Property and Finishes

Provide a list of installed equipment furnished under this contract. Include all information usually listed on manufacturer's name plate. Include, as applicable, the following information for each piece of equipment installed: description of item, all dimensions, 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. Real property includes, but is not limited to, floor coverings, wall surfaces, ceiling surfaces, windows, roofing, HVAC filters, plumbing fixtures, and lighting fixtures. Submit the final list 30 days after transfer of the completed facility.

Include spatial data defining actual net square footage and data of each room. Also include the room finish schedule including room names and numbers. Include schedules in the construction drawings in the room inventory. Add a column to each schedule to record what was provided by

the contractor during construction. Provide a PDF of room inventory. Key the designations to the related area depicted on the contract drawings. 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
[_____]				

1.6.3 Part 3: Facilities, Systems, and Assemblies Information

1.6.3.1 Organization

Bookmark information in this section using the current version of ASTM E2166 Unifomat II, UFGS numbers, and document type as outlined in the example below. Bookmark/tab each item to the third level for easy navigation of the manual.

Example as shown in Table below:

PARTS AND SUBPART NUMBERING
3.1 B20 EXTERIOR CLOSURE (System)
3.1.1 B2030 EXTERIOR DOORS (Subsystem)
3.1.1.1 B2030110 GLAZED DOORS (Component)
3.1.1.1.1 Applicable specifications List in UFGS Format
3.1.1.1.2 Manufacturer's Operations and Maintenance Data
3.1.1.1.3 Approved Submittal
3.1.1.1.4 Coordination/Shop Drawings
3.1.1.1.5 Sequence of Operation for Operating Equipment
3.1.1.1.6 Testing Equipment Information and Performance Data
3.1.1.1.7 Routine Maintenance Requirements
3.1.1.1.8 Repair Procedures
3.1.1.1.9 Emergency Procedures & Locations of Applicable Controls
3.1.1.1.10 Warranties
3.1.1.1.11 Record Drawings and Utility Systems

PARTS AND SUBPART NUMBERING
3.1.1.1.12 Contractor / Supplies Listing and Contact Information

1.6.3.2 Related Specifications

Reference each specification related to the subsystem in this section, and locate the actual specification section in Part 2 of the O&M Manual. List specifications in table format as shown in the below example.

UFGS Number	Specification Title	Page Spec Begins in Part 2

1.6.3.3 Manufacturer's Operations and Maintenance Data

Provide a copy of all manufacturer specifications and cutsheets. Provide text-searchable, high-quality document files from the manufacturer's online or electronic documentation. Color documents are preferred. Provide documents specific to the product(s) installed under this Contract. Provide identification and coverage for the parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Provide Uniformat II Level 3 identification for D20, D30, D40 installed equipment. When possible, do not submit document files containing multiple product catalogs from the same manufacturer, or product data from multiple manufacturers in the same files. Provide documents directly from the manufacturer whenever possible. Do not provide scanned copies of hardcopy documents. Provide identification and coverage for the 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 must show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Group the parts shown in the listings 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 part catalog.

1.6.3.4 Approved Submittals and Certificates

Provide a copy of all submittals documented with the required approval as applicable for each UFGS specification listed in the table outlined in applicable specifications. Include copies of SD-07 Certificates submittals documented with the required approval, SD-08 Manufacturer's Instructions submittals documented with the required approval, and SD-10

Operation and Maintenance Data submittals documents with the required approval.

1.6.3.5 Approved Coordination/Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work. Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project. Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

1.6.4 Sequence of Operation for Operating Equipment

Provide record one-line diagrams for each floor, delineating mechanical equipment location within the building. Provide specific instructions, procedures, and illustrations for the following phases of operation for the installed model and features of each system:

1.6.4.1 Safety Precautions and Hazards

List personnel hazards and equipment or product safety precautions for operating conditions. List all residual hazards identified in the Activity Hazard Analysis provided under Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS. Provide recommended safeguards for each identified hazard. Specify if any certifications or licenses are required to operate the equipment.

1.6.4.2 Operator Prestart

Provide procedures required to install, set up, and prepare each system for use.

1.6.4.3 Startup, Shutdown, and Post-Shutdown Procedures

Provide narrative description for Startup, Shutdown and Post-shutdown operating procedures including the control sequence for each procedure.

1.6.4.4 Normal Operations

Provide Control Diagrams with data to explain operation and control of systems and specific equipment. Provide narrative description of Normal Operating Procedures.

1.6.4.5 Emergency Operations

Provide 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. Provide Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of utility systems including required valve positions, valve locations and zones or portions of systems controlled.

1.6.4.6 Operator Service Requirements

Provide instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gauge readings.

1.6.4.7 Environmental Conditions

Provide 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.

1.6.4.8 Operating Log

Provide forms, sample logs, and instructions for maintaining necessary operating records.

1.6.4.9 Additional Requirements for Equipment Control Systems

Provide Data Package 5 and the following for all control systems:

- a. Provide a narrative description on how to perform and apply functions, features, modes, and other operations, including unoccupied operation, seasonal changeover, manual operation, and alarms. Include detailed technical manual for programming and customizing control loops and algorithms.
- b. Submit complete controls equipment schedules, full as-built sequence of operations, wiring and logic diagrams, Input/Output Tables, equipment schedules, copies of checkout tests and calibrations performed by the Contractor (not Cx tests), and all associates information.
- c. Full points list. Provide a listing of rooms with the following information for each room:
 - (1) Floor
 - (2) Room number
 - (3) Room name
 - (4) Air handler unit ID
 - (5) Reference drawing number
 - (6) Air terminal unit tag ID
 - (7) Heating or cooling valve tag ID
 - (8) Minimum cfm
 - (9) Maximum cfm
- d. Full print out of all schedules and set points after testing and acceptance of the system.
- e. Full as-built print out of software program.
- f. Marking of system sensors and thermostats on the as-built floor plan and mechanical drawings with their control system designations.

1.6.4.10 Testing Equipment Information and Performance Data

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components. Provide final set points.

Include completed prefunctional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms. Provide final set points.

1.6.5 Routine Maintenance Requirements

1.6.5.1 Preventive Maintenance Plan, Schedule, and Procedures

Provide manufacturer's schedule for routine preventive maintenance, inspections, condition monitoring (predictive tests) and adjustments required to ensure proper and economical operation and to minimize repairs. Provide instructions stating when the systems should be retested. Provide manufacturer's projection of preventive maintenance work-hours on a daily, weekly, monthly, and annual basis including requirements by type of activity. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

- a. Define the anticipated time required to perform each test (work-hours), test apparatus, number of personnel identified by responsibility, and a testing validation procedure permitting the record operation capability requirements within the schedule. Provide a remarks column for the testing validation procedure referencing operating limits of time, pressure, temperature, volume, voltage, current, acceleration, velocity, alignment, calibration, adjustments, cleaning, or special system notes. Delineate procedures for preventive maintenance, inspection, adjustment, lubrication and cleaning necessary to minimize repairs.
- b. Repair requirements must inform operators how to check out, troubleshoot, repair, and replace components of the system. Include electrical and mechanical schematics and diagrams and diagnostic techniques necessary to enable operation and troubleshooting of the system after acceptance.

1.6.5.2 Lubrication Data

Include the following preventive maintenance lubrication data, in addition to instructions for lubrication required under paragraph 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. Provide procedural instructions for Oil Sampling for all equipment.
- c. A Lubrication Schedule showing service interval frequency.

1.6.6 Repair Procedures

Provide instructions and a list of tools required to repair or restore the

product or equipment to proper condition or operating standards. Provide manufacturer's recommended procedures and instructions for correcting problems and making repairs for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials. Specify if any certifications or licenses are required to repair the equipment.

1.6.6.1 Troubleshooting Guides and Diagnostic Techniques

Provide 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 require replacement.

1.6.6.2 Wiring Diagrams and Control Diagrams

Provide 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.

1.6.6.3 Removal and Replacement Instructions

Provide step-by-step procedures and a list of required specialty tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Use a combination of text and illustrations.

1.6.6.4 Repair Work-Hours

Provide manufacturer's projection of repair work-hours including requirements by type of craft. Identify, and tabulate separately, repair that requires the equipment manufacturer to complete or to participate.

1.6.6.5 Warranty Information

List and explain the various warranties and clearly identify the servicing and technical precautions prescribed by the manufacturers or contract documents in order to keep warranties in force. Identify if replacement of a subassembly, attachment or accessory requires the entire assembly to be replaced. Include warranty information for primary components of the system. Provide copies of warranties required by Section 01 78 00 CLOSEOUT SUBMITTALS.

1.6.6.6 Extended Warranty Information

List all warranties for products, equipment, components, and sub-components whose duration exceeds one year. For each warranty listed, indicate the applicable specification section, duration, start date, end date, and the point of contact for warranty fulfillment. Also, list or reference the specific operation and maintenance procedures that must be performed to keep the warranty valid. Provide copies of warranties required by Section 01 78 00 CLOSEOUT SUBMITTALS.

1.6.6.7 Record Drawings and Utility Systems

The record drawings are the final compilation of actual conditions reflected in the as-built drawings. Provide record drawings as outlined in 01 78 00 CLOSEOUT SUBMITTALS.

Using Record Source Drawings, show and document details of the actual installation of the utility systems, annotate and highlight the Operation and Maintenance information. Provide the following drawings at a large enough scale to differentiate designated isolation units from surrounding valves and switches.

1.6.6.8 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.

1.6.6.9 Contractor / Supplier Listing and Contact Information

Provide a list that includes the name, address, telephone number, email and website 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 that can provide replacements most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

1.6.7 Part 4: Facility Operations

1.6.7.1 Completed Facility Operating Plan

Provide a plan that documents that procedures for the operation of systems and assemblies in the facility. The systems that should be included in the Operating Plan include, but are not limited to:

- a. Electrical systems and equipment
- b. Mechanical systems and equipment
- c. Fire Protection systems and equipment
- d. Control Systems and equipment
- e. Architectural and Structural systems, fixtures, structures, and equipment
- f. Vertical transportation such as elevators and escalators

1.6.7.2 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. Provide final set points.

1.6.7.3 Testing and Performance Data

Include completed prefunctional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting

and blank test forms. Provide final set points.

1.6.7.4 Approved Field Test Reports and Manufacturer's Field Reports

Compile and provide approved Field Test Reports (SD-06) and Manufacturer's Field Reports (SD-09) submittals.

1.6.7.5 Maintenance Plans, Procedures, Checklists, Records, and Spare Parts Inventory

1.6.7.5.1 Maintenance Schedules

Include recommended maintenance schedules for systems and equipment.

1.6.7.5.2 Ongoing Commissioning Operational and Maintenance Record Keeping

Include ongoing commissioning and optimization procedures and documentation to monitor and improve the performance of facility systems.

1.6.7.5.3 Janitorial and Cleaning Plans and Procedures

Include a copy of facility cleaning and janitorial plan with procedures and intended chemicals and equipment.

Provide environmentally friendly cleaning recommendations in accordance with ASTM E1971.

1.6.7.6 Utility Record Drawings

1.6.7.6.1 Utility Schematic Diagrams

Provide a one-line schematic diagram for each utility system such as power, water, wastewater, and gas/fuel. Schematic diagram must show from the point where the utility line is connected to the mainline up to the 5 foot connection point to the facility. Indicate location or area designation for route of transmission or distribution lines; locations of duct banks, manholes/handholes or poles; isolation units such as valves and switches; and utility facilities such as pump stations, lift stations, and substations.

1.6.7.6.2 Enlarged Connection and Cutoff Plans

Provide enlarged floor plans and provide information between the 5 foot utilities connection point and where utilities connect to facility distribution. Enlarge floor plans/elevations of the rooms where the utility enters the building and indicate on these plans the locations of the main interiors and exterior connection and cutoff points for the utilities. Also enlarge floor plans/elevations of the rooms where equipment is located. Include enough information to enable someone unfamiliar with the facility to locate the connection and cutoff points. Indicate designations such as room number, panel number, circuit breaker, or valve number of each utility and equipment connection and cutoff point, and what that connection and cutoff point controls.

1.6.7.6.2.1 Description of Utility Metering and Monitoring Systems

Provide in narrative format a description of the utility metering and monitoring systems. Include locations, function, and related systems.

1.6.7.6.2.2 Procedures for Tracking Utility Use and Reporting

Procedures for usage reporting and tracking in support of establishing and monitoring utility budgets and costs, and in developing annual energy reports.

1.6.7.6.2.3 One-Line Diagrams and Meter Location of System

Provide one-line diagrams and design drawings that highlight meter locations on the site.

1.6.7.6.3 Spare Parts and Supply Lists

Provide lists of spare parts and supplies required for 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.

1.6.8 Part 5: Training

Provide a copy of training plans used for each type of equipment along with training materials used, arranged in specification sequence. Provide a copy of training records, sign-in sheets, and agendas. Include training and documentation on the updating and continued use of the O&M Manual.

1.6.9 Part 6: Cx Project Report and TAB Report

Provide the final Cx Plan and complete Cx reports with evaluation and testing forms and records for each building system. Include relevant commissioned system assemblies test reports including installers checklists of assemblies. Provide all Cx Progress Reports, issues and resolutions logs with resolution or status of each item, and a list of any open items and seasonal or additional testing required.

1.6.10 Part 7: Regulatory Requirements

Provide information describing regulatory and policies compliance requirements or provide a reference to where it is stored.

1.6.11 Part 8: Permits

Provide information requiring frequently asked questions and associated answers or provide a reference to where it is stored.

1.6.12 Part 9: Operations and Maintenance Manual Approval

Provide a signed document stating that the project O&M Manual has been reviewed and confirming agreement with the approach it presents. Include contact information for the signer for coordination of any future changes.

1.7 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES

Provide the O&M data packages specified in individual technical sections. O&M Data Packages are one of the components of the O&M Manual. The information required in each type of data package follows:

1.7.1 Package Quality

Documents must be fully legible. Operation and Maintenance data must be

consistent with the manufacturer's standard brochures, schematics, printed instructions, general operating procedures, and safety precautions.

1.7.2 Data Package 1

- a. Safety precautions and hazards
- b. Cleaning recommendations
- c. Maintenance and repair procedures
- d. Warranty information
- e. Extended warranty information
- f. Contractor information
- g. Spare parts and supply list

1.7.3 Data Package 2

- a. Safety precautions and hazards
- b. Normal operations
- c. Environmental conditions
- d. Lubrication data
- e. Preventive maintenance plan, schedule, and procedures
- f. Cleaning recommendations
- g. Maintenance and repair procedures
- h. Removal and replacement instructions
- i. Spare parts and supply list
- j. Parts identification
- k. Warranty information
- l. Extended warranty information
- m. Contractor information

1.7.4 Data Package 3

- a. Safety precautions and hazards
- b. Operator prestart
- c. Startup, shutdown, and post-shutdown procedures
- d. Normal operations
- e. Emergency operations

- f. Environmental conditions
- g. Operating log
- h. Lubrication data
- i. Preventive maintenance plan, schedule, and procedures
- j. Cleaning recommendations
- k. Troubleshooting guides and diagnostic techniques
- l. Wiring diagrams and control diagrams
- m. Maintenance and repair procedures
- n. Removal and replacement instructions
- o. Spare parts and supply list
- p. Product submittal data
- q. O&M submittal data
- r. Parts identification
- s. Warranty information
- t. Extended warranty information
- u. Testing equipment and special tool information
- v. Testing and performance data
- w. Contractor information
- x. Field test reports

1.7.5 Data Package 4

- a. Safety precautions and hazards
- b. Operator prestart
- c. Startup, shutdown, and post-shutdown procedures
- d. Normal operations
- e. Emergency operations
- f. Operator service requirements
- g. Environmental conditions
- h. Operating log
- i. Lubrication data
- j. Preventive maintenance plan, schedule, and procedures

- k. Cleaning recommendations
 - l. Troubleshooting guides and diagnostic techniques
 - m. Wiring diagrams and control diagrams
 - n. Repair procedures
 - o. Removal and replacement instructions
 - p. Spare parts and supply list
 - q. Repair work-hours
 - r. Product submittal data
 - s. O&M submittal data
 - t. Parts identification
 - u. Warranty information
 - v. Extended warranty information
 - w. Personnel training requirements
 - x. Testing equipment and special tool information
 - y. Testing and performance data
 - z. Contractor information
 - aa. Field test reports
- 1.7.6 Data Package 5
- a. Safety precautions and hazards
 - b. Operator prestart
 - c. Start-up, shutdown, and post-shutdown procedures
 - d. Normal operations
 - e. Environmental conditions
 - f. Preventive maintenance plan, schedule, and procedures
 - g. Troubleshooting guides and diagnostic techniques
 - h. Wiring and control diagrams
 - i. Maintenance and repair procedures
 - j. Removal and replacement instructions
 - k. Spare parts and supply list

- l. Product submittal data
- m. Manufacturer's instructions
- n. O&M submittal data
- o. Parts identification
- p. Testing equipment and special tool information
- q. Warranty information
- r. Extended warranty information
- s. Testing and performance data
- t. Contractor information
- u. Field test reports
- v. Additional requirements for HVAC control systems

1.7.7 Changes to Submittals

Provide manufacturer-originated changes or revisions to submitted data if a component of an item is so affected subsequent to acceptance of the O&M Data. Submit changes, additions, or revisions required by the Contracting Officer for final acceptance of submitted data within 30 calendar days of the notification of this change requirement.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 TRAINING

Prior to acceptance of the facility by the Contracting Officer for Beneficial Occupancy, provide comprehensive training for the systems and equipment specified in the technical specifications. The training must be targeted for the building maintenance personnel, and applicable building occupants. Instructors must be well-versed in the particular systems that they are presenting. Address aspects of the Operation and Maintenance Manual submitted in accordance with Section 01 78 00 CLOSEOUT SUBMITTALS. Training must include classroom or field lectures based on the system operating requirements. The location of classroom training requires approval by the Contracting Officer.

3.1.1 Training Plan

Submit a written training plan to the Contracting Officer for approval at least 60 calendar days prior to the scheduled training. Training plan must be approved by the Commissioning Authority (CxA) prior to forwarding to the Contracting Officer. Also, coordinate the training schedule with the Contracting Officer and CxA. Include within the plan the following elements:

- a. Equipment included in training

- b. Intended audience
- c. Location of training
- d. Dates of training
- e. Objectives
- f. Outline of the information to be presented and subjects covered including description
- g. Start and finish times and duration of training on each subject
- h. Methods (e.g. classroom lecture, video, site walk-through, actual operational demonstrations, written handouts)
- i. Instructor names and instructor qualifications for each subject
- j. List of texts and other materials to be furnished by the Contractor that are required to support training
- k. Description of proposed software to be used for video recording of training sessions.

3.1.2 Training Content

The core of this training must be based on manufacturer's recommendations and the operation and maintenance information. The [QC][CxA] is responsible for overseeing and approving the content and adequacy of the training. Spend 95 percent of the instruction time during the presentation on the OPERATION AND MAINTENANCE DATA. Include the following for each system training presentation:

- a. Start-up, normal operation, shutdown, unoccupied operation, seasonal changeover, manual operation, controls set-up and programming, troubleshooting, and alarms.
- b. Relevant health and safety issues.
- c. Discussion of how the feature or system is environmentally responsive. Advise adjustments and optimizing methods for energy conservation.
- d. Design intent.
- e. Use of O&M Manual Files.
- f. Review of control drawings and schematics.
- g. Interactions with other systems.
- h. Special maintenance and replacement sources.
- i. Tenant interaction issues.

3.1.3 Training Outline

Provide the Operation and Maintenance Manual Files (Bookmarked PDF) and a

written course outline listing the major and minor topics to be discussed by the instructor on each day of the course to each trainee in the course. Provide the course outline 14 calendar days prior to the training.

3.1.4 Training Video Recording

Record classroom training session(s) on video. Provide to the Contracting Officer two copies of the training session(s) in DVD video recording format. Capture within the recording, in video and audio, the instructors' training presentations including question and answer periods with the attendees. The recording camera(s) must be attended by a person during the recording sessions to assure proper size of exhibits and projections during the recording are visible and readable when viewed as training.

3.1.5 Unresolved Questions from Attendees

If, at the end of the training course, there are questions from attendees that remain unresolved, the instructor must send the answers, in writing, to the Contracting Officer for transmittal to the attendees, and the training video must be modified to include the appropriate clarifications.

3.1.6 Validation of Training Completion

Ensure that each attendee at each training session signs a class roster daily to confirm Government participation in the training. At the completion of training, submit a signed validation letter that includes a sample record of training for reporting what systems were included in the training, who provided the training, when and where the training was performed, and copies of the signed class rosters. Provide two copies of the validation to the Contracting Officer, and one copy to the Operation and Maintenance Manual Preparer for inclusion into the Manual's documentation.

3.1.7 Quality Control Coordination

Coordinate this training with the [QC][CxA] in accordance with Section 01 45 00 QUALITY CONTROL.

3.2 SUBMITTAL SCHEDULING

3.2.1 Operation and Maintenance Manual, Progress Submittal

Submit the Progress submittal when construction is approximately 50 percent complete, to the Contracting Officer for approval. Provide Operation and Maintenance Manual Files (Bookmarked PDF). Include the elements and portions of system construction completed up to this point. The purpose of this submittal is to verify progress is in accordance with contract requirements as discussed during the Operation and Maintenance Manual Coordination Meeting.

3.2.2 Operation and Maintenance Manual, Prefinal Submittal

Submit the 100 percent submittal of the Operation and Maintenance Prefinal Submittal to the Contracting Officer for approval within 90 calendar days of the Beneficial Occupancy Date (BOD). This submittal must provide a complete, working document that can be used to operate and maintain the facility. Any portion of the submittal that is incomplete or inaccurate requires the entire submittal to be returned for correction. Any

discrepancies discovered during the Government's review of Operation and Maintenance Progress submittal must be corrected prior to the Prefinal submission. The Prefinal Submittal must include Operation and Maintenance Manual Files (Bookmarked PDF).

3.2.3 Operation and Maintenance Manual, Final Submittal

Submit completed Operation and Maintenance Manual Files (Bookmarked PDF) and one hard copy of the Operation and Maintenance Manuals. The Final submittal is due at BOD. Any discrepancies discovered during the Government's review of the Prefinal submittal, including the Field Verification, must be corrected prior to the Final submission.

-- End of Section --

SECTION 01 78 24.00 10

FACILITY DATA REQUIREMENTS

PART 1 GENERAL

This specification requires the collection, organization, and turnover of electronic Facility Data for specific assets designed and constructed as part of this contract. Provide a Facility Document Set (FDS) and Facility Data Workbook (FDW) as defined in this specification. See Sections 01 33 00 SUBMITTAL PROCEDURES, 01 78 00 CLOSEOUT SUBMITTALS, 01 78 23 OPERATION AND MAINTENANCE DATA, for additional Facility Data delivery requirements.

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.

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 19005-3	(2012) Document Management -- Electronic Document File Format for Long-Term Preservation -- Part 3: Use of ISO 32000-1 with Support for Embedded Files (PDF/A-3)
ISO 32000-1	(2008) Document Management -- Portable Document Format -- Part 1: PDF 1.7

1.2 DEFINITIONS AND ABBREVIATIONS

1.2.1 Assets

Assets are specific items of property or equipment.

1.2.2 Attributes

Attributes are individual pieces of Facility Data that describe facilities and their associated assets.

1.2.3 Facility Data

Information defined and collected in the Facility Data Workbook (FDW) and Facility Document Set (FDS).

1.2.4 Facility Document Set (FDS)

An electronically compiled and organized document containing the supporting documents and data used to populate the Facility Data Workbook during its respective phase of development.

- a. For construction-based deliverables, the FDS is comprised of the project Operation and Maintenance Data Packages and Government-Approved Record drawings.

1.2.5 Facility Data Workbook (FDW)

A pre-formatted spreadsheet template used to compile Asset, Attribute, Facility, and Space Data that the Government wishes to manage via electronic means. The FDW also contains all requirements associated with proper collection, organization, and turnover of the Facility Data.

1.2.6 Facility Data Project Execution Plan (FDPxP)

A document that describes the clear and organized plan for the collection, organization, and turnover of the Facility Data deliverables required by this specification.

1.3 UNITS OF MEASURE

Provide Facility Data deliverables utilizing the units of measure identified in the contract documents.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Facility Data Project Execution Plan(FDPxP)

SD-10 Operation and Maintenance Data

Facility Data Workbook, Construction Progress; G

Facility Document Set, Construction Progress; G

[SD-11 Closeout Submittals

Facility Data Workbook, Construction Final; G

Facility Document Set, Construction Final; G]

1.5 QUALITY CONTROL

1.5.1 Facility Data Project Execution Plan (FDPxP)

Provide the Government with a plan for the collection, organization, and turnover of the Facility Data deliverables to the Government. At a minimum, include the following items in the FDPxP:

1.5.1.1 Front Matter

Provide a Cover Page, Table of Contents, and Executive Summary/Objectives.

1.5.1.2 Project Information

List the Project Owner, Project Name, Project Location and address, Contract Type, Project Description, Project/Contract Number, Project

Milestones.

1.5.1.3 Submittal Schedule

Identify delivery schedule for all deliverables in compliance with the submission requirements identified in this specification.

1.5.1.4 Personnel

Identify key personnel involved in the development of the Facility Data deliverables including Contractor and Government personnel.

1.5.1.5 Facility Data Workbook(s)

Identify Facility and Space Data as applicable at time of FDPxP submission. Individually list every asset group from the FDW Requirements that will require Facility Data collection. No attribute data is required at this time. Identify asset groups from the FDW Requirements that are not required within the scope of this Contract. Document the version of FDW to be used through the duration of the project.

1.5.1.6 Facility Document Set(s)

Define structure and format of the submittal. Provide a comprehensive outline of the final FDS to be delivered. Organize the outline with headings, titles, and descriptions such that the Government may ascertain that working documents comply with the formatting requirements defined by this specification.

1.5.1.7 Protocols

Detailed procedures:

- a. Facility Data documentation/collection process.
- b. Facility Document Set production/development process.
- c. Collaboration procedures including strategy, meetings, communication, and subcontractor/consultant involvement.
- d. Quality Control, including site verification of FDW, as applicable.
- e. File and folder naming structure.
- f. Hardware and software being used for collection and organization of Facility Data. Identify type, format, and anticipated organization of digital storage media to be provided as part of required deliverables. Include means and methods for checking deliverables for malicious content.

1.5.2 Meetings

To assure that Facility Data requirements are being met through the duration of the project, organize the following meetings and discuss the subsequent topics:

1.5.2.1 Pre-Construction Meeting

At a minimum, discuss the following:

- a. The requirement for Facility Data deliverables under this contract.
- b. Primary roles and responsibilities associated with the development and delivery of the Facility Data deliverables, and.
- c. Identify and agree upon a date and attendance list for the meetings described below:

1.5.2.2 FDPxP Coordination Meeting

- a. Facilitate a meeting following submission and Government review of the FDPxP. Include the Facility Data Preparer(s), Quality Control (QC) Manager, Commissioning Authority (CA), Government's Facility Data Proponent, Contracting Officer's Representative, and Base Civil Engineer (BCE) Facilities Management Specialist (FMS). Also include Government personnel required for obtaining security clearances and waivers for proper Facility Data collection in this meeting.
- b. The purpose of this meeting is to coordinate the efforts necessary by contract parties to ensure an accurate collection, preparation, quality control, and submittal of these deliverables.
- c. The FDPxP serves as the primary agenda for this meeting. At a minimum, discuss the following:
 - (1) Processes and methods of gathering facility data during construction. Discuss and obtain special permissions and waivers as necessary (such as photo waivers and data encryption);
 - (2) Contractor Quality Control practices and procedures;
 - (3) Corrective actions necessary for Government approval of FDPxP;
 - (4) Necessity for additional or recurring Facility Data Coordination Meetings outside of those required by this specification, as requested by the Contractor. Intent of these meetings would be to maintain regular contact between responsible parties of the Contractor and Government with regard to development of the facility data deliverables. Conduct status meetings with a frequency agreed upon at this meeting.

1.5.2.3 Submittal Coordination Meeting

- a. Facilitate a meeting following submission and Government review of each design or progress submittal of the Facility Data. Include the Facility Data Preparer(s), Designer of Record (DOR), Quality Control (QC) Manager, Commissioning Authority (CA), Government's Facility Data Proponent, Contracting Officer's Representative, and Base Civil Engineer (BCE) Facilities Management Specialist (FMS). Include Mechanical, Electrical, Plumbing, and Fire Protection subcontractors as applicable.
- b. The purpose of this meeting is to demonstrate ongoing compliance with the requirements identified in this specification.
- c. The applicable deliverables, along with Government remarks associated with review of these submittals serve as the primary guide and agenda for this meeting. At a minimum, discuss the following during this

meeting:

- (1) Review assets, applicable attributes, facility, and space data in FDW at time of submittal;
- (2) Demonstrate Quality Control and site verification procedures, as applicable, by Contractor QC;
- (3) Review contents and organization of FDS at time of submittal;
- (4) Discuss Government review comments and unresolved items preventing completion and Government approval of the Facility Data Workbook and Facility Document Set.

1.5.3 Facility Turnover and Contract Closeout

Include the Facility Document Set, Construction Final as a deliverable in Facility Turnover and Contract Closeout procedures as defined in 01 78 00 CLOSEOUT SUBMITTALS.

1.5.4 Facility Data Workbook Quality Requirements

For each submittal, ensure that the information contained in the FDW(s) reflects the minimum content requirements defined in the PART 3 EXECUTION portion of this section. Ensure that information provided as part of the FDW(s) conforms to the standards described below:

- a. Compile FDW(s) using approved spreadsheet templates. Do not alter the formatting or organizational layout of the templates. For this Contract, templates are available for download from the USACE CAD/BIM Technology Center website, site information provided in the PART 2 PRODUCTS portion of this section.
- b. Instructions for the proper maintenance and completion of these FDWs are contained in the FDW Requirements contained within the FDW template.

1.5.5 Facility Document Set Quality Requirements

Ensure that information provided as part of each FDS conforms to the electronic and data formatting standards identified below:

1.5.5.1 Document Files

Utilize PDF file format in accordance with ISO 32000-1 and ISO 19005-3 for all document-based files. Provide files from original sources, text-searchable, and saved in "Standard" (uncompressed) resolution. Bookmark and label files as defined in the PART 2 PRODUCTS portion of this section.

1.5.5.2 Photograph Files

If photographs are required, utilize JPEG file format for all photograph and image files. Provide full-color photos with photo resolution of not less than 4 megapixels and not more than 12 megapixels.

Provide a copy of installation-specific letters or waivers allowing permission to take installed equipment photographs on this Contract. Waivers need not be attached to every photo, only one copy of each

permission letter need be included in the Government deliverables.

1.5.5.3 Drawing Files

Provide all drawings required by this specification in full-size PDF format in accordance with ISO 32000-1 and ISO 19005-3. Produce PDF files from original sources, text-searchable, and saved in "Standard" (uncompressed) resolution whenever possible. Bookmark and label files as defined in the PART 2 PRODUCTS portion of this section.

Submission of scanned or photocopied drawing files is prohibited. Only vector-preserved PDF files are acceptable.

1.5.6 Facility Document Set Integrity Requirements

Ensure that information provided as part of each FDS conforms to the integrity standards identified below:

1.5.6.1 File Protection

Do not restrict data files, document files or photographic files from being printed, exported, modified or copied. Do not deliver files with restrictions such as expiration date and locks for access, viewing, archiving, or editing.

1.5.6.2 Manufacturer-Specific Documents

Provide text-searchable, vector-based document files from the manufacturer's online or electronic documentation. Color documents are preferred. Provide documents specific to the product(s) installed under this Contract. When possible, do not submit document files containing multiple product catalogs from the same manufacturer, or product data from multiple manufacturers in the same file. Provide documents directly from the manufacturer whenever possible. Do not provide scanned copies of hardcopy documents.

1.6 DELIVERY, STORAGE, AND HANDLING

Deliver facility data submittals in an organized and legible manner. Provide submittals adhering to the requirements of of 01 33 00 SUBMITTAL REQUIREMENTS and 01 78 23 OPERATION AND MAINTENANCE DATA.

1.6.1 Number of Copies

Provide three identical copies of disks for approval; for each submittal and each facility required. Provide on approved electronic media (one copy per disk or set of disks) as defined below. Provide submittal files on electronic storage media in compliance with the quality requirements identified in this specification.

1.6.2 Malicious Content

Scan all files for malicious viruses using a commercially available scanning program that is routinely updated to identify and remove current virus threats.

1.6.3 Storage Media

Provide facility data on disk-based (DVD-R/RW) media. Deviations from the

required storage media must be approved by the Government. Select and apply technology used for electronic data transmission to ensure that the full Facility Data submittal for each facility is provided on one single disk, whenever possible. When separation of the submittal is required, first separate the FDS and the FDW onto separate media. Second, separate FDS into logical segments or components. Further divisions must be documented in the FDPxP and approved by the Government.

Provide Facility Data on disk-based (DVD-R/RW) media. Deviations from the required storage media must be approved by the Government. Select and apply technology used for electronic data transmission to ensure that the full Facility Data submittal for each facility is provided on one single disk, whenever possible. When separation of the submittal is required, first separate the FDS and the FDW onto separate media. Second, separate FDS into logical segments or components. Further divisions must be documented in the FDPxP and approved by the Government.

- a. Apply a label directly printed to storage media. Do not provide adhesive, paper-based labels. List the name of the facility, Project, Project location, Contract number, Designer of Record firm/Prime Contractor company's name, title of submission, and security classification (in accordance with the appropriate security classification labeling regulations) on the label. If multiple disks are provided, clearly document the contents of each disk on the label.
- b. Include the name and contact information of the individual who produced the final data disk to ensure that problems with the data or media can be easily resolved.
- c. When browsed on a computer, the disk must display the following folders and their associated content:
 - (1) Facility Data Workbook (containing 1 FDW per facility);
 - (2) Facility Document Set (containing 1 FDS per facility);
 - (3) FDPxP (containing 1 PxP per contract);
 - (4) Readme (Containing 1 TXT, PDF, or HTML file with general use information, organizational instructions, and basic preparer contact information. Include all information included on the storage media label).

[1.6.4 Encryption

Encrypt deliverable data as directed by [District][Area][Resident][Project] Office Engineer. Document the encryption to be used in the FDPxP.

]PART 2 PRODUCTS

2.1 FACILITIES

Facilities that require individual (separate and complete) Facility Data deliverables as described in this specification are as follows:

- a. [_____]
- [b. [_____]]
- [c. [_____]]
- [d. [_____]]

2.2 FACILITY DATA WORKBOOK(S)

Provide one compiled FDW for each facility identified above. Complete all portions of each FDW including facility, space, asset, and attribute data in compliance with the FDW Requirements. Download the current FDW template (.xslm format) from the USACE CAD/BIM Technology Center website at <https://cadbimcenter.erd.dren.mil>.

2.2.1 Spaces

Provide data for all applicable spaces in the facility. Minimum space definitions are as follows:

- a. Provide all rooms as defined in the design documents.
- b. If not otherwise defined, provide a minimum of one "roof" space in the FDW.
- c. If not otherwise defined, provide a minimum of one "site" space in the FDW.
- d. Provide all spaces not otherwise described, but necessary to accurately indicate the location of all FDW assets required by this specification.

2.2.2 Assets

- a. Compile an FDW that contains the maintainable and warrantable equipment (assets) associated with each facility. This includes assets in contract scope and within the project extents. See 01 78 00 CLOSEOUT SUBMITTALS [and 01 78 23 OPERATION AND MAINTENANCE DATA]for related requirements. Assets include, but are not limited to, those types described in the "Required Assets" portion of the FDW template[, those assets listed in the table below,] and additional assets defined in the FDPxP. Itemized FDW asset entries (instance-based). Entries indicative of multiple assets (type-based) are not allowed.

SUPPLEMENTAL ASSET LIST (INCLUDE IN ADDITION TO "REQUIRED ASSETS" LISTED IN FDW TEMPLATE)	
Asset	Description/Example
[Fixtures, Furnishings, and Equipment]	[Furniture, systems furniture, appliances, and other significant items of equipment]
[Kitchen Equipment and Fixtures]	[Kitchen and foodservice equipment including but not limited to stoves, steamers, accessory hoods, cooking devices, refrigeration devices]
[Valves]	[All operable valves in facility including but limited to those installed in plumbing, HVAC, and fire protection systems.]
[Tanks and Vaults]	[Items such as expansion tanks, septic tanks, oil-water separators, grease separators]
[Material Handling Equipment]	[Items such as cranes, coveyor belts, equipment lifts]
[DDC and EMCS Equipment]	[Panels and consoles associated with the facility automation and control systems integration.]

SUPPLEMENTAL ASSET LIST (INCLUDE IN ADDITION TO "REQUIRED ASSETS" LISTED IN FDW TEMPLATE)	
[All Inspectable Equipment]	[_____]
[_____]	[_____]

] Document assets applicable to the scope of this project in the FDPxP.

- b. Sub-component assets that are an integral and functional part of another component (e.g. An electric motor that serves as part of an air-handling unit) need not be duplicated or listed separately as its own asset.
- c. Definitions, descriptions, and formatting requirements for these assets can be found in the FDW Requirements contained within the FDW template.
- d. If an asset type is not included in the scope of the Project, no Facility Data (assets or attributes) are to be included in the FDW (even as a placeholder) for that asset type.

2.2.3 Attributes

- a. Populate each individual asset with all required attributes defined in the "Required Attributes" portion of the FDW template.
- b. Definitions, descriptions, and formatting requirements for these attributes can be found in the FDW Requirements contained within the FDW template.
- c. If an attribute is not applicable, populate that field with "N/A." Do not leave it blank.

2.3 FACILITY DOCUMENT SET

2.3.1 Organization

Organize the FDS in a hierarchical manner as follows. Use electronic bookmarks to create an easily navigable document. The first and primary hierarchical level must contain the following bookmarks:

- a. "O&M Data" - See subordinate hierarchical requirements in the "O&M DATA HIERARCHY" paragraph.
- b. "Record Drawings" - See subordinate hierarchical requirements in paragraph RECORD DRAWINGS HIERARCHY.

2.3.1.1 O&M Data Hierarchy

Under "O&M Data" provide all Government-Approved O&M Data Packages as defined in 01 78 23 OPERATION AND MAINTENANCE DATA and as required by technical specifications contained within this contract. Further organize this information under the following hierarchical levels:

- a. The contract specification and title under which the Data Package and the associated equipment or system references. (e.g. 26 23 00 -

LOW-VOLTAGE SWITCHGEAR)

- b. The Data Package Number as defined in 01 78 23 OPERATION AND MAINTENANCE DATA. (e.g. Data Package 2)

2.3.1.2 Record Drawings Hierarchy

Under "Record Drawings" provide an electronic copy of the Government-Approved record drawings, as specified in 01 78 00 CLOSEOUT SUBMITTALS, for the project in PDF format. Further group discipline sheets under the following hierarchical levels:

- a. The full discipline heading represented by the contents of the sheet and as shown in the Record Drawing Sheet Index. Organize these headings in the order that the drawings set is organized. (General, Civil, Structural, Architectural, Interiors, Plumbing, Mechanical, Electrical, Telecommunications)
- b. The Sheet ID and Sheet Name as found in the Record Drawing Sheet Index and in accordance with the AEC CAD Standard referenced in 01 78 00 CLOSEOUT SUBMITTALS. (e.g. G-001 - LEGEND; CS101 - SITE PLAN AREA 101; A-101 - OVERALL FIRST FLOOR PLAN; P-601 - FIRST FLOOR DWS WATER RISER DIAGRAM)

PART 3 EXECUTION

3.1 CONSTRUCTION PROGRESS SUBMITTALS

Submit the FDW and FDS construction progress submittals together. Meet the following completeness and formatting requirements listed below:

- a. Provide Facility Data Workbook, Construction Progress submittal(s) when all assets are identified, but not later than 90 days prior to Beneficial Occupancy Date (BOD) as identified in the Government-Approved construction schedule. Clearly identify assets or asset groups missing in the "variations" section of the ENG Form 4025 Transmittal Form provided with the submittal. Populate assets with front-loaded attribute data that is available at the time of asset input. See the FDW Requirements contained within the FDW template for a list of attributes to be completed for this submittal.
- b. Submit individual FDW templates for each facility identified in the "FACILITIES" paragraph. While FDWs are not required to be complete for this submittal, provide accurate and correctly formatted data according to the FDW Requirements.
- c. Submit a sample or working Facility Document Set, Construction Progress submittal containing "draft" or "example" documents that are organized in the manner defined by this specification. Draft or example documents need not be technically accurate or complete in their content, but defined and separated in a manner such that all organizational and formatting requirements defined by this specification may be evaluated.

3.2 CONSTRUCTION FINAL SUBMITTALS

Submit the FDW and FDS construction final submittals 90 days after BOD. Coordinate the Facility Data Workbook, Construction Final submittal with data verification procedures as defined in the accepted FDPxP. Provide

the Facility Document Set, Construction Final submittal only after Government acceptance of its individual components as defined by 01 78 00 CLOSEOUT SUBMITTALS and 01 78 23 OPERATION AND MAINTENANCE DATA.

3.3 FACILITY DATA WORKBOOK VERIFICATION

Verify the FDW through the quality control personnel and procedures as defined in the FDPxP. Coordinate and conduct verification with commissioning procedures defined in 01 91 00.15 BUILDING COMMISSIONING. One-hundred percent accuracy of FDW information is required for Government acceptance of the Facility Data Workbook, Construction Final submittal.

-- End of Section --

SECTION 01 91 00.15

BUILDING COMMISSIONING

PART 1 GENERAL

Building Commissioning is a systematic, quality-focused process for enhancing the delivery of a project that focuses on verifying and documenting that all of the commissioned systems and assemblies are planned, designed, installed, tested, operated, and maintained to meet the project requirements. The purpose is to reduce the cost and performance risks associated with delivering facilities projects, and to increase value to owners, occupants, and users.

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 SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

ASHRAE 90.1 - IP	(2019) Energy Standard for Buildings Except Low-Rise Residential Buildings
ASHRAE 180	(2018) Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems
ASHRAE 202	(2018) Commissioning Process for Buildings and Systems

ASSOCIATED AIR BALANCE COUNCIL (AABC)

ACG Commissioning Guideline	(2005) Commissioning Guideline
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NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB)

NEBB S1110	(2019) Whole Building Technical Commissioning of New Construction; 2nd Edition
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SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)

ANSI/SMACNA 014	(2013) HVAC Systems Commissioning Manual, 2nd Edition
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U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 25-345-1	(2019) Commissioning -- Systems Manual
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1.2 DEFINITIONS

Commissioning Process (Cx) - a quality-focused process for enhancing the delivery of a project. Refer to ASHRAE 202 for a comprehensive

description of the commissioning process.

Lead Commissioning Specialist (CxC) - The entity who leads, plans, and coordinates the Commissioning Team. The terms Commissioning Provider, Commissioning Firm, Lead Commissioning Specialist, Commissioning Specialist, and Commissioning Authority (CA or CxA) when used by sustainable Third Party Certification (TPC) programs, are interchangeable.

Commissioning Authority - The Government retains the authority for oversight and assurance of the entire commissioning process, and final approval of all commissioning deliverables.

[Owner's Project Requirements (OPR) - document that details the stakeholders' requirements for the project and the expectations for how it will be used and operated. The OPR is provided for commissioning review purposes only and is not a contract requirement.

]1.3 COMMUNICATION WITH THE GOVERNMENT

The Lead Commissioning Specialist (CxC) must submit all plans, schedules, reports, and documentation directly to the Contracting Officer's Representative concurrent with submission to the CQC System Manager.

The Lead Commissioning Specialist must have direct communication with the Contracting Officer's Representative regarding all elements of the commissioning process; however, the Government has no direct contract authority with the Lead Commissioning Specialist.

1.4 SYSTEMS TO BE COMMISSIONED

Coordinate commissioning and quality control activities for the following systems, equipment, and associated controls. System-specific requirements are located in the associated specification sections. Commission the following systems, equipment, and associated controls in accordance with this section and the inspection, testing, and quality control requirements of their respective sections:

- [Heating, ventilating, air-conditioning, and refrigeration systems (mechanical and passive) and associated controls (HVAC)
-][Lighting systems: interior and exterior, automatic and manual daylighting controls, occupancy sensing devices, automatic shut-off controls, time switching, and other lighting control devices, and dimming systems
-][Service hot-water systems and controls
-][Water pressure-booster systems
-][Building Control Systems
-][Utility Monitoring and Control Systems
-][Metering and sub-metering
-][Automatic Receptacle Control
-] [Building Automation Systems]

Power Distribution System

Power Generaion System

Compressed Air and Water

Engergy and Water Utility Metering Systems and Sub-meters

1.5 RELATED SECTIONS

Refer to the following technical sections for additional commissioning requirements for respective systems:

[Section 23 08 00 COMMISSIONING OF MECHANICAL[AND PLUMBING] SYSTEMS

] [Section 26 08 00 APPARATUS INSPECTION AND TESTING

]1.6 COMMISSIONING TEAM

The Commissioning team will include, but is not limited to the following team members.

Ensure all Design and Construction Activities for systems to be commissioned are coordinated with the appropriate commissioning team members.

- a. Lead Commissioning Specialist (CxC)
- b. CQC System Manager
- c. Sub-Contractor Representatives for each trade responsible for construction/installation of systems to be commissioned
- d. Contractor's Project Manager
- e. Technical Commissioning Specialists for each system to be commissioned
- f. TAB Representative
- g. Equipment manufacturer representatives
- h. Government Contracting Officer
- i. Government Representatives
- j. Installation Maintenance Representative
- k. Facility End User
- l. Designer of Record (DOR)

[_____]

1.7 PROJECT SCHEDULE

Include the following tasks in the project schedule required by Section 01 32 01.00 10 PROJECT SCHEDULE. Ensure sufficient time is scheduled to complete each item. The order of items listed below is not intended to imply a specified sequence:

- a. Submission and approval of the Commissioning Firm Qualifications
- b. Submission and approval of the Design Phase Commissioning Plan
- [c. Submission and approval of the Design Review Report
-] d. Submission and approval of the Interim and Final Construction Phase Commissioning Plans
- e. Commissioning Kickoff Meeting
- f. Regular Commissioning Coordination Meetings
- g. Installation of permanent utilities (gas, water, electric, steam)
- h. Building Enclosure Construction
- i. Submission and approval of the Completed Building Enclosure Inspection Checklists
- j. Manufacturer's Equipment Start-Up for each of the systems to be commissioned
- k. Submission and approval of the Completed Commissioning Observation Checklists
- l. Submission and approval of Certificate of Readiness for each system to be commissioned
- m. Commissioning Testing, including Functional Performance Testing, for each system to be commissioned
- n. Integrated Systems Tests
- o. Post-test deficiency correction for each system to be commissioned
- p. Re-Testing
- q. Submission and approval of the Maintenance and Service Life Plans
- r. Submission and approval of the Systems Manual
- s. Training for each of the systems to be commissioned
- t. Submission and approval of the Final Commissioning Reports
- [v. [_____]

]1.8 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-05 Design Data

Design Phase Commissioning Plan; G

SD-06 Test Reports

Completed Construction Observation Checklists; G

Design Review Report; G

Interim Construction Phase Commissioning Plan; G

Final Construction Phase Commissioning Plan; G

Issues Log; G

SD-07 Certificates

Commissioning Firm; G

SD-10 Operation and Maintenance Data

Maintenance and Service Life Plan; G

Systems Manual; G

SD-11 Closeout Submittals

Final Commissioning Report; G

Updated Final Commissioning Report; G

[Final Commissioning Report (eNotebook); S

][Updated Final Commissioning Report (eNotebook); S

]1.9 COMMISSIONING FIRM

Employ the services of a Commissioning Firm and all Commissioning Specialists required to perform work for this project. The Commissioning Firm must be a first-tier subcontractor that is financially and corporately independent from prime contractor and all other subcontractors and the Designer of Record and that is not participating in any other work on this Contract, including design, furnishing equipment, construction, or testing, adjusting, and balancing.

- a. Submit the Commissioning Firm's and Commissioning Specialists' qualifications, including the name of the firm and each CxC and each certification, no later than 30 calendar days after notice to proceed.
- b. If, for any reason, a specialist loses a certification during this period, immediately notify the Contracting Officer and submit another Commissioning Specialist for approval. An approved successor must validate all work performed for this project by the CxC who lost a certification.

1.9.1 Commissioning Specialists (CxC)

Assign Lead Commissioning Specialist and other appropriate Commissioning Specialists for the systems to be commissioned.

1.9.1.1 Lead Commissioning Specialist (CxC)

Lead Commissioning Specialist (CxC) coordinates all aspects of the commissioning process. Duties include leading and overseeing the commissioning work and acting as the primary point of contact for the commissioning work. CxC may serve as a systems Specialist if all requirements for both designations are met. CxC must have a minimum of five years of commissioning experience, including two projects of similar size and complexity to this project.

[CxC must be certified in one of the following:

NEBB Building System Commissioning Professional (CxCP)

ACG Certified Commissioning Authority (CxA)

ICB/TABB Certified Commissioning Supervisor

BCA Certified Commissioning Professional (CCP)

AEE Certified Building Commissioning Professional (CBCP)

University of Wisconsin-Madison Qualified Commissioning Process Provider (QCxP)

ASHRAE Building Commissioning Professional (BCxP).

]1.9.1.2 Commissioning Specialists

Refer to the related technical commissioning specification section for additional qualifications for each Commissioning Specialist associated with each system. Include all Commissioning Specialist qualifications with the Commissioning Firm submittal:

- [a. Mechanical Commissioning Specialist: The technical work associated with mechanical systems to be commissioned must be performed by a Commissioning Specialist certified by NEBB, ACG, ICB/TABB, AEE, University of Wisconsin-Madison, ASHRAE, or BCA in the commissioning of HVAC systems with five years of experience in the commissioning of HVAC systems.
-]
 - [b. Electrical Commissioning Specialist: The technical work associated with electrical systems to be commissioned must be performed by an engineering technician with five years of experience inspecting, testing, and calibrating electrical distribution and generation equipment, systems, and devices.[The lead engineering technician specified in specification Section 26 08 00 APPARATUS INSPECTION AND TESTING may serve as the Electrical Commissioning Specialist.][The Mechanical Commissioning Specialist may be utilized to perform the technical work associated with electrical systems to be commissioned.]
 -] c. Building Enclosure Commissioning Specialist: The technical work associated with the Building Envelope system must be performed by a Building Enclosure Commissioning Specialist that is a [registered

architect or engineer, or building scientist, with five years of building enclosure design or construction experience][or a professional with training and Certification in Building Enclosure Commissioning from a third-party certification organization plus five years of commissioning experience]. The commissioning provider must have the necessary training, experience, and FPT equipment.

1.10 COMMISSIONING STANDARD

Comply with ASHRAE 202 and the commissioning standards under which the Commissioning Firm and Specialists qualifications are approved, which may include ACG Commissioning Guideline, NEBB S1110, or ANSI/SMACNA 014. In a conflict, the most stringent requirements apply. In addition, comply with ASHRAE 90.1 - IP commissioning requirements for all systems. Refer to related technical commissioning specification sections for additional standards requirements.[Comply with applicable International Electrical Testing Association (NETA) testing standards for electrical systems.] The following requirements apply to all project commissioning and test standards:

- a. Implement all recommendations and suggested practices contained in the Commissioning Standard and test standards.
- b. Use the Commissioning Standard for all aspects of Commissioning, including calibration of instruments.
- c. Where the instrument manufacturer calibration recommendations are more stringent than those listed in the Commissioning Standard, adhere to the manufacturer calibration recommendations.
- d. All quality assurance provisions of the Commissioning Standard such as performance guarantees are part of this contract.
- e. The Commissioning Specialists must develop commissioning procedures for any systems or system components not covered in the Commissioning Standard.
- f. Use any new requirements, recommendations, and procedures published or adopted by the body responsible for the applicable Commissioning Standards at the time of project award.
- g. If there is a conflict between the requirements of the contract documents and the commissioning standard used, the contract documents take precedent.

1.11 SUSTAINABILITY THIRD PARTY CERTIFICATION (TPC)

The Commissioning Specialist must perform all commissioning activities, coordination, and submittals required by the sustainability Third Party Certification (TPC) program applied to this project, in accordance with Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING.

1.12 ISSUES LOG

The Commissioning Specialist develops and maintains an Issues Log for the systems to be commissioned. The issues log documents and tracks resolution of deficiencies identified during submittal reviews, inspection, and testing. At any point during construction, any commissioning team member finding deficiencies may communicate those

deficiencies in writing to the Commissioning Specialist for inclusion into the Issues Log. For each issue, the Issues Log includes, but is not limited to, a unique reference number, description of the issue with contract requirement referenced, location of or equipment name/tags exhibiting the issue, the initials of the individual's name whom reported the issue, the date of first observation, the proposed resolution of the issue and date proposed, the date of any subsequent observations with applicable additional information, and the date of implementation of the final resolution of the issue as confirmed by the Commissioning Specialist and Contracting Officer. Issues must not be deleted from the issues log.

CxC must submit the Issues Log monthly and within three working days from changes to the Issue Log. The CxC is responsible for distributing the Issues Log to the Commissioning Team. CQC System Manager must track construction deficiencies identified in the Issues Log using a quality management system in accordance with Section 01 45 00.15 10 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE(RMS CM)and 01 45 00 QUALITY CONTROL.

1.13 CERTIFICATE OF READINESS

Prior to scheduling Commissioning Tests for each system, the Quality Control Manager must issue a Certificate of Readiness for each system, certifying that inspections have been completed, open issues have been resolved, and the system is ready for Commissioning Tests. Refer to each related technical commissioning specification section for additional requirements.

Submit the Certificate of Readiness for each system 30 calendar days prior to Commissioning Tests of that system. Do not schedule Commissioning Tests for a system until the Certificate of Readiness is approved by the Government.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 DESIGN COMMISSIONING COORDINATION MEETING

Conduct a design commissioning coordination meeting led by the CxC prior to the 35 percent design submittal for systems to be commissioned. Discuss the commissioning process, including project contract requirements, lines of communication, roles and responsibilities, schedules, and documentation requirements.

The Contractor's Project Manager, Quality Control team, Designer of Record, and the Government must attend this meeting. Invite the User and [a Directorate of Public Works Representative][a Reserve Support Command Representative], [Base Civil Engineering Representative], and resident engineer or representative to attend this meeting. The meeting may be conducted by teleconferencing.

3.2 DESIGN PHASE COMMISSIONING PLAN

Submit the Design Phase Commissioning Plan no later than 14 calendar days after the Design Commissioning Coordination Meeting. Outline the commissioning process, commissioning team members and responsibilities, lines of communication, and documentation requirements for the design

phase of the project in the Design Phase Commissioning Plan. Identify the Commissioning Standards chosen for the project.

3.3 DESIGN REVIEW

The CxC and other Commissioning Specialists must review design documents. The design review must occur prior to 50 percent design completion. The design review must include verifying that the design for the systems to be commissioned are prepared in accordance with the contract documents.

Provide a Design Review Report identifying discrepancies or deficiencies that would prevent the systems to be commissioned from operating or performing effectively or being adequately maintained. Report must include individual list of each deficiency and corresponding corrective action necessary for proper system performance.[Identify any discrepancies between the design and the Owner's Project Requirements Document. The Owner's Project Requirements Document is provided for commissioning review purposes only and does not form a part of the contract documents for this project.] **Submit the Design Review Report no later than 14 calendar days after approval of the Commissioning Firm and Commissioning Specialists after completing the review of the design.** The Contracting Officer or Designated Representative, the Contractor's Project Manager, the CxC, and the Designers of Record for the associated systems must meet, discuss, and resolve any outstanding items contained in the report no later than 14 calendar days after submission of the report. The CxC must verify that their review comments have been adequately addressed in subsequent design submittals.

3.4 CONSTRUCTION SUBMITTAL REVIEWS

Coordinate construction submittal document reviews for commissioned systems and assemblies with the CxC. The commissioning submittal review does not replace the designer of record (DOR) or Government submittal review, in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.

The CxC must identify construction submittals to be provided by the contractor for the commissioned systems. The CxC must evaluate construction submittals for compliance with the contract documents[and Owner's Project Requirements Document] prior to submission to the Government concurrent with DOR review. Include a copy of CxC comments with the construction submittals. The DOR must consider the CxC's comments, and the DOR provides direction to the contractor as necessary. Provide a copy of final DOR submittal reviews with comment responses to the CxC. Include a copy of the submittal document review transmittal and response in the Commissioning Report.

3.5 COMMISSIONING KICKOFF MEETING

Conduct a Commissioning Kickoff Meeting, led by the CxC, after approval of the Commissioning Firm and Commissioning Specialists, and no later than 60 days following construction notice to proceed. Discuss the commissioning process including contract requirements, lines of communication, roles and responsibilities, schedules, documentation requirements, inspection and test procedures, and logistics as specified in this section.

The Contractor's Project Manager, Quality Control team, Designer of Record, and the Government must attend this meeting. Invite the User and[a Directorate of Public Works Representative][a Reserve Readiness Division Representative] [Base Civil Engineering Representative] [_____],

and Resident Engineer or representative to attend this meeting.

3.6 REGULAR COMMISSIONING COORDINATION MEETINGS

The Quality Control team, Designer of Record, and the Government must attend this meeting. Sub-Contractor Representatives for each trade responsible for construction/installation of systems to be commissioned must attend this meeting as requested by the CxC. Invite the User and [a Directorate of Public Works Representative] [a Reserve Readiness Division Representative], and Resident Engineer or representative [a Base Civil Engineering Representative] [_____] to attend this meeting.

CxC must conduct monthly commissioning coordination meetings when installation of commissioned systems begins. Provide status of commissioned systems, open issues log items, outstanding submittals, and upcoming commissioning activities. Conduct bi-weekly commissioning coordination meetings within 30 days of the scheduled date for commissioning testing.

Participate in monthly commissioning coordination meetings led by the CxC when installation of commissioned systems begins. Provide status of commissioned systems, open issues log items, outstanding submittals, and upcoming commissioning activities. Participate in bi-weekly commissioning coordination meetings within 30 days of the scheduled date for commissioning testing.

3.7 CONSTRUCTION PHASE COMMISSIONING PLANS

The Interim Construction Phase Commissioning Plan identifies the commissioning and testing standards and outline the overall commissioning process, the commissioning schedule, the commissioning team members and responsibilities, lines of communication, documentation requirements for the construction phase of the project[, and Template Building Enclosure Inspection Checklists]. Submit the Interim Construction Phase Commissioning Plan, prepared by the CxC, 14 calendar days after the Construction Commissioning Coordination Meeting and 14 days prior to the start of construction of the building enclosure. Include the following items in the commissioning schedule in addition to the items in paragraph PROJECT SCHEDULE: Seasonal Testing, Warranty Phase Site Visit, Post-Construction Endurance Testing, and Updated Commissioning Report.

The Final Construction Phase Commissioning Plan includes the information provided in the Interim Construction Phase Commissioning Plan as well as commissioning construction observation checklists and test procedures such as Pre-Functional Checklists, Integrated Systems Test Checklists, and Functional Performance Test Checklists and other Commissioning Test Checklists for each building, for each system required to be commissioned, and for each component for inclusion in the Final Construction Phase Commissioning Plan. Refer to the related technical commissioning specification section for additional requirements for checklists. Submit the Final Construction Phase Commissioning Plan, prepared by the CxC, no later than 90 calendar days prior to the start of Commissioning Inspections.[Once approved, file the approved plan in the Sustainability eNotebook.]

3.7.1 Construction Observation Checklists

Construction Observation Checklists must include items for physical inspection or testing that demonstrate that installation and start-up of

equipment and systems is complete. Refer to paragraph COMMISSIONING INSPECTIONS. Construction observation checklists must be tailored to verify the specific installation requirements and details of the construction documents and manufacturer's instructions.

3.7.2 Test Procedures and Checklists

Test procedures and checklists must include procedures that explain, step-by-step, the actions and expected results that will demonstrate that the systems perform in accordance with the contract. Refer to paragraph COMMISSIONING TESTS. Include the following sections and details appropriate to the systems being tested in the test procedures and checklists:

- a. Notable system features including information about controls to facilitate understanding of system operation
- b. Conclusions and recommendations. Conclusions must clearly indicate if system does or does not perform in accordance with contract requirements. Recommendation must clearly indicate that the system should or should not be approved by the Government.
- c. Test conditions including date, beginning and ending time, and beginning and ending outdoor air conditions
- d. Attendees
- e. Identification of the equipment involved in the test
- f. Control system feature identification
- g. As-found condition of the system operation
- h. List of test items with step numbers along with the corresponding feature or operation, intended test procedure, expected system response, and pass/fail indication.
- i. Space for comments for each test item.

3.8 COMMISSIONING INSPECTIONS

Complete inspections using Construction Observation Checklists for each individual item of equipment or system for each system required to be commissioned in accordance with the commissioning plan. Indicate commissioning team member inspection and validation of each checklist item by initials. Validation of each checklist item by each team member indicates that item conforms to the contract documents and design in their area of responsibility. Commissioning Specialist validation of each checklist item indicates that each item has been installed correctly and in accordance with contract documents[and the Owner's Project Requirements (OPR)]. Submit the initialed and Completed Construction Observation Checklists no later than 7 calendar days after completion of inspection of all checklists items for each system.

3.9 COMMISSIONING TESTS

Demonstrate that all systems, equipment, and components have been installed correctly and that the systems operate and perform, including interactive operation between systems, in accordance with contract

documents[and the Owner's Project Requirements Document]. Perform tests as specified in related technical commissioning specifications. Provide all materials, services, and labor required to perform all commissioning tests.

Commissioning Specialist's duties include leading and documenting all tests for the systems to be commissioned with appropriate sub-contractors performing the Tests. The representatives listed in the paragraph COMMISSIONING TEAM must attend the tests with the exception of the Contractor's Project Manager.

3.9.1 Test Scheduling and Coordination

Schedule Commissioning Tests for each system only after the Certificate of Readiness has been approved by the Government for the system. Correct all deficiencies identified through any prior review, inspection, or test activity before the start of Commissioning tests.

Commissioning Tests and Integrated Systems Tests must be performed with the CxC present. Government reserves the right to witness all tests. Coordinate test schedule with Government representatives.

3.9.2 Testing Procedures

Commissioning tests include tests such as functional performance and integrated systems tests.[For electrical systems testing, include testing of sensor calibrations, control responses, safeties, interlocks, operating modes, capacity, lighting levels, and verification of all other electrical system contract performance requirements.] Perform test procedures in accordance with the commissioning standards specified. In addition, comply with the testing procedures specified in the sections listed in paragraph RELATED SECTIONS.

3.9.3 Sample Strategy

Refer to the sections identified in paragraph RELATED SECTIONS for sample strategy. Perform commissioning tests for all systems and equipment to be commissioned using the sample strategy identified herein. Complete a Test Checklist for each item of equipment or system to be tested. For sample sizes less than 100 percent for similar equipment, the Contracting Officer's Representative reserves the right to select the specific equipment or system to be tested.

For electrical systems, test 100 percent of all equipment and systems

Test all central plant equipment, primary air handling units, and process cooling or heating equipment. Test all system-level equipment serving multiple zones. Fifty percent sample testing is allowed for large groups of identical equipment with identical controllers serving single zones such as air terminal units, fan coil units, unitary equipment, and plumbing fixtures. Sample size may be no less than three units.

For electrical systems, test 100 percent of all equipment and systems.

3.9.3.1 100 Percent Sample Procedures

Systems or equipment for which 100 percent sample size are tested fail if one or more of the test procedures results in discovery of a deficiency and the deficiency cannot be resolved within 5 minutes during the test.

Re-test to the extent necessary to confirm that the deficiencies have been corrected without negatively impacting the performance of the rest of the system.

3.9.3.2 Less than 100 Percent Sample Procedures

Randomly test each sample group of identical equipment. Sample size must be at least three units. If 10 percent of the units in the first sample fail the commissioning tests, test a second sample group, the same size as the first sample group. The second sample must not include any units from the first sample group.

If 10 percent of the units in the second sample fail, test all remaining units. If at any point frequent failures occur, the CxC may stop the testing and require the contractor to perform and document a checkout of the remaining equipment prior to continuing commissioning testing.

3.9.4 Aborted Tests and Re-Testing

Abort any test if any deficiency prevents successful completion of the test or if any required commissioning team member is not present for the test. Re-test after all deficiencies identified during the original test have been corrected. Contracting Officer may withhold payment equivalent to lost time, re-testing, and aborted tests. These costs may include salary, travel costs, and per diem for Government team members.

3.10 TRAINING PLAN

CxC must review the training plan for training associated with the equipment and systems to be commissioned, checking that each plan has the trainer name, trainer contract information, training schedule and location. Submit review at least 30 days prior to the first training event. Incorporate CxC review comments prior to submitting training plan in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA. Update and resubmit the training plan based on any corrective action taken.

[3.11 SYSTEMS MANUAL

Prepare and submit a Systems Manual, including a signed certification or letter from the Commissioning Specialists and the CxC stating that the Systems Manual is complete, clear, and accurate. The Systems Manual, for all commissioned systems, must conform to Appendix A SYSTEMS MANUAL ORGANIZATION AND CONTENT per ER 25-345-1, available at the USACE Publications website at the following location: <https://www.publications.usace.army.mil/USACE-Publications/Engineer-Regulations/>. Submit Systems Manual no later than 30 calendar days following completion of Functional Performance Tests and Integrated Systems Tests. Update and resubmit the Systems Manual based on any corrective action taken during the warranty period.

Ensure Systems Manual is coordinated with the requirements of Section 01 78 23 OPERATION AND MAINTENANCE DATA and Quality Control requirements.

]3.12 MAINTENANCE AND SERVICE LIFE PLAN

3.12.1 Maintenance Plan

Prepare and submit a Maintenance Plan for the project mechanical, electrical, plumbing, and fire protection systems. Prepare the HVAC and refrigeration sections of the Maintenance Plan in accordance with ASHRAE 180. Develop required inspection and maintenance tasks similar to Section 5 of ASHRAE 180 for the other commissioned systems and fire protection systems. Ensure Maintenance Plan is coordinated with the requirements of Section 01 78 23 OPERATION AND MAINTENANCE DATA.

Submit the Maintenance Plan no later than 30 calendar days following the completion of Functional Performance Tests and Integrated Systems Tests.

3.12.2 Service Life Plan

Prepare and submit a Service Life Plan for the building enclosure, structural systems, and site hardscape that includes the following for each assembly or component:

- a. A description of each including the materials or products.
- b. The estimated service life, in years.
- c. The estimated maintenance frequency and description of maintenance tasks.
- d. The point of maintenance access for the components with estimated service life less than service life of the building.

Ensure Service Life Plan is coordinated with the requirements of Section 01 78 23 OPERATION AND MAINTENANCE DATA. Submit the Service Life Plan no later than 30 calendar days following the completion of Functional Performance Tests and Integrated Systems Tests.

3.13 COMMISSIONING REPORT

Submit an Final Commissioning Report no later than 14 calendar days following commissioning team validation of all Commissioning Tests, including Functional Performance Tests, and Integrated Systems Tests, with the exception of Seasonal Tests. [File the approved Final Commissioning Report (eNotebook) in the Sustainability eNotebook.]Include the following information in the Final Commissioning Report:

- a. An executive summary describing the overall commissioning process, the results of the commissioning process, outstanding deficiencies and recommended resolutions, and seasonal testing that must be scheduled for a later date. Indicate, in the executive summary, whether the systems meet the requirements of the contract documents[and the Owner's Project Requirements Document].
- b. A list of deficiencies discovered during the commissioning process and the corrective actions taken in the report.
- c. Completed [Building Enclosure Inspection Checklists,]Pre-Functional Checklists and other Commissioning Observation Checklists, Commissioning Test Checklists such as Functional Performance Test Checklists and Integrated Systems Test Checklists,[, the Air Leakage

Test Reports and Diagnostic Test Reports,] the Final Construction Phase Commissioning Plan, the Issues Log, Training Attendance Rosters, the Design Review Reports, Submittal Review Report, and any other documents as specified by related technical commissioning specification sections.

[3.14 WARRANTY PHASE SITE VISIT

The Lead Commissioning Specialist must visit the building site concurrent with the 9 month warranty inspection to inspect building system equipment and review building operation with the building operating/maintenance staff, and identify any deficiency of the building systems to operate in accordance with the contract documents[and the Owner's Project Requirements Document]. The Commissioning Specialist must notify the Contracting Officer of any identified deficiencies and the proposed corrective action. Submit Updated Final Commissioning Report and Systems Manuals, documenting the results of the warranty phase inspection. Include other warranty or post-construction phase activities as specified in related technical commissioning specification sections, such as Seasonal testing results[and Post-Construction Endurance Test and Trend Log Report]. [File the approved Updated Final Commissioning Report (eNotebook) in the Sustainability eNotebook.]

]

[APPENDIX A - OWNER'S PROJECT REQUIREMENTS DOCUMENT

] -- End of Section --

Attachment A – Industry and Military Criteria & Governing Codes

ATTACHMENT A

INDUSTRY AND MILITARY CRITERIA AND GOVERNING CODES

PART ONE - Industry Criteria

Applicable design and construction criteria references are listed in the table below. Use criteria from the most current references aligning with the date of issue of this project's solicitation unless noted otherwise. This list is not intended to include all criteria that may apply, or to restrict design and construction to only those references listed. See also Part Two for additional applicable military criteria.

Air Conditioning, Heating, and Refrigeration Institute (AHRI)	
AHRI 430	Performance Rating of Central Station Air Handling Units
AHRI 440	Performance Rating of Room Fan-Coils
AHRI 520	Performance Rating of Positive Displacement Condensing Units
AHRI 1500	Performance Rating of Commercial Space Heating Boilers
Air Movement and Control Association (AMCA)	
AMCA 99-16	Standards Handbook
AMCA 210	Laboratory Methods of Testing Fans for Rating
American Architectural Manufacturers Association (AAMA)	
AAMA 605	Voluntary Specification Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels
AAMA 607.1	Voluntary Guide Specifications and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum
AAMA 611	Voluntary Specification for Anodized Architectural Aluminum
AAMA 1503	Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors, and Glazed Wall Sections
AAMA 2605	Voluntary Specification for Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels

American Concrete Institute	
ACI MNL-66	Detailing Manual
ACI 315	Details and Detailing of Concrete Reinforcement
ACI 318	Building Code Requirements for Structural Concrete
American Institute of Steel Construction (AISC)	
AISC 325	Steel Construction Manual
American Iron and Steel Institute	
AISI	Light Gage Cold-Formed Steel Design Manuals, the American Iron and Steel Institute
American National Standards Institute (ANSI)	
ANSI C2	National Electrical Safety Code
American Society of Civil Engineers (ASCE)	
ASCE 7	Minimum Design Loads for Buildings and Other Structures
American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)	
ASHRAE TC9.9	Data Center Power Equipment Thermal Guidelines and Best Practices
ASHRAE Datacom Series 1	Thermal Guidelines for Data Processing Environments
ASHRAE Fundamentals	ASHRAE Handbook of Fundamentals
ASHRAE Guideline 0	The Commissioning Process
ASHRAE Guideline 1.1	HVAC&R Technical Requirements for the Commissioning Process
ASHRAE 55	Thermal Environmental Conditions for Human Occupancy
ASHRAE 62.1	Ventilation for Acceptable Indoor Air Quality
ASHRAE 90.1	Energy Standard for Buildings Except Low-Rise Residential Buildings
ASHRAE 183	Peak Cooling and Heating Load Calculations in Buildings

American Water Works Association (AWWA)	
AWWA Standards	Latest edition of applicable standards
Architectural Woodwork Institute (AWI)	
AWI	Architectural Woodwork Standards (AWS), 2nd Edition
Associated Air Balance Council (AABC)	
AABC MN-1	National Standards for Testing and Balancing Heating, Ventilating, and Air Conditioning Systems
ASTM International	
ASTM C1060-90(1997)	Standard Practice for Thermo graphic Inspection of Insulation Installations in Envelope Cavities of Frame Buildings
ASTM E 779 -10	Standard Test Method for Determining Air Leakage Rate by Fan Pressurization
ASTM E 283	Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors under Specified Pressure Differences Across the Specimen
ASTM E 331	Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
ASTM E 2178	Air Barrier Material Standard
ASTM E 2357	Air Barrier Assembly Testing
ASTM E 1186-03	Standard Practices for Air Leakage Site Detection in Building Envelopes and Air Barrier Systems
ASTM E 1258	Standard Test Method for Airflow Calibration of Fan Pressurization Devices
ASTM E1827-96	Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door
ASTM E 2178-11	Standard Test Method for Air Permeance of Building Materials
Builders Hardware Manufacturers Association (BHMA)	
ANSI/BHMA	American National Standards for Builders Hardware

Building Industry Consulting Service International (BICSI)	
TDMM	Telecommunications Distribution Methods Manual, 2014
CO-OSP	Customer-Owned Outside Plant Design Manual
Code of Federal Regulations (CFR)	
29 CFR 1910.1048	Formaldehyde Standard, National Archives and Records Administration (NARA), http://www.gpoaccess.gov/cfr/index.html
Electronic Industries Association (EIA) / Telecommunications Industry Association (TIA)	
TIA 568.0-D	Generic Telecommunications Cabling for Customer Premises
TIA 568.1-D	Commercial Building Telecommunications Infrastructure Standard
TIA 568.2-D	Balanced Twisted-Pair Telecommunications Cabling and Component Standards
TIA 568.3-D	Optical Fiber Cabling and Components Standard
TIA 568.4-D	Broadband Coaxial Cabling and Component Standard
TIA 569-D	Telecommunications Pathways and Spaces
TIA-606	Administration Standard for the Commercial Telecommunications Infrastructure
TIA-607-C	Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises
TIA 758-B	Customer Owned Outside Plant Telecommunications Infrastructure Standard
Illuminating Engineering Society of North America (IESNA)	
IESNA	Lighting Handbook Illumination Engineering Society of North America Lighting Handbook
Institute of Electrical and Electronics Engineers (IEEE)	
IEEE Standard 100	IEEE Standard Dictionary of Electrical and Electronics Terms
IEEE Standard 141	Recommended Practice for Electric Power Distribution for Industrial Plants (Red Book)
IEEE Standard 142	Recommended Practice for Grounding Industrial and Commercial Power Systems (Green Book)

IEEE Standard 242	Recommended Practice for Protection and Coordination of Industrial and Commercial Power Systems (Buff Book)
IEEE Standard 399	Recommended Practice for Power Systems Analysis (Brown Book)
IEEE Standard 493	Recommended Practice for Reliable Industrial and Commercial Power Systems (Gold Book)
International Code Council (ICC)	
IBC	<p>International Building Code</p> <p>Note: All references in the International Building Code to the International Electrical Code shall be considered to be references to NFPA 70.</p> <p>All references in the International Building Code to the National Fuel Gas Code / Liquefied Petroleum Gas Code shall be considered to be references to NFPA 54 and NFPA 58.</p> <p>All references in the International Building Code to the International Fire Code shall be considered to be references to Unified Facilities Criteria (UFC) 3-600-01.</p>
IEBC	International Existing Building Code
IMC	International Mechanical Code (Per UFC 3-410-01)
IPC	International Plumbing Code (Per UFC 3-420-01)
IECC	International Energy Conservation Code (Per UFC 1-200-02)
International Electrical Testing Association Inc (NETA)	
NETA	Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems
National Environmental Balancing Bureau (NEBB)	
NEBB Procedural Standards	Procedural Standards for Testing, Adjusting, and Balancing Environmental Systems
National Fenestration Rating Council (NFRC)	
NFRC 100	Procedure for Determining Fenestration Product U-Factors

NFRC 200	Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence
National Fire Protection Association (NFPA), latest editions	
NFPA 1	Fire Code
NFPA 10	Standard for Portable Fire Extinguishers
NFPA 13	Standard for the Installation of Sprinkler Systems
NFPA 20	Standard for the Installation of Stationary Fire Pumps for Fire Protection
NFPA 24	Standard for the Installation of Private Fire Service Mains and Their Appurtenances
NFPA 54	National Fuel Gas Code
NFPA 70	National Electrical Code
NFPA 70E	Standard for Electrical Safety in the Workplace
NFPA 72	National Fire Alarm Code
NFPA 80	Standard for Fire Doors and Fire Windows
NFPA 90A	Standard for the Installation of Air Conditioning and Ventilating Systems
NFPA 101	Life Safety Code
NFPA 170	Standard for Fire Safety and Emergency Symbols, 2015
NFPA 241	Safeguarding Construction, Alteration and Demolition Operations
NFPA 291	Recommended Practice for Fire Flow Testing
NFPA 409	Standard on Aircraft Hangars
NFPA 780	Standard for the Installation of Lightning Protection Systems
NFPA Suite	National Fire Protection Association, Complete Suite of Documents, latest edition(s)
National Roofing Contractors Association (NRCA)	
NRCA	Roofing and Waterproofing Manual
Occupational Safety and Health Administration (OSHA)	
Title 29, Part 1926	OSHA Construction Industry Standards, Title 29, Code of Federal Regulations, Part 1926, Safety and Health Regulations for Construction
Plumbing and Drainage Institute (PDI)	
PDI WH 201	Water Hammer Arresters Standard

Sheet Metal and Air Conditioning Contractors National Association (SMACNA)	
SMACNA 1793	Architectural Sheet Metal Manual
SMACNA 1780	HVAC Systems Testing, Adjusting and Balancing
SMACNA 1966	HVAC Duct Construction Standards Metal and Flexible
State/Local Regulations	
	Sedimentation and Erosion Control Design Requirements
	Environmental Control Requirements
	Storm Water Management Requirements
Steel Deck Institute (SDI)	
SDI	SDI Diaphragm Design Manual
Steel Door Institute (SDI)	
ANSI A250.8	Standard Steel Doors and Frames
Steel Joist Institute	
SJI	Standard Specifications and Load Tables for Steel Joists and Joist Girders
The Masonry Society (TMS)	
TMS 402	Building Code for Masonry Structures
Underwriters Laboratories (UL)	
UL 96A	Standard for Installation Requirements for Lightning Protection Systems
UL 580	Standard for Tests for Uplift Resistance of Roof Assemblies
Rainfall Frequency Atlas	
US Atlas	Rainfall Frequency Atlas of the United States for Durations from 30 minutes to 24 hours, and return periods from 1 to 100 years

PART TWO - Military Criteria and Regional Criteria

Conform to the following regional and military criteria. Certain design impacts and features due to these criteria are noted in the project narrative for the benefit of the reader. However, all requirements of the referenced criteria are applicable, whether noted or not, unless otherwise specified herein. The version of the documents that is current at the time of issuance of this project's solicitation is applicable unless otherwise noted.

Air Force Corporate Facility Standards (AFCFS), <https://www.wbdg.org/ffc/af-afcec/corporate-facilities-standards-afcfs>

Air Force Instruction 32-1020, Civil Engineering, Planning and Programming Built Infrastructure Projects

Air Force Manual, DAFMAN 32-1084 Facility Requirements

Air Force Policy Memo: Electrification of Installations, Standard Building Operations, flightlines, and Non-Tactical Vehicles (NTV)

AFCEC A-GRAM 17-01 Change to AF New Construction and Major Renovation Certification Requirements

Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities Standard for Department of Defense Facilities, United States Access Board, <http://www.access-board.gov/>

Arkansas Department of Energy and Environment, Environmental Quality

Department of Defense Manual (DoDM) 5200.01 Volume 3; DoD Information Security Program: Protection of Classified Information

Ebbing Air National Guard Base Area Development Plan

EM 385-1-1, US Army Corps of Engineers Safety and Health Requirements Manual

Energy Policy (EPACT) Act of 2005

Energy Independence and Security Act (EISA) of 2007

Engineering and Construction Bulletins (ECBs) found at:
<https://www.wbdg.org/ffc/dod/engineering-and-construction-bulletins-ecb>

Executive Order 13693 – Planning for Federal Sustainability in the Next Decade

Executive Order 13834 – Efficient Federal Operations

Executive Order 14057 – Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability

F16TSSTD-FACILITY-INST-001, f-16 Aircrew Training Device (ATD) Unit Training Device (UTD) Update Facility Design Criteria

HQ USAF Force Protection Guide

ICS 705-1 Physical and Technical Security Standards for Sensitive Compartmented Information Facilities

ICS 705-2 Standards for the Accreditation and Reciprocal Use of Sensitive Compartmented Facilities

Joint Strike Fighter (JSF) Facility Requirements Document (FRD)

Management Plan for the Air Force Capital Construction Program

Mission Critical Facility Engineering Standard (MCFES) 15-01 - Mission Critical Facility Engineering Squad - Facility Electrical and Mechanical Infrastructure Redundancy Requirements – 27 OCT 2015

TM 5-805-4, Technical Manual: Noise and Vibration Control

U.S. Army Corps of Engineers Engineer Manuals available at:
<http://www.publications.usace.army.mil/USACEPublications/EngineerManuals.aspx>

U.S. Army Corps of Engineers Technical Instructions TI 800-01 available at:
http://www.wbdg.org/ccb/ARMYCOE/COETI/ARCHIVES/ti800_01.pdf

U.S. Army Corps of Engineers Engineering and Construction Bulletin (ECB) 2018-17

USACE Contract Administration guidelines set forth at:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_715-1-7.pdf

Whole Building Design Guide, <http://www.wbdg.org>

Engineering Technical Letters:

ECB 2018-11 Control System Cybersecurity Coordination Requirement

ETL 12-15, Light Emitting Diode (LED) Fixture Design and Installation Criteria for Interior and Exterior Lighting Application

ETL 1110-3-447, Engineer of Record and Design Responsibilities

Engineering Regulation Letters:

ER 1110-345-723, Guidelines for the Total Building Commissioning Process

ER 1110-1-8173, Energy Modeling and Life Cycle Cost Analysis

ER 1110-34-1, Engineering and Design Transportation Systems Mandatory Center of Expertise

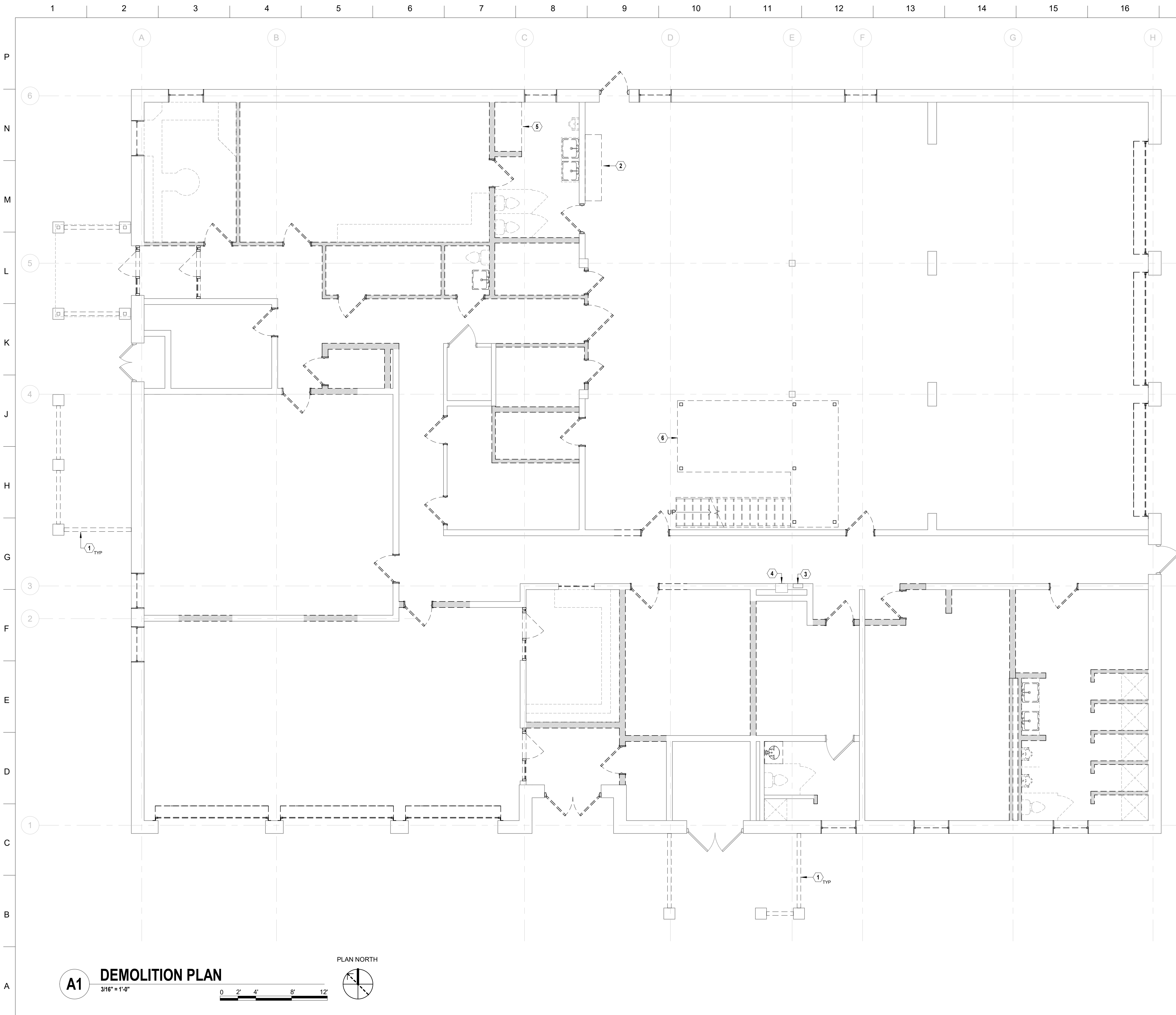
ER 1110-3-12 Quality Management

Unified Facilities Criteria (UFC): The latest version of the UFC is applicable, unless noted otherwise, and can be found at <http://dod.wbdg.org>.

UFC 1-200-01	DoD Building Code
UFC 1-200-02	High Performance and Sustainable Building Requirements
UFC 1-300-01	Criteria Format Standard
UFC 3-101-01	Architecture
UFC 3-110-03	Roofing
UFC 3-120-01	Design: Sign Standards
UFC 3-120-10	Interior Design
UFC 3-190-06	Protective Coatings and Paints
UFC 3-201-01	Civil Engineering
UFC 3-201-02	Landscape Architecture
UFC 3-210-10	Low Impact Development
UFC 3-220-01	Geotechnical Engineering
UFC 3-230-01	Water Storage, Distribution, and Transmission
UFC 3-250-01	Pavement Design for Roads and Parking Areas
UFC 3-301-01	Structural Engineering
UFC 3-401-01	Mechanical Engineering
UFC 3-410-01	HVAC Systems

UFC 3-410-02	Direct Digital Control for HVAC and Other Building Control Systems
UFC 3-420-01	Plumbing Systems
UFC 3-420-02	Compressed Air
UFC 3-450-01	Noise and Vibration Control
UFC 3-501-01	Electrical Engineering
UFC 3-520-01	Interior Electrical Systems
UFC 3-530-01	Interior and Exterior Lighting and Controls
UFC 3-550-01	Exterior Electrical Power Distribution
UFC 3-560-01	Electrical Safety O&M
UFC 3-575-01	Lightning and Static Electricity Protection Systems
UFC 3-580-01	Telecommunications Building Cabling Systems Planning and Design
UFC 3-600-01	Fire Protection Engineering for Facilities
UFC 3-730-01	Programming Cost Estimates for Military Construction
UFC 4-010-01	DoD Minimum Antiterrorism Standards for Buildings
UFC 4-010-05	SCIF/SAPF Planning, Design, and Construction
UFC 4-010-16	Cybersecurity of Facility-Related Control Systems
UFC 4-021-01	Design and O&M Mass Notification Systems
UFC 4-021-02	Electronic Security Systems
UFC 4-026-01	Design to Resist Forced Entry
UFC 4-211-01	Aircraft Maintenance Hangars
UFC 4-211-02	Aircraft Corrosion Control and Paint Facilities
UFC 4-440-01	Warehouses and Storage Facilities

Attachment B – Concept Design Drawings



GENERAL NOTES

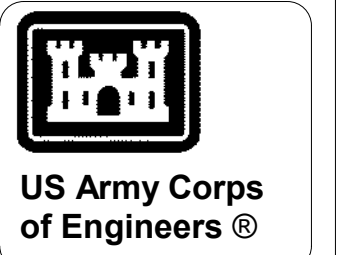
- WHERE WALLS AND THEIR ASSOCIATED OPENINGS ARE TO BE DEMOLISHED, REMOVE EXISTING WALL CONSTRUCTION IN ITS ENTIRETY FROM FLOOR TO STRUCTURE ABOVE INCLUDING DOORS, DOOR FRAMES, VISION PANELS, BASE, ASSOCIATED ELEC./MECH. WORK ETC. (EXTENT SHOWN BY BROKEN LINES). PATCH EXISTING ADJACENT AREAS, AS REQUIRED, THAT HAVE BEEN DISTURBED BY DEMOLITION AND PREPARE SURFACES TO RECEIVE NEW FINISHES.
- WHERE OPENINGS ARE TO BE REMOVED IN WALLS THAT ARE EXISTING TO REMAIN, REMOVE EXISTING DOOR OR VISION PANEL, GLAZING AND FRAME ASSEMBLY. CLOSE EXISTING OPENING TO MATCH ADJACENT CONSTRUCTION. ALIGN NEW WORK FLUSH WITH EXISTING ADJACENT PARTITION. PREPARE SURFACE AS REQUIRED TO RECEIVE NEW SCHEDULED FINISH.
- WHERE NEW OPENINGS ARE SHOWN IN WALLS THAT ARE EXISTING TO REMAIN, PROVIDE OPENING IN EXISTING PARTITION AS REQUIRED TO RECEIVE NEW DOOR FRAME OR VISION PANEL AS SHOWN. PATCH AND PREPARE ADJACENT SURFACES AS REQUIRED TO RECEIVE NEW SCHEDULED FINISH.

DEMOLITION LEGEND

- EXISTING PARTITIONS TO BE DEMOLISHED
- EXISTING ELEMENTS TO BE DEMOLISHED
- EXISTING ELEMENTS TO REMAIN
- EXISTING DOORS TO REMAIN
- EXISTING DOORS TO BE DEMOLISHED
- EXISTING GLAZING TO BE DEMOLISHED
- PROVIDE OPENING IN EXISTING PARTITION

SHEET KEYNOTES

- REMOVE FENCE, PREPARE FOR NEW UTILITY ENCLOSURE
- REMOVE CONCRETE CURB AND PATCH CONCRETE SLAB TO MATCH EXISTING
- EXISTING FIRE EXTINGUISHER CABINET TO REMAIN
- EXISTING DRINKING FOUNTAIN TO REMAIN
- REMOVE EQUIPMENT CURB, PREPARE SUBFLOOR FOR NEW FINISH
- REMOVE MEZZANINE ABOVE



MARK	DESCRIPTION	DATE

DESIGNED BY: D. REMY	ISSUE DATE: JUNE 2024
DRAWN BY: M. DAVIS	SOLICITATION NO.:
CHECKED BY: S. BLAIR	CONTRACT NO.:
SUBMITTED BY: C. SEGHI	
SIZE: ANSI D	

US ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT
819 TAYLOR ST., FORT WORTH, TX 76102

BLAIRREMY
ARCHITECTS

SEGHRICK
CONSTRUCTION

FORT SMITH, ARKANSAS
EBBING ANG RENOVATION OF 5 FACILITIES
A-2020-S

DEMOLITION PLAN
BUILDING 201

SHEET ID
AD101

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A1 DEMOLITION PLAN
3/16" = 1'-0"

PLAN NORTH



GENERAL NOTES

1 REFER TO 01 10 00, ATTACHMENT C FOR SCOPE OF FINISHES

PROGRAMMING LEGEND

- BULK SPARES
- CIRCULATION
- COMPACT STORAGE SYSTEM
- RACKED STORAGE AREA
- RESTROOMS
- SEMI BULKY STORAGE AREA
- SPARES TRANSIT AREA
- UTILITY SPACES

FLOOR PLAN LEGEND

- EXISTING PARTITIONS TO REMAIN
- NEW MASONRY PARTITIONS
- NEW METAL STUD PARTITIONS
- EXISTING DOORS TO REMAIN
- NEW DOORS
- UTILITY ENCLOSURE (ABOVE)

SHEET KEYNOTES

- 1 CHAIN LINK ENCLOSURE OVER UTILITY YARD (ABOVE)
- 2 EXISTING COVERED ENTRY TO REMAIN (ABOVE)
- 3 FLOOR-MOUNTED SERVICE SINK
- 4 EXISTING DRINKING FOUNTAIN TO REMAIN
- 5 EXISTING FIRE EXTINGUISHER CABINET TO REMAIN
- 6 WALL-MOUNTED LAVATORY
- 7 WATER CLOSET
- 8 METAL PANEL UTILITY ENCLOSURE



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CHECKED BY: S. BLAIR	CONTRACT NO.:
SUBMITTED BY: C. SEGHI	
SIZE: ANSI D	

US ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT
819 TAYLOR ST., FORT WORTH, TX 76102

BLAIR SEGHI
ARCHITECTS

MERRICK
ARCHITECTS

FORT SMITH, ARKANSAS
EBBING ANG RENOVATION OF 5 FACILITIES
A-2020-S
CONCEPT PLAN
BUILDING 201

SHEET ID
A-002

A1 CONCEPT PLAN
3/16" = 1'-0"

PLAN NORTH

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GENERAL NOTES

1 ALL FURNITURE SHOWN IS CONCEPTUAL IN NATURE AND WILL NOT BE SPECIFIED AS PART OF THIS PROJECT

SHEET KEYNOTES

- 1 FIRE RISER
- 2 HIGH-DENSITY STORAGE UNIT (CUSTOMER SUPPLIED)
- 3 FLOOR-MOUNTED SERVICE SINK
- 4 EXISTING DRINKING FOUNTAIN TO REMAIN
- 5 EXISTING FIRE EXTINGUISHER CABINET TO REMAIN
- 6 WATER CLOSET
- 7 WALL-MOUNTED LAVATORY



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SUBMITTED BY: C. SEGHI	
SIZE: ANSI D	

US ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT
819 TAYLOR ST., FORT WORTH, TX 76102

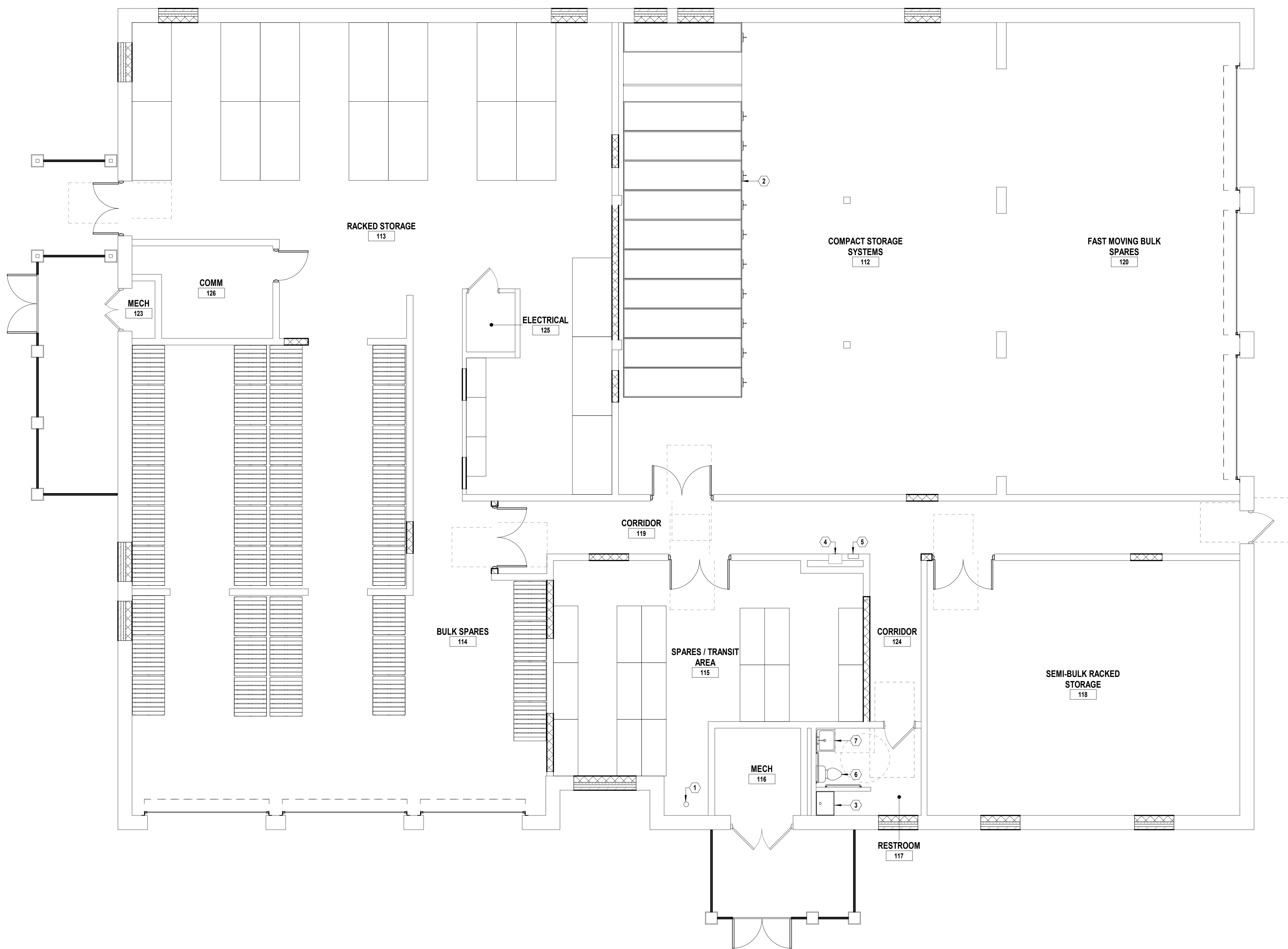
BLAIR REMY
ARCHITECTS

MERRICK
ENGINEERS

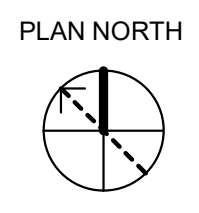
FORT SMITH, ARKANSAS
EBBING ANG RENOVATION OF 5 FACILITIES
A-2020-S

FURNITURE PLAN
BUILDING 201

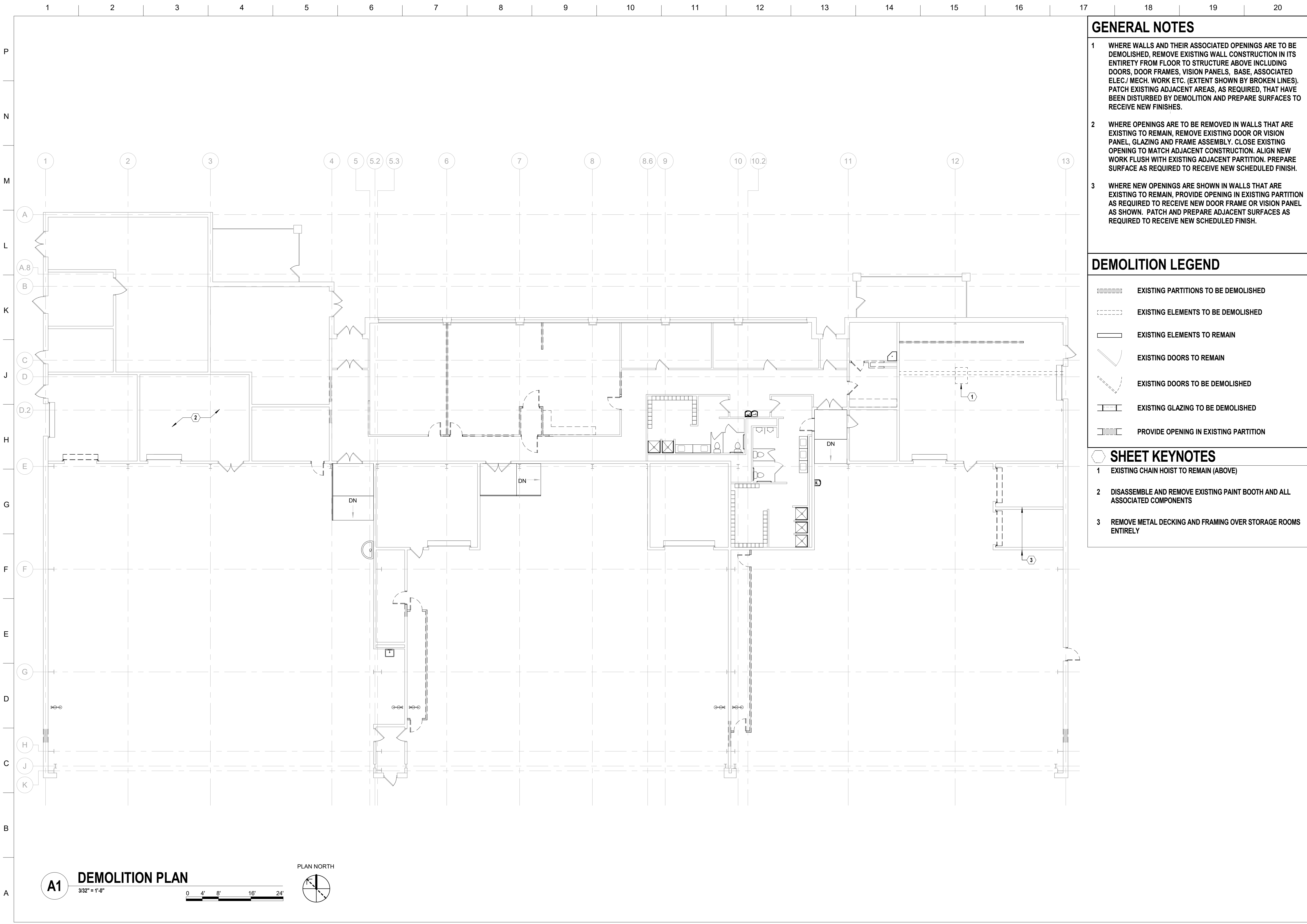
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A1 FURNITURE PLAN
3/16" = 1'-0"



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GENERAL NOTES

- WHERE WALLS AND THEIR ASSOCIATED OPENINGS ARE TO BE DEMOLISHED, REMOVE EXISTING WALL CONSTRUCTION IN ITS ENTIRETY FROM FLOOR TO STRUCTURE ABOVE INCLUDING DOORS, DOOR FRAMES, VISION PANELS, BASE, ASSOCIATED ELEC./MECH. WORK ETC. (EXTENT SHOWN BY BROKEN LINES). PATCH EXISTING ADJACENT AREAS, AS REQUIRED, THAT HAVE BEEN DISTURBED BY DEMOLITION AND PREPARE SURFACES TO RECEIVE NEW FINISHES.
- WHERE OPENINGS ARE TO BE REMOVED IN WALLS THAT ARE EXISTING TO REMAIN, REMOVE EXISTING DOOR OR VISION PANEL, GLAZING AND FRAME ASSEMBLY. CLOSE EXISTING OPENING TO MATCH ADJACENT CONSTRUCTION. ALIGN NEW WORK FLUSH WITH EXISTING ADJACENT PARTITION. PREPARE SURFACE AS REQUIRED TO RECEIVE NEW SCHEDULED FINISH.
- WHERE NEW OPENINGS ARE SHOWN IN WALLS THAT ARE EXISTING TO REMAIN, PROVIDE OPENING IN EXISTING PARTITION AS REQUIRED TO RECEIVE NEW DOOR FRAME OR VISION PANEL AS SHOWN. PATCH AND PREPARE ADJACENT SURFACES AS REQUIRED TO RECEIVE NEW SCHEDULED FINISH.

DEMOLITION LEGEND

- EXISTING PARTITIONS TO BE DEMOLISHED
- EXISTING ELEMENTS TO BE DEMOLISHED
- EXISTING ELEMENTS TO REMAIN
- EXISTING DOORS TO REMAIN
- EXISTING DOORS TO BE DEMOLISHED
- EXISTING GLAZING TO BE DEMOLISHED
- PROVIDE OPENING IN EXISTING PARTITION

SHEET KEYNOTES

- EXISTING CHAIN HOIST TO REMAIN (ABOVE)
- DISASSEMBLE AND REMOVE EXISTING PAINT BOOTH AND ALL ASSOCIATED COMPONENTS
- REMOVE METAL DECKING AND FRAMING OVER STORAGE ROOMS ENTIRELY



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DESIGNED BY: D. REMY	ISSUE DATE: JUNE 2024
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SUBMITTED BY: C. SEGHI	
SIZE: ANSI D	

US ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT
19 SAINT JOSEPH STREET

BLAIR REMY
ARCHITECTS

MERRICK
ENGINEERS

FORT SMITH, ARKANSAS
EBBING ANG RENOVATION OF 5 FACILITIES
A-2020-S
DEMOLITION PLAN
BUILDING 202

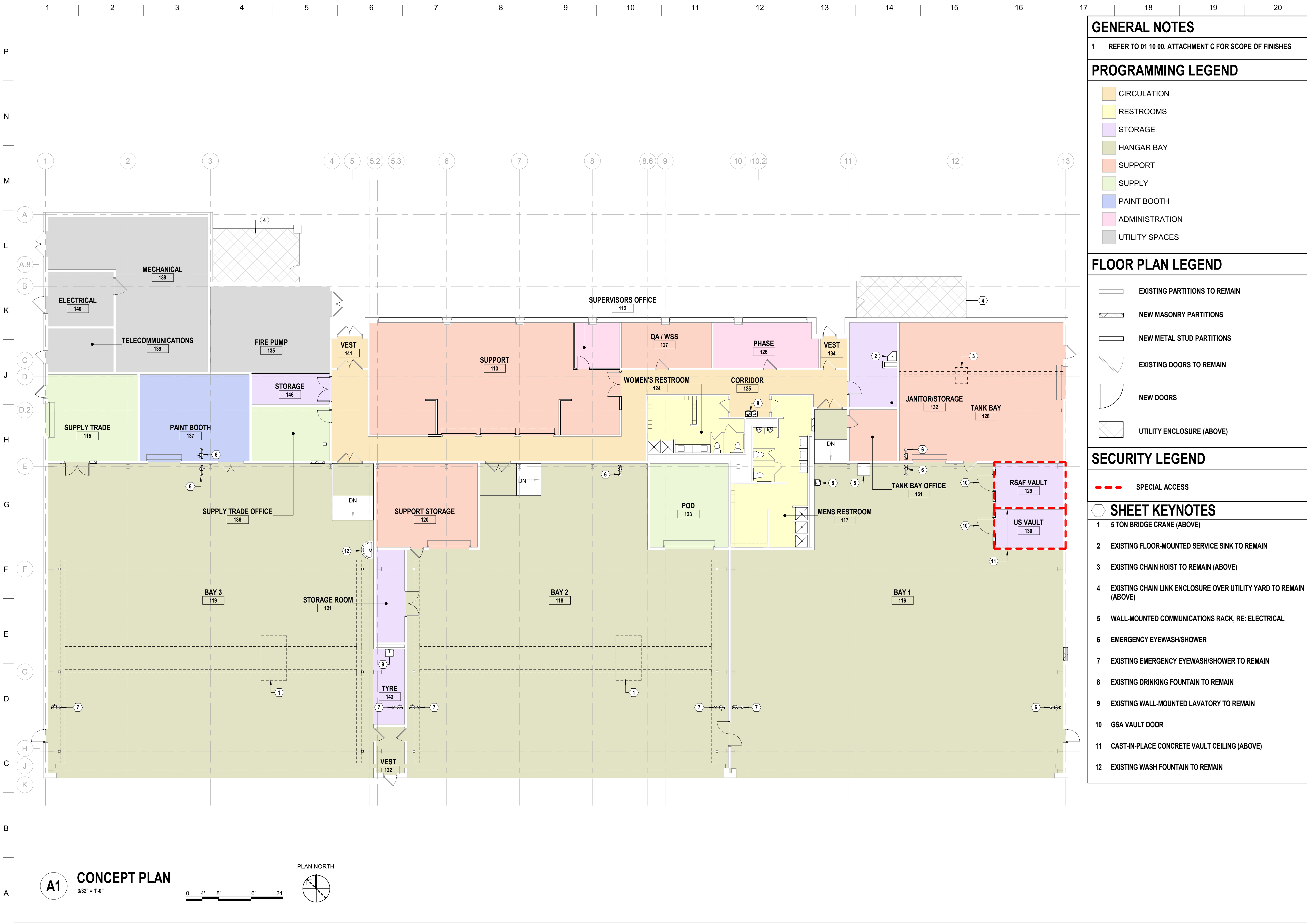
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A1 DEMOLITION PLAN
3/32" = 1'-0"

0 4' 8' 16' 24'

PLAN NORTH

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GENERAL NOTES

1 REFER TO 01 10 00, ATTACHMENT C FOR SCOPE OF FINISHES

PROGRAMMING LEGEND

- CIRCULATION
- RESTROOMS
- STORAGE
- HANGAR BAY
- SUPPORT
- SUPPLY
- PAINT BOOTH
- ADMINISTRATION
- UTILITY SPACES

FLOOR PLAN LEGEND

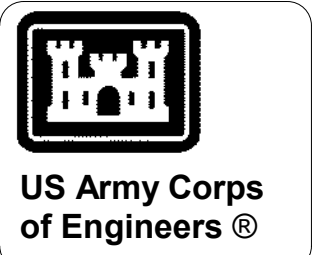
- EXISTING PARTITIONS TO REMAIN
- NEW MASONRY PARTITIONS
- NEW METAL STUD PARTITIONS
- EXISTING DOORS TO REMAIN
- NEW DOORS
- UTILITY ENCLOSURE (ABOVE)

SECURITY LEGEND

- SPECIAL ACCESS

SHEET KEYNOTES

- 1 5 TON BRIDGE CRANE (ABOVE)
- 2 EXISTING FLOOR-MOUNTED SERVICE SINK TO REMAIN
- 3 EXISTING CHAIN HOIST TO REMAIN (ABOVE)
- 4 EXISTING CHAIN LINK ENCLOSURE OVER UTILITY YARD TO REMAIN (ABOVE)
- 5 WALL-MOUNTED COMMUNICATIONS RACK, RE: ELECTRICAL
- 6 EMERGENCY EYEWASH/SHOWER
- 7 EXISTING EMERGENCY EYEWASH/SHOWER TO REMAIN
- 8 EXISTING DRINKING FOUNTAIN TO REMAIN
- 9 EXISTING WALL-MOUNTED LAVATORY TO REMAIN
- 10 GSA VAULT DOOR
- 11 CAST-IN-PLACE CONCRETE VAULT CEILING (ABOVE)
- 12 EXISTING WASH FOUNTAIN TO REMAIN



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CHECKED BY: S. BLAIR	CONTRACT NO.: W91328-XX-XXXX
SUBMITTED BY: C. SEGHI	
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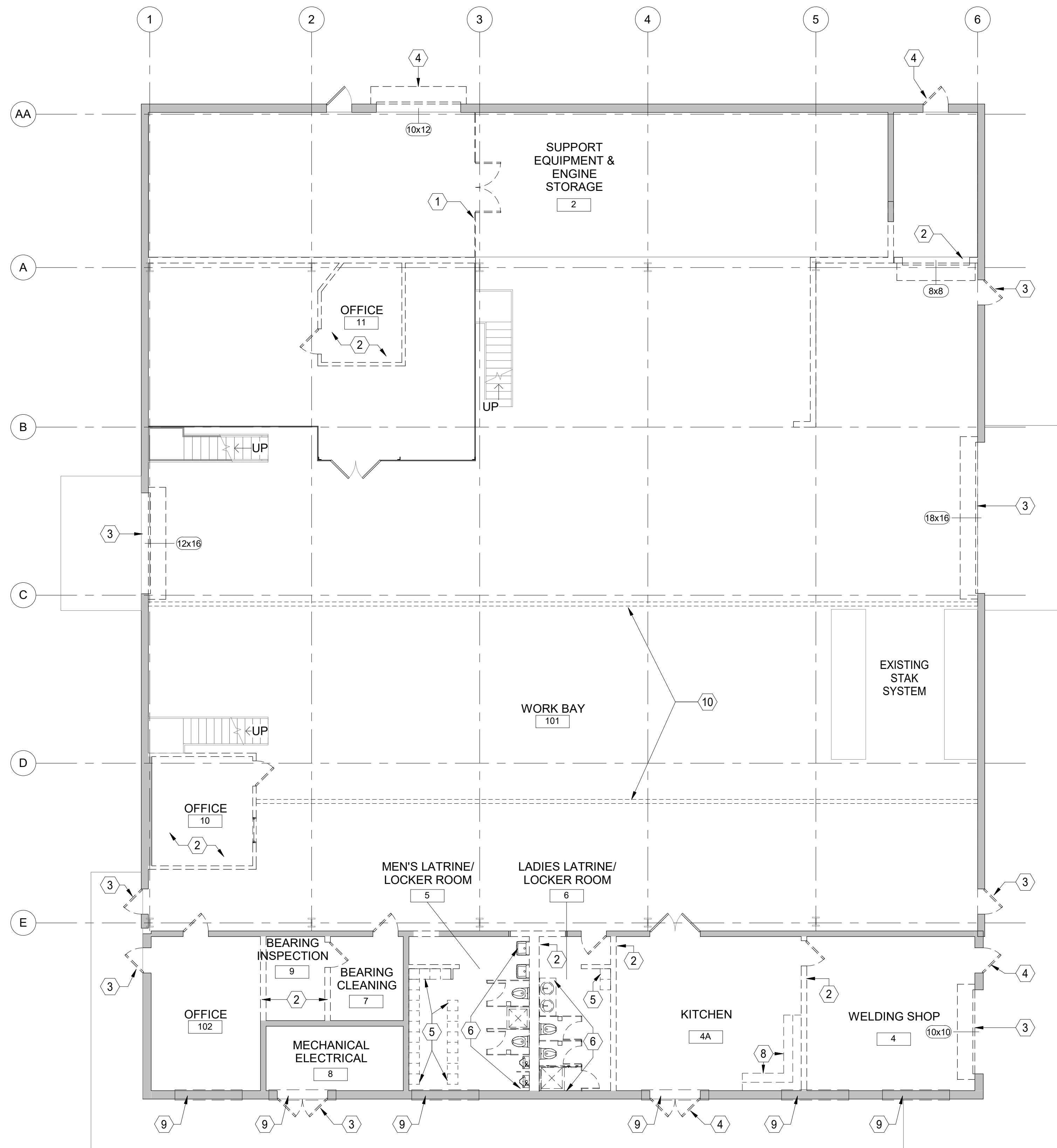
US ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT
19 SAINT JOSEPH STREET
BLAIRREMY ARCHITECTS
C. SEGHI

FORT SMITH, ARKANSAS
EBBING ANG RENOVATION OF 5 FACILITIES
A-2020-S
CONCEPT PLAN
BUILDING 202

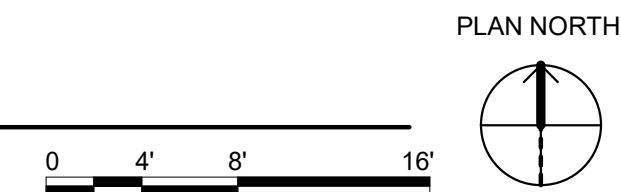
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A1 CONCEPT PLAN
3/32" = 1'-0"
0 4' 8' 16' 24'
PLAN NORTH

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A1 GROUND FLOOR DEMOLITION FLOOR PLAN
1/8" = 1'-0"



DEMOLITION NOTES

- DRAWINGS OF EXISTING CONDITIONS HAVE BEEN COMPILED FROM EXISTING DATA SUPPLIED TO THE A/E. THE ARCHITECT A/E MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, FOR THE ACCURACY OR COMPLETENESS OF THE EXISTING INFORMATION RECORDED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE C.O. IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS THAT MIGHT ARISE IN THE COURSE OF DEMOLITION WORK.
- VERIFY LOCATIONS OF EXISTING MECHANICAL, PLUMBING AND ELECTRICAL UTILITIES. LOCATE AND PROTECT UTILITIES TO REMAIN. DISCONNECT, REMOVE BACK TO THE NEAREST JUNCTION BOX OR PANEL AS REQUIRED AND CAP DESIGNED UTILITIES WITHIN THE DEMOLITION AREA. REFER TO THE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFO.
- THE DEMOLITIONS ARE DIAGRAMMATIC AND GENERAL IN NATURE. THE INTENT IS TO ILLUSTRATE DEMOLITION REQUIRED IN THE SPACES UNLESS NOTED OTHERWISE. FIELD VERIFICATION OF EXISTING CONDITIONS AND DETERMINATION OF SPECIFIC QUANTITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- REMOVAL AND DISPOSAL OF DEMOLITION DEBRIS IS THE RESPONSIBILITY OF THE CONTRACTOR. VERIFY THE HAULING ROUTE THROUGH THE BUILDING, DEMOLITION STAGING AREA AND THE LOCATION OF THE DUMPSTER WITH THE C.O. PRIOR TO THE START OF THE DEMOLITION. DISPOSAL OF RUBBISH SHALL BE DONE IN A LEGAL MANNER.

DEMOLITION LEGEND

- EXISTING ELEMENTS
- ELEMENTS TO BE DEMOLISHED
- EXISTING DOORS
- EXISTING DOORS TO BE DEMOLISHED
- OPEN TO BELOW

KEYNOTES

- DEMO EXISTING CHAINLINK WALL AND GATE
- REMOVE EXISTING PARTITION WALL AND DOOR
- REMOVE AND REPLACE EXISTING EXTERIOR DOORS
- REMOVE EXISTING EXTERIOR DOOR AND SEAL / INFILL OPENING
- REMOVE EXISTING LOCKERS
- REMOVE EXISTING PLUMBING FIXTURES AND TOILET PARTITIONS
- REMOVE AND REPLACE EXISTING CABINETS AND PLUMBING FIXTURES
- REMOVE EXISTING CABINETRY
- REMOVE EXISTING TRANSOM WINDOW AND SEAL / INFILL OPENING
- EXISTING BRIDGE CRANE RUNWAY BEAMS ABOVE



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MARK	DESCRIPTION	DATE

DESIGNED BY: A RIVARD	ISSUE DATE: JUNE 2024
DRAWN BY: S. SAHAYAN	SOLICITATION NO.:
CHECKED BY: A RIVARD	CONTRACT NO.:
SUBMITTED BY: C. LANGUM	
SIZE: ANSI D	

MERRICK
BLAIRPREMY ARCHITECTS

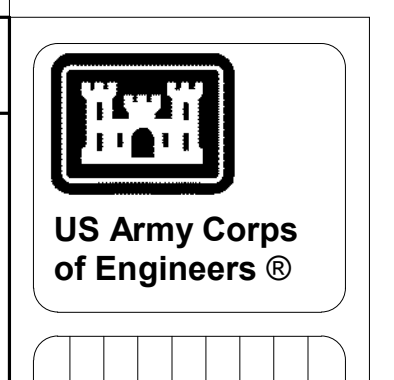
FORTH SMITH, ARKANSAS
EBBING ANGE RENO
100691-00
**DEMOLITION PLAN - GROUND FLOOR
BUILDING 214**

SHEET ID
AD101



GENERAL NOTES

1. ALL FURNITURE SHOWN IS CONCEPTUAL IN NATURE AND WILL NOT BE SPECIFIED AS PART OF THIS PROJECT.



LEGEND

- WIRE MESH SECURITY FENCE
- EXISTING WALLS
- NEW WALLS
- EXISTING DOORS
- NEW DOORS
- OPEN TO BELOW
- OPEN SPACE AREAS

MARK	DESCRIPTION	DATE

DESIGNED BY: T. JOHNSON	ISSUE DATE: JUNE 2024
DRAWN BY: T. JOHNSON	SOLICITATION NO.:
CHECKED BY: A. RIVARD	CONTRACT NO.:
SUBMITTED BY: C. SEGHI	
SIZE: ANSI D	

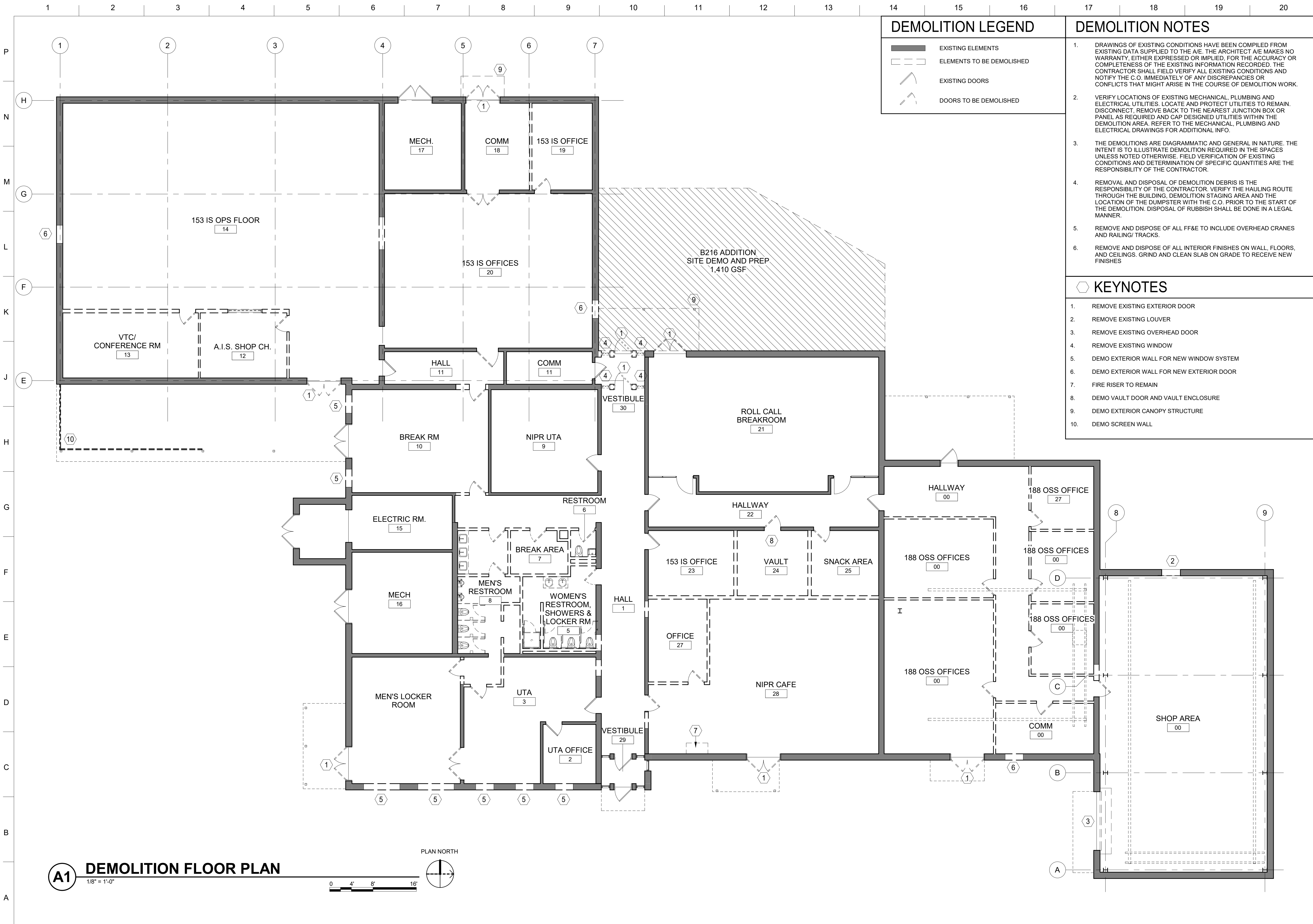
US ARMY CORPS OF ENGINEERS

BLAIRPREMY

FORTH SMITH, ARKANSAS
EBBING ANGE RENO
100691-00
FURNITURE PLAN
BUILDING 214

SHEET ID
IF101

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DEMOLITION LEGEND

	EXISTING ELEMENTS
	ELEMENTS TO BE DEMOLISHED
	EXISTING DOORS
	DOORS TO BE DEMOLISHED

- ### DEMOLITION NOTES
- DRAWINGS OF EXISTING CONDITIONS HAVE BEEN COMPILED FROM EXISTING DATA SUPPLIED TO THE A/E. THE ARCHITECT A/E MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, FOR THE ACCURACY OR COMPLETENESS OF THE EXISTING INFORMATION RECORDED. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE C.O. IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS THAT MIGHT ARISE IN THE COURSE OF DEMOLITION WORK.
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 - REMOVE AND DISPOSE OF ALL FF&E TO INCLUDE OVERHEAD CRANES AND RAILING/ TRACKS.
 - REMOVE AND DISPOSE OF ALL INTERIOR FINISHES ON WALL, FLOORS, AND CEILINGS. GRIND AND CLEAN SLAB ON GRADE TO RECEIVE NEW FINISHES

- ### KEYNOTES
- REMOVE EXISTING EXTERIOR DOOR
 - REMOVE EXISTING LOUVER
 - REMOVE EXISTING OVERHEAD DOOR
 - REMOVE EXISTING WINDOW
 - DEMO EXTERIOR WALL FOR NEW WINDOW SYSTEM
 - DEMO EXTERIOR WALL FOR NEW EXTERIOR DOOR
 - FIRE RISER TO REMAIN
 - DEMO VAULT DOOR AND VAULT ENCLOSURE
 - REMOVE EXTERIOR CANOPY STRUCTURE
 - DEMO SCREEN WALL



MARK	DESCRIPTION	DATE

ISSUE DATE: JUNE 2024	SOLICITATION NO.:	CONTRACT NO.:
DESIGNED BY: D. CAMBEUL	DRAWN BY: V. SOTILO	CHECKED BY: A. RIVARD
SUBMITTED BY: C. SEGHI		SIZE: ANSI D

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BLAIRPREMY

FORT SMITH, ARKANSAS
EBBING ANGE RENO
100691-00
DEMO FLOOR PLAN
BUILDING 216

SHEET ID
AD101

A1 DEMOLITION FLOOR PLAN
1/8" = 1'-0"
0 4' 8' 16'
PLAN NORTH

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PROGRAMMING LEGEND

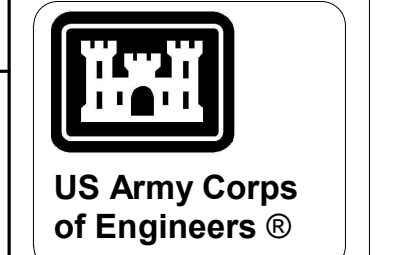
- ADMIN SPACE
- DEBRIEF/MTG
- STORAGE
- SUPPORT SPACE

SECURITY LEGEND

- UFC 4-010-05 SAPF / F-35 FRD
 - U.S. SECRET CLEARANCE ACCESS
DoDM 5200.01 VOL 3
- SA 000 ARE SECURE AREAS CROSS REFERENCED WITHIN THE ROOM DATA SHEETS.

KEYNOTES

1. NEW EXTERIOR WALL INFILL (MATCH EXISTING)
2. NEW EXTERIOR DOOR, SECURE DOORS ARE STC 55 MIN
3. NEW WINDOW
4. EXISTING CANOPY TO REMAIN



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MARK	DESCRIPTION	DATE

DESIGNED BY: D. CAMBEUL	ISSUE DATE: JUNE 2024
DRAWN BY: V. SOTILO	SOLICITATION NO.:
CHECKED BY: A. RIVARD	CONTRACT NO.:
SUBMITTED BY: C. SEGHI	
SIZE: ANSI D	

US ARMY CORPS OF ENGINEERS

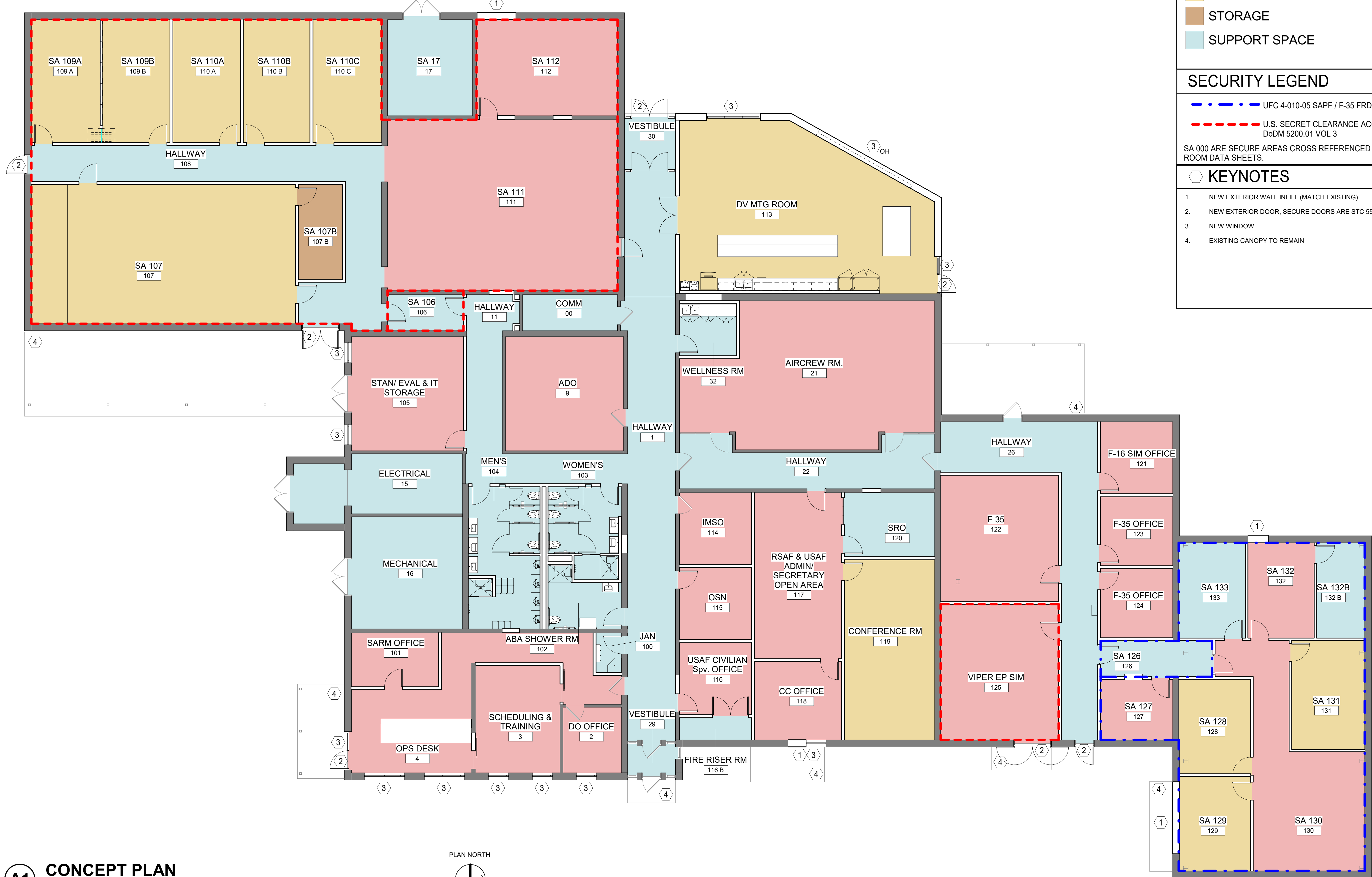
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ARCHITECTS

MERRICK
ENGINEERS

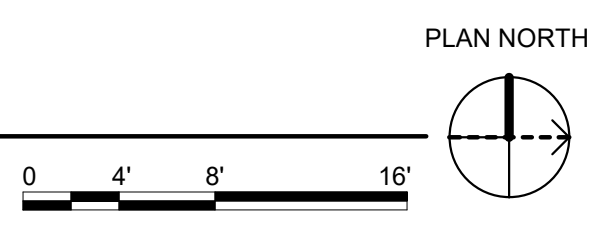
FORT SMITH, ARKANSAS
EBBING ANGE RENO
100691-00

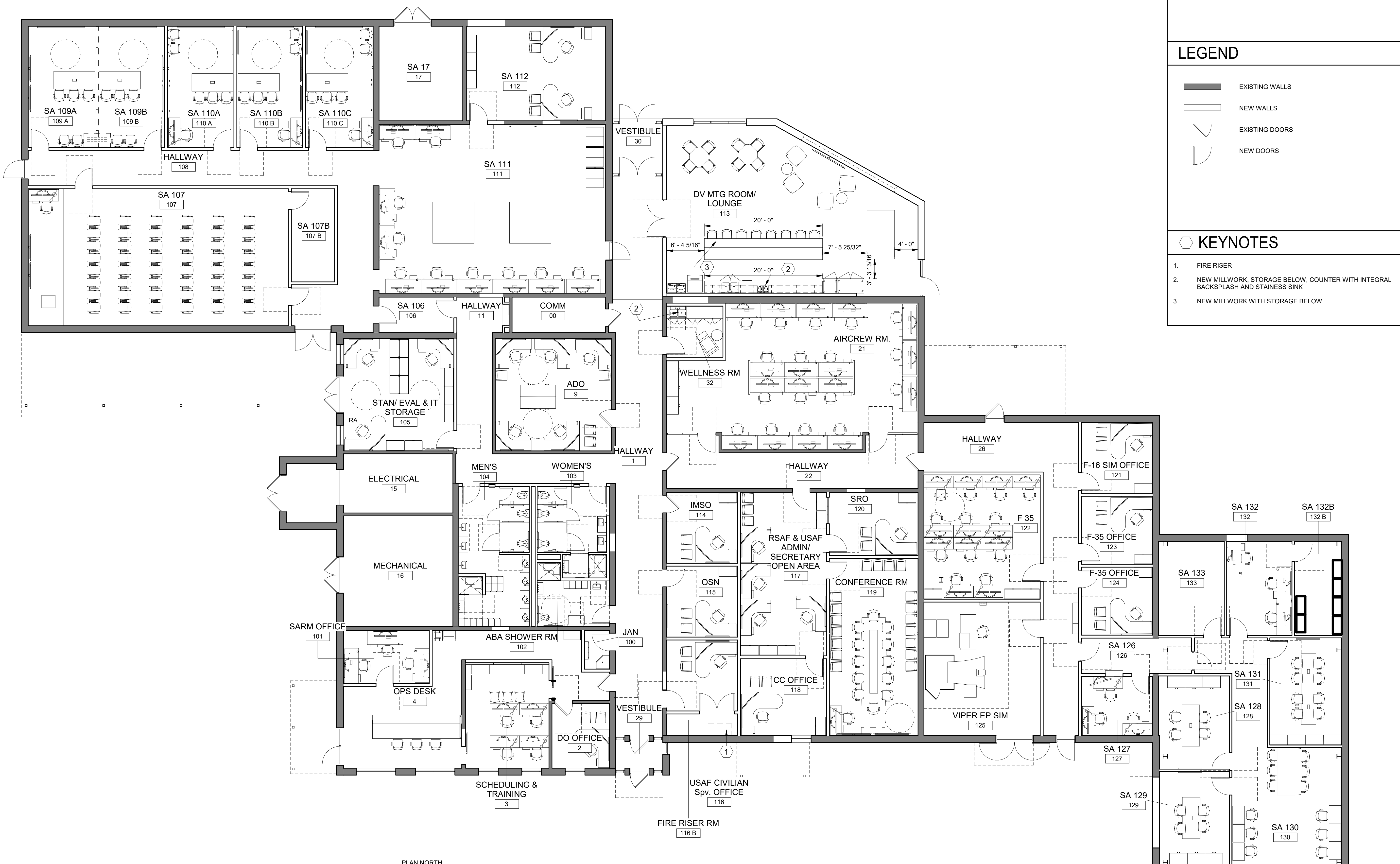
ARCHITECTURAL CONCEPT PLAN
BUILDING 216

SHEET ID
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A1 CONCEPT PLAN
1/8" = 1'-0"





GENERAL NOTES

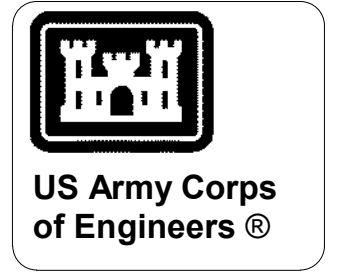
1. ALL FURNITURE SHOWN IS CONCEPTUAL IN NATURE AND WILL NOT BE SPECIFIED AS PART OF THIS PROJECT.

LEGEND

- EXISTING WALLS
- NEW WALLS
- EXISTING DOORS
- NEW DOORS

KEYNOTES

1. FIRE RISER
2. NEW MILLWORK, STORAGE BELOW, COUNTER WITH INTEGRAL BACKSPASH AND STAINLESS SINK
3. NEW MILLWORK WITH STORAGE BELOW



MARK	DESCRIPTION	DATE

DESIGNED BY: T. JOHNSON	ISSUE DATE: JUNE 2024
DRAWN BY: T. JOHNSON	SOLICITATION NO.:
CHECKED BY: A. RIVARD	CONTRACT NO.:
SUBMITTED BY: C. SEGHI	
SIZE: ANSI D	

US ARMY CORPS OF ENGINEERS

MERRICK

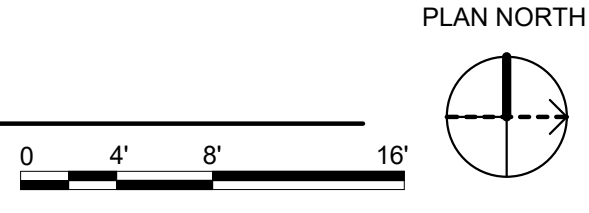
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EBBING ANGE RENO
100691-00

FURNITURE PLANS
BUILDING 216

SHEET ID
IF101

A1 FURNITURE PLAN
1/8" = 1'-0"



KEYNOTES

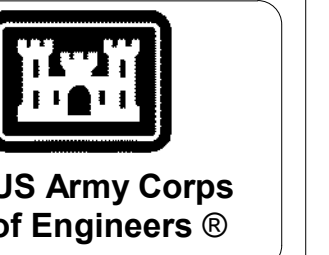
- EXISTING DOORS TO BE SEALED
- ROLL-UP WINDOW TO BE REMOVED
- EXISTING DOOR LATCH SIDE TO BE REVERSED

DEMOLITION LEGEND

	EXISTING ELEMENTS
	ELEMENTS TO BE DEMOLISHED
	EXISTING DOORS
	DOORS TO BE DEMOLISHED
	REMOVE FRAMING AT INTERIOR METAL ROOF OVER CORRIDOR

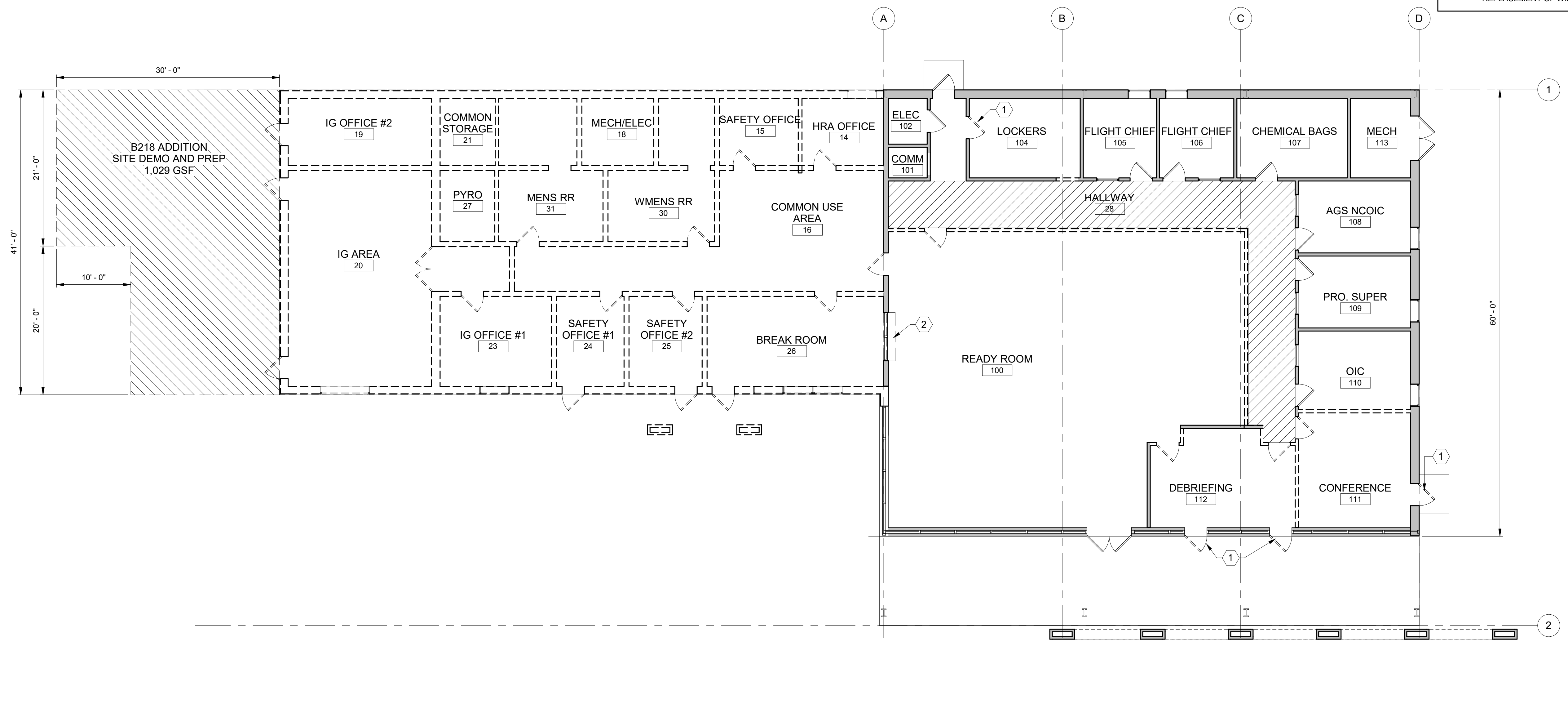
DEMOLITION NOTES

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- EXISTING LOWER PORTION OF FACILITY WEST OF GRIDLINE A SHALL HAVE EXTERIOR WALL AND ROOF SYSTEM BE REMOVED AND REPLACED. EXISTING WINDOWS SHALL EVALUATED UPON REMOVAL TO DETERMINE RE-USE OR REPLACEMENT OF WINDOWS FOR NEW EXTERIOR WALL.



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MARK	DESCRIPTION	DATE



B3 DEMOLITION FLOOR PLAN
 1/8" = 1'-0"
 PLAN NORTH
 0 4' 8' 16'

DESIGNED BY: A. RIVARD	ISSUE DATE: JUNE 2024
DRAWN BY: H. TONG	SOLICITATION NO.:
CHECKED BY: A. RIVARD	CONTRACT NO.:
SUBMITTED BY: C. SEGHI	
SIZE: ANSI D	

US ARMY CORPS OF ENGINEERS
MERRICK
 BLAIRPREMY

FT. SMITH, ARKANSAS
 EBBING ANGE RENO
 100691-00
 DEMOLITION FLOOR PLAN

SHEET ID
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PROGRAMMING LEGEND

- ADMIN SPACE
- DEBRIEF/ MEETING
- SUPPORT SPACE

KEYNOTES

- TRANSACTION WINDOW / COUNTER
- HARDENED ROOM BE ENCLOSED IN A MASONRY WALL AND REQUIRE A HARD LID CEILING; RE: ROOM DATA SHEETS



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MARK

DESCRIPTION

DATE

MARK

DESCRIPTION

DATE

ISSUE DATE:

SOLICITATION NO.:

CONTRACT NO.:

DESIGNED BY:

DRAWN BY:

CHECKED BY:

SUBMITTED BY:

SIZE:

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US ARMY CORPS OF ENGINEERS

BLAIR REMY

ARCHITECTURAL CONCEPT PLAN

FT. SMITH, ARKANSAS

EBBING ANGE RENO

1008691-00

ARCHITECTURAL CONCEPT PLAN

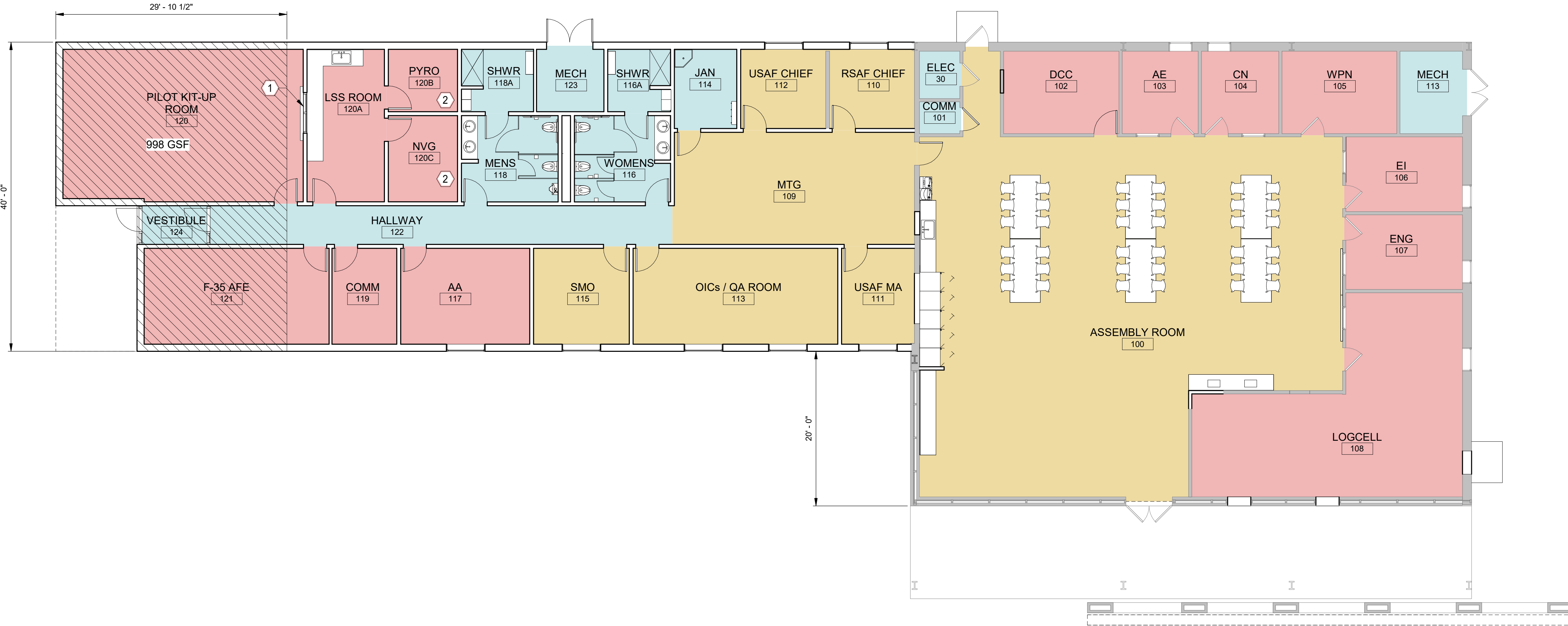
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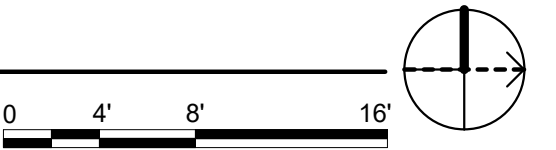
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C2 CONCEPT PLAN

1/8" = 1'-0"

PLAN NORTH



Attachment C – Room Data Sheets

ROOM DATA SHEETS

Table of Contents

Room Data Sheets Overview	2
Building 201	3
Building (Hangar) 202	14
Building 214	43
Building 216	58
Building 218	105

Room Data Sheets Overview

This attachment is included to aid in understanding the requirements of the rooms and areas to be renovated or constructed within Buildings 201, 202, 214, 216, and 218. Room descriptions and functional requirements are summarized in the following Room Data Sheets. Refer to Attachment B - Concept Design Drawings for layout configurations.

Structural, Mechanical, Electrical, Plumbing, Fire Protection, Communications, and other engineering specialties are not fully defined in the Room Data Sheets. Refer to specific sections of the RFP Specification 01 10 10 Design Requirements and its attachments, including the concept drawings, for additional requirements and criteria that further define the spaces indicated in these Room Data Sheets.

Information listed in the Furniture, Fixtures & Equipment Notes section of this document is for reference and space planning purposes only, and not a part of the design-build contract.

Information provided below is intended to supplement the U.S Army Corps of Engineers design criteria requirements. The criteria are available on the internet at:

<https://www.publications.usace.army.mil/USACE-Publications/Engineer-Manuals/>

Building 201

Building 201 operates as a supply warehouse and includes storage rooms, space for a high-density storage unit, restrooms, and utility rooms. All existing windows will be infilled and all doors with glazing will be replaced with solid. Existing overhead doors are glazed and they will all be replaced with new solid overhead doors.

Room Name:	Corridor
Use/Description:	Circulation
Functional Requirements:	Provide double doors to adjacent storage rooms for pallet jack traffic Walls: CMU/Brick – painted Floors: Sealed Concrete Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection UFC 3-600-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS at door to flightline.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Fast Moving Bulk Spares
Use/Description:	Unconcentrated storage for quick turnover items
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Sealed Concrete Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01. Provide additional dehumidification in conditioned storage spaces.
Electrical and Other Special Requirements:	N/A
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection UFC 3-600-01.
Communications and Cybersecurity Requirements:	Provide BMS at new overhead doors.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	Replace existing glazed overhead doors to flightline with new solid overhead doors.

Room Name:	Compact Storage Systems
Use/Description:	High-density storage
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Sealed Concrete Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01. Provide additional dehumidification in conditioned storage spaces. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection in accordance with UFC 3-600-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18” below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide connection for wall mounted telephone.
Furniture, Fixtures & Equipment Notes:	Provide space for a customer provided, manually operated, high density storage unit with surface-mounted rails.
Other Requirements / Notes:	N/A

Room Name:	Racked Storage
Use/Description:	Storage room with rack units
Functional Requirements:	Provide abuse resistant gypsum wallboard partition extending south from existing Electrical Room. Walls: CMU and Gypsum Board – Painted, Eggshell Finish Floors: Sealed Concrete Base: N/A at CMU, Rubber Base at Gypsum Board Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01. Provide additional dehumidification in conditioned storage spaces. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	N/A
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection in accordance with UFC 3-600-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18" below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide IDS/ACS for new double doors at covered entry.
Furniture, Fixtures & Equipment Notes:	(17) 8'0" x 4'0" heavy duty storage racks. (3) 4'0" x 2'0" heavy duty storage racks. Provide minimum 5'0" wide aisles.
Other Requirements / Notes:	Provide 4'0"H stainless steel corner guards at all exposed outside gypsum board corners. Replace existing storefront door with new solid double doors at covered entry.

Room Name:	Electrical (Existing to Remain)
Use/Description:	Utility Space
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01.
Electrical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection in accordance with UFC 3-600-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Bulk Spares
Use/Description:	Staging area for items on pallets
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Sealed Concrete Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01. Provide additional dehumidification in conditioned storage spaces. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	N/A
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection in accordance with UFC 3-600-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18” below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1
Communications and Cybersecurity Requirements:	Provide BMS at new overhead doors.
Furniture, Fixtures & Equipment Notes:	(40) pallets Provide minimum 5’0” wide aisles
Other Requirements / Notes:	N/A

Room Name:	Spares/Transit
Use/Description:	Storage room with rack units
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Sealed Concrete Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01. Provide additional dehumidification in conditioned storage spaces. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	N/A
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection in accordance with UFC 3-600-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18” below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1. Fire Riser at south alcove.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	(15) 5’9” x 2’6” Heavy Duty Storage Racks. Provide minimum 5’0” wide aisles.
Other Requirements / Notes:	N/A

Room Name:	Mechanical (Existing to Remain)
Use/Description:	Utility Space
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	N/A
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection in accordance with UFC 3-600-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18" below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Comm
Use/Description:	Utility Space
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Static Dissipative Vinyl Tile Base: Rubber Base Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3- 410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection in accordance with UFC 3-600-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Restroom
Use/Description:	Single occupant restroom with space for custodial equipment
Functional Requirements:	Existing partitions to remain Walls: CMU – Painted, Eggshell Finish Floors: Sealed Concrete Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01. Replace existing watercloset with new. Replace existing kneeguard and lavatory with new wall mounted lavatory. Remove existing shower and provide new service sink.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection in accordance with UFC 3-600-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	(1) Mop and Broom Holder with Shelf
Other Requirements / Notes:	Provide plumbing accessories in accordance with Installation standards.

Room Name:	Semi-Bulk Racked Storage
Use/Description:	Unconcentrated storage space
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Sealed Concrete Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating and air conditioning systems in accordance with UFC 3-410-01. Provide additional dehumidification in conditioned storage spaces. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection UFC 3-600-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18" below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Building (Hangar) 202

Building 202 operates as a hangar and supporting operations, and includes admin, tool supply, heavy and light maintenance spaces, material storage, vault storage, personnel support spaces, and utility rooms.

Room Name:	Vestibule (Existing to Remain)
Use/Description:	Vestibule at main personnel entrance
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	Provide heating, ventilation and air conditioning systems in accordance with UFC 3-410-01.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS at entry doors.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Corridor
Use/Description:	Circulation
Functional Requirements:	Provide abuse resistant gypsum board at all new partitions. Walls: Gypsum Board – Painted, Eggshell Finish Floors: 5-Coat Fuel Resistive Epoxy Base: Integral Epoxy Base Ceiling: ACT
Mechanical and Other Special Requirements:	Provide heating, ventilation and air conditioning systems in accordance with UFC 3-410-01.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Existing ABA high/low drinking fountain to remain.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	Provide 4'0"H stainless steel corner guards at all exposed outside gypsum board corners. Provide 4'0"H stainless steel wainscot above base.

Room Name:	Hangar Bay 3
Use/Description:	Wash Bay
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: 5-Coat Fuel Resistive Epoxy Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	(1) Emergency shower/eyewash (2) Existing emergency shower/eyewash to remain (1) Existing washfountain to remain
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	Provide 5-ton bridge crane with 22'0" min. hook height. Provide new fall protection system. Provide new egress door aligned with existing door to vestibule. Provide floor striping in accordance with UFC 4-211-01.

Room Name:	Tyre (Existing to Remain)
Use/Description:	Part storage
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Existing wall mounted lavatory to remain. Existing emergency shower/eyewash to remain.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Supply Trade Office
Use/Description:	Administrative support for Supply Trade
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Vinyl Sheet Flooring Base: Rubber Base Ceiling: ACT
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	Systems furniture with (4) workstations (4) Ergonomic Task Chairs (3) Storage cabinets Space for (1) customer supplied printer Space for (2) customer supplied barcode printers
Other Requirements / Notes:	Provide new solid core wood door with half lite and kick plate to corridor.

Room Name:	Paint Booth (Existing to Remain)
Use/Description:	Paint booth equipment operations
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: 3-Part Fuel Resistive Epoxy Base: N/A Ceiling: Exposed to Structure – Painted
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	N/A
Plumbing and Other Special Requirements:	(1) Emergency shower/eyewash
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01 and NFPA 33. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	Provide space for customer supplied paint booth equipment.
Other Requirements / Notes:	Provide floor striping in accordance with UFC 4-211-01.

Room Name:	Supply Trade
Use/Description:	Tool and part issue
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Seamless Resinous Flooring Base: N/A Ceiling: Exposed to Structure – Painted
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	N/A
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	(3) 8'0" x 2'6" Heavy Duty Storage Racks (3) 4'0" x 2'6" Heavy Duty Storage Racks (1) Packing Table Space for (1) customer supplied weighing scale
Other Requirements / Notes:	Replace existing overhead door to Hangar Bay 3 with double doors surrounded by CMU block wall construction to match adjacent wall construction.

Room Name:	Fire Pump (Existing to Remain)
Use/Description:	Utility Space
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01, UFC 4-211-01 and UFC 4-211-02. Provide Mass Notification in accordance with UFC 4-021-01. Remove foam suppression system equipment
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Storage
Use/Description:	Storage room
Functional Requirements:	Provide abuse resistant gypsum board at all new partitions Walls: CMU and Gypsum Board – Painted, Eggshell Finish Floors: Sealed Concrete Base: N/A at CMU, Rubber Base at Gypsum Board Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01, UFC 4-211-01 and UFC 4-211-02. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	(3) 4'0" x 2'0" Heavy duty storage racks
Other Requirements / Notes:	Provide new insulated metal double doors to corridor

Room Name:	Mechanical Room (Existing to Remain)
Use/Description:	Utility Space
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	N/A
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Telecommunications Room (Existing to Remain)
Use/Description:	Utility Space
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Electrical Room (Existing to Remain)
Use/Description:	Utility Space
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Hangar Bay 2
Use/Description:	General Maintenance Bay
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: 5-Coat Fuel Resistive Epoxy Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	(1) Emergency shower/eyewash (2) Existing emergency shower/eyewashes to remain.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	Provide new 5-ton Bridge Crane with 22'0" min. hook height. Provide new fall protection system. Provide new dual swing double door to Hangar Bay 1. Align north leaf with existing door to Vestibule. Provide floor striping in accordance with UFC 4-211-01.

Room Name:	POD
Use/Description:	Tool and part storage
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: 3-Coat Fuel Resistive Epoxy Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Support Storage
Use/Description:	Large tool and part issue
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Seamless Resinous Flooring Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	(2) POL Cabinets
Other Requirements / Notes:	N/A

Room Name:	Storage Room
Use/Description:	Part storage
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: 3-Coat Fuel Resistive Epoxy Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	Replace existing door with new double doors aligned with existing extents of north jamb.

Room Name:	Restroom – Women’s (Existing to Remain)
Use/Description:	Personnel support space
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Restroom – Men’s (Existing to Remain)
Use/Description:	Personnel support space
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Hangar Bay 1
Use/Description:	Fuel Cell Maintenance Bay
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: 5-Coat Fuel Resistive Epoxy Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	(2) Emergency shower/eyewashes Existing emergency shower/eyewash to remain Existing ABA drinking fountain to remain
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	Provide space and infrastructure for hazardous material storage cabinets.
Other Requirements / Notes:	Provide new fall protection system. Provide new egress door aligned with north leaf of door to Hangar Bay 2. Provide floor striping in accordance with UFC 4-211-0.

Room Name:	US Vault
Use/Description:	Classified Information Vault
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Vinyl Sheet Flooring Base: Rubber Base Ceiling: Exposed to Structure – Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating, ventilation and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	(2) 5'0" x 2'0" Heavy Duty Storage Racks (1) Safe (2) Receiver-Exciter Processors (2) AESA Antennas
Other Requirements / Notes:	Replace existing overhead door with CMU block. Infill with new GSA Secure Vault door with electromagnetic lock.

Room Name:	RSAF Vault
Use/Description:	Classified Information Vault
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Vinyl Sheet Flooring Base: Rubber Base Ceiling: Exposed to Structure – Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating, ventilation and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	(6) 4'0" x 2'0" Heavy Duty Storage Racks (1) 3'0" x 1'3" Heavy Duty Storage Rack (1) Safe
Other Requirements / Notes:	Replace existing overhead door with CMU block. Infill with new GSA Secure Vault door with electromagnetic lock.

Room Name:	Tank Bay
Use/Description:	Heavy Maintenance Shop
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: 3-Coat Fuel Resistive Epoxy Base: N/A Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	(1) Emergency shower/eyewash
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	Existing hoist and rail to remain. Provide floor striping in accordance with UFC 4-211-01.

Room Name:	Tank Bay Office
Use/Description:	Administrative support for Hangar Bay 1
Functional Requirements:	Walls: CMU – Painted, Eggshell Finish Floors: Vinyl Sheet Flooring Base: Rubber Base Ceiling: ACT
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. IDS/ACS.
Furniture, Fixtures & Equipment Notes:	(3) Height-Adjustable Workstations (3) Ergonomic Task Chairs
Other Requirements / Notes:	N/A

Room Name:	Vestibule (Existing to Remain)
Use/Description:	Circulation at secondary personnel entrance
Functional Requirements:	N/A
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	N/A
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Janitor/Storage
Use/Description:	Utility and storage space
Functional Requirements:	Walls: CMU and Gypsum Board – Painted, Eggshell Finish Floors: Sealed Concrete Base: N/A at CMU, Rubber Base at Gypsum Board Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	N/A
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01. Existing service sink and faucet to remain.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(8) 4'0" x 2'0" Heavy Duty Storage Racks (1) Mop and Broom Holder with Shelf
Other Requirements / Notes:	Provide new Fiberglass Reinforced Plastic (FRP) wall panels at service sink. Replace existing half lite door with new solid core wood door with kick plate.

Room Name:	Phase
Use/Description:	Administration
Functional Requirements:	Walls: Gypsum Board - Painted, Flat Finish, Eggshell Finish Floors: Vinyl Sheet Flooring Base: Rubber Base Ceiling: ACT
Mechanical and Other Special Requirements:	Provide heating, ventilation and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(1) L-Shaped Workstations (7) Ergonomic Task Chairs (2) File Cabinets (2) Lateral File Cabinets, 5-Drawer, Flip-Up Shelf (1) Conference Table to Seat 5 (1) 7'0" x 4'0" Glass Whiteboard
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name:	QA/WSS
Use/Description:	Administration
Functional Requirements:	Walls: Gypsum Board - Painted, Flat Finish, Eggshell Finish Floors: Vinyl Sheet Flooring Base: Rubber Base Ceiling: ACT
Mechanical and Other Special Requirements:	Provide heating, ventilation and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(6) Height-Adjustable Workstations (6) Ergonomic Task Chairs (1) 3'0" x 2'0" Storage Cabinet
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name:	Support
Use/Description:	Tool and parts issue with service counter
Functional Requirements:	Walls: Gypsum Board - Painted, Flat Finish, Eggshell Finish Floors: Seamless Resinous Flooring Base: Integral Epoxy Base Ceiling: Exposed to Structure - Painted, Flat Finish
Mechanical and Other Special Requirements:	Provide heating, ventilation and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(13) 8'0" x 2'6" Heavy duty storage racks (2) Work benches (1) POL Refrigerator (1) POL Cabinet (1) iPad Storage Cabinet (2) 3'0" x 2'6" Storage Cabinets (1) 27'0" x 2'6" Service Counter and Cabinets (4) Height-Adjustable Workstations (8) Ergonomic Task Chairs (1) Reservoir Eyewash Station Space for (1) Printer/Copier Provide minimum 5'0"W aisles
Other Requirements / Notes:	Provide 4'0"H stainless steel corner guards at all exposed outside gypsum board corners. Provide roller shades at windows with minimum 3% openness. Provide new hollow metal double doors to Corridor along east wall. Provide (3) new overhead doors to Corridor; align center door with existing doors to Hangar Bay 2. Provide chain divider at Service Counter.

Room Name:	Supervisor's Office
Use/Description:	Administrative supervision for Support
Functional Requirements:	Walls: Gypsum Board - Painted, Flat Finish, Eggshell Finish Floors: Vinyl Sheet Flooring Base: Rubber Base Ceiling: ACT
Mechanical and Other Special Requirements:	Provide heating, ventilation and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(1) U-Shaped Workstation (1) Ergonomic Task Chair (2) Guest Chairs with Arms
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Building 214

Building 214 operates as a jet engine intermediate maintenance (JEIM) facility, and includes: Work Bay, Modules Area, Tool Storage, Parachute Room, COMM Room, Storage-1, Storage-2, Compressor / Fire Riser, Men's and Women's Restrooms, Storage & FOM, AME, 425 FS Trade Learning Room, JEIM – Emms Room, JEIM – Engine Office.

Room Name:	Work Bay
Use/Description:	Large open Work Bay to support the maintenance of jet engines.
Functional Requirements:	Ceiling: New vinyl faced insulation Walls: New vinyl faced insulation. Repurpose existing lower metal panel wall for insulation protection. Base: New 4" high rubber base Floor: New five-coat epoxy flooring
Mechanical and Other Special Requirements:	Provide heating and ventilation systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01. Provide compressed air distribution system in accordance with UFC 3-420-02.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm-in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18" below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. IDS/ACS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	Existing double girder bridge cranes (5 tons) and single girder bridge cranes (capacity unverified) are to be recertified for facility use.

Room Name:	Modules Area (Existing to Remain)
Use/Description:	Open storage for engine control modules. Open to Work Bay.
Functional Requirements:	Ceiling: N/A Walls: Paint in eggshell finish Base: New 4" high rubber base with toe Floor: New five-coat epoxy flooring
Mechanical and Other Special Requirements:	Provide heating and ventilation systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide compressed air distribution system in accordance with UFC 3-420-02.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm-in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18" below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide new IDS/ACS.
Furniture, Fixtures & Equipment Notes:	Coordinate storage rack configuration with User equipment requirements.
Other Requirements / Notes:	N/A

Room Name:	Tool Storage (Existing to Remain)
Use/Description:	Existing tool storage to remain as functional tool storage.
Functional Requirements:	Ceiling: N/A Walls: Paint in eggshell finish Base: New 4" high rubber base with toe Floor: New five-coat epoxy flooring
Mechanical and Other Special Requirements:	Provide heating and ventilation systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide compressed air distribution system in accordance with UFC 3-420-02.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm-in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18" below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide new IDS/ACS.
Furniture, Fixtures & Equipment Notes:	Existing high-density storage systems to remain. Coordinate storage rack configuration with User equipment requirements.
Other Requirements / Notes:	Existing wire mesh to remain and be repurposed for new configuration.

Room Name:	Parachute Room
Use/Description:	Parachute Room
Functional Requirements:	Ceiling: Paint in flat finish, gypsum board. Walls: Paint in eggshell finish Base: New 4" high rubber base with toe Floor: New five-coat epoxy flooring
Mechanical and Other Special Requirements:	Provide heating, ventilation and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01. All electrical items and lighting must have hazardous area classification.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	Parachute table (customer supplied), (1) small freestanding and height adjustable workstation, (1) Ergonomic Task Chair, (5) lateral file cabinets, (4 drawer and flip top shelf)
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name:	Comm Room (Existing to Remain)
Use/Description:	Communications Equipment Room.
Functional Requirements:	Ceiling: Paint in flat finish, gypsum board. Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Static Dissipative floor tiles.
Mechanical and Other Special Requirements:	Provide air conditioning systems in accordance with UFC 3-410- 01. Provide dedicated split system. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide new ACS.
Furniture, Fixtures & Equipment Notes:	Provide communications racks, switches, and other comm equipment as needed
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name:	Storage 1 (Existing to Remain)
Use/Description:	Storage room for equipment parts
Functional Requirements:	Ceiling: Paint in flat finish, gypsum board. Walls: Paint in eggshell finish Base: New 4" high rubber base with toe Floor: New five-coat epoxy flooring
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm-in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18" below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	Coordinate storage rack configuration with User equipment requirements.
Other Requirements / Notes:	N/A

Room Name:	Storage 2 (Existing to Remain)
Use/Description:	Storage room for equipment parts
Functional Requirements:	Ceiling: Paint in flat finish, gypsum board. Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT tiles or planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Confirm need for additional dehumidification. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm-in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18" below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide new IDS/ACS.
Furniture, Fixtures & Equipment Notes:	Coordinate storage rack configuration with User equipment requirements.
Other Requirements / Notes:	N/A

Room Name:	Compressor / Fire Riser Room
Use/Description:	Compressor / Fire Riser
Functional Requirements:	Ceiling: Paint in flat finish, open. Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Sealed concrete floor to remain. Terminate epoxy at door
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01. Provide compressed air system and air distribution system in accordance with UFC 3-420-02.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Restrooms – Men’s and Women’s
Use/Description:	ABA Restroom for building occupants.
Functional Requirements:	Ceiling: Paint in flat finish, open. Walls: Paint in eggshell finish, porcelain tiles Base: Metal cove base Floor: Porcelain tile
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Storage and FOM
Use/Description:	Storage room for equipment parts
Functional Requirements:	Ceiling: Paint in flat finish, gypsum board. Walls: Paint in eggshell finish Base: New 4" high rubber base with toe Floor: New five-coat epoxy flooring
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Confirm need for additional dehumidification.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm-in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18" below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	Coordinate storage rack configuration with User equipment requirements.
Other Requirements / Notes:	N/A

Room Name:	AME
Use/Description:	Storage room for equipment parts and Aircraft maintenance engineer
Functional Requirements:	Ceiling: Paint in flat finish, gypsum board. Walls: Paint in eggshell finish Base: New 4" high rubber base with toe Floor: New five-coat epoxy flooring
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Confirm need for additional dehumidification.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm-in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01. Sprinkler protection is required to be based on the maximum potential height of storage (up to 18" below the ceiling or roof deck) in accordance with UFC 3-600-01 Section 4-48.2.3.1.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	Coordinate storage rack configuration with User equipment requirements.
Other Requirements / Notes:	N/A

Room Name:	425 FS Trade Learning Room
Use/Description:	Trade Learning Room
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: New 4" high rubber base with toe Floor: New LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	Conference Table to seat 8 with accessibility to power and data ports, small freestanding, stationary workstation, (9) ergonomic task chairs and (12) side chairs
Other Requirements / Notes:	N/A

Room Name:	JEIM – EMMS Room
Use/Description:	EMMS Room
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: New 4" high rubber base with toe. Floor: New LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install 4 new receptacles. Replace lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	Freestanding, height adjustable workstation with dual monitors, mobile file pedestal, (8) 5H lateral file cabinets (4 drawers, 1 flip top shelf), glass white board over Workstation
Other Requirements / Notes:	N/A

Room Name:	JEIM – Engine Office
Use/Description:	JEIM Engine Office
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: New 4" high rubber base with toe. Floor: New LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install 4 new receptacles, and replace lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Install new NIPR drop, and one phone line. Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(1) Freestanding peninsula workstation, height adjustable, with monitor arms, (1) freestanding 5' workstation, height adjustable, with monitor arms, (2) mobile file pedestals, (3) vertical file towers, glass white board over Workstation
Other Requirements / Notes:	N/A

Room Name:	Janitor
Use/Description:	Janitor closet
Functional Requirements:	Ceiling: GWP, paint in flat finish Walls: Paint in semi-gloss finish and FRP panels up to 48" Base: New 4" high rubber base with toe Floor: New five-coat epoxy flooring
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Mop Sink
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(1) Wall mounted mop rack
Other Requirements / Notes:	N/A

Building 216

Building 216 is a flight operations facility and includes flight crew areas, administrative spaces, briefing rooms, F-35 Lightning II operations facility, a simulator, and training rooms. It requires an addition for the distinguished visitor (DV) meeting area. The building will have secure areas in accordance with UFC 4-010-05 and F-35 Lightning II Functional Requirements Document.

Room Name & Numbers:	USAF Admin / RSAF Admin / Secretary
Use/Description:	Administrative Office for 4
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 4 comm and 4 NIPR.
Furniture, Fixtures & Equipment Notes:	(3) 5' freestanding workstations, height adjustable, with monitor arms, (1) L shaped workstation with modesty panel, height adjustable, monitor arm, (4) mobile file pedestals, (4) ergonomic task chairs, (3) guest chairs with arms, (5) 5H lateral file cabinets (4 drawers, 1 flip top shelf), glass white boards over desks
Other Requirements / Notes:	N/A

Room Name & Numbers:	CC Office
Use/Description:	Commander's Office
	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 1 comm and 1 NIPR.
Furniture, Fixtures & Equipment Notes:	(1) freestanding peninsula workstation with modesty panel, height adjustable with monitor arm, (1) mobile file pedestal, (1) Ergonomic Task Chair, (2) guest chairs with arms, (1) 5H lateral file cabinet (4 drawer, 1 flip top shelf), glass white board over desk.
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name & Numbers:	SRO Office
Use/Description:	Sensitive Reconnaissance Operations Office
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 1 comm and 1 NIPR.
Furniture, Fixtures & Equipment Notes:	(1) freestanding peninsula workstation with modesty panel, height adjustable with monitor arm, (1) mobile file pedestal, (1) ergonomic task chair, (2) guest chairs with arms, (1) 5H lateral file cabinet (4 drawers, 1 flip top shelf), glass white board over desk
Other Requirements / Notes:	N/A

Room Name & Numbers:	Conference Room
Use/Description:	Main Conference Room
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 1 comm and 2 NIPR.
Furniture, Fixtures & Equipment Notes:	(1) freestanding conference table to seat 12, (12) fully upholstered high back conference room chairs, (18) fully upholstered guest chairs with arms, (3) wall mounted screens, and (1) storage credenza below monitor on end wall
Other Requirements / Notes:	N/A

Room Name & Numbers:	OPS Workstation
Use/Description:	Operations Workstation admin area. Flight check-in
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 3 comm and 3 NIPR. Provide IDS-ACS.
Furniture, Fixtures & Equipment Notes:	Casework counter with file storage below and transaction top along entire length. (3) ergonomic task chairs, (1) wall mounted screen, (1) tablet charging cabinet, and (1) copier
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name & Numbers:	SARM Office
Use/Description:	Squadron Aviation Recourse Management Office admin area.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 3 comm and 3 NIPR. Provide IDS-BMS.
Furniture, Fixtures & Equipment Notes:	(3) 5' freestanding workstations, height adjustable with monitor arms, (3) mobile file pedestals, (3) ergonomic task chairs, glass white boards mounted over desks
Other Requirements / Notes:	N/A

Room Name:	Scheduling and Training
Use/Description:	Flight mission briefing and operations training.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 4 comm and 6 NIPR.
Furniture, Fixtures & Equipment Notes:	(4) 5' freestanding workstations, height adjustable with monitor arms, (4) low storage cabinets, (1) full height bookcase, (4) ergonomic task chairs, (3) stacking guest chairs, (3) projection screens
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name:	DO Office
Use/Description:	Operations Officer Admin Area
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 1 comm and 1 NIPR.
Furniture, Fixtures & Equipment Notes:	(1) freestanding peninsula workstation with modesty panel, height adjustable with monitor arms, (1) mobile file pedestal, (1) ergonomic task chair, (2) guest chairs with arms, glass white board mounted over desk
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name:	Janitor
Use/Description:	Janitor closet
Functional Requirements:	Ceiling: GWP, paint in flat finish Walls: Paint in semi-gloss finish and FRP panels up to 48" Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide mop sink.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(1) Wall mounted mop rack
Other Requirements / Notes:	N/A

Room Name:	Restroom – Men’s and Women’s
Use/Description:	Restrooms
Functional Requirements:	Ceiling: GWB, paint in Semi-Gloss finish Walls: Paint in semi-gloss finish, porcelain tile Base: Metal cove base Floor: porcelain tile
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(1) Clothes hook, and (4) two tier lockers in each room
Other Requirements / Notes:	N/A

Room Name:	ADA Shower Room
Use/Description:	ADA gender neutral shower room with toilet and sink
Functional Requirements:	Ceiling: GWB, paint in Semi-Gloss finish Walls: Paint in semi-gloss finish, porcelain tile Base: Metal cove base Floor: porcelain tile
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(4) two tier lockers, clothes hook
Other Requirements / Notes:	N/A

Room Name:	ADO
Use/Description:	Assistant Operations Officers Admin Area
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 5 comm and 5 NIPR.
Furniture, Fixtures & Equipment Notes:	(5) freestanding "L" shaped workstations, height adjustable with monitor arms, (5) mobile file pedestals, (5) ergonomic task chairs, (4) guest chairs with arms, (4) low storage cabinets with HPL top for huddle surface, glass white boards mounted over workstations
Other Requirements / Notes:	N/A

Room Name:	Hallway
Use/Description:	Hallway
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT Tiles or Planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Stan / Eval and IT Storage
Use/Description:	IT Storage and offices
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT tiles or planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 3 comm and 3 NIPR.
Furniture, Fixtures & Equipment Notes:	(9) full height wire racks for IT storage, (2) 5H Lateral files for RA (4 drawer and (1) flip top shelf), (2) "L" shaped freestanding workstations, height adjustable with monitor arms, (1) freestanding peninsula desk with modesty panel, height adjustable with monitor arms, (3) mobile file pedestals, (3) ergonomic task chairs, glass white boards over desks
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name:	Man Trap (SA 106)
Use/Description:	Security Vestibule for US Secret Secure Area
Functional Requirements:	Ceiling: GWB with paint in flat finish Walls: Paint in eggshell finish (tied into wall system and sealed above for security) Base: 4" high rubber base with toe. Floor: LVT tiles or planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS-BMS.
Furniture, Fixtures & Equipment Notes:	Located outside of Man Trap, (2) phone storage locker banks with keypad locks and universal charging stations within lockers. Can not be located on RF Shielded wall.
Other Requirements / Notes:	United States Secret Clearance Access Facility in accordance with DoDM 5200.01 Vol 3. Interior enclosure and doors to be ICD 705 Type A Sound Group 4.

Room Name:	Conference / Main Briefing Room (SA107)
Use/Description:	Conference / Main Briefing Room
Functional Requirements:	Ceiling: ACT (GWB true ceiling above to tie into wall system and sealed for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	United States Secret Clearance Access Only Provide data in accordance with UFC 3-580-01. Provide 1 NIPR. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	(48) fixed auditorium seats with flip up seats and tablet arms
Other Requirements / Notes:	United States Secret Clearance Access Facility in accordance with DoDM 5200.01 Vol 3. Interior enclosure and doors to be ICD 705 Type A Sound Group 4.

Room Name:	Storage (SA107B)
Use/Description:	Storage for Conference/ Main Briefing room
Functional Requirements:	Ceiling: GWB with paint in flat finish (tied into wall system and sealed above for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT tiles or planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	United States Secret Clearance Access Only Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	United States Secret Clearance Access Facility in accordance with DoDM 5200.01 Vol 3. Interior enclosure and doors to be ICD 705 Type A Sound Group 4.

Room Name:	Hallway (SA108)
Use/Description:	Hallway
Functional Requirements:	Ceiling: ACT (GWB true ceiling above to tie into wall system and sealed for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT Tiles or Planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	United States Secret Clearance Access Only Provide data in accordance with UFC 3-580-01. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	United States Secret Clearance Access Facility in accordance with DoDM 5200.01 Vol 3. Interior enclosure and doors to be ICD 705 Type A Sound Group 4.

Room Name:	Briefing Rooms (SA 109A, SA109B)
Use/Description:	Briefing Rooms combinable with operable partition
Functional Requirements:	Ceiling: ACT (GWB true ceiling above to tie into wall system and sealed for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT Tiles or Planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	United States Secret Clearance Access Only Provide data in accordance with UFC 3-580-01. Provide 1 NIPR.
Furniture, Fixtures & Equipment Notes:	(2) Huddle tables total, (10) training chairs total, (1) operable wall partition, (2) wall mounted white boards total, and (4) wall mounted screens total
Other Requirements / Notes:	United States Secret Clearance Access Facility in accordance with DoDM 5200.01 Vol 3. Interior enclosure and doors to be ICD 705 Type A Sound Group 4.

Room Name:	Briefing Rooms (SA110A, SA110B, SA110C)
Use/Description:	Three adjacent briefing rooms
Functional Requirements:	Ceiling: ACT (GWB true ceiling above to tie into wall system and sealed for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT Tiles or Planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	United States Secret Clearance Access Only Provide data in accordance with UFC 3-580-01. Provide 1 NIPR.
Furniture, Fixtures & Equipment Notes:	(1) Huddle table in each room, (6) training chairs in each room, (1) 5' freestanding workstation, height adjustable with monitor arms in each room, (1) large wall mounted white board in each room, (1) small wall mounted white board in each room, and (2) wall mounted screens in each room
Other Requirements / Notes:	United States Secret Clearance Access Facility in accordance with DoDM 5200.01 Vol 3. Interior enclosure and doors to be ICD 705 Type A Sound Group 4.

Room Name:	Mechanical (SA 17)
Use/Description:	Existing Mechanical Room
Functional Requirements:	Ceiling: open GWB with paint in flat finish (tied into wall system and sealed above for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: sealed concrete
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	United States Secret Clearance Access Only Provide data in accordance with UFC 3-580-01. Provide IDS-BMS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	United States Secret Clearance Access Facility in accordance with DoDM 5200.01 Vol 3. Interior enclosure and doors to be ICD 705 Type A Sound Group 4.

Room Name:	L16 BOSS / ACMI / GCI CNTL (SA 112)
Use/Description:	Administrative Area for Command and Control
Functional Requirements:	Ceiling: ACT (GWB true ceiling above to tie into wall system and sealed for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	United States Secret Clearance Access Only Provide data in accordance with UFC 3-580-01. Provide 2 comm, 2 NIPR, and 1 ISP. Provide IDS/ACS.
Furniture, Fixtures & Equipment Notes:	(2) freestanding peninsula workstations with modesty panels, height adjustable with monitor arms, (2) mobile file pedestals, (2) ergonomic task chairs, (3) 5H lateral file cabinets (4 drawers and 1 flip top shelf), (4) guest chairs with arms, glass white boards mounted over desks
Other Requirements / Notes:	United States Secret Clearance Access Facility in accordance with DoDM 5200.01 Vol 3. Interior enclosure and doors to be ICD 705 Type A Sound Group 4.

Room Name:	Mission Planning Room (SA 111)
Use/Description:	Flight Planning Room with task desks and map tables
Functional Requirements:	Ceiling: ACT (GWB true ceiling above to tie into wall system and sealed for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT Tiles or Planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	United States Secret Clearance Access Only Provide data in accordance with UFC 3-580-01. Provide 10 comm and 10 NIPR. IDS-BMS.
Furniture, Fixtures & Equipment Notes:	(10) freestanding workstations, height adjustable with monitor arms, (10) mobile file pedestals, (10) ergonomic task chairs, (2) 7' x 7' cubes of storage cabinets to hold maps and other supplies with a common HPL top over storage at standing height to be used for huddles, (3) five drawer safes, and (3) two drawer safes, (1) wall mounted screen, and (2) small wall mounted markerboards
Other Requirements / Notes:	United States Secret Clearance Access Facility in accordance with DoDM 5200.01 Vol 3. Interior enclosure and doors to be ICD 705 Type A Sound Group 4.

Room Name:	Comm
Use/Description:	Existing Comm Room
Functional Requirements:	Ceiling: open Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Static Dissipative Tiles
Mechanical and Other Special Requirements:	Provide air conditioning systems in accordance with UFC 3-410-01. Provide dedicated split system. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Remove existing comm runs and install new ones. Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Electrical
Use/Description:	Existing Electrical Room
Functional Requirements:	Ceiling: open Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: sealed concrete
Mechanical and Other Special Requirements:	Provide heating and ventilation systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace panels, transformers, disconnects, and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	Mechanical
Use/Description:	Existing Mechanical Room
Functional Requirements:	Ceiling: open Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: sealed concrete
Mechanical and Other Special Requirements:	Provide heating and ventilation systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	DV Meeting Room / Building Addition
Use/Description:	DV Meeting Room
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS-ACS.
Furniture, Fixtures & Equipment Notes:	(1) recreation table (by others), (2) cafe tables, (8) cafe chairs without arms, (6) barstools without arms, (1) wall mounted monitor, (1) freestanding storage credenza (under wall mounted monitor), (4) lounge chairs with fully upholstered tight seat and back, (2) 20" diameter end tables, Casework not included in FFE. Appliances include refrigerators, microwaves, water fountain with bottle filler, and ice maker
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name:	Aircrew Room
Use/Description:	Air crew administrative workstation area.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 17 comm and 17 NIPR. Provide IDS-ACS.
Furniture, Fixtures & Equipment Notes:	(17) freestanding workstations, height adjustable with monitor arms, panel-based spine and T connections on each end for workstations in center of room (powered with J box and power pole), (17) mobile file pedestals, (17) Ergonomic Task Chairs, (3) full height 2-door storage cabinets
Other Requirements / Notes:	N/A

Room Name:	Hallway
Use/Description:	Main Hallway
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	USAF Civilian SPV Office
Use/Description:	USAF Civilian Supervisor Office
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 1 comm and 1 NIPR.
Furniture, Fixtures & Equipment Notes:	(1) freestanding peninsula desk with modesty panel, height adjustable with monitor arm, (1) freestanding file pedestal, (1) ergonomic task chair, (2) guest chairs with arms, glass whiteboard mounted above desk
Other Requirements / Notes:	N/A

Room Name:	OSAN
Use/Description:	OSAN secure room
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 1 comm, 1 NIPR, and 1 ISP.
Furniture, Fixtures & Equipment Notes:	(1) freestanding peninsula desk with modesty panel, height adjustable with monitor arm, (1) freestanding file pedestal, (1) ergonomic task chair, (2) guest chairs with arms, (1) 5H lateral file cabinet (4 drawers and 1 flip top shelf), glass white board mounted above desk
Other Requirements / Notes:	Cipher lock

Room Name:	IMSO
Use/Description:	Admin Area for International Military Student Officer
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 1 comm and 1 NIPR.
Furniture, Fixtures & Equipment Notes:	(1) freestanding peninsula desk with modesty panel, height adjustable with monitor arm, (1) freestanding file pedestal, (1) ergonomic task chair, (2) guest chairs with arms, (1) 5H lateral file cabinet (4 drawers and 1 flip top shelf), glass white board mounted above desk
Other Requirements / Notes:	N/A

Room Name:	F-35
Use/Description:	Two adjacent F-35 offices
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 1 comm and 1 NIPR.
Furniture, Fixtures & Equipment Notes:	(1) freestanding peninsula Workstation with modesty panel, height adjustable with monitor arm per room, (1) freestanding file pedestal per room, (1) Ergonomic Task Chair per room, (2) guest chairs with arms per room, (1) 5H lateral file cabinet per (4 drawers and 1 flip top shelf), glass white board above each workstation
Other Requirements / Notes:	N/A

Room Name:	Hallway
Use/Description:	Hallway
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	F-16 SIM BRF
Use/Description:	F16 simulator briefing room
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 1 comm and 2 NIPR.
Furniture, Fixtures & Equipment Notes:	(1) freestanding peninsula desk with modesty panel, height adjustable with monitor arm, (1) freestanding file pedestal, (1) ergonomic task chair, (2) guest chairs with arms, (1) 5H lateral file cabinet (4 drawer and 1 flip top shelf), glass white board mounted over desk
Other Requirements / Notes:	N/A

Room Name:	VIPER EP SIM
Use/Description:	VIPER EP SIM Unclassified space for simulator
Functional Requirements:	Ceiling: ACT (GWB true ceiling above to tie into wall system and sealed for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Anticipated thermal load is 4.9 Ton BTU/hr.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01. The F-16 UTD simulator requires a 60-amp service in 3-phase, 208/120 volts, 60 hertz. Equip the incoming primary power with an appropriately rated phase monitoring system.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 1 comm and 2 NIPR.
Furniture, Fixtures & Equipment Notes:	Egress Trainer Flight Simulator in accordance with F16TSATD-FACLT-INST-001
Other Requirements / Notes:	United States Secret Clearance Access Facility in accordance with DoDM 5200.01 Vol 3. Interior walls and doors to be ICD 705 Type A Sound Group 4.

Room Name:	F-35
Use/Description:	F-35 air crew administrative area
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 12 comm and 12 NIPR.
Furniture, Fixtures & Equipment Notes:	(12) freestanding workstations, height adjustable with monitor arm, (12) mobile file pedestals, (12) ergonomic task chairs, (3) 5H lateral files (4 drawers 1 flip up shelf)
Other Requirements / Notes:	N/A

Room Name:	Man Trap (SA126)
Use/Description:	Security vestibule to SAPF area.
Functional Requirements:	Ceiling: GWP, paint in flat finish (tie into wall system above and seal for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Fortify ducts over 96 square inch cross-sectional area crossing secure perimeter. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	SAPF ICD/ICS 705 / TEMPEST / F-35 FRD Provide data in accordance with UFC 3-580-01. Provide ACS/IDS.
Furniture, Fixtures & Equipment Notes:	(2) phone storage locker banks with keypad locks and universal charging stations within lockers. Located outside the room in hallway, cannot be on an RF shielded secure wall.
Other Requirements / Notes:	Special Access Program in accordance with UFC 4-010-05. Interior walls and doors to be ICD 705 Type B Sound Group 4

Room Name:	Security (SA 127)
Use/Description:	Security admi area for SAPF
Functional Requirements:	Ceiling: GWP, paint in flat finish (tie into wall system above and seal for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Fortify ducts over 96 square inch cross-sectional area crossing secure perimeter.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	SAPF ICD/ICS 705 / TEMPEST / F-35 FRD Provide data in accordance with UFC 3-580-01. Provide 1 comm and 3 NIPR. Provide IDS-BMS.
Furniture, Fixtures & Equipment Notes:	(3) freestanding workstations, height adjustable with monitor arms, (3) ergonomic task chairs, (3) mobile file pedestals, glass white board above 2 desks
Other Requirements / Notes:	Special Access Program in accordance with UFC 4-010-05. Interior walls and doors to be ICD 705 Type B Sound Group 4

Room Name:	Secure Comm (SA 133)
Use/Description:	Secure Comm Room
Functional Requirements:	Ceiling: GWB, paint in flat finish (tie into wall system above and seal for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Static Dissipative Tiles
Mechanical and Other Special Requirements:	Provide air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Provide dedicated split system. Fortify ducts over 96 square inch cross-sectional area crossing secure perimeter.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	SAPF ICD/ICS 705 / TEMPEST / F-35 FRD Provide data in accordance with UFC 3-580-01. Provide 1 comm and 1 NIPR.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	Special Access Program in accordance with UFC 4-010-05. Interior walls and doors to be ICD 705 Type A Sound Group 4

Room Name:	VAULT ALIS / ODIN (SA 132)
Use/Description:	ALIS / ODIN Admin Area for servers
Functional Requirements:	Ceiling: GWP, paint in flat finish (tie into wall system above and seal for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Fortify ducts over 96 square inch cross-sectional area crossing secure perimeter.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	SAPF ICD/ICS 705 / TEMPEST / F-35 FRD Provide data in accordance with UFC 3-580-01. Provide 4 comm and 4 NIPR. Provide IDS-ACS.
Furniture, Fixtures & Equipment Notes:	(3) freestanding workstations, height adjustable with monitor arms, (3) ergonomic task chairs, (3) mobile file pedestals, glass white board mounted over each desk
Other Requirements / Notes:	Special Access Program in accordance with UFC 4-010-05. Interior walls and doors to be ICD 705 Type A Sound Group 4

Room Name:	Vault 1 Server (SA 132B)
Use/Description:	SAPF Server Area
Functional Requirements:	Ceiling: GWB, paint in flat finish (tie into wall system above and seal for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Static Dissipative Tile
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Fortify ducts over 96 square inch cross-sectional area crossing secure perimeter.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	SAPF ICD/ICS 705 / TEMPEST / F-35 FRD Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(6) full height wire racks
Other Requirements / Notes:	Special Access Program in accordance with UFC 4-010-05. Interior walls and doors to be ICD 705 Type A Sound Group 4

Room Name:	Vault 1 Large Brief (SA 131)
Use/Description:	Large Briefing Room
Functional Requirements:	Ceiling: ACT (GWB true ceiling above to tie into wall system and seal for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, tiles or planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Fortify ducts over 96 square inch cross-sectional area crossing secure perimeter.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	SAPF ICD/ICS 705 / TEMPEST / F-35 FRD Provide data in accordance with UFC 3-580-01. Provide 1 NIPR and IDS-BMS.
Furniture, Fixtures & Equipment Notes:	(2) training tables, (8) training chairs, (4) full height, 2-door storage cabinets, glass whiteboard at head of room
Other Requirements / Notes:	Special Access Program in accordance with UFC 4-010-05. Interior walls and doors to be ICD 705 Type A Sound Group 4

Room Name:	Vault 1 Mission Planning Room (SA 130)
Use/Description:	Mission Planning Room
Functional Requirements:	Ceiling: ACT (GWB true ceiling above to tie into wall system and seal for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Fortify ducts over 96 square inch cross-sectional area crossing secure perimeter.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	SAPF ICD/ICS 705 / TEMPEST / F-35 FRD Provide data in accordance with UFC 3-580-01. Provide 1 NIPR. IDS-BMS.
Furniture, Fixtures & Equipment Notes:	(1) Huddle table for 6, (12) training chairs, (6) small freestanding workstations, stationary with no storage, glass whiteboard over huddle table
Other Requirements / Notes:	Special Access Program in accordance with UFC 4-010-05. Interior walls and doors to be ICD 705 Type A Sound Group 4

Room Name:	Vault 1 Small Brief (SA128, SA129)
Use/Description:	Two adjacent small Brief / Debrief rooms
Functional Requirements:	Ceiling: ACT (GWB true ceiling above to tie into wall system and seal for security) Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Fortify ducts over 96 square inch cross-sectional area crossing secure perimeter.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	SAPF ICD/ICS 705 / TEMPEST / F-35 FRD Provide data in accordance with UFC 3-580-01. Provide 1 NIPR. Provide IDS-BMS.
Furniture, Fixtures & Equipment Notes:	(1) mobile training table per room, (4) training chairs per room, (3) full height, 2 door storage cabinets per room, glass whiteboard at head of room
Other Requirements / Notes:	Special Access Program in accordance with UFC 4-010-05. Interior walls and doors to be ICD 705 Type A Sound Group 4.

Room Name:	Vestibule
Use/Description:	Distinguished Visitors Entry and Hallway
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Walk-off mat
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS-ACS.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name:	Wellness Room
Use/Description:	Wellness Room (can be used as Lactation Room)
Functional Requirements:	Ceiling: GWB Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Sink required in casework
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	Lactation Chair and footstool, side table, casework, undercounter refrigerator.
Other Requirements / Notes:	Provide lock on door for privacy

Building 218

Building 218 serves as an administrative facility and includes administrative offices, a pilot kit-up room, an assembly space, and a log cell.

Room Name:	Assembly Room
Use/Description:	Assembly Room for large meetings and dining. The room will have countertops for microwaves and lower storage, with sinks for cleaning small dishes. Provide space for refrigerators to store pilot meals to be warmed up.
Functional Requirements:	Ceiling: Open, painted in flat finish Walls: Paint in eggshell finish Base: 4" high rubber base with toe Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Existing doors to have controlled electronic access to the flightline. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01. (1) Break room sink (1) Electric water cooler
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide IDS/ACS and infrastructure for 1 projector.
Furniture, Fixtures & Equipment Notes:	(10) tables with HPL top, vinyl edge banding, and metal legs with metal cross bar for structural support. (60) chairs with metal frame and poly seat and back (no arms). Cabinetry in 3 locations within room - (1) cabinet length to have a sink location with lower storage and prep counter. (2) cabinet lengths to have lower storage and prep counter with (2) microwaves per counter. Refrigerators located near sink counter.
Other Requirements / Notes:	Existing doors are to receive door hardware modification to controlled access to the flightline.

Room Name:	Comm Room
Use/Description:	Communications Equipment Room.
Functional Requirements:	Ceiling: Open, painted in flat finish Walls: Paint in eggshell finish Base: 4" high rubber base with toe Floor: Static dissipative tile
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment. Provide a dedicated split system.
Electrical and Other Special Requirements:	Standard electrical service in accordance with UFC-3-580-01. Provide the following: dedicated power panel, dedicated circuits to each rack, and wall receptacle every 6 feet. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	N/A
Other Requirements / Notes:	N/A

Room Name:	DCC
Use/Description:	Open office Area for 3 personnel. Provided in existing office space.
Functional Requirements:	Ceiling: Acoustical ceiling system Walls: Paint in eggshell finish Base: 4" high rubber base with toe Floor: LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace 8 receptacles with new. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 3 NIPR and 2 phone lines.
Furniture, Fixtures & Equipment Notes:	(3) freestanding workstations, height adjustable with monitor arms, (3) mobile file pedestals, (3) ergonomic task chairs, (3) 5H lateral files, (1) Times Two starter unit rotating cabinet, letter sized, glass white boards mounted over desks
Other Requirements / Notes:	Secured room.

Room Name:	AE
Use/Description:	Open office Area for 3 personnel. Provided in existing office space.
Functional Requirements:	Ceiling: Acoustical ceiling system Walls: Paint in eggshell finish Base: 4" high rubber base with toe Floor: sealed concrete
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace 7 receptacles with new. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 3 NIPR and 2 phone lines.
Furniture, Fixtures & Equipment Notes:	(3) freestanding workstations with end panels, stationary, with monitor arm per desk, (3) ergonomic task chairs, (2) 5H lateral file cabinets (4 drawers and 1 flip top shelf)
Other Requirements / Notes:	Secured room, Provide roller shades at windows with minimum 3% openness.

Room Name:	CN
Use/Description:	Open Office Area for 3 personnel. Provided in existing office space.
Functional Requirements:	Ceiling: Acoustical ceiling system Walls: Paint in eggshell finish Base: 4" high rubber base with toe Floor: LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace 8 receptacles with new. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 3 NIPR and 2 phone lines.
Furniture, Fixtures & Equipment Notes:	(2) freestanding workstations, height adjustable with monitor arms, (1) "L" shaped workstation, freestanding, height adjustable with monitor arm, (3) ergonomic task chairs, (3) mobile file pedestals, (1) 5H lateral file cabinet (4 drawers and 1 flip top shelf), glass white board mounted above each desk
Other Requirements / Notes:	Secured room. Provide roller shades at windows with minimum 3% openness.

Room Name:	WPN
Use/Description:	Open office Area for 3 personnel. Provided in existing office space.
Functional Requirements:	Ceiling: Acoustical ceiling system. Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace 10 receptacles with new. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 3 NIPR and 2 phone lines.
Furniture, Fixtures & Equipment Notes:	(2) freestanding, height adjustable workstations with monitor arms, (1) freestanding "L" shaped workstation with monitor arm, (3) mobile file pedestals, (3) ergonomic task chairs, (1) 5H lateral file (4 drawers and 1 flip top shelf), (1) Times Two starter unit, rotating cabinet, letter sized, (1) Times Two add on unit, rotating cabinet, letter sized, glass white boards mounted above desks
Other Requirements / Notes:	Secured room.

Room Name:	Mechanical Room
Use/Description:	Mechanical equipment room, Existing room
Functional Requirements:	Ceiling: Open, painted in flat finish Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Sealed concrete
Mechanical and Other Special Requirements:	Provide heating and ventilation systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	Provide communications racks, switches, and other comm equipment.
Other Requirements / Notes:	Secured room.

Room Name:	EI
Use/Description:	Open office Area for 3 personnel. Provided in existing office space.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 3 NIPR and 2 phone lines.
Furniture, Fixtures & Equipment Notes:	(1) "L" shaped freestanding, height adjustable workstations with monitor arms, (2) regular freestanding desk, height adjustable with monitor arm, (3) mobile file pedestals, (3) ergonomic task chairs, (1) 5H lateral file cabinet, (1) Times Two starter unit, rotating cabinet, letter sized and (1) Times Two add on unit, rotating cabinet, letter sized, glass white board mounted above desks
Other Requirements / Notes:	Secured room. Provide roller shades at windows with minimum 3% openness.

Room Name:	ENG
Use/Description:	Open office Area for 8 personnel. Area used for small meetings and training observation. Repurposed space utilizing and combining existing office space
Functional Requirements:	Ceiling: Open, painted in flat finish or ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace 7 receptacles with new. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 3 NIPR and 2 phone lines.
Furniture, Fixtures & Equipment Notes:	(3) freestanding workstations, height adjustable with monitor arm, (1) 5H lateral file storage cabinet (4 drawer, 1 flip top shelf), (1) times-two unit starter cabinet, rotating, letter sized, (1) times two unit add-on cabinet, rotating, letter sized, (3) ergonomic task chairs, glass whiteboards mounted above each desk
Other Requirements / Notes:	Secured room. Provide roller shades at windows with minimum 3% openness.

Room Name:	LOGCELL
Use/Description:	LOGCELL
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(8) freestanding, height adjustable workstations with monitor arms, (21) ergonomic task chairs, (8) mobile file pedestals, (2) training tables, (5) 3H lateral file cabinets, (4) 2 door low storage cabinets with 2 interior adjustable shelves, (1) conference table to seat 10 in wood veneer or wood grain HPL, power and data to run through base to tabletop, (3) glass white boards mounted above desk
Other Requirements / Notes:	Secured room. Existing doors are to receive door hardware modification to control access to the flightline. Provide roller shades at windows with minimum 3% openness.

Room Name:	Meeting Room
Use/Description:	Meeting, Existing space to remain.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(1) Conference table to seat 10 in wood veneer or wood grain HPL, power and data accessible through base to tabletop. (10) Conference task chairs
Other Requirements / Notes:	N/A

Room Name:	SMO
Use/Description:	Enclosed office for 1 personnel. Provided in existing office space.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(1) freestanding peninsula workstation with modesty panel, height adjustable with monitor arm, (1) mobile file pedestal, (1) 5H lateral file (4 drawers and 1 flip top shelf), (1) ergonomic task chair, (2) guest chairs with arms, glass whiteboard mounted above desk
Other Requirements / Notes:	Secured room. Provide roller shades at windows with minimum 3% openness.

Room Name:	RSAF Chief
Use/Description:	RSAF Chief
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace 5 receptacles with new. Replace all lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 2 NIPR and 2 phone lines.
Furniture, Fixtures & Equipment Notes:	(1) freestanding, peninsula shaped with modesty panel, height adjustable desk with monitor arm, , (1) mobile file pedestal, (1) Ergonomic Task chair, (1) 5H lateral file (4 drawers and 1 flip top shelf) cabinet, (2) guest chair with arms, glass white board mounted over desk
Other Requirements / Notes:	Secured room. Provide roller shades at windows with minimum 3% openness.

Room Name:	USAF MA
Use/Description:	Enclosed office for 1 personnel. Provided in existing reconfigured office space.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace 5 receptacles with new and replace all lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Install 1 NIPR and 1 phone line.
Furniture, Fixtures & Equipment Notes:	(1) freestanding peninsula, height adjustable workstation with monitor arm and modesty panel, (1) mobile file pedestal, (1) ergonomic task chair, (1) 5H lateral file cabinet (4 drawers, 1 flip top shelf), (2) guest chairs with arms, glass white board mounted over desk
Other Requirements / Notes:	Secured room. Provide roller shades at windows with minimum 3% openness.

Room Name:	USAF Chief
Use/Description:	Enclosed office for 1 personnel. Provided in existing office space.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace 5 receptacles with new and replace all lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Install 2 NIPR and 2 phone lines.
Furniture, Fixtures & Equipment Notes:	(1) freestanding, peninsula-shaped, height-adjustable desk with monitor arm and modesty panel, (1) mobile file pedestal (1) Ergonomic Task chair, (1) 5H lateral file cabinet (4 drawers and 1 flip top shelf), (1) guest chair with arms, glass white board mounted over desk
Other Requirements / Notes:	Secured room.

Room Name:	OICs / QA Room
Use/Description:	Enclosed open office area for 6 personnel. Provided in reconfigured existing office space.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet Tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace 12 receptacles with new and replace all lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 6 NIPR and 5 phone lines.
Furniture, Fixtures & Equipment Notes:	(6) freestanding, "L" shaped, height adjustable workstations with monitor arms, (6) ergonomic task chairs, (6) mobile file pedestals, (1) 2 door, low storage cabinet with (2) interior adjustable shelves (printer will sit on top), (5) glass white board mounted above desks
Other Requirements / Notes:	Secured room. Provide roller shades at windows with minimum 3% openness.

Room Name:	AA
Use/Description:	Enclosed open office Area for 4 personnel with small central meeting Workstation. Provided in existing office space
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace 10 receptacles with new. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Install 3 NIPR and 2 phone lines.
Furniture, Fixtures & Equipment Notes:	(3) freestanding, height adjustable workstations with monitor arms, (3) mobile file pedestals, (3) ergonomic task chairs, (4) training chairs, (1) huddle table, round with pedestal base, (2) 5H lateral file cabinets (4 drawers and 1 flip top shelf), glass whiteboards mounted above desks
Other Requirements / Notes:	Secured room. Provide roller shades at windows with minimum 3% openness.

Room Name:	Pyro
Use/Description:	Hardened storage space for storage of flight equipment with explosive properties.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Carpet tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide 1 receptacle and grounding points. Provide new lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01. All electrical items and lighting must have a hazardous classification rating.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01. (2) Class 2A 10BC fire extinguisher.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(2) Flammable cabinets
Other Requirements / Notes:	Secure and hardened space. Space contains Class 1.4S explosives. Coordinate with user quantity of material stored. Construct room with cinder block and steel deck ceiling.

Room Name:	Pilot Kit-Up Room
Use/Description:	Pilot Kit-Up locker room for flight prep and issuing of flight gear.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT plans or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide 2 new receptacles and new lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01. All electrical items and lighting must have a hazardous classification rating.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(35) Pilot kit-up lockers with lower storage drawer, open compartment with hooks for gear, closed door, and drawer, storage above. Lockers use approximate 30" x 30" footprint.
Other Requirements / Notes:	N/A

Room Name:	LSS Room
Use/Description:	Flight equipment issuing room with cleaning equipment.
Functional Requirements:	Ceiling: ACT Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: LVT planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide 6 new receptacles and new lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01. All electrical items and lighting must have a hazardous classification rating.
Plumbing and Other Special Requirements:	Provide plumbing in accordance with UFC 3-420-01.
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. Provide 3 NIPR and 2 phone lines.
Furniture, Fixtures & Equipment Notes:	Built-in counter tops at seated height, transaction top at 36" AFF, (1) freestanding washing machine, (2) ergonomic task chairs, (2) counter mounted monitor arms.
Other Requirements / Notes:	Secure room. Provide roller shades at windows with minimum 3% openness.

Room Name:	NVG
Use/Description:	Storage room of flight equipment
Functional Requirements:	Ceiling: GWB, paint in flat finish Walls: Paint in eggshell finish Base: 4" high rubber base with toe Floor: LVT, tiles or planks
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide 2 new receptacles and new lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(2) Full height storage cabinets, locking, with 4 interior adjustable shelves per cabinet
Other Requirements / Notes:	Secure room

Room Name:	Restrooms – Men’s and Women’s
Use/Description:	ABA Restroom and showers for building occupants.
Functional Requirements:	Ceiling: GWB, painted in semi-gloss finish Walls: Paint in semi-gloss finish, porcelain tile Base: Metal cove base Floor: Porcelain tile floors with shower pan or mosaic tile sloped to drain
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	Lockers, 2H, plastic, with self-provided locks, (1) interior shelf and (1) interior hook per locker
Other Requirements / Notes:	N/A

Room Name:	Comm Room
Use/Description:	Communications Equipment Room.
Functional Requirements:	Ceiling: Paint in flat finish, gypsum board. Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: Static Dissipative floor tiles.
Mechanical and Other Special Requirements:	Provide Heating Ventilation and Air Conditioning systems in accordance with UFC 3-410- 01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01. New ACS.
Furniture, Fixtures & Equipment Notes:	Provide communications racks, switches, and other comm equipment as needed
Other Requirements / Notes:	Provide roller shades at windows with minimum 3% openness.

Room Name:	Janitor
Use/Description:	Janitor closet
Functional Requirements:	Ceiling: GWP, paint in flat finish Walls: Paint in semi-gloss finish and FRP panels up to 48" Base: 4" high rubber base with toe Floor: LVT, planks or tiles
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Install new receptacles and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	Mop Sink
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	Provide data in accordance with UFC 3-580-01.
Furniture, Fixtures & Equipment Notes:	(1) Wall mounted mop rack
Other Requirements / Notes:	N/A

Room Name & Numbers:	F-35 AFE (Aircrew Flight Equipment) Room
Use/Description:	Room containing lockers and benches for donning flight gear.
Functional Requirements:	Ceiling: open Walls: Paint in eggshell finish Base: 4" high rubber base with toe. Floor: sealed concrete
Mechanical and Other Special Requirements:	Provide heating, ventilation, and air conditioning systems in accordance with UFC 3-410-01. Do not use gas-fired equipment.
Electrical and Other Special Requirements:	Replace panels, transformers, disconnects, and lighting. Provide power in accordance with UFC 3-520-01. Provide lighting in accordance with UFC 3-530-01.
Plumbing and Other Special Requirements:	N/A
Fire Protection / Fire Alarm / Mass Notification System:	Provide Fire Protection / Fire Alarm in accordance with UFC 3-600-01. Provide Mass Notification in accordance with UFC 4-021-01.
Communications and Cybersecurity Requirements:	N/A
Furniture, Fixtures & Equipment Notes:	Lockers and benches T.B.D.
Other Requirements / Notes:	N/A

Attachment D- Site Photos

SITE PHOTOS

Table of Contents

Building 201	2
Building 202	10
Building 214	30
Building 216	31
Building 218	44

Building 201



1 - B201 Exterior from Northeast



2 - B201 Exterior from Southeast



3 - B201 South Facade



4 - B201 Covered Entry Brick Deterioration



5 - B202 East Overhead Door Openings



6 - B201 Infill South Doors



7 - B201 Utility Enclosure #1



8 - B201 Utility Enclosure #2



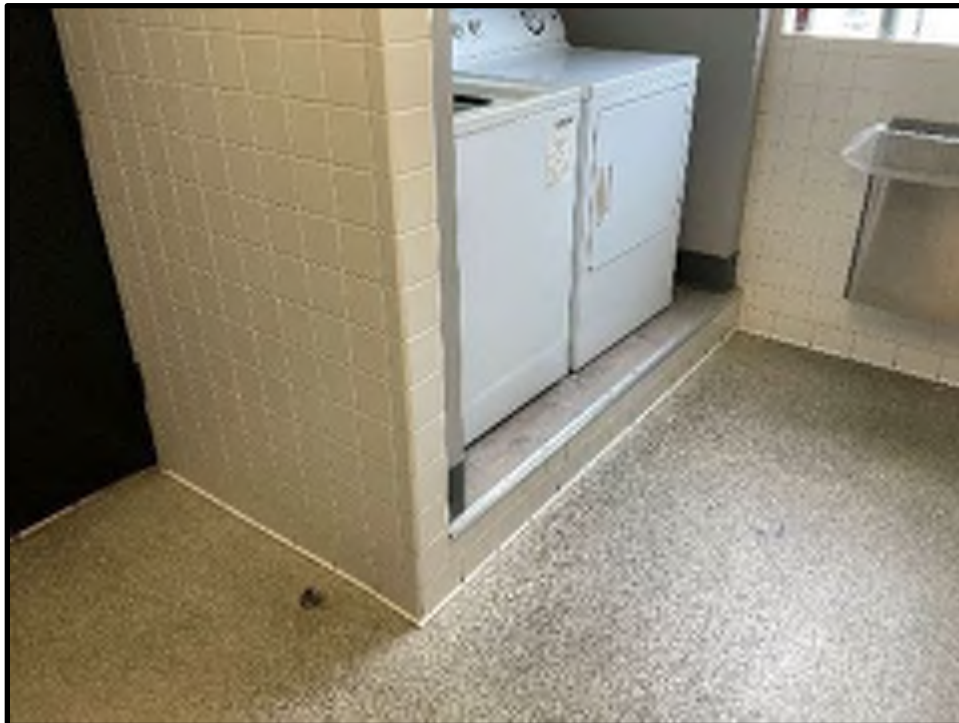
9 - B201 Downspout with No Splash Block



10 - B201 Expansion Joint



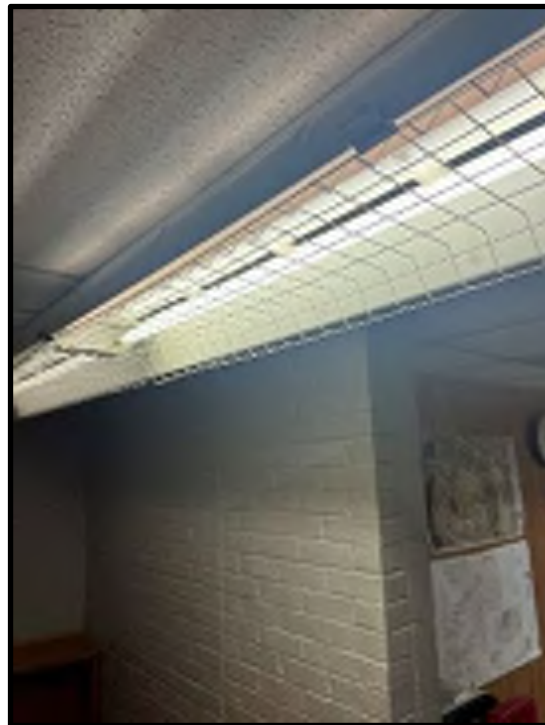
11 - B201 Infill South Doors



12 - B201 Washer and Dryer Curb



13 - B201 Meter



14 - B201 Hallway Light



15 - B201 Equipment Bay and Mezzanine



16 - B201 Locker Curb

Building 202



17 - B202 Flightline Facade



18 - B202 Covered Personnel Entry



19 - B202 Main Entry



20 - B202 Existing Storefront Windows



21 - B202 Water Damage at Covered Entry



22 - B202 East Entry on North Side of Building



23 - B202 Exterior Tank Bay Doors



24 - B202 Northeast Corner



25 - B202 Northwest Corner



26 - Southeast Corner



27 - B202 Transformer Enclosure



28 - B202 Bay 1 Ceiling



29 - B202 Bay 1 Door to be Removed



30 - B202 Example of ACT Damage



31 - B202 Existing Hangar Bay Ceiling



32 -B202 Existing Hangar Bay Epoxy Floor



33 - B202 Existing Kitchenette



34 - B202 Existing Service Sink



35 - B202 Eyewash Station Obscured by Screen Wall



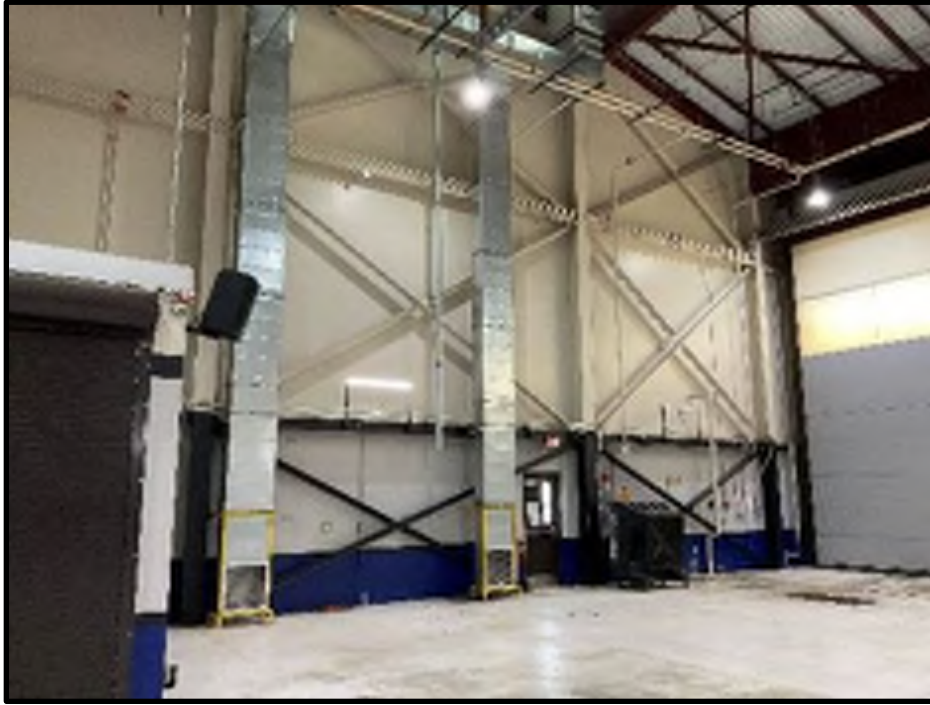
36 - B202 Fire Riser Equipment



37 - B202 Fire Riser Room #1



38 - B202 Fire Riser Room #2



39 - B202 Hangar Bay 1 East Wall (Door to be Removed)



40 - B202 Hangar Bay 1 Storage Rooms



41 - B202 Hangar Bay 2 Ceiling



42 - B202 Hangar Bay 3 Handwash



43 - B202 Hangar Bay 3 North Wall East Side



44 - B202 Hangar Bay 3 North Wall West Side



45 - B202 Hangar Bay 3 Tyre Sink



46 - B202 Paint Booth



47 - B202 Paint Booth Interior



48 - B202 Screen Wall to be Removed, Typical



49 - B202 Tank Bay Screen Wall to be Removed



50 - B202 Utility Enclosure



51 - B202 Utility Enclosure



52 - B202 Expansion Joint



53 - B202 Meter



54 - B202 Foam Suppression System

Building 214



55 - B214 Exterior View #1



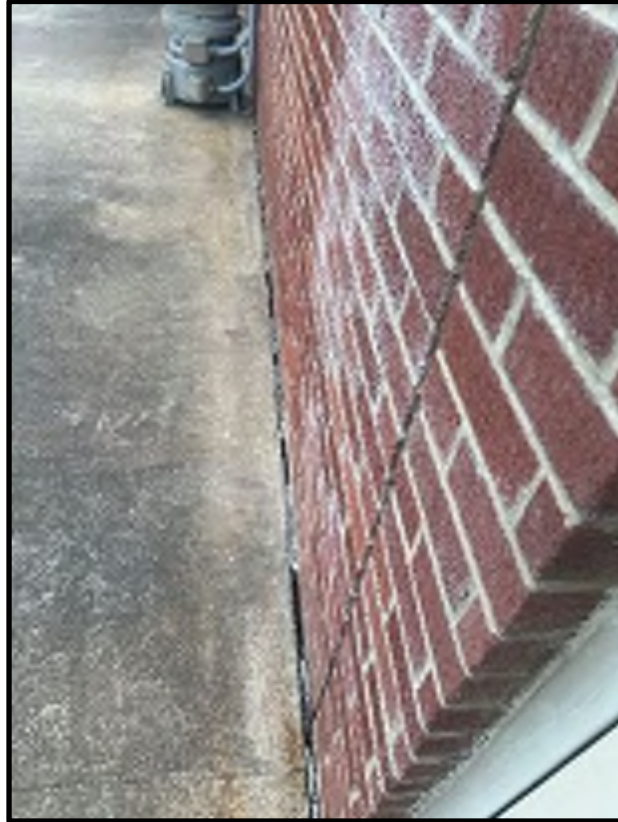
56 - B214 Exterior View #2



57 - B214 Exterior View #3



58 - B214 Exterior View #4



59 - B214 Expansion Joint



60 - B214 Meter



61 - B214 Comm Device #1



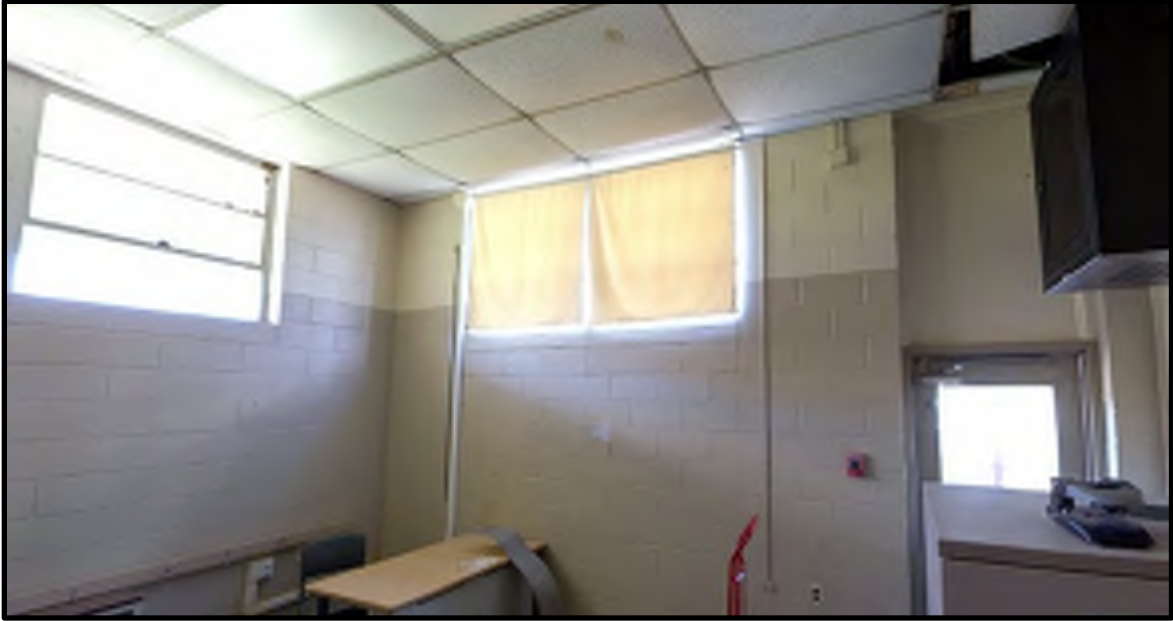
62 - B214 Comm Device #2



63 - B214 Old Electrical Panel



64 - B214 Breakroom



65 - B214 Existing Office



66 - B214 Mezzanine #1



67 - B214 Mezzanine #2



68 - B214 Restroom



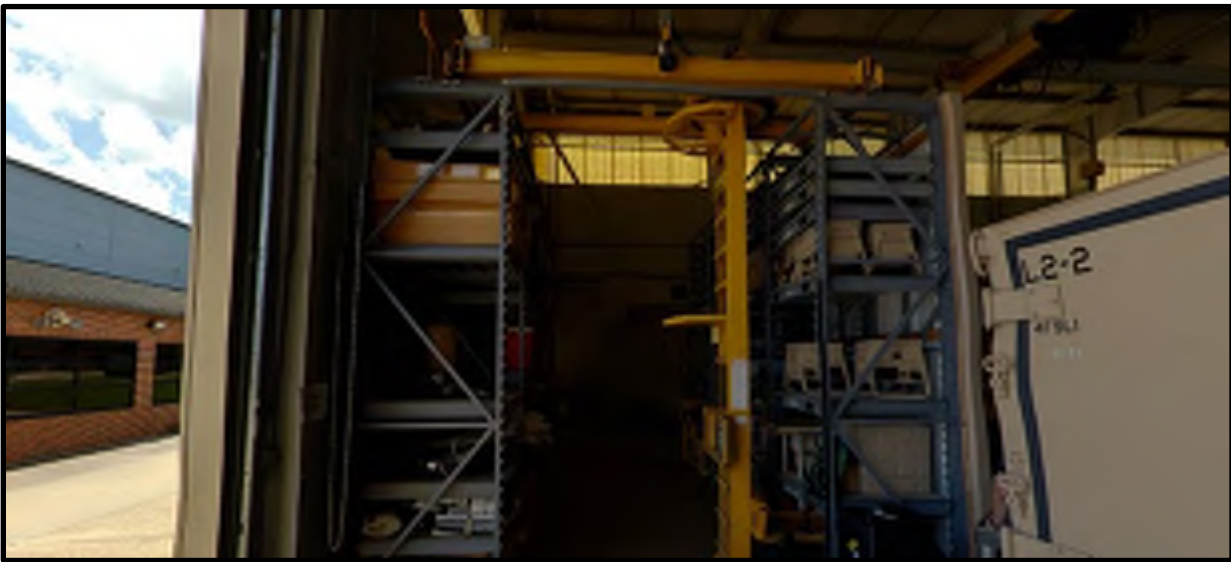
69 - B214 Storage Area #1



70 - B214 Storage Area #2



71 - B214 Storage Area #3



72 - B214 Storage Rack System



73 - B214 Work Bay View #1



74 - B214 Work Bay View #2



75 - B214 Work Bay View #3



76 - B214 Work Bay View #4

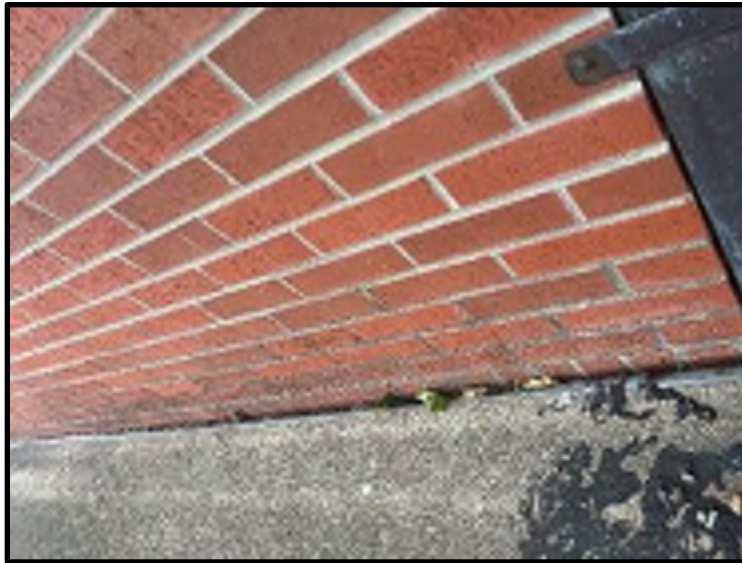
Building 216



77 - B216 Area of Addition



78 - B216 Downspouts by Addition



79 - B216 Expansion Joint



80 - B216 Meter



81 – B216 F35 Area Crane



82 - B216 F35 Area North View



83 - B216 F35 Area North View #2



84 - B216 F35 Area South View



85 - B216 NW Secure Area AIS Shop



86 - B216 NW Secure Area North Wall



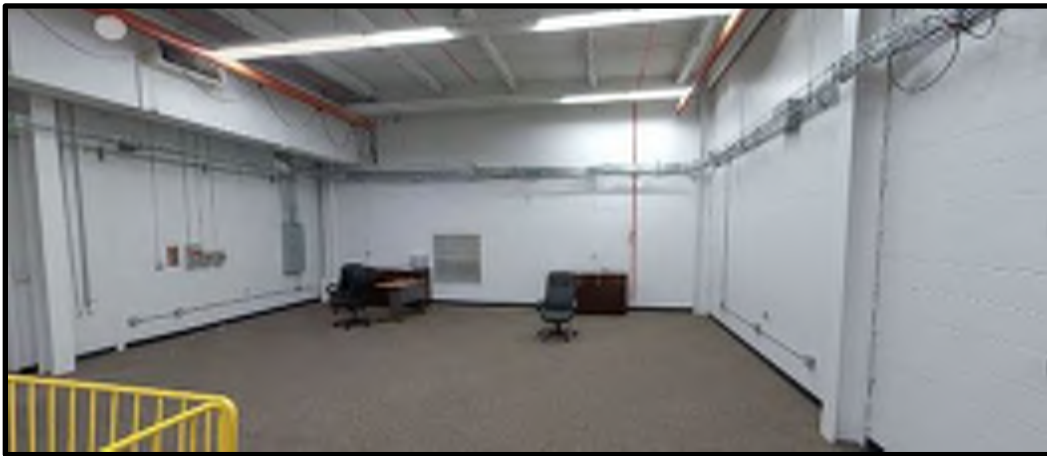
87 - B216 NW Secure Area South Wall



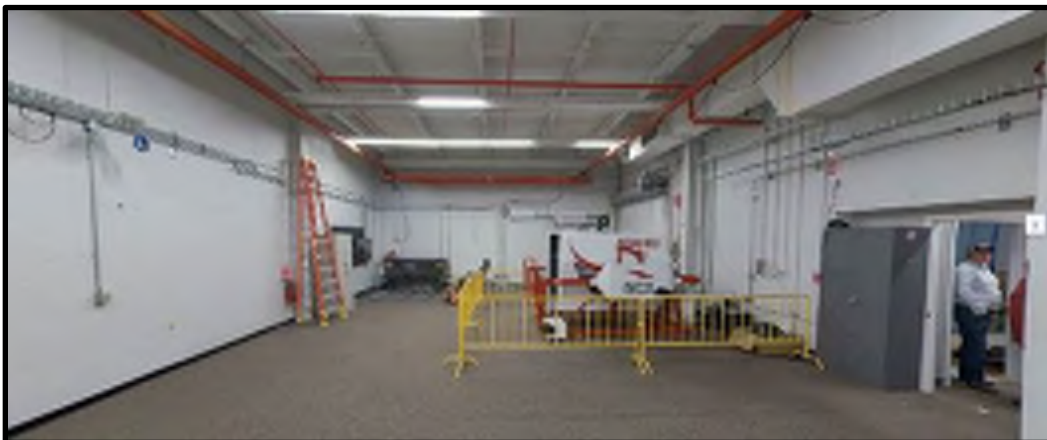
88 - B216 NW Secure Area VTC Conference Room



89 – B216 NW Secure Area West Wall



90 – B216 Secure Area North Wall



91 – B216 Secure Area South Wall

Building 218



92 - B218 Exterior View #1



93 - B218 Exterior View #2



94 - B218 Exterior View #3



95 - B218 North Side Planting Bed



96 - B218 Meter



97 - B218 Comm Equipment at Entry



98 - B218 Assembly Area View #1



99 - B218 Assembly Area View #2



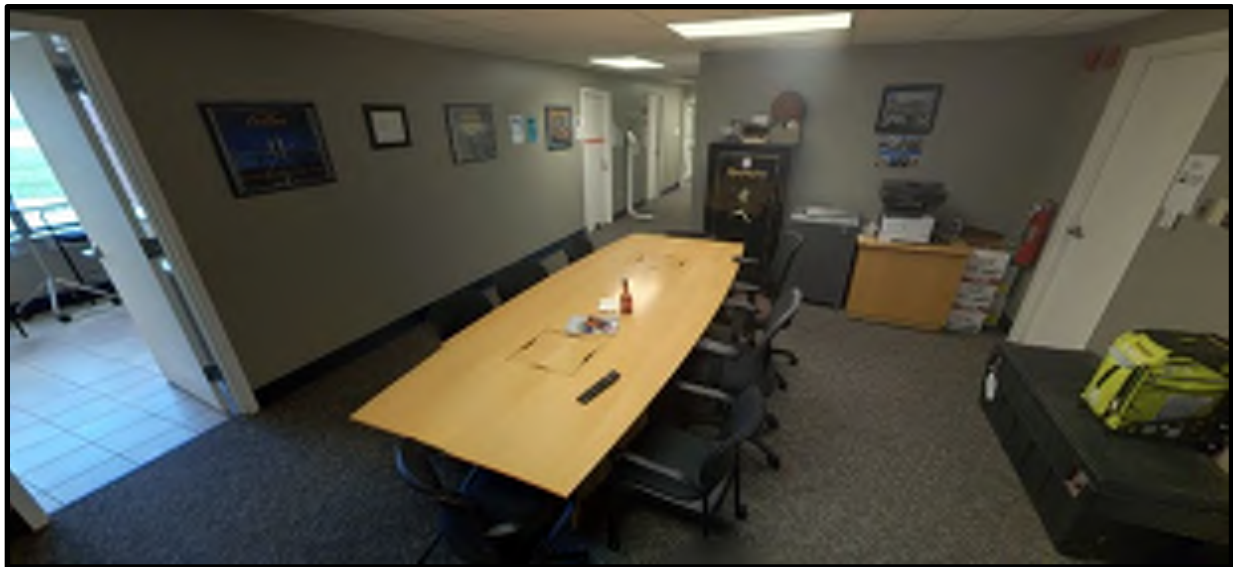
100 - B218 Breakroom



101 - B218 Hall #1



102 - B218 Hall #2



103 - B218 Meeting Area



104 - B218 Office #1



105 - B218 Office #2



106 - B218 Restroom

Attachment E – AsBuilt Drawings (sent separately electronically)

Attachment F – Hydrant Flow Test Results



FIRE HYDRANT FLOW TEST

HYDRANT # & LOCATION Hydrants #21 & 22, Voodoo Road, Ebbing ANG Base, Ft. Smith, AR DATE: 5/22/2024

TEST BY: Traci Bangor Day of Week: Wednesday TIME OF DAY: 7:45am MIN. OF FLOW: 5

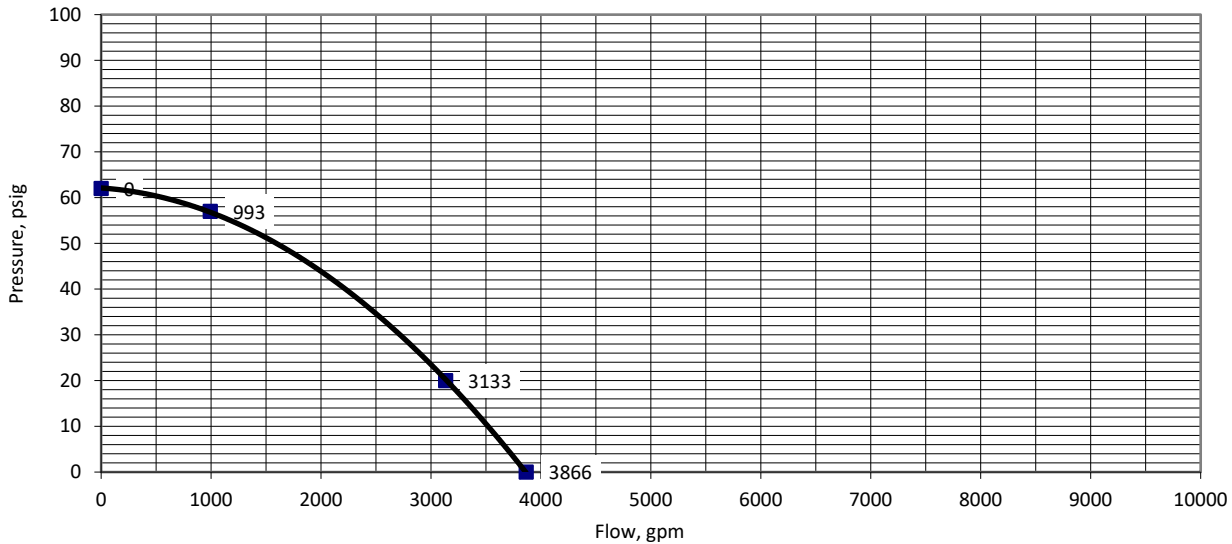
WATER SUPPLIED BY: Water Tower at Phantom Drive & Voodoo Road (approx. 800 feet west of flow hydrant)

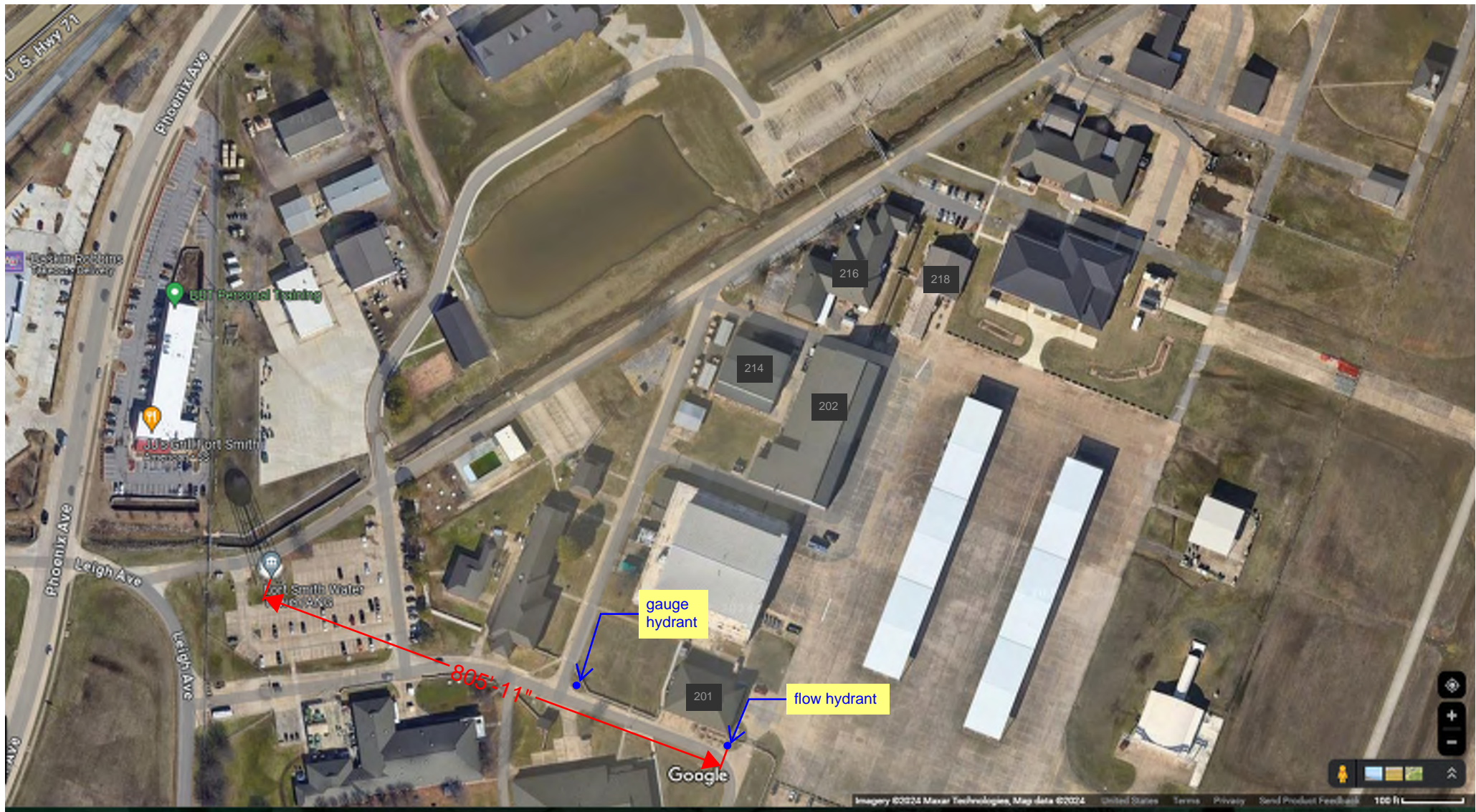
PURPOSE OF TEST:

DATA

FLOW HYDRANT(S)	A1	A2	A3
SIZE OPENING:	<u>2.5</u>	_____	_____
COEFFICIENT:	<u>0.9</u>	_____	_____
PITOT READING:	<u>35</u>	_____	_____
GPM:	<u>993</u>	_____	_____
TOTAL FLOW DURING TEST:	<u>993</u> GPM	_____	_____
STATIC READING:	<u>62</u> PSI	RESIDUAL: <u>57</u> PSI	
RESULTS:	AT 20 PSI RESIDUAL <u>3133</u> GPM	AT 0 PSI <u>3866</u> GPM	
ESTIMATED CONSUMPTION:	<u>4963</u> GAL.		

REMARKS:





U.S. Hwy 71

Phoenix Ave

JJC Personal Training

JJC Personal Training

JJC Grill / Fort Smith

JJC Water

gauge hydrant

flow hydrant

805' 11"

Google



FIRE HYDRANT FLOW TEST

HYDRANT # & LOCATION Hydrants #16 & 17, Super Sabre Street, Ebbing ANG Base, Ft. Smith, AR DATE: 5/22/2024

TEST BY: Traci Bangor Day of Week: Wednesday TIME OF DAY: 8:00am MIN. OF FLOW: 5

WATER SUPPLIED BY: Water Tower at Phantom Drive & Voodoo Road (approx. 795 feet northwest of flow hydrant)

PURPOSE OF TEST:

DATA

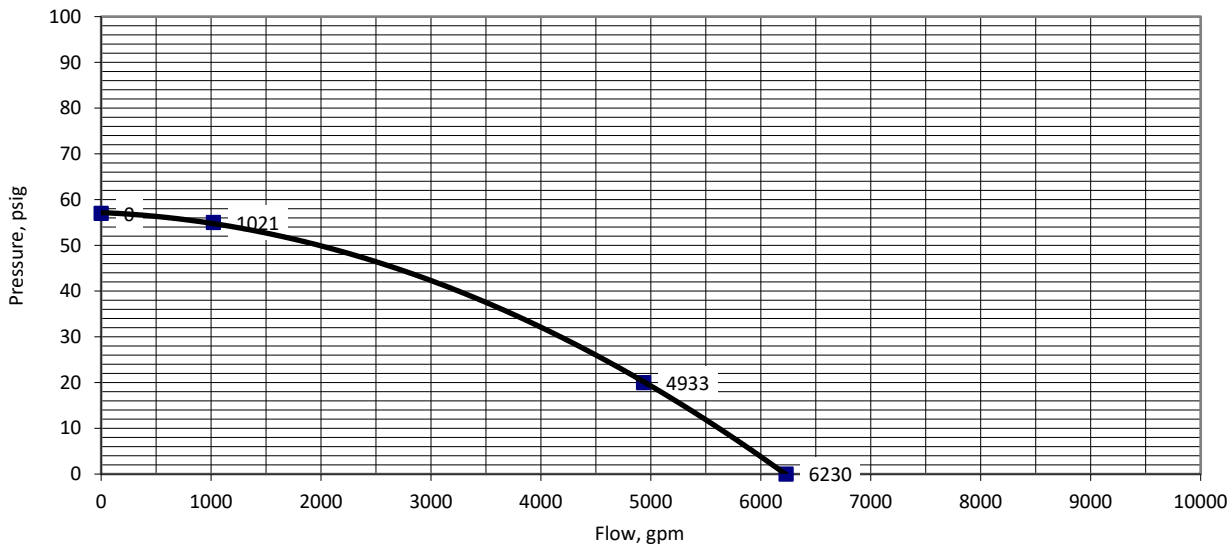
FLOW HYDRANT(S)	A1	A2	A3
SIZE OPENING:	<u>2.5</u>	_____	_____
COEFFICIENT:	<u>0.9</u>	_____	_____
PITOT READING:	<u>37</u>	_____	_____
GPM:	<u>1021</u>	_____	_____
TOTAL FLOW DURING TEST:	<u>1021</u> GPM		

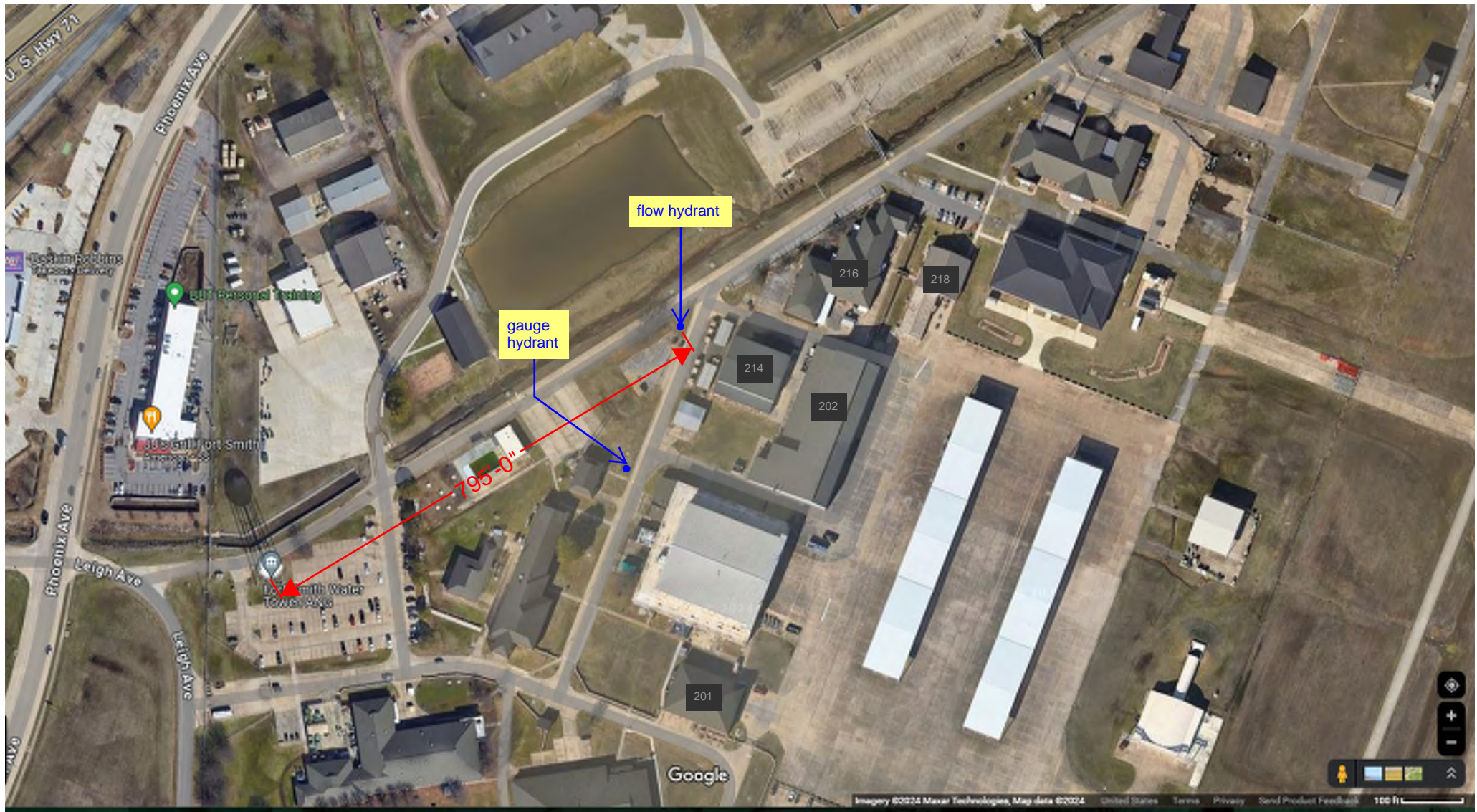
STATIC READING: 57 PSI RESIDUAL: 55 PSI

RESULTS: AT 20 PSI RESIDUAL 4933 GPM AT 0 PSI 6230 GPM

ESTIMATED CONSUMPTION: 5103 GAL.

REMARKS:





Attachment G – Main Ramp Apron Clearances

Attachment H – List of Pyro Room Contents

EXPLOSIVES FACILITY LICENSE

1. BASE Luke AFB, AZ	2. ORGANIZATION (include initials of Parent Command in parenthesis, if in Tenant) 425th Fighter Squadron	3. LICENSE NO. 23-10
-------------------------	---	-------------------------

I. FACILITY DATA

4. FACILITY IDENTIFICATION Building 416	
5. PRIMARY USE Maintenance Facility	6. WRITTEN OLS APPLICABLE 56 OG OI 91-201
7. ROOM NO. 4	8. ROOM USE Life Support General Inspections Room
9. CONSTRUCTION Cinder Block w/ Steel Roof	

II. EXPLOSIVES LIMITS REQUESTED

(if more space is needed, use second page)

CLASS DIVISION A	COMPATIBILITY GROUP(S) B	NOMENCLATURE C	QNTY D	EXPLOSIVE WEIGHT E	FIRE SYMBOL F
1.4	G	SIGNAL BOMB AND ILLUMINATION BOMB IN 137MD09NSN 1377-01-109-5029	52	N/A	4DE
1.4	G	SIGNAL BOMB AND ILLUMINATION BOMB IN 137MD09NSN 1377-01-109-5029	52	N/A	4DE
1.4	S	CUTTER, LOCKING CORD, SURVIVAL KIT NSN 1377-01-333-9143	26	N/A	4
1.4	S	CUTTER, REEFING LINE ASSEMBLY, ACES-II NSN 1377-01-332-2379	52	N/A	4
1.4	S	PARACHUTE RELEASE AF, CANOPY, PCU-63(V)P, UWARS NSN 1377-01-394-1271	52	N/A	4
1.4	S	PARACHUTE RELEASE NAVY, CANOPY, PCU-63(V)P, UWARS NSN 1377-01-394-1272	52	N/A	4
1.4	S	INFLATION DEVICE, AUTO FLU-9 B/P NSN 1377-01-454-9864	52	N/A	4
1.4	S	INFLATION DEVICE, FLU-9 A/P NSN 1377-01-326-1466	52	N/A	4

III. CERTIFICATION

I CERTIFY the above described facility is required in support of the mission of the above organization.

DATE 19 Oct 23	TYPED NAME, GRADE AND TITLE OF CERTIFYING OFFICIAL Robert A. Hilby, Lt Col, USAF Commander	SIGNATURE HILBY, ROBERT ALLAN 12 57000911	<small>Digitally signed by HILBY, ROBERT ALLAN 12 Date: 2023.10.19 14:02:00 -0400</small>
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IV. ACTION OF RESPONSIBLE OFFICIAL

DATE 27 Oct 23	TYPED NAME, GRADE AND TITLE OF APPROVING OFFICIAL TODD, THOMAS A GS-12 USAF AETC 56 FW/SEW	SIGNATURE TODD THOMAS A 1097262 159	<small>Digitally signed by TODD THOMAS A 1097262 Date: 2023.10.27 14:02:00 -0400</small>
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REMARKS

- Two each 2A:10BC fire extinguishers will be immediately available for fire protection.
- An "X" next to a stock number indicates authorized "SUITABLE SUBSTITUTE ISSUED" IAW DESR 6055.09 AFMAN 91-201 V6.E3.6.1.4.6.2.
- Do not exceed the personnel limits of 1 SUPERVISORS, 2 WORKERS, and 2 CASUALS during explosive operations
- THIS LICENSE SUPERSEDES ALL PREVIOUS ISSUED FOR THIS LOCATION

V. COORDINATION

TYPED NAME-ORG 56 EMS/MASO	TYPED NAME-ORG 56 CES/CEFP	TYPED NAME-ORG 56 SFS/S5S	TYPED NAME-ORG Annual Review	TYPED NAME-ORG Annual Review
SIGNATURE [Signature]	SIGNATURE [Signature]	SIGNATURE [Signature]	SIGNATURE [Signature]	SIGNATURE [Signature]