AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
J	1 | 70

2. AMENDMENT/MODIFICATION NO.	EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO.(If applicable)
0008	21 May 2026		

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than item 6)	CODE
US ARMY CORPS OF ENGINEERS FORT WORTH 819 TAYLOR ST, ROOM 3A28 FORT WORTH TX 76102	W9126G	See Item 6	

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		
	X	9A. AMENDMENT OF SOLICITATION NO. W9126G24R0124
	X	9B. DATED (SEE ITEM 11) 25-Apr-2024
		10A. MOD. OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE / FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer [ ] is extended, [X] is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

[ ] A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

[ ] B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

[ ] C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

[ ] D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Project: Design-Build and Design-Bid-Build Vertical Construction for Fort Johnson by means of Indefinite Delivery-Indefinite Quantity (IDIQ),Multiple Award Task Order Contracts (MATOC) 8(a) Set-Aside to support facilities construction and repair: The purpose of this amendment is to:

a) Remove CLINs 0007 and 0008.
b) Remove any verbiage pertaining to Electric Vehicle Charging Stations in Section 01 10 00
c) Remove any verbiage pertaining to Electric Vehicle Charging Stations in Concept Drawings, Site Plan, Page 4
d) Due date has remained unchanged. Phase 2 Proposal Receipt date is 22 June 2026, 1:00 P.M. CT

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) TEL: EMAIL:	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY (Signature of Contracting Officer)	16C. DATE SIGNED

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

CHANGES TO SOLICITATION W9126G24R0124

CHANGES TO BASE MATOC SPECIFICATIONS

1. Update Sections: The following sections are being updated in the BASE MATOC with amendment markings, bearing the notation W9126G24R0124-0008:

00 10 00	Contract Line Item Schedule
01 10 00	Statement of Work
Appendix C	Conceptual Site Plans

(End of Summary of Changes)

ANIMAL BUILDING
Fort Polk, LA

CONTRACT LINE ITEM SCHEDULE

Item No.	Description	Quantity	Unit		Unit Price	Line Item Amount
BASE OFFER: All work (CLIN 0001 - 0002) required by the Contract exclusive of work required by the Options**.**						
0001	All work to design a remodel of a fully functional Military Working Dog Facility.	1	JA	$	***	$ _____
0002	All work to construct the remodel of a fully functional Military Working Dog Facility.	1	JA	$	***	$ _____
	TOTAL BASE OFFER					$ _____
OPTIONS						
	OPTION 01: Will include all work for CLIN 0003 -0004 and will not be executed separately.					
0003	**OPTION 1:** All work to design the exam room of the MWD facility.	1	JA	$	***	$ _____
0004	**OPTION 1:** All work to construct the exam room of the MWD facility.	1	JA	$	***	$ _____
	TOTAL OPTION 01:					$ _____
	OPTION 02: Will include all work for CLIN 0005 -0006 and will not be executed separately.					
0005	**OPTION 2:** All work to design an ADA compliant restroom in the MWD facilty.	1	JA	$	***	$ _____
0006	**OPTION 2:** All work to construct an ADA compliant restroom in the MWD facilty.	1	JA	$	***	$ _____
	TOTAL OPTION 02:					$ _____
<AM#0008>	~~**OPTION 03: Will include all work for CLIN 0007 -0008 and will not be executed separately.**~~					
~~0007~~	~~**OPTION 3:** All work to design an EV Plug/220 Plug station outside for electric vehicle.~~	~~1~~	~~JA~~	~~$~~	~~***~~	~~$~~ _____
~~0008~~	~~**OPTION 3:** All work to construct an EV Plug/220 Plug station outside for electric vehicle.~~	~~1~~	~~JA~~	$	***	$ _____ </AM#0008>

ANIMAL BUILDING
Fort Polk, LA

CONTRACT LINE ITEM SCHEDULE

Item No.	Description	Quantity	Unit	Unit Price	Line Item Amount
		TOTAL OPTION 03:			$ _____
		TOTAL ALL OPTIONS			$ _____
		TOTAL OFFER (BASE + OPTIONS)			$ _____

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. 5

Section 01 10 00

STATEMENT OF WORK

Table of Contents

PART 1 GENERAL

1.1 PROJECT OBJECTIVES

1.1.1 Fort Polk Animal Building

The project is the renovation of Animal Building (MWD Kennels) at Fort Polk, Louisiana. These facilities are designed for the purpose of providing a fully functional Military Working Dog (MWD) facility in accordance with current MWD Kennel Design Guide criteria. Primary facilities include expanding and enclosing the existing open-air kennel, demolition, new fire water line, upgrading the electrical capacity, installing a new dedicated HVAC system with DOAS, heating, ventilation, sound attenuation, fire protection, UMCS connectivity, security fencing, bringing bathroom up to ADA requirements, and reconfiguring the interior of the administration facility as needed to provide a dedicated Isolation Kennel. Secondary improvements shall consist of retesting and balancing the entire facility's HVAC, relocating CCTV, expanding the existing fire alarming system, new sidewalks, new facility signage, manual transfer switch and plug for backup power, expanding the mass notification system, adding and reconfiguring existing floor drains, expanding the sanitary sewer, upsizing the gas meter, and

improving site drainage infrastructure as needed. Facilities will be designed to a minimum life of 40 years in accordance with DoD's Unified Facilities Criteria (UFC 1-200-02) including energy efficiencies, building envelope and integrated building systems performance. Sustainable design and energy measures are included. Antiterrorism and force protection measures are included were applicable. Facilities will be designed to a minimum life of 40 years in accordance with DoD's Unified Facilities Criteria (UFC 1-200-02) including energy efficiencies, building envelope and integrated building systems performance.

a. Number of personnel the facility supports: 1

b. Maximum Gross Area: 9,814 SF

1.2 DESCRIPTION OF WORK

1.2.1 Site Planning and Design

Provide all site design and construction within the facility limits of construction necessary to support the new building facilities. Supporting facilities include, but are not limited to, utilities, electric service, exterior and security lighting, fire protection and alarm systems, security fencing and gates, water, gas, sewer, oil water separators, storm drainage and site improvements.

Maintain the construction site and haul route. Repair/replace damage to existing sidewalks, pavements, curb and gutter, utilities, and/or landscaping within the construction limit, adjacent to the construction site, and along the Contractor’s haul route resulting from the Contractor’s construction activities at no additional cost to the Government. Prior to construction activities, the Contractor and Contracting Officer must conduct an existing condition survey. At the completion of the Contract, the Contractor and Contracting Officer must perform a final condition survey to determine repair/replacement requirements.

1.2.2 Building Areas

Specific renovation requirements included in the project are as follows:

a. Enclosing the kennel area with new exterior walls and adding a HVAC system to provide dehumidified air and ensure positive pressure.
b. Additional modifications are required to bring the building into compliance with the MWD Kennel Design Guide, which requires an addition of an isolation kennel within the exam room area.
c. Utility connections are required to privatize electric, water, and wastewater systems. The Army intends to have the electric, water, and wastewater systems Utilities Privatization System Owners make and own the necessary connections up to the facility service disconnect or other defined point of demarcation.
d. This building is required to be designed in compliance with the following:
    1. with all regulations that pertain to MWD
    2. AR 190-12, ATP 3-39.34

3. AFI 31-121, DAFI 31-126
4. AR 40-905, AVMA Companion Animal Care Guidelines (CACG)
5. AVMA Animal Welfare Policy (AWP)
6. MCO 5585.5A, OPNAVINST 5585.2C
7. TB MED 298; AF MWD Facility Standard Design Guide (SDG)
8. DoD Unified Facilities Criteria (UFC)
9. NFPA 150

The facility will be unoccupied at the time of construction. Inspect and verify all existing conditions, loadings, and dimensions of the facility.

1.3 HAZARDOUS MATERIALS

No hazardous materials are present in the areas to be worked by this contract.

1.4 BASE BID AND OPTIONS

The Project consists of a Base Bid, and three (3) option(s). Refer to Section 01 10 00 CONTRACT LINE ITEM SCHEDULE for project-specific details.

1.4.1 Base Bid

Base bid includes all work required by the solicitation exclusive of work identified in the options.

1.4.2 Option 1 – Interior Renovations

Option 1 includes all work required to design and construct the following: reconfiguring the interior of the administration facility as needed to provide a dedicated Isolation Kennel.

1.4.3 Option 2 – ABA Latrine Upgrades

Restroom upgrades

<AM#0008> ~~**1.4.4 Option 3 – EVCF Plug Installation**~~

~~Installation of exterior charging plug.~~ </AM#0008>

PART 2 DESIGN

2.1 DESIGN REQUIREMENTS

Design and construct the project in accordance with the military criteria in conjunction with industry standard criteria, materials, and efficient practices. If there is a conflict between standards, apply the most stringent requirement, unless otherwise specifically noted in the contract. Building design and materials selected must be high quality, durable, easily maintained and meet the specifications. The Contractor will be responsible for the professional quality, code compliance, technical accuracy and coordination of all designs, drawings, specifications and other documents or publications upon which the design and construction are based.

As part of the design effort, perform a thorough survey of project limits and scope to determine conditions and actual dimensions and capacities. Prepare and submit design documents for Government review and acceptance in accordance with Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD).

2.2 INDUSTRY CRITERIA

Applicable design and construction criteria references are listed in Table 1 below. This list is not intended to restrict design and construction to only those references listed. See paragraph 2.3 MILITARY CRITERIA for additional facility-specific applicable criteria.

Use criteria from the most recent version, including any applicable addenda, as of the date of the solicitation, unless specifically stated elsewhere. In the event of conflict between references and/or applicable military criteria, apply the most stringent requirement, unless otherwise specifically noted in the contract.

Table 1: Industry Criteria

Air Conditioning, Heating, and Refrigeration Institute (AHRI)	
ANSI/AHRI/CSA 310/380	Standard for Packaged Terminal Air-Conditioners and Heat Pumps (CSA-C744-04)
ANSI/AHRI 430	Central Station Air Handling Units
ANSI/AHRI 440	Performance Rating of Room Fan-Coils
ANSI/AHRI 880	Performance Rating of Air Terminals, with Addendum 1
Air Movement and Control Association (AMCA)	
AMCA 210	Laboratory Methods of Testing Fans for Rating

American Architectural Manufacturers Association (AAMA)	
AAMA 101/I.S.2/A440	North American Fenestration Standards/Specifications for Windows, Doors, and Skylights
AAMA 507	Standards Practices for Determining The Thermal Performance Characteristics of Fenestration Systems in Commercial Buildings
AAMA 510	Voluntary Guide Specification for Blast Hazard Mitigation for Vertical Fenestration Systems
AAMA 520	Voluntary Specification for Rating the Severe Wind-Driven Rain Resistance of Windows, Doors, and Skylights
AAMA 605.1	Specification for High Performance Organic Coatings on Architectural Extrusions and Panels
AAMA 611	Voluntary Specification for Anodized Architectural Aluminum
AAMA 612	Voluntary Guide Specification, Performance Requirements, and Test Procedures for Combined Coatings of Anodic Oxide and Transparent Organic Coatings on Architectural Aluminum
AAMA 711	Voluntary Specification for Self-Adhering Flashing Used for Installation of Exterior Wall Fenestration Products
AAMA 712	Voluntary Specifications for Mechanically Attached Flexible Flashing
AAMA 713	Voluntary Test Method to Determine Chemical Compatibility of Sealants and Self-Adhered Flexible Flashings
AAMA 800	Voluntary Specifications and Test Methods for Sealants
AAMA 1503	Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections
AAMA 1504	Voluntary Standard for Thermal Performance of Windows, Doors, and Glazed Wall Sections
American Bearings Manufacturers Association (ABMA)	
AFBMA 9	Load Ratings and Fatigue Life for Ball Bearings
AFMBA 11	Load Ratings and Fatigue Life for Roller Bearings
American Concrete Institute (ACI)	
ACI 318	Building Code Requirements for Structural Concrete
ACI SP-66	ACI Detailing Manual
American Institute of Steel Construction (AISC)	

	Steel Construction Manual
	Seismic Design Manual
American Iron and Steel Institute (AISI)	
AISI S 100	North American Specification for the Design of Cold-formed Steel Structural Members
American National Standards Institute (ANSI)	
ANSI/IEEE C2	National Electrical Safety Code
American Society of Civil Engineers (ASCE)	
ASCE/SEI 7	Minimum Design Loads for Buildings and Other Structures
American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)	
ASHRAE 202	Commissioning Process for Buildings and Systems
ASHRAE Guideline 1.1	HVAC&R Technical Requirements for The Commissioning Process
ASHRAE 15	Safety Standard for Refrigeration Systems
ASHRAE 55	Thermal Environmental Conditions for Human Occupancy
ASHRAE Standard 62.1	Ventilation for Acceptable Indoor Air Quality
ASHRAE 90.1	Energy Standard for Buildings Except Low-Rise Residential Buildings
ASHRAE 135	BACnet – A Data Communication Protocol for Building Automation and Control Networks
American Society of Mechanical Engineers International (ASME)	
ASME BPVC, Section VII	Boiler and Pressure Vessel Code: Section VII, “Care of Power Boilers”
American Society for Testing and Materials (ASTM) International	
ASTM C1060	Standard Practice for Thermographic Inspection of Insulation Installations in Envelope Cavities of Frame Buildings
ASTM E779	Standard Test Method for Determining Air Leakage Rate by Fan Pressurization

ASTM E1827	Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door
ASTM E2178	Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials
ASTM E2357	Standard Test Method for Determining Air Leakage Rate of Air Barrier Assemblies
American Veterinary Medical Association (AVMA)	
	Companion Animal Care Guidelines (CACG)
	Animal Welfare Policy (AWP)
American Water Works Association (AWWA)	
	Standards for Water Line Materials and Construction
American Welding Society (AWS)	
	Welding Handbook
American Wood Council (AWC)	
ANSI/AWC NDS	National Design Specification (NDS) for Wood Construction
Architectural Woodwork Institute (AWI)	
AWS	Architectural Woodwork Standards
Associated Air Balance Council (AABC)	
AABC MN-1	National Standards for Testing and Balancing Heating, Ventilating, and Air Conditioning Systems
	AABC Testing and Balance Procedures
BACnet International (BTL)	
BTL Guide	BACnet Testing Laboratory Implementation Guidelines
Builders Hardware Manufacturers Association (BHMA)	
ANSI/BHMA	ANSI/BHMA American National Standards, Various Dates (Current Versions)
Building Industry Consulting Service International (BICSI)	

	Telecommunications Distribution Methods Manual
	Outside Plant Design Reference Manual
Code of Federal Regulations (CFR)	
49 CFR 192	Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards
10 CFR 430	Energy Conservation Program for Consumer Products
10 CFR 433	Energy Efficiency Standards for Design and Construction of New Federal Commercial and Multi-Family High-Rise Residential Buildings
40 CFR 247	Comprehensive Procurement Guidelines for Products Containing Recovered Materials
9 CFR 3	Animal And Plant Health Inspection Service: Animal Welfare
Consumer Electronics Association (CEA)	
CEA 709.1-D	Control Network Protocol Specification
CEA 709.3	Free-Topology Twisted-Pair Channel Specification
CEA 852-C	Tunneling Device Area Network Protocols Over Internet Protocol Channels
Federal Highway Administration (FHWA)	
FHWA-NHI-10-009	Urban Drainage Design Manual, HEC-22
Illuminating Engineering Society (IES)	
ANSI/IES RP-1-12	American National Standard Practice for Office Lighting
ANSI/IES LP-1-20	American National Standard Practice for Designing Quality Lighting for People and Buildings
Institute of Electrical and Electronics Engineers Inc. (IEEE)	
IEEE/ASTM SI 10	American National Standard for use of the international system of units (SI): The Modern Metric System.
International Code Council (ICC)	
IBC	International Building Code Note: (a) All references in the International Building Code to the International Electrical Code shall be considered to be references

	to NFPA 70. (b) All references in the International Building Code to the International Fuel Gas Code shall be considered to be references to NFPA 54 and NFPA 58. (c) 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.
IMC	International Mechanical Code
IPC	International Plumbing Code
IEBC	International Existing Building Code
IgCC	International Green Construction Code
Master Painters Institute (MPI)	
MPI Approved Products List	http://www.paintinfo.com/mpi/approved/Manufactory_index.shtml
Metal Building Manufacturers Association (MBMA)	
	Metal Building Systems Manual
Midwest Insulation Contractors Association (MICA)	
	National Commercial and Industrial Insulation Standards Manual
National Association of Architectural Metal Manufacturers (NAAMM)	
NAAMM HMMA HMM	Hollow Metal Manual
National Association of Corrosion Engineers (NACE) International	
SP0169	Control of External Corrosion on Underground or Submerged Metallic Piping Systems
SP0185	Extruded Polyolefin Resin Coating Systems with Soft Adhesives for Underground or Submerged Pipe
SP0285	Corrosion Control of Underground Storage Tank Systems by Cathodic Protection
SP0286	Electrical Isolation of Cathodically Protected Pipelines
National Environmental Balancing Bureau (NEBB)	
	New Testing, Adjusting, and Balancing Procedural Standard

National Fire Protection Association (NFPA)	
NFPA 1	Fire Code
NFPA 10	Standard for Portable Fire Extinguishers
NFPA 13	Standard for the Installation of Sprinkler Systems
NFPA 24	Standard for the Installation of Private Fire Service Mains and Their Appurtenances
NFPA 25	Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems
NFPA 54	National Fuel Gas Code
NFPA 70	National Electrical Code
NFPA 72	National Fire Alarm and Signaling Code
NFPA 80	Standard for Fire Doors and Other Opening Protectives
NFPA 90a	Standard for Installation of Air Conditioning and Ventilating Systems
NFPA 101	Life Safety Code
NFPA 150	Fire and Life Safety in Animal Housing Facilities Code
NFPA 291	Recommended Practice for Fire Flow Testing and Marking of Hydrants
NFPA 780	Standard for the Installation of Lightning Protection Systems
National Roofing Contractors Association (NRCA)	
	The NRCA Roofing Manual – Set
Occupational Safety and Health Administration (OSHA)	
29 CFR 1926	Safety and Health Regulations for Construction
Plumbing and Drainage Institute (PDI)	
PDI G101	Testing and Rating Procedure for Grease Interceptors
PDI WH201	Water Hammer Arrestors Standard

Precast Concrete Institute	
	PCI Design Handbook
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.
Sheet Metal and Air Conditioning Contractor's National Association (SMACNA)	
SMACNA	HVAC Duct Construction Standards - Metal and Flexible
SMACNA	Architectural Sheet Metal Manual
SMACNA	HVAC Systems - Testing, Adjusting and Balancing
SMACNA	HVAC Systems Commissioning Manual
SMACNA	Indoor Air Quality (IAQ) Guidelines for Occupied Buildings Under Construction
SMACNA	Fire, Smoke and Radiation Damper Installation Guide
SMACNA	HVAC Sound and Vibration Manual
State & Local Regulations	
	State Specific Environmental Control Requirements
	State Specific Department of Transportation Standard Specifications for Highway and Bridge Construction
	State Specific Sedimentation and Erosion Control Design Requirements
	State Specific Storm Water Management Requirements
Steel Deck Institute (SDI)	
	Standard for Steel Roof Deck
	Standard for Quality Control and Quality Assurance for Installation of Steel Deck
Steel Door Institute (SDI)	
ANSI/SDI A250.8	SDI-100 – Specifications for Standard Steel Doors and Frames

Steel Joist Institute (SJI)	
SJI 100	Standard Specification Load Tables and Wight Tables for Steel Joists and Joist Girders K-Series, LH-Series, DHL Series, Joist Girders
Telecommunications Industry Association	
TIA-485	Electrical Characteristics of Generators and Receivers for Use in Balanced Digital Multipoint Systems
TIA-568.0-E	Generic Telecommunications Cabling for Customer Premises
TIA-568.1-E	Commercial Building Telecommunications Cabling Standard
TIA-568.2-E	Balanced Twisted-Pair Telecommunications Cabling and Components Standard
TIA-568.3-E	Optical Fiber Cabling Components Standard
TIA-569-E	Telecommunication Pathways and Spaces
TIA-606-D	Administration Standards for the Telecommunications Infrastructure
TIA-607-E	Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises
Underwriters Laboratories (UL)	
UL 96A	Installation Requirements for Lightning Protection Systems
UL 916	Standard for Energy Management Equipment
U.S. Access Board	
ADA/ABAAG	Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines, Current Versions as Currently Amended Excluded are: (a) Facilities, or portions of facilities, on a military installation that are designed and constructed for use exclusively by able-bodied military personnel (See Paragraph 3 for any reference to this exclusion). (b) Reserve and National Guard facilities, or portions of such facilities, owned by or under the control of the Department of Defense that are designed and constructed for use exclusively by able-bodied military personnel. (See paragraph 3 for any reference to this exclusion).

2.3 MILITARY CRITERIA

The project must conform to the following criteria. Certain design impacts and features due to these criteria are noted for the benefit of the Offeror; however, all requirements of the referenced criteria will be applicable, whether noted or not, unless otherwise specified herein.

Use criteria from the most recent version, including any applicable addenda, as of the date of the solicitation unless specifically stated elsewhere. In the event of conflict between references and/or applicable military criteria, apply the most stringent requirement, unless otherwise specifically noted in the contract.

Table 2: Military Criteria

Laws, Policies, Regulations, and Other Criteria	
EISA07 110-140	Energy Independence and Security Act of 2007
Executive Orders	All Current Executive Orders applicable to the project as published on https://www.federalregister.gov/
EPACT05	Energy Policy Act of 2005 / Public Law 109-58
ASA (IE&E)	Army Sustainable Design and Development Policy
	Engineering and Construction Bulletin 2018-17
	United States Army Corps of Engineers (USACE) Air Leakage Testing Protocol for Measuring Air Leakage in Buildings
	Military Handbook (MIL HDBK)-419-A Grounding, Bonding, and Shielding for Electronic Equipment and Facilities
AR 190-12	Military Working Dogs
AR 190-051	Security of Unclassified Army Property (Sensitive and Non-sensitive)
AR 40-905	Veterinary Health Services
ER 1110-345-723	Total Building Commissioning Procedures
ATP 3-39.34	Military Working Dogs
AFI 31-121	Military Working Dog Program
DAFI 31-126	DoD Military Working Dog (MWD) Program
MCO 5585.5A	Marine Corps Military Working Dog (MWD) Manual

OPNAVINST 5585.2C	Department of the Navy Military Working Dog Program
TB MED 298	Veterinary Care and Management of the Military Working Dog
	Air Force Military Working Dog Facility Standard Design
Unified Facilities Criteria (UFC)	
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 1-300-02	Unified Facilities Guide Specifications (UFGS) Format Standard
UFC 1-300-07A	Design Build Technical Requirements
UFC 2-100-01	Installation Master Planning
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 3-240-01	Wastewater Collection
UFC 3-250-01	Pavement Design for Roads and Parking Area

UFC 3-250-03	Standard Practice Manual for Flexible Pavements
UFC 3-250-04	Standard Practice for Concrete Pavements
UFC 3-301-01	Structural Engineering
UFC 3-400-02	Design: Engineering Weather Data
UFC 3-401-01	Mechanical Engineering
UFC 3-410-01	Heating, Ventilating, and Air Conditioning Systems
UFC 3-410-02	Direct Digital Control for HVAC and Other Building Control Systems
UFC 3-410-04	Industrial Ventilation
UFC 3-420-01	Plumbing Systems
UFC 3-450-01	Noise and Vibration Control
UFC 3-470-01	Utility Monitoring and Control System (UMCS) Front End and Integration
UFC 3-501-01	Electrical Engineering
UFC 3-520-01	Interior Electrical Systems
UFC 3-530-01	Interior and Exterior Lighting Systems
UFC 3-550-01	Exterior Electrical Power Distribution
UFC 3-560-01	Operation and Maintenance: Electrical Safety
UFC 3-570-01	Cathodic Protection
UFC 3-575-01	Lightning and Static Electricity Protection Systems
UFC 3-580-01	Information and Communications Technology Infrastructure Planning and Design
UFC 3-600-01	Fire Protection Engineering for Facilities
UFC 4-010-01	DoD Minimum Antiterrorism Standards for Buildings
UFC 4-010-06	Cybersecurity of Facility-Related Control Systems (FRCS)

UFC 4-021-01	Design and O&M: Mass Notification Systems
UFC 4-022-03	Security Fences and Gates

2.4 DESIGN FEATURES

The design of architectural, interior, structural, mechanical, fire protection, electrical, environmental, civil, and other engineering features of the work must be accomplished and reviewed and approved by engineers, Qualified Fire Protection Engineer (QFPE), architects, and interior designers registered to practice in their respective professional fields.

2.5 DESIGN UNITS

Develop design(s) using the English inch-pound (I-P) system of units. Submittals for Government approval or for information only must cover the I-P products actually being furnished for the project. The Contractor must submit the required drawings and calculations in the same units used in the contract documents unless otherwise instructed or approved.

2.6 PRIVATIZED UTILITY PROVIDERS (PUP)

Fort Polk utilizes privatized utility providers. Refer to 01 35 12.00 44 SPECIAL PROJECT PROCEDURES FOR FORT POLK for PUP requirements and information.

PART 3 CIVIL / SITE ENGINEERING

3.1 GENERAL

The Project is an existing facility renovation of building 4780 at Fort Polk, LA, which is a Military Working Dog (MWD) facility. There is an existing concrete lined drainage swale adjacent to the site which could be affected by any further encroachment to the west. The site contains a canine explosives training aid magazine (ARMAG) which creates a radius which must be avoided, and no encroachment within 25' of the ARMAG shall be allowed. There is a flood plain which borders the east perimeter fence line. An MWD cemetery has been created to the northeast of a training yard perimeter.

The project is intended to improve the protection and safety of the MWDs. The current building's configuration allows for risks to the MWD assets from insect-borne pathogens, high humidity, and high temperatures. Reduction of these risks can be achieved by enclosing the kennel area with new exterior walls and adding an HVAC system to provide dehumidified and temperature-controlled air and ensure positive pressure.

Sidewalk access shall be re-routed on the south side to accommodate the new HVAC unit, where the dog break area and exercise yard are currently located. An all-weather gravel service drive shall be constructed to facilitate access to the new HVAC equipment (see Appendix C for drawings).

The Contractor shall install a remote fire department connection (FDC) (see Fire Protection section), and a Knox Box shall be installed on the gate. As part of the Project the utility system owners (SOs) will provide system upgrades to install a new fire hydrant, post indicator valve (PIV), and sprinkler connection to the building at the point of demarcation.

<AM#0008> ~~As an option, an electric vehicle charging plug shall be installed in the existing parking area within the facility fence (see Electrical Section).~~ </AM#0008>

A generator receptacle shall be installed in the paved area adjacent to the north face of the building administrative area (refer to Electrical section and see Appendix C for drawings).

The Contractor shall install screening slats in the existing perimeter fence and gates, and between the new chain-link fencing between the training yard, break area, and exercise yard, to prevent dogs from seeing each other in these areas. Screening shall also be installed on the exercise yard and break area to screen the view of the HVAC equipment, and a screening fence shall be installed on 3 sides of the HVAC equipment.

The Contractor shall design the site and supporting facilities to meet all minimum federal standards for construction, utilization, and force protection. Consider existing site conditions, including topography, utilities, and surrounding buildings. See Appendix C for the project location map with the location of haul routes, existing conditions plan, and a concept site plan.

No waste or recycling is available on the installation except for excavation spoils of usable asphalt. For disposal of spoils and waste the Contractor is required to report to Directorate of Public Works – Environmental and Natural Resources Management Division (DPW-ENRMD) the quantities of solid waste taken off the installation. See the Haul Route Map in Appendix C for locations of approved asphalt disposals.

3.1.1 Haul Routes and Staging Areas

3.1.1.1 Haul Route

The haul route indicated in Appendix C is preliminary and must be coordinated with, and approve by the Contracting Officer (KO) prior to commencement of construction activities.

3.1.1.2 Staging Area

The architect/engineer (AE) designer of record (DOR) shall make arrangements with the KO during design, and will be allotted an area for the placement of a construction trailer complex and storage for the Contractor and respective subcontractors. Ensure that all trailers and storage containers are placed within the designated staging area and do not obstruct access to the building work areas. The contractor's parking shall be near the job site, as designated by the KO or contracting officer's representative (COR). Refer to Section 01 35 12.00 44 Special Project Procedures for Fort Polk, for instructions on installation access and parking during bid and construction.

The following conditions apply to the staging area:

3.1.1.2.1 Permanent trailers are not permitted within the building work areas.
3.1.1.2.2 Trailers within the work area may be required to be relocated at no additional cost to the Government to accommodate site activities.
3.1.1.2.3 A Conex box may be placed within the work area for storage of equipment, but it may be required to be relocated at no additional cost to the Government to accommodate site activities.

3.1.2 Construction Fencing

The Contractor shall provide fencing in accordance with the requirements outlined in Section 01 50 00 Temporary Facilities. Coordinate the location of the construction fences on all sites with the KO to ensure that:

3.1.2.1 Fences do not obstruct access by the Fire Department to a fire hydrant.
3.1.2.2 Fire hydrants must always be accessible to the Fire Department.
3.1.2.3 Temporary construction fence is not necessary in areas already contained within existing facility fencing.
3.1.2.4 Fences must have multiple exits/entrances to the site to allow multiple access points for the Fire Department.

3.1.3 Preparation and Maintenance

The Contractor is responsible for the site preparation, fencing, access drives, and maintenance of the project site at all times, including ensuring that the site is kept clean and free of debris.

3.1.4 Project Completion

Upon project completion and clearance of all Contractor materials, equipment, and trailers from the designated fenced area, the fencing must be removed and deemed the property of the Contractor. Return all areas utilized for storage, equipment maneuvering, or any other purpose, to their original or better condition. This includes, but is not limited to, repair of any damaged paved surfaces within the designated staging area, the removal of any gravel laid for access across grassed areas and the complete restoration of said areas. Restoration must include the replacement of topsoil and seeding as required to match the surrounding landscape as necessary.

3.1.5 Temporary Utilities

All temporary utilities are the responsibility of the Contractor. The Contractor shall coordinate with the system owners (SOs), also referred to in this contract as privatized utility providers (PUPs), and Utility Privatization (UP) Contractors; through their respective CORs. Refer to Section 01 50 00 Temporary Facilities, for temporary utility requirements.

3.1.6 Permits

The Contractor shall obtain all permits (local, state, and federal) required for design and construction of all site features, and utilities on the building side of the utility points of demarcation. See information on points of demarcation in Section 01 35 12.00 44 Special Procedures for Fort Polk.

Louisiana Sanitary Code Title 51 Subpart XII paragraph 105 requires the owner of the water system to obtain Louisiana Department of Health and Hospitals (LDHH) approval prior to the start of construction for modifications to the water system, and the UP Contractor shall be the DOR for their system, and shall obtain permits necessary for work on their system in accordance with UP Contract SP0600-08-C-8257, and Section 01 35 12.00 44 Special Procedures for Fort Polk.

A Fort Polk, Army installation (AECOM) dig permit must be obtained by the Contractor before any excavation can commence. Dig permit requests shall be submitted to the KO a minimum of 14 calendar days prior to commencement of excavation or trenching operations.

3.2 SITE PLANNING AND DESIGN

The Contractor shall provide a site design with separate drawings to include, but not be limited to; Existing Conditions Plan, Demolition Plan, Site/Layout Plan, Utility Plan, Grading Plan, Storm Drainage Plan, Paving Plan, Striping and Signage Plan, Utility Profiles, and Landscaping Plan. Some plan sheets may be combined in the event work is minimal enough to provide clear plan information for the listed plan sheets without

separate sheets. A design analysis must be provided, and complete design calculations must be included for site development items. Provide electronic design files (CADD/GIS) for the site as part of their design and construction responsibilities. See Section 01 33 16.00 10 Design Data (Design After Award) for requirements.

3.2.1 Demolition

The existing concrete walkways on the west and east side of the building shall be full depth sawcut and partially demolished to accommodate expansion of the foundation for new building walls, but maintain full circulation around the building. Concrete walkways of a lesser width shall be maintained to eliminate any need to extend the facility's west perimeter, or extend the east edge of the east walk into the existing training area or paving. The requirement for 10' walkways is no longer in effect along the closed walls, as these walkways are no longer necessary to access or service the kennels.

The existing sidewalk adjacent to the south of the building, interior to the break areas, shall be demolished for installation of the new HVAC unit. This area will also require demolition of existing gates, and existing 7' fabric chain link fence with a 1' extension.

The Contractor shall clear and grub the areas south and southeast of the building, in preparation for installation of the HVAC pad and a service drive (see Appendix C for drawings).

3.2.2 SITE STRUCTURES AND AMENITIES

3.2.2.1 Enclosures and Visual Screens

The Contractor shall install screening slats in the chain link fence on the entire facility perimeter and perimeter gates, in accordance with Army Regulation 190-12 (Military Working Dog Program), to protect the privacy of the MWD and eliminate outside distractions. All MWD chain link fencing shall be 7' fabric with a 1' plain wire extension (8' overall) without barbs, and angled toward the inside, to protect the MWD from injury in the event they attempt to scale the fence.

The Contractor shall reconfigure the existing break area and exercise yard as necessary to make room for HVAC equipment, re-route the existing walkway, and maintain current functionality for the dogs, their handlers, and equipment installation and maintenance. New sidewalks south of the building shall be 10' wide from the new service drive, and may be reduced to no less than 6' wide for continued circulation past the new mechanical yard, to the west side of the building.

The break area and exercise yard can be decreased to 10' X 20' each, and still meet the requirements of the regulation. All MWD chain link fencing shall be 7' fabric with a 1' plain wire extension (8' overall) without barbs, and angled toward the inside. MWD gates shall be at least 5' wide with the same vertical configuration as the fence. The Contactor shall install at least one 6' wide gate allowing access from the new service drive to the new HVAC equipment and south entrance of the building.

The Contractor shall install a 6’ tall HVAC Screen on the east, south, and west sides of the new HVAC equipment to minimize agitation of the MWD. This screen may consist of screened chain link fence, shall minimize the chance of injury to the MWD, be durable and able to withstand mechanical loading such as impact from an MWD, and resistant to inclement weather. The screen is not required to be completely opaque, and may allow air-flow.

The break area shall be directly accessible from a training yard, and the south entrance to the building. It shall have direct access to both areas and shall not require contact with the new mechanical equipment or passage through any other yard for access to the south entrance, training yard, or full circulation around the building. The break area fence and gates shall contain screening slats preventing view of the training yard, exercise yard, and new mechanical equipment.

The exercise yard shall have direct access to the south entrance of the building and shall not require contact with the new mechanical equipment or passage through any other yard for access to the south entrance, or full circulation around the building. The exercise yard does not require direct access to a training yard, but shall have direct access to building circulation, and the training yards shall maintain direct access to building circulation. The exercise yard fence and gates shall contain screening slats preventing view of the training yard, break area, and new mechanical equipment.

To accommodate the new mechanical equipment, the existing break area and exercise yard may be decreased in size to 10’ X 20’ each, and the existing third yard may be deleted, and still meet the AR 190-12 standard. The yards may also be relocated, or extended southward, however, it is desirable to keep the yards as large as possible, and maintain the third yard, with a gate, for separation and auxiliary use. The third yard is not required to be 10’ X 20’. It is also desirable to maintain the existing facility perimeter footprint if possible.

3.2.2.2 Utility Pads

An equipment pad shall be installed adjacent to the south face of the building to accommodate the new HVAC equipment. The DOR shall ensure this installation maintains existing positive drainage away from the building and yards, and design a drainage system which will prevent condensate from lingering on the pad or in the vicinity. The Contractor may tie into existing sanitary sewer but shall not devise or install a system which could introduce stormwater into the sanitary system. The Contractor may drain to grade, with the outlet beyond the perimeter fence.

The contractor shall not allow this drainage to run over sidewalks or the interior of the perimeter fence, and no fixtures shall be exposed at ground level, which could injure the MWD.

3.3 SITE FUNCTIONAL REQUIREMENTS

3.3.1 Parking

3.3.1.1 Privately Owned Vehicle (POV) Parking

There is no new POV parking required in the scope of the Project.

3.3.1.2 Access Drives

There is no new parking access drive construction required in the scope of the Project. An all-weather gravel service drive shall be constructed providing passage from the existing interior pavement to the new mechanical equipment.

3.3.1.3 Emergency Vehicle/Fire Access Lanes

There is no new fire access lane required in the scope of the Project.

3.3.2 Stormwater Management (SWM) Systems

There is no new construction of storm drainage required in the scope of the Project. The Contractor shall replace the existing downspouts and splash blocks to accommodate the new location of the exterior walls (see Architectural Section), and ensure existing positive drainage away from the building is maintained after this installation. The Contractor shall maintain current drainage patterns and ensure all new construction does not cause ponding or adverse runoff conditions.

3.3.3 Erosion and Sediment Control

The Project site limit is currently less than 1 acre, and considerably less than 1 acre of soil disturbance. If the Contractor's design should require more than 1 acre of soil disturbance, the Contractor shall prepare a site-specific Stormwater Pollution Prevention Plan (SWPPP) prior to any soil disturbance, in compliance with the Louisiana Department of Environmental Quality (LDEQ) general permit number LAR200000 Storm Water Discharges from Small Construction Activities (equal to or greater than 1 acre but less than 5 acres). If necessary the Contractor shall Implement and maintain the SWPPP, to include measures to prevent pollution of surface and ground waters, and monitoring activities to ensure compliance. The SWPPP must be made available upon request.

3.4 SITE ENGINEERING

3.4.1 Existing Topographical Conditions

The project site is located at building 4780, Fort Polk, LA. The existing topography of the site is existing construction with low to moderate relief.

3.4.2 Existing Geotechnical Conditions

The Contractor shall perform any geotechnical investigation needed to determine the site's subsurface conditions in support of their design. The Government will not supply any new investigation or report. See Appendix for an independent geotechnical report performed prior to the current construction.

3.4.3 Fire Flow Tests

Refer to Appendix for results of fire flow tests to use as basis of design for fire flow and domestic water supply requirements. The Designer of Record (DOR) must ensure new tests are conducted within six months of the final submittal, and replace the updated numbers for the basis of design.

3.4.4 Grading Requirements

Grading will be minimal, if any, and will consist of leveling the break areas southward to accommodate the new HVAC equipment. Borrow fill is not available on Fort Polk.

3.4.5 Pavement Requirements

The building currently has existing 10’ wide sidewalks against the west and east faces of the building, and the kennels open to these sidewalks for access and service. The finished construction shall leave these sidewalks extending to the outer limit they currently occupy at a lesser width, to accommodate the new walls on the kennels without extending the footprint of the existing sidewalks. The east and west sidewalks will be adjacent to closed walls after construction and will no longer require additional width for kennel service, but are desired to remain at the decreased width for continued access around the building. The Contractor shall ensure new sidewalk construction, and existing sidewalk modification, maintains existing positive drainage away from the building and yards, and does not cause ponding or adverse runoff conditions.

The Contractor shall install a 10’ wide, all weather gravel path to the south end of the building from the existing interior paving on the east side of the building, for installation and service of the new HVAC equipment (see Appendix C for drawings). The Contractor shall ensure this construction maintains existing positive drainage away from the building and yards, and does not cause ponding or adverse runoff conditions.

3.4.6 Base Utility Information

Utility information must be coordinated and planned with the SOs (UP Contractors) through the Installation’s Directorate of Public Works (DPW) and the COR for the respective SOs. Refer to Appendix C for existing utilities.

The DOR for utilities outside the point of demarcation shall be the UP Contrtactor. Work outside the point of demarcation shall be by the UP Contractor.

There is a point of demarcation on site for each utility.

The Contractor shall submit a Fort Polk AECOM dig permit to the KO a minimum of 14 days prior to any earth disturbance. The Contractor shall verify utility locations prior to digging and report any discrepancies between drawings and field conditions to the KO. It shall be the responsibility of the Contractor to verify no existing utility is damaged by construction, and the Contractor shall perform due diligence prior to excavation to verify

no existing utilities are present. Any digging within 5’ of an existing utility shall be done by hand.

3.4.6.1 Water Distribution Systems

Water Service is privatized by American Water Operations and Maintenance, Inc. (AW). Unless stated otherwise, when site demolition is required the Contractor shall be responsible for the demolition of existing water utilities. Cutting and capping, or new construction of water utilities shall be by the UP Contractor, AW.

Water utility work consists of installing a new fire hydrant proximate to the main gate, and connecting new fire sprinkler service to the building. No fire pump will be needed, based on preliminary inspection by the US Army Corps of Engineers (USACE) Fire Protection engineer. See Mechanical section for information on the existing water meter.

The Contractor shall install a new remote FDC.

3.4.6.2 Sanitary Sewer

Sanitary Sewer Service is privatized by American Water Operations and Maintenance, Inc. (AW). Unless stated otherwise, when site demolition is required, the Contractor shall be responsible for the demolition of existing sanitary sewer utilities. Cutting and capping, or new construction of sanitary sewer utilities shall be by the UP Contractor, AW.

No new sanitary sewer work is necessary for the civil scope of the Project except for the possibility of a drain for the new mechanical pad if the Government Contract DOR so chooses.

3.4.6.3 Natural Gas

There is no new natural gas construction required for the civil scope of the Project. The Contractor must repair and replace any existing utilities damaged during construction.

Natural Gas Service is owned by the Installation. Any necessary design and construction of the service lines or mains for natural gas must be done by the Contractor.

3.5 Landscaping

The Project will not require landscaping beyond replacement of disturbed turf with like material.

PART 4 ARCHITECTURAL

4.1 GENERAL REQUIREMENTS

This project is to bring the existing Military Working Dog (MWD) facility into compliance with current MWD Kennel Design Guide criteria. The facility is broken into two zones, the Kennels and Administration areas.

Work in the kennels include expanding and enclosing the existing open-air kennels, demolition, new roofing, sound attenuation, and area for fire risers.

In the existing administration facility zone, the bathroom (changing room) must be brought up to Architectural Barriers Act (ABA) requirements. Work also includes reconfiguring the interior of the facility to provide an exam and isolation area.

This effort includes two (2) bid options:

a. **BID OPTION 1:** Reconfiguration of administrative area to provide exam and isolation areas.

b. **BID OPTION 2**: ABA restroom upgrades

4.1.1 Functional and Operational Requirements

Use UFC 3-101-01 for planning and design requirements for this project. Design and provide Architecture requirements in accordance with this section and design standards listed in Part 2. Refer to the conceptual floor plans in Appendix B for the required functional spaces and required adjacencies. The conceptual floor plan drawings are provided “FOR INFORMATION ONLY”, to establish functional requirements. The Designer of Record (DOR) is responsible for the full design of the facility in compliance with the requirements stated in this RFP and code. Refer to Appendix F for As-built drawings.

4.1.2 Accessibility Requirements

This facility is intended for able-bodied soldiers/personnel to occupy and manage the Animal Building. The Architectural Barriers Act (ABA) requirements do not apply to the Animal Building facility, except as follows:

a. Provide ABA door access clearances in the building main entry and the public restroom used by visitors.

4.1.3 Minimum Acoustical Requirements

Comply with STC requirements of UFC 3-101-01.

4.2 DEMOLITION

This project includes the demolition of the following:

Kennels

a. Remove the wire fencing above the interior CMU wall.

Administration

b. Remove the existing sink, shower wall and shower along with the floor and wall finishes in the Changing Room. **(BID OPTION 2)**

c. Remove all existing gypsum board ceiling, ACT tiles and grid.

4.3 BUILDING SYSTEMS

Select building materials that are durable, easily maintainable, and that comply with the Installation Design Guide. Do not use exterior materials that require periodic repainting or similar refinishing process. Material exposed to weather must be factory pre-finished, integrally colored or provided with intrinsic weather finish. Building exterior design must incorporate accent materials, reveals and finish banding, so as not to create a flat or monolithic exterior aesthetic.

4.3.1 Exterior Wall Systems

The exterior wall must use durable materials for the exterior finish. Use of Exterior Insulation and Finish Systems (EIFS) is not permitted

To support the load of the new kennel exterior walls and roof addition to the new floor slab, beams to match the existing foundation must be added. This slab extension must include a trough and drain at each kennel and a continuous beam under the wall. The new wall must contain two (2) windows at each kennel. These windows must allow for air flow in the kennels so that the facility can maintain operability during power outages from extreme weather events. The outside of the new walls must match existing exterior metal panel walls, whereas the interior wall be epoxy painted CMU.

Exterior wall must include a continuous air and vapor barrier system that ties into the roof air and vapor barrier system. The use of painted interior walls is not an acceptable air barrier method.

The new fire riser walls must be insulated metal wall panels and insulated standing seam metal roof supported and framed by steel studs.

Drawings showing the proposed kennel modifications and fire riser area are provided in Appendix B.

4.3.2 Windows and Louvers

Windows must follow the requirements stated in ATP 3-39.34 Ch. 8 (Appendix H), "For indoor kennels, the exterior walls along the runs should have windows beginning at six feet above the finished floor to allow for natural light. Windows should be operable and hinged at the sill to tilt inward to prevent the escape of MWDs." In addition, windows must be insulated and tinted with thermally broken aluminum frames. Windows must have insect screens.

Louver and vents must incorporate bird screens and must be designed to exclude wind-driven rain. Louver finish must be factory applied.

4.3.3 Doors and Frames

Required Sound Transmission Class (STC) ratings must include the entire door and frame assembly.

4.3.3.1 Exterior Insulated Hollow Metal Doors & Frames

Provide insulated hollow metal exterior doors for entry to all spaces other than corridors, lobbies, or reception and waiting rooms. Doors must be continuously welded with mitered corners and seamless face joints and factory-primed. Use tamperproof screws for the attachment of all door accessories.

4.3.3.2 Interior Insulated Metal Doors

Provide an insulated metal door at the new exam and isolation room. Door must be constructed of the same material as exterior insulated hollow metal doors.

4.3.3.3 Interior Hollow Metal Frames

Provide frames with continuously welded mitered corners and seamless face joints; factory primed. Interior hollow metal frames must be constructed of the same material as exterior hollow metal frames.

4.3.4 Door Hardware

All hardware must conform to American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA) standards for Grade 1. All screw attached door hardware and accessories must be attached with tamperproof screws. Provide closers for all exterior doors, all doors opening to corridors, balconies and as required by code. Install push pad rim exit devices on all building egress doors. Plastic cores are unacceptable.

4.3.4.1 Finish Hardware (Master Keying System and Cores)

Coordinate all requirements for hardware keying with the Contracting Officer. Provide extension of the existing Installation keying system. Provide key-removable type cylinder cores with no less than seven pins. Disassembly of knob or lockset to remove core from lockset is not permitted. Locksets for mechanical, electrical and

communications rooms, and mechanical closets must be keyed to the existing Installation Master Keying System.

4.3.4.2 Auxiliary Hardware

Provide other hardware as necessary for a complete installation.

4.3.4.2.1 Doorstops

Provide wall or floor stops for all exterior doors that do not have overhead holder and stops. Door hinge stops are not acceptable.

4.3.4.2.2 Thresholds and Door Sweeps

Provide exterior doors with thresholds and aluminum and rubber door sweeps for a tight seal between door and threshold. Provide door sweep with an aluminum anodized finish, color must match door frame.

4.3.5 Thermal Requirements

Provide exterior wall assemblies, and roof and ceiling assemblies with thermal transmittance (U-values) required to comply with the proposed energy conservation requirements. Insulation must not be installed directly on top of suspended acoustical ceiling systems.

4.3.6 Mold and Mildew Mitigation

The Designer of Record must provide details in the design analysis and design showing steps taken to mitigate the potential growth of mold and mildew in the facility. Perform a wall and roof construction moisture analysis to verify appropriate thermal insulation and vapor permeability retardant assemblies to prevent condensation within the wall and or roof under all foreseeable climate conditions. All gypsum board must achieve a score of 10, the highest level of performance for mold resistance under the ASTM D 3273 test method. All gypsum board must be transported, handled, stored, and installed in accordance with the GYPSUM ASSOCIATION – Guidelines for Prevention of Mold Growth on Gypsum Board (GA-238-2025).

4.3.7 Roof Systems

Provide watertight roof systems compatible with the facility function, construction, and service conditions. Provide new pitched roof systems to match the existing pitch of 2-1/2” slope per foot. Structural standing seam metal roofs must comply with the requirements of ASTM E 1592. Roof system must be Underwriters Laboratory (UL 580 Class 90) rated or Factory Mutual Global (FM) I-90 rated and comply with applicable criteria for fire rating. Refer to UFC 3-110-03, UFC 3-101-01, and UFC 1-200-02 for additional roofing requirements.

The project has additions to an existing building, and the roof system of those additions must be visually similar to the roof of that existing building.

4.3.7.1 Trim and Flashing

Gutters, downspouts, gutter debris guards, and fascia must be factory pre-finished metal and must comply with SMACNA Architectural Sheet Metal Manual.

4.3.8 Wildlife Habitat Mitigation

The DOR must provide details in the design necessary to eliminate the habitation, congregating and nesting of wildlife at, on, and in the facility.

4.3.9 Termite Mitigation

Provide termite mitigation in accordance with Installation and local building code requirements.

4.4 INTERIOR DESIGN

Provide a Structural Interior Design (SID) package that complies with UFC 3-120-10. A Furniture, Fixtures and Equipment (FF&E) design and package is NOT required for this project. However, a Structural Interior Design (SID) is required, to provide basic planning for the anticipated FF&E requirements in conjunction with the functional layout of the required spaces in the building. The design and documentation of the SID will be funded as a part of the construction contract.

a. Interior Design services must be performed by a professional with professional credentials that comply with UFC 3-120-10. This professional must prepare the SID and participate in all design charrette and review meetings to develop the building design and floor plan.

b. Sufficiently schedule all SID submittals including but not limited to interior design programming documents and exterior & interior finish/color and material sample boards early enough to obtain the required government approvals and meeting all ordering and installation lead times to complete the project by the contract completion date.

4.4.1 Structural Interior Design (SID)

Completion of a SID involves the selection and specification of applied finishes for the building's interior features including, but not limited to, walls, floors, ceilings, trims, doors, windows, window treatments, built-in furnishings and installed equipment, lighting, and signage. The SID package will include furniture floor plans, finish schedules, finish samples and any supporting interior elevations, details or plans necessary to communicate the building finish design and build out. The SID will provide basic space planning for anticipated FF&E design requirements in conjunction with the functional layout of the building and design issues such as life safety, privacy, acoustics, lighting, ventilation, and accessibility. Fixed furnishings (items that are fixed to the structure) such as marker boards, bulletin boards, specialty equipment, lockers, blinds/shades are part of the SID.

4.4.1.1 Structural Interior Design (SID) Submittal

The SID submittal process must begin following the notice to proceed of the awarded contract. Refer to Section 01 33 00 SUBMITTAL PROCEDURES and 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) for SID submittal requirements.

4.5 FINISHES AND INTERIOR SPECIALITIES

Provide aesthetically pleasing, functional, durable finishes appropriate to the building's function. Consider acoustic properties of materials, as well as the durability and ease of maintenance during material selection. Maximize the use of sustainable materials and natural day lighting. All interior finishes must conform to the requirements of IBC, UFC 3-600-01, and NFPA 101. Where code requirements conflict, the most stringent code requirement must apply. Designers are not limited to the minimum finishes listed in this

section and are encouraged to offer higher quality finishes within the stated contract cost limitations.

4.5.1 Minimum Finish Requirements

4.5.1.1 Walls

At the kennel side, the 8” concrete masonry units will be installed up to the underside of structure on top of the existing CMU half wall for sound attenuation.

Unless noted otherwise, all the new interior wall partitions of the administration building must be 5/8-inch painted gypsum board in accordance with Gypsum Association GA 214, 216, and 224; ASTM C1396/C1396M. Use impact resistant gypsum board in accordance with Structural Failure Test; ASTM E695 and Indentation Test; ASTM D5420. Provide minimum 5/8-inch cement backer board as substrate for ceramic tile in accordance with Tile Council of North America (TCNA) Handbook and ANSI A108/A118. In humid areas or spaces provide 5/8-inch moisture resistant gypsum board ASTM C1396/C1396M. Provide ceramic tile wainscot in all toilet rooms to a minimum height of 4’-0”. Bracing must be provided for all wall mounted items.

Provide fixed interior wall partitions that extend from finish floor to underside of structure above.

All interior wall finish materials must match existing.

4.5.1.1.1 Paint

Refer to Appendix A for locations of walls to be painted. Paint new and previously painted interior surfaces including walls, doors, trim, ceilings as well as all interior exposed metal items, to include interior grilles, registers, diffusers, access panels, and panel boxes. All paints used must be listed on the “Approved Product List” of the Master Painters Institute (MPI). Follow application criteria recommended by MPI guide specifications for the substrate to be painted and the environmental conditions existing at the project site. Except factory pre-prime coat and two finish coats. Paints having a lead content over 0.06 percent by weight of nonvolatile content are unacceptable. Paints containing zinc-chromate, strontium-chromate, mercury, or mercury compounds, confirmed or suspected human carcinogens must not be used on this project.

a. Interior Surfaces - Interior paints and coating products must contain a maximum level of 150 grams per liter of VOCs for non-flat coatings and 50 grams per liter of VOCs for flat coatings. Provide an MPI Gloss Level 3 Finish (eggshell-like) with orange peel texture in all areas, except corridors. Provide an MPI Gloss Level 5 Finish (semi-gloss) in corridors.

4.5.1.1.2 Ceramic Tile

Provide tile wall systems as defined in the Tile Council of North America (TCNA) handbook for tile installation and materials. Wall finishes must conform to ANSI

A108/A118. Use epoxy grout for all tile finishes with grout color blended with color of field tiles. Tile must have a minimum breaking strength of 400 pounds.

4.5.1.1.3 Tub and Shower Surrounds

All tub and shower surrounds must be full wall height, 1/4-inch thick, cast 100 percent acrylic polymer, solid surface material. Surrounds must have antimicrobial and non-porous finish to prevent the growth of mold and mildew. Wall panels must be hard seamed to minimize areas where dirt can accumulate. Tub surrounds and shower surrounds must be a system of solid polymer components to include panels, corner trim, soap dishes, shampoo shelves and panel edge trim. Panels must be formed from manufacturer's standard 1/4-inch-thick sheet product. Panels must be full width and height with seams occurring only at the inside corners, and center of bathtub, and at inside corners of shower surround. Provide a 4’-0” high, 1/4-inch thick, cast 100 percent acrylic polymer, solid surface material wainscot around the rest of the bathrooms and restrooms. Soap dishes and shampoo shelves must be of a configuration, shape, and location as standard with the manufacturer's system. Shower stall design incorporating a shower pan, with self-leveling base system, raised dam, slip-resistant bottom, and integral tile flange is required.

4.5.1.2 Wall Base

Provide a wall base for transition between floor and wall finish. Provide rubber or vinyl cove base at exposed concrete or resilient tile floors, and a base to match the floor material at hard surface tile floors.

4.5.1.2.1 Resilient Wall Base

All rubber or vinyl base must be a minimum of 4 inch high and [1/8] inch thick as required unless otherwise noted. The wall base must include inside and outside corners and must conform to ASTM F1861, Type TS. Provide wall base in rolls and not 4-foot lengths.

4.5.1.2.2 Tile Wall Base

Coordinate tile base with ceramic wall and floor tile for color, material match and modularity. Include all pre-manufactured trim pieces, special shapes, caps, stops, and returns to provide a complete installation.

4.5.1.3 Ceilings

Select finished surface of ceiling tiles to address acoustical, maintenance, moisture, or impact resistance requirements of the room. Refer to Appendix A for location of ceilings to be removed and replaced. Primary ceiling finish must be Class A, 24 inch by 24 inches suspended acoustical panel ceiling system of minimum 5/8-inch thickness, except provide a painted suspended gypsum board ceiling in restrooms and showers. Provide white, fine fissured texture acoustical panels with beveled tegular edge. Provide acoustical panels that exceeds 75 % light reflectance. Acoustical panels must have a

minimum NRC of 0.50 and minimum CAC of 35-39. Provide a 9/16-inch suspension system. Provide white, hot-dipped galvanized steel, exposed tee grid with hold down clips for ceiling tiles. Exposed structural systems must be painted.

4.5.1.4 Floors

Primary floor finish must be sealed concrete, except ceramic tile must be provided in toilet rooms and shower area.

Refer to Appendix A for locations of Flooring to be removed and replaced.

4.5.1.4.1 Sealed Concrete Flooring

Exposed concrete floors must be coated with a sealer appropriate to the function of the space.

4.5.1.4.2 Porcelain/Ceramic Tile

Provide tile floor systems as defined in the Tile Council of North America (TCNA) handbook for tile installation and materials. Tile floor system must conform to ANSI A108/A118. Provide colored-body tiles with epoxy grout for all tile finishes. Use a sanitary cove base that complements the floor and wall tile and provide coordinating threshold for tile flooring. Use of accent bands is acceptable. Tile must have a minimum slip coefficient of 0.6 wet and 0.7 dry, with a minimum breaking strength of 400 pounds. Non-slip or textured surface is required for tile in areas where there is excessive water or grease and oils such as kitchens, dining facilities, shower rooms, toilets, and in industrial and maintenance facilities.

PART 5 MECHANICAL ENGINEERING

5.1 GENERAL

The mechanical and plumbing design requirements for this project must include the provisions for new HVAC additions, re-work of existing HVAC systems, demolition of restroom plumbing systems, and new work of restroom plumbing systems. The design must comply at minimum with the design requirements list in UFC 3-410-01 and UFC 3-420-01.

5.1.1 Allowable Deviations from Criteria

Deviations from technical requirements in the RFP will not be allowed.

5.1.2 Codes and Standards

Codes and standards required for design and construction are listed in Part 2. Specific prescriptive requirements and work from the codes and standards are provided in the technical requirements listed below to assist Contractor bidding and the RFP evaluator with determination of compliance with technical requirements. Listing of prescriptive requirements and work does not alleviate the Contractor from completely complying with code and standard requirements.

5.1.3 Antiterrorism Force Protection Requirements

Mechanical and plumbing design and construction must comply with equipment bracing, under building access, outside air intake, exterior equipment enclosures, and HVAC stop button requirements listed in UFC 4-010-01.

5.1.4 Existing Conditions and Utilities

Inspect and survey existing sites to verify all conditions and utilities prior to the completion of design. The Contractor must locate all utilities for coordination of design and construction. Refer to Part 3 for additional base utility information.

5.2 PLUMBING REQUIRMENTS

5.2.1 Demolition

Provide demolition of the plumbing systems and equipment items listed below and when removed the contractor is responsible for disposal and recycling of all materials in accordance with requirements from other sections of the contract.

a. **BID OPTION 2: Remove lavatory and shower and associated piping.**

b. Remove the building backflow preventer.

5.2.2 Design Requirements

Provide all planning, design, and construction to meet the requirements listed below for complete and fully functioning systems.

a. **BID OPTION 1:**

1. Install two (2) new floor drains in the exam/isolation room and necessary sanitary and vent routed to the nearest sanitary main.

b. **BID OPTION 2:**

1. Install new plumbing fixtures and accessories in restroom. (Lavatory and Shower)

2. Install new domestic cold and domestic hot water piping to new plumbing fixture locations in restroom.

3. Install new sanitary and vent piping to new plumbing fixture locations in restroom.

c. Install a new building backflow preventer with like kind.

5.2.2.1 Design Conditions

5.2.2.1.1 Outdoor Design Conditions

Use the extreme temperatures listed in the weather data requirements listed in the Mechanical requirements section for designing equipment and features of the plumbing system.

5.2.2.2 Allowable Piping Materials

a. Domestic Hot and Cold Water

(1) Above Ground: Copper tube type-L with sweat joints only (ASTM B88). Insulation minimum requirement: mineral fiber insulation (ASTM C547) for hot water lines, flexible elastomeric cellular insulation (ASTM C534) for cold water lines.

(2) Below Ground (Cold Water): Copper tube type-K with brazed joints only (ASTM B88).

b. Sanitary Waste

(1) Above Ground: Polyvinyl chloride (PVC) plastic, cast iron soil pipe and fittings (CISPI 301 and ASTM A888) pipe and fittings must be marked with CISPI trademark.

(2) Below Ground: Polyvinyl chloride (PVC) plastic, cast iron soil pipe and fittings hub and spigot (ASTM A74) with compression gaskets (pipe and fittings must be marked with the CISPI trademark).

c. Vent Piping

(1) Polyvinyl chloride (PVC) plastic, cast iron soil pipe and fittings (CISPI 301 and ASTM A888) (pipe and fittings must be marked with CISPI trademark), cast iron soil pipe and fittings hub and spigot (ASTM A74) with compression gaskets (pipe and fittings must be marked with the CISPI trademark).

d. Natural Gas Piping

(1) Above ground: Black Carbon steel (ASTM A53) with threaded fittings (ASME B16.3) or welded fittings (ASME B16.11 or B16.9)

(2) (Below ground: Contractor shall coordinate requirements with gas utility provider. If gas utility provider does not have requirements, then the contractor shall provide polyethylene pipe (ASTM D2513) with SDR-11 or lower value.

e. Hangers and Supports: Hangers and supports must be factory fabricated according to MSS SP-58. A licensed engineer must design all hanger and supports for the project. Lateral supports must be provided to prevent piping from swaying.

f. Strainers: Install strainers upstream of all control valves and backflow prevention devices. Install unions or flanges at all pieces of equipment.

g. Identification: All piping and plumbing systems must be clearly marked for identification with permanent color-coded markers. Identification scheme must be per ASME A 13.1. Pipes and ducts must be labeled at each valve, control device, tee and elbow and regular interval not greater than 20 feet between markers. Valves must be tagged, and a laminated valve schedule must be mounted in the mechanical room.

h. Fittings, Joints, Unions, Couplings, Connectors, Flanges, Gaskets, Valves, and Accessories: Requirements for minimum certifications, materials, and types allowed for the systems required must be compatible with the prescriptive materials requirements.

5.2.2.3 Piping Expansion Provisions

Plumbing design must include provisions for piping expansion and contraction of the water piping.

5.2.2.4 Prohibited Locations for Plumbing Piping

Plumbing piping of any type must not be provided over the following locations:

a. Electrical rooms

b. Server/communications/telephone rooms

c. Electrical equipment

d. File Storage rooms

5.2.2.5 Equipment Accessibility

Design and construction must provide access to all equipment, valves, and accessories. Equipment manufacturer's service clearance/accessibility requirement must be provided. Provide access doors or removable panels when equipment is concealed. Equipment or items requiring maintenance must not be located on the roof. Coordinate the locations of valves with DPW during design to minimize accessibility issues by maintenance personnel.

5.2.3 Prescriptive Plumbing Requirements

a. Flushing: Perform system flushing as stated in the International Plumbing Code. Perform the during flushing work with all plumbing fixtures operating. Perform work required in the after flushing requirements.

b. Disinfection: Perform system disinfection as stated in the International Plumbing Code.

c. All sanitary drainage, waste and vent piping shall be located either below floor slabs, above ceilings, in pipe chases, or in wall cavities as required. Complete accessibility shall be available to all cleanouts in the piping system.

5.2.4 Testing Requirements

The following testing is prescriptively required, and testing results shall be reported to the Government. Failed testing will be repeated at no additional cost to the Government.

a. Domestic Water Supply System:

(1) Water Supply Systems Test (IPC).

(2) Pressure testing of the most remote fixture.

(3) Operation of each fixture and valve.

(4) Temperature of each domestic hot-water supply.

(5) Operation of each vacuum breaker and backflow preventer.

b. Water and Vent System:

(1) Drainage and vent final test utilizing smoke testing (IPC).

(2) Operation of each drain by flooding with water.

c. Natural Gas System:

(1) Pressure testing of the system.

5.2.5 Fixture Flow Rate Requirements

Provide WaterSense labeled products with fixture flow rates below, meeting the International Green Construction Code (IGCC) low flow fixture requirements.

a. Water Closets: 1.28 GPF

b. Lavatory: 0.35 GPM

c. Shower: 1.5 GPM

5.2.6 Automatic Fixture Controls

Automatic sensor operated faucets and flush valves for lavatories, water closets, kitchen sinks, and service sinks are not required.

5.2.7 Prohibited Fixtures

a. No-Water Urinals

b. Flush Tank Water Closets

c. Non-Flushing Toilets

5.2.8 Domestic Water System Requirements

5.2.8.1 Design Requirements

a. All major plumbing equipment must be located in the mechanical room. No equipment or items requiring maintenance must be located in an attic space created by new pitched roofs. Attic space may be used for plumbing vent through roof piping.

b. All domestic hot, cold, and hot water return piping must be insulated with 1” thick “all service jacket” fiberglass insulation. All valves, tanks, pumps, and other similar devices contained in these systems must be insulated. Insulation must comply with NFPA 90A for UL flame spread and smoke developed ratings.

5.2.9 Prescriptive System Requirements

a. Waste and Vent

(1) Cleanouts: Cleanout locations must be designed for clearing lines without the removal of plumbing fixtures. Cleanout must be provided for clearing lines at each restroom. Floor drains must not be counted as cleanouts. A double cleanout or bi-directional cleanout must be provided at all locations where sanitary sewer lines exit the buildings.

(2) Vent Piping

(a) Vent piping must be in accordance with the IPC.
(b) Vent pipe extensions through the roof must be located to be a minimum 20 ft away from any intake openings on the building or on mechanical equipment.

(3) Sanitary Sewer Slope: Sanitary sewer lines must be sloped in accordance with the IPC.

(4) P-Traps: Provide liquid seal p-traps on all plumbing fixtures in accordance with the UFC 3-420-01.

(5) BID OPTION 1: Floor Drains: Provide floor drains for the following spaces:

(a) Exam/Isolation room.

b. Water Hammer Arrestors: Provide commercial type water hammer arrestors sized and located in accordance with PDI WH201 requirements and recommendations. Provide access doors or removable panels when water hammer arrestors are concealed. Water hammer arrestors must be provided at all new quick closing valves (solenoid valves, etc.) and must be installed according to the manufacturer's recommendations. Vertical, capped pipe columns are not permitted.

c. Pipe Connections: Fixture connections must be sized in accordance with the manufacturer’s instructions.

d. Domestic Water

(1) Domestic water systems must be sized for all fixtures to have the required pressure for operation and must be sized with water velocities below 8 feet per second for domestic cold water systems and below 4 feet per second for domestic hot water systems.

(2) Provide isolation valves on domestic hot and cold water piping where required. Provide access doors or removable panels when isolation valves are concealed.

(3) Isolation valves must be provided throughout the facility to enable servicing, expansion, renovation, or construction of any part of the facility without interruption of plumbing services to adjacent spaces. Provide valves at all branches from mains serving more than one fixture, and at all individual fixtures.

(4) Provide reduced pressure backflow preventers on the exterior of the building for domestic cold water piping entering the buildings in accordance with the IPC.

e. The domestic water systems must be installed to eliminate air to water shock waves within the piping system.

f. The water pressure and flow rate required to meet the 2.0 GPM for showers must be verified with calculations and submitted with the interim design submittal.

Design piping per IPC Table 604.3 and fixture output rate per requirements. Contractor must verify if adequate water pressure is available for the buildings. It is preferred that a domestic water pressurization system is not utilized, however, if adequate water pressure is not available, a domestic water pressurization system must be required.

5.3 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) REQUIRMENTS

5.3.1 Demolition

Provide demolition of the HVAC systems and equipment items listed below and when removed the contractor is responsible for disposal and recycling of all materials in accordance with requirements from other sections of the contract.

a. Remove the HVAC split system serving the telecommunication room.

b. Remove all existing exhaust fans and duct work in the kennel space.

c. Remove the BAS panel.

5.3.2 Design Requirements

Provide all planning, design, and construction to meet the requirements listed below for complete and fully functioning systems.

a. The newly walled in kennel space will be ventilated and conditioned using packaged air conditioning unit(s). Install all necessary systems, ductwork, and equipment to support the internal and external loading of the space. The HVAC unit must have MERV 13 filtration for both OA and RA to limit contaminates in the space. Kennel space shall have an air change rate of 6 air changes per hour (ACH).

b. All new and existing systems will require TAB work to be completed.

c. Install new like kind telecommunication HVAC system including accessories (condensate pump and pipe).

d. Install and connect new and existing equipment to a new BAS panel.

e. BID OPTION 1: Install new split system(s) that will serve only the exam/isolation room and must be 100% exhausted. The unit must be sized as a DOAS in accordance with UFC 3-410-01.

5.3.2.1 Outdoor Design Conditions

Outdoor design condition requirements must be obtained from UFC 3-400-02 and must be in accordance with UFC 3-410-01, Section 3-5.2 Outdoor Design Conditions.

5.3.2.2 Indoor Design Conditions

The indoor design conditions must be in accordance with UFC 3-410-01, Section 3-5.3 Indoor Design Conditions.

Size systems and equipment to maintain and control indoor design conditions for the following space types and rooms.

Kennel Space:

- Cooling: Space must be 78 Deg F.
- Heating: Space must be 68 Deg F.
- Humidity: Space must maintain a maximum 55% RH.

BID OPTION 1: Isolation/Exam Room:

- **Cooling: Space must be 78 Deg F.**
- **Heating: Space must be 68 Deg F.**
- **Humidity: Space must maintain a maximum 50% RH**

5.3.2.3 Hours of Operation

This facility is occupied 24/7. The Contractor must confirm this with the building occupants and set the system schedule to match normal working hours to include start up time.

5.3.2.4 Occupant Design Data

Occupant population values must be determined from ASHRAE 62.1 default values for the space type if occupancy for space is not provided in other discipline sections and/or appendices. Dog kennels must be ventilated at a rate of 10 CFM/ per MWD and 0.18 CFM/SQFT.

5.3.2.5 Personnel HVAC Load

Personnel heat and moisture rejection rates shall be determined from ASHRAE Handbook based on the activity level in the space.

5.3.2.6 Internal HVAC Load

Calculate HVAC loads in accordance with ASHRAE 183 procedures. Designer must investigate space loads for the building and determine loading based on occupant requirements. The daily use of water from hoses to clean kennels must be considered in the design.

5.3.2.7 Prescriptive Calculation Requirements

In additional to calculated required in Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD), The following prescriptive calculations are required to be included in the design analysis documentation, other calculations are required by the codes and criteria and the list below is not intended to be exhaustive:

a. Building Air Balance Calculation

b. ASHREA 62.1 Minimum Outdoor Air Calculation

c. Exhaust Air Calculation

d. Equipment Sizing Calculation and Psychrometric Analysis

5.3.3 Prescriptive Requirements

a. Duct liner is prohibited.

b. All diffusers must have balancing dampers.

c. Plenum returns are prohibited.

d. All diffusers located in the kennel space must be a material not prone to corrosion.

e. Refrigerants subject to phase out or phasedown are not permitted.

5.3.4 Pre-functional, Function, and Integrated Systems Testing (Mechanical)

Pre-functional testing, functional testing, and integrated systems testing requirement shall be coordinated and provided.

5.3.5 Direct Digital Control (DDC) System

Provide new DDC system for the HVAC and plumbing equipment for the building.

5.3.6 Building Automation System (BAS)

The Building Automation System (BAS) must be a single complete non-proprietary Direct Digital Control system for control of the heating, ventilating and air conditioning and other building systems. The BAS must be based on an Open implementation of BACnet technology using ASHRAE 135-2020 as the communications protocol and use only BACnet Standard Network Types for communication between DDC Hardware devices to allow multi-vendor interoperability. The building BAS must be capable of integration to existing base wide supervisory Utility Monitoring and Control System (UMCS). Monitoring and Control hardware and software requirements and UMCS integration requirements are listed below.

a. Hardware must be installed such that individual control equipment can be replaced by similar control equipment from other equipment manufacturers without loss of system functionality.

b. Provide necessary documentation, configuration information, configuration tools, application programs, and application source codes for programmable controllers, drivers, and other software licensed to the government or its agents to be able to perform repair, replacement, upgrades, and expansions of the system without dependence on the contractor.

c. Must conform to base wide addressing schemes, particularly with regard to device identification.

d. Provide BacNet objects, properties, services, and input/output points required to support the application and supervisory monitoring and control functionality in accordance with UFC 3-410-01 Heating, Ventilation, and Air Conditioning Systems Appendix D in addition but not limited to the following control points:

(1) System Safeties (All)

(2) System Scheduling

(3) Alarming

(4) Duty Cycling

(5) Demand Limiting

(6) Damper Controls

(7) Refrigerant Flow Status

(8) Resets

(9) Design Temperatures and Humidities

(10) Run Times

(11) Plant Controls

e. The list above is provisional and will depend on HVAC system for actual points being monitored and controlled and applicable software.

f. Provide any device capable of communicating over IEEE 802.3 (Ethernet) and Certificate of Networthiness (CoN) in accordance with Risk Management Framework (RMF) for this installation, regardless of whether the Ethernet connection is active at the time of installation. Do not use devices with Ethernet connection capability if not included in a RMF or without a CoN.

g. Gateways provided must control one and only one package unit.

5.3.6.1 UMCS Integration Requirements

a. The BAS must include integration to a base wide supervisory monitoring and control system (UMCS) and must comply with UFC 3-470-01.

b. Provide Building Point of Connection (BPOC) routers that are complaint with ASHRAE Standard 135. All IP network work including access to existing networks must be coordinated with the installation Network Enterprise Center (NEC).

c. Building DDC system must be integrated into the installation UMCS, contractor must bid project for integration of the building BACnet DDC system into existing UMCS front end. Contractor must include all hardware (including but not limited to controllers and routers), software, and programming to fully integrate building DDC system into existing installation UMCS. The final connection to the Fort Polk UMCS will be completed by the Government.

d. The kennel space HVAC system shall be shut off when a operable window in the space is opened for a period of time exceeding 5 minutes.

5.3.7 Testing, Adjusting, and Balancing

a. Testing, Adjusting and Balancing – Test and balance air systems, using a 3rd party firm certified for testing and balancing by the Associated Air Balance Council (AABC), National Environmental Balancing Bureau (NEBB), or the Testing Adjusting, and Balancing Bureau (TABB). The prime D/B Contractor must hire the TAB firm directly, not through a sub-D/B Contractor. 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 HVAC TAB unless otherwise specified herein. All recommendations and suggested practices contained in the TAB Standard must be considered mandatory. Use the provisions of the TAB Standard, including checklists, report forms, etc., as nearly 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 must be 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, requirements, etc., 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.

b. TAB can be performed only after each system is complete, including installation and operation of controls, and all aspects of the facility that have any bearing on the HVAC systems, including installation of ceilings, walls, windows, doors, and partitions, are complete. All items such as ductwork and piping parts, terminal connections, etc., necessary to perform TAB must be complete during the systems Readiness Check.

c. Perform duct air leakage test (DALT) in accordance with SMACNA 1972 CD HVAC Air Duct Leakage Test Manual, UFC 3-410-01.

5.4 BUILDING ACCEPTANCE TESTING

Building acceptance testing must be completed in accordance with IgCC.

5.5 ENERGY CONSERVATION

Plumbing system energy usage and equipment efficiencies must comply with UFC 1200-02.

5.5.1 Energy Star, FEMP, and NEMA Products

Provide Energy Star or FEMP designated products. 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).

PART 6.0 ELECTRICAL ENGINEERING

Provide a complete in place and functional electrical system that is fully coordinated with mechanical, plumbing and fire protection and with the building structure, enclosure, thermal envelope, and interior design. The electrical systems shall incorporate energy conservation and promote low maintenance. Provide an electrical system in accordance with codes and UFCs, as noted in PART 2.

6.1 ELECTRICAL SYSTEM

The new electrical system shall meet ASHRAE 90.1 standards to optimize energy savings. Engineering calculations shall be provided as required by UFC 3-501-01. The electrical system shall meet all electrical demand, building functions and codes requirements. All electrical equipment shall have capability to withstand available short circuit currents. The Contractor shall not only provide the calculations but also describe fully, written clearly, and lead the reviewer through the design by stating assumptions and design inputs; per UFC 3-501-01.

6.2 CONTRACTOR AND UTILITY COMPANY REQUIREMENTS

The Contractor shall provide all personnel, equipment, tools, materials, and other necessary items to perform all work and provide minor repairs as necessary. All work shall comply with the requirements of the current codes and criteria, as shown in PART 2. The Contractor shall be responsible for compliance with installation, local, state, and Federal environmental/occupational safety laws. The Contractor shall take all necessary actions to preclude any unsafe conditions which may be hazardous to the health and safety of personnel.

Primary electrical distribution system infrastructure is owned by the local privatized utility provider (PUP) Entergy Company.

The Point of Demarcation (POD) i.e. the point on the distribution system where ownership changes from the Grantee to the building owner, is the line side of the main panel in the structure. Entergy will make connections of the primary and secondary feeders to the utility transformer.

a. The Contractor shall coordinate scheduling with Entergy for all exterior electrical distribution works to include demolition, design, and installation. Contractor will be responsible for everything downstream of the main service entrance disconnect.

b. D/B Contractor shall coordinate with Entergy to arrange temporary power.

6.2.1 Primary Power

a. The nominal primary voltage is reported to be 13.8 kV. Entergy to provide power from the nearest and most feasible source which would be probably an overhead line. Coordination will be needed between Entergy and building owner to determine

pad-mounted transformer location that complies with the requirements of this RFP and Entergy specifications.

b. The electrical service will originate at the existing overhead power lines located approximately 200 feet from the facility. The primary riser will feed a pad-mounted transformer primary compartment. Entergy will handle the primary connection to the transformer and the secondary connections to the main distribution panelboard (MDP) per utility provider's design criteria. All work and equipment associated with the electrical primary and secondary services for this project will be provided by the local privatized utility provider, Entergy.

6.2.2 Secondary Power

a. Existing Conditions

The existing system is powered from 3-25 kVA (75 kVA) pole mounted transformers. The system voltage is 208/120V, 3 phase, 4 wire. The system consists of 3 panelboards:

(1) 400-amp panel MDP with a 250-amp main circuit breaker (Mech. Room 106).
(2) 125-amp Panel A (Mech. Room 106)
(3) 125-amp Panel B (Kennel 130).

Panels A and B are powered from the MDP. These three panels powered the fans, lights, telecommunications equipment, existing HVAC, and miscellaneous items. The Y2020 electrical billing records from the utility provider show the maximum peak load is in the winter months, around 30 amps, and minimum load is in late spring, around 27 amps. The Y2019 electrical billing records indicate that the maximum peak load was in the summer months is approximately 100 amps.

b. New Electric Distribution Service

(1) The new secondary underground utility service will extend from the new utility pad mount transformer to the Animal building mechanical room and terminate on the lugs in the new main distribution panel (MDP) , which will have an integral main service disconnect. The Main Distribution Panel (MDP) NEMA1 must be installed within a fully lockable enclosure. It shall be sized appropriate for the load and be rated for the full AIC interrupt rating as calculated by the sealing Engineer.

(2) The electrical distribution shall be 208/120-volt three-phase 4-wire. Select electrical characteristics of the power system to provide a safe, efficient, and economical distribution of power based upon the size and types of loads to be served. Use distribution and utilization voltages of the highest level that is practical for the load to be served.

(3) Provide a new smart meter, comparable to the existing, in the mechanical room. The smart meter will be connected to the building automation system

(BAS) for integration into the building unified monitoring and control system (UMCS).

<AM#0008> (4) ~~**BID OPTION 3**: Provide and install (1) Recreational Vehicle (RV) receptacle 50 Ampere in weatherproof enclosure NEMA 3R, in the paved area immediately adjacent to the building. RV plug must be provided per UFC 3-501-01, UFC 3-520-01 and NEC 551.71(C). A dedicated advanced metering infrastructure (AMI) is not required.~~ </AM#0008>

6.2.3 Emergency Power

Provide a portable generator connection box and manual transfer switch (MTS) to back-up the entire building.

6.2.4 Parking Lot Lighting

There is no requirement for site and parking lot lighting in this project.

6.3 ELECTRICAL DEMOLITION OF BUILDING

6.3.1 Exterior Demolition

a. The PUP will remove the (3) 25kVA pole mounting utility transformer and associated secondary feeder to the building.

b. All CCTV cameras in the kennel area to be removed and discarded. Demolish existing pathways.

6.3.2 Interior Demolition

Electrical system demolition within this project boundary includes but is not limited to:

a. Mechanical room: Service panel and associated feeders, Remove existing electrical main distribution panelboard, and associated feeders. Disconnect Panelboards A and B from the existing main distribution panel. Preserve Panels A and B for future use but discard existing feeders.

b. Kennel arena: Lighting fixtures, exit illuminated signs, branch circuits associated to electric ceiling fans, electric power equipment, and associated devices. All items removed shall be properly discarded.

c. Office area: Remove and discard Lighting fixtures in the following rooms: Kennel Master, Entry Vestibule, Handlers/Conf, Dog Food, Trainers, COMM, Changing Room and Exam Groom area. Associated branch circuits must be preserved for new lighting fixtures.

d. Preserve cable tray above ceiling from the communication room throughout the office area.

e. Fire alarm devices attached to the ceiling must be removed, preserved, and reinstalled at the same location in the new ceiling. All devices must be tested before removal and tested again after installation in the new ceiling.

6.4 NEW INTERIOR ELECTRICAL REQUIREMENTS

Conform to NFPA 101 regarding penetrations in walls and partitions due to outlet boxes, normal construction ratings or fire ratings. At all penetrations of fire-rated walls or partitions, seal the opening to maintain the fire rating of the wall or partition. Provide Fire-rating in accordance with ASTM E814 or UL1479 that matches the rating of the wall or partition being penetrated. Provide commercially manufactured products manufactured and tested specifically for condition of application.

6.4.1 Lighting

Lighting levels, light power densities, controls and color shall comply with the recommendations of the Illumination Engineering Society of North America (IESNA), ASHRAE 90.1, UFC 3-530-01 and UFC 3-520-01; where conflicts exist, except where specified, UFC 3-520-01 shall govern, unless stated in the table below. Lighting technology shall be LED. All lamps shall have a Correlated Color Temperature (CCT) not greater than 4100k, a Color Rendering Index of (CRI) not less than 80, minimum efficacy of 100 lumens per watt, a lumen depreciation greater than or equal to L70 at 40,000 hours and five-year unconditional warranty for material.

a. Kennel Area

(1) Design a fully functioning interior lighting system and provide lighting controls as required by UFC 3-530-01.

(2) Provide full cut-off type, wall-mounted, lighting fixtures around the building perimeter. These fixtures shall be controlled by a lighting contactor with a photocell and timeclock should respond to the architectural character of the facility.

(3) Provide emergency lighting required by NFPA 101. Incorporate the emergency lighting into normally provided lighting fixtures by utilizing local battery backup.

(4) Provide LED illuminated exit signs with battery backup in accordance with NFPA 101.

b. Office Area

(1) Design a fully functioning interior lighting system and provide lighting controls as required by UFC 3-530-01.

(2) Provide general-purpose lighting in the following rooms: Kennel Master, Entry Vestibule, Handlers/Conf, Dog Food, Trainers, COMM, Changing Room and Exam Groom area.

6.4.2 Interior Power

Interior power shall be provided for all installed equipment requiring power to include panelboards, convenience receptacles; special receptacles, dedicated receptacles; government furnished, government installed equipment; support of equipment specified in other sections of the RFP; including all HVAC and plumbing equipment.

a. Provide a main panel with main circuit breaker to sustain the existing and new load. The circuit breakers shall be rated 20A minimum. Each panel shall have 15% spare capacity in the number of circuit breakers, as well as 15% spare kVA capacity for future use. Both the panels and the feeders shall be sized for the spare kVA loads.

   (1) The main distribution panel (MDP) shall be 208Y/120-volt, rated with one main circuit breaker with appropriate circuit breakers for branch circuits. MDP shall be copper bus, all circuits breakers must be bolt on type.

   (2) Provide a minimum of 15% spare load and 15% spare circuit breaker at the MDP.

   (3) Wiring shall be installed per UFC unless exemptions are secured. Wiring system shall consist of insulated single conductors installed in raceways. Do not use cable assemblies, types of AC, MC, or MI, in lieu of conduit and wire. Conduit shall be labeled with source and destination. Empty conduit shall have nylon pull rope installed in it with 10 feet of pull rope coiled at each end. An equipment grounding conductor (EGC) shall be installed with all feeders and with all branch circuit wiring to receptacle and equipment. Conductors shall be a minimum size of 12 AWG.

   (4) Provide surge protection device (SPD) adjacent to the MDP that meets the requirements of IEEE C62.42 and is UL listed in accordance with the testing requirements of UL 1449, 3rd edition. Do not install SPD inside a panelboard. Transient voltage surge protection device shall be placed in enclosed boxes that are separate from panel boards.

b. New electrical distribution system shall meet the requirements per NFPA 70, NFPA 70E, and UFC 3-520-01. Contractor cannot install either Metal-Clad cable (MC) or Romex in this project.

c. Lighting, receptacle, specialized equipment, and mechanical/plumbing equipment shall be on their own branch circuits. Contractor shall not mix these types of loads onto any of the branch circuits.

d. Outlet Requirements:

(1) Provide GFCI protected, weather-resistant (WR), “in-use” type receptacle cover, a 120-volt, 20A receptacle within 10-feet of every mechanical equipment, located exterior of building.

(2) GFCI Receptacles shall not be wired in series with any other receptacles.

(3) Provide special purpose receptacles if needed to meet other requirements of this RFP.

6.5 FIRE ALARM AND MASS NOTIFICATION SYSTEM

The existing fire alarm and mass notification system shall be replaced with a new addressable system. The existing conduit shall be preserved for reuse. The transmitter shall be a Monaco radio transmitter that is compatible with the installation.

a. The fire alarm and mass notification system (FA/MNS) must meet current codes.

(1) Provide speakers in the office area with field-adjustable tap settings to allow for adjustment after installation to meet the audibility and intelligibility requirements in UFC 4-021-01.

(2) Provide Class A wiring methods. Wiring methods shall comply with NFPA 72.

(3) Kennel Area: Provide text sign in accordance with NFPA 72. Speakers and strobes are not required.

(4) Smoke alarm and detector shall be installed in accordance with NFPA 150 and NFPA 72.

(5) Provide carbon monoxide sensing where required in accordance with NFPA72.

b. The fire alarm (FA/MNS) drawings shall be reviewed and stamped by a registered professional Fire Protection Engineer (FPE). This FPE shall also be considered the qualified fire protection engineer (QFPE) for this project as defined by UFC 3-600-01 and shall be responsible for performing all work described in that UFC for

QFPEs. NICET qualifications cannot be substituted for a professional engineering license in evaluating an individual for this role.

c. The QFPE shall be regularly and directly involved in all aspects of design, installation, acceptance testing and commissioning of fire protection, fire alarm, mass notification and life safety systems and features. The QFPE shall personally conduct and/or witness all acceptance testing for fire protection, fire alarm, mass notification and life safety systems and features.

d. The QFPE shall be responsible for reviewing designs and submittals for all trades to ensure that fire protection and life safety features are maintained throughout the contract. This includes, but is not limited to, developing, and submitting the review letter at the 100% design described in UFC 3-600-01 section 1-7.3.

e. The QFPE shall provide a design analysis in accordance with UFC 3-600-01.

f. Additional requirements relevant to life safety and fire protection (including site utilities, fire alarm, mass notification, concept drawings and life safety analysis) are included in other sections of this RFP.

g. All technicians involved in the installation of FA/MNS shall be NICET Level II certified and supervised by a NICET Level III or IV technician. All fire alarm and mass notification submittals shall be reviewed by the US Army Corps of Engineers as a Government Approval submittal before installation.

h. Conform to NFPA 101 regarding penetrations in walls and partitions due to outlet boxes, normal construction ratings or fire ratings. At all penetrations of fire-rated walls or partitions, seal the opening to maintain the fire rating of the wall or partition. Provide Fire-rating in accordance with ASTM E814 or L1479 that matches the rating of the wall or partition being penetrated. Provide commercially manufactured products manufactured and tested specifically for condition of application.

6.6 TELECOMMUNICATION REQUIREMENTS

a. All building telecommunications cabling systems (BCS) shall conform to TIA 568, TIA 569, TIA 607, UFC 3-580-01. If any conflicts arise between UFC or TIA's, then UFC will take precedence.

b. Pre-Demolition Testing: All existing fiber optic and copper cabling shall be tested at the plywood backboard located inside the building prior to the start of demolition activities to verify current operational status. Results shall be documented and submitted for Government review. Upon completion of installation and termination, all new cabling shall be tested for continuity, performance, and compliance with

applicable standards. Testing shall be performed in accordance with UFGS Section 33 82 00.

c. Provide the backbone for a fully functional closed-circuit television system including connection points for cameras, equipment, and wiring. This includes Category 6 cable, conduit, junction boxes, and wiring raceways.

(5) Design and provide communication horizontal pathway in conduit, category 6 cable, for new CCTV cameras in kennel area.

(6) Design and provide IDS/ACS infrastructure only to new doors in the kennel area. Infrastructure includes conduits and J-box.

(7) Conform to NFPA 101 regarding penetrations in walls and partitions due to outlet boxes, normal construction ratings or fire ratings. At all penetrations of fire-rated walls or partitions, seal the opening to maintain the fire rating of the wall or partition. Provide F-rating in accordance with ASTM E814 or UL1479 that matches the rating of the wall or partition being penetrated.

6.7 LIGHTNING PROTECTION SYSTEM

Lightning protection system (LPS) is required. LPS shall be designed and constructed per codes and criteria called in this RFP. A UL Lightning Protection Inspection Master Label Certificate shall be provided by a commercial third-party inspection entity, as noted in UFC 3-575-01.

PART 7 STRUCTURAL ENGINEERING

The Military Working Dog (MWD) facility in Fort Polk is a single-story steel frame structure. The renovation of this building is to bring the existing into compliance with current MWD Kennel Design Guide Criteria. The renovation must be in accordance with UFC 3-301-01 and shall comply with the Department of Defense (DoD) Antiterrorism/ force protection requirements per UFC 4-010-01.

7.1 STRUCTURAL BACKGROUND

Structural systems are based upon as-built drawings provided in Appendix F – As-Built Drawings. The write up and as-built drawings provided may not be complete or fully represent the existing structural systems. Contractor will verify existing structural system and dimensions prior to the renovation work.

a. The existing building's structural system consists of a Pre-Engineered Metal Building Frame supporting gravity loads. The lateral load resisting system was selected per PEMB manufacturer and is unidentified on As-Builts drawings and the contractor shall verify the type and location on site. The building is founded on a 5" thick reinforced ribbed mat slab with thickened pads at columns' locations.

7.2 GENERAL STRUCTURAL REQUIREMENTS

Must comply with UFC 1-200-01. Note: this UFC references all other DoD UFCs and building codes. The Contractor's Structural Engineer-of-Record (SER) shall ensure all designs meets all applicable design codes and criteria, including UFCs.

The building and all design loads must be safely supported during demolition and construction.

7.2.1 Existing Construction

If the strength of a structural element is required for design and cannot be determined by the as-built drawings, Contractor shall run tests to determine the strength of the material.

Any alteration or repair work in conjunction with an addition must meet the requirements for alterations and repair projects.

Seismic Design Category is B; therefore, this project is exempt from Seismic Evaluation and Mitigation per ICSSC RP 10, Standards of Seismic Safety for Existing Federally Owned and Leased Buildings as modified by UFC 3-301-01.

7.2.1.1 Inspection

Inspect the superstructure and all readily accessible portions of the substructure of the building. Perform inspection after finishes are removed to allow access to the structural elements.

Provide an inspection report including items that require repair to maintain structural capacity to support all required loads. The report must also include options for repair of all degraded structural elements.

Provide a copy of the inspection report in the appendix of the design analysis required per Section “01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD)”.

7.2.1.2 Repair

Conduct a joint inspection with the Government to identify structural items requiring repair. Coordinate repair requirements through the Contracting Officer.

7.2.1.3 Alterations

If alterations or replacements increase dead, live, or snow loads by more than 5 percent, a structural analysis of all framing and foundation elements affected by the load increase must be performed.

Where the alteration or replacement increases design lateral loads, results in a prohibited structural irregularity as defined in ASCE 7 or decreases the capacity of any existing lateral load-carrying element, the lateral structure system of the altered building must meet the requirements of IBC Section 1609 and 1613 unless applicable codes provide an exception.

Exceptions:

a. Any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is not more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the International Building Code. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.
b. Increase in the demand-capacity ratio is due entirely to the addition of rooftop-supported mechanical equipment individually having an operating weight less than 400 pounds and where the total additional weight of all rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, “roof” shall mean the roof level above a particular story.

Provide an analysis report including items that require strengthening to support increased loads. The report must also include options for strengthening affected elements. Provide a copy of the analysis report in the appendix of the design analysis required per Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD).

For bidding purposes, assume no structural strengthening is required unless otherwise listed in the Design-Build Request for Proposal.

7.2.1.4 Additions

Unless required otherwise herein, select an economical structural system based upon addition size, projected load requirements, local availability of materials and labor, and compatibility with existing structure. Base the structural design on site specific geotechnical information and anticipated loads for the building type and geographical location. Design structural elements to preclude damage to finishes, partitions, and other non-structural elements Limit deflections of structural members to the allowable of the applicable material standard.

Any existing gravity load-carrying structural element for which an addition and related alterations causes an increase in the design dead, live, or snow load of more than 5 percent must be analyzed and replaced or altered as required to carry the gravity loads required by IBC for new structures.

If the addition is structurally separate from the existing building, the existing lateral structural elements must be permitted to remain unaltered unless repair or an alteration is made to affect the lateral structural element. If the addition is not structurally separate from the existing building, the existing building and the addition acting as a single structure must be shown to meet the requirements of IBC Sections 1609 and 1613 using full seismic forces unless applicable codes provide an exception.

Design the reinforced concrete foundation based on the anticipated structural loads and as per requirements of the Contractor’s geotechnical report.

If ribbed mat slab construction is utilized, slabs will be reinforced concrete with a minimum thickness of 5 inches. Provide a vapor barrier system with a minimum 10 mil polyethylene membrane under all building slabs-on-grade.

7.3 DESIGN LOADS

7.3.1 Risk Category

Risk Category for the building is II.

7.3.2 Dead Loads

Dead loads include weight of the structure plus finishes and any ancillary items. Include appropriate allowances for mechanical, electrical, plumbing, and other miscellaneous collateral dead loading.

7.3.3 Live Loads

Design live loads per the IBC, ASCE 7, and UFC 3-301-01.

7.3.4 Snow Loads

Refer to UFC 3-301-01 and ASCE 7.

Ground Snow is 10 psf.

For existing buildings where an alteration or addition changes the potential snow drift effects on adjacent buildings, notify the government. Include this in the design analysis discussion.

7.3.5 Wind Loads

Refer to UFC 3-301-01 and ASCE 7.

Basic Wind Speed, V, for Fort Polk, Louisiana, Risk Category II, is 108 mph minimum.

Wind Exposure Category is C unless the SER can satisfactorily justify another Exposure Category.

7.3.6 Earthquake Loading

Refer to UFC 3-301-01, IBC, and ASCE 7.

Spectral Response Accelerations are S_S = 12 % g minimum and S_1 = 6.5% g minimum.

Site Class is “D” per Appendix A “Geotechnical Report”.

7.3.7 Antiterrorism / Force Protection (ATFP) Requirements

ATFP measures must comply with UFC 4-010-01.

7.4 EXISTING BUILDING REQUIREMENTS

7.4.1 MWD Kennel Building

7.4.1.1 Demolition

a. **(BID OPTION 1)** The Contractor must verify locations of existing mat foundation ribs prior to slab demolition. Remove existing concrete slab as necessary to accomplish plumbing work associated with this Option. Do not

demolish or damage mat foundation ribs. Where new plumbing is required to horizontally penetrate existing foundation ribs, the Contractor must locate, design, and construct plumbing sleeves to minimize structural effects of penetrations and to avoid existing rib reinforcement.

b. **(BID OPTION 2)** The Contractor must verify locations of existing mat foundation ribs prior to slab demolition. Remove existing concrete slab as necessary to accomplish plumbing work associated with this Option. Do not demolish or damage mat foundation ribs. Where new plumbing is required to horizontally penetrate existing foundation ribs, the Contractor must locate, design, and construct plumbing sleeves to minimize structural effects of penetrations and to avoid existing rib reinforcement.

7.4.1.2 Addition

a. Design and construct an addition for the MWD building. The addition must be compatible with the intended functions and components that allow for future flexibility and reconfigurations of the interior space and meets the requirements of existing building for UFC and Building codes.

b. Design and provide a permanent fall protection system on top of new addition. Fall protection system must be in-compliance with OSHA standards.

c. **(BID OPTION 1)** Design and construct slab repairs where demolition of the existing slab was necessary to accommodate plumbing retrofits. Thickness of replacement slab areas must not be less than the thickness of the existing slab.

d. **(BID OPTION 2)** Design and construct slab repairs where demolition of the existing slab was necessary to accommodate plumbing retrofits. Thickness of replacement slab areas must not be less than the thickness of the existing slab.

7.5 DESIGN ANALYSIS

Provide structural calculations and analysis of the building including existing areas, modified and un-modified, and new areas. Calculations and analysis must include all gravity and lateral loads. All calculations must be performed by a registered engineer and checked by an engineer other than the design engineer. With the calculations, provide a write-up explaining the analysis and assumptions made.

Computer generated calculations must identify the program name, source, and version. Provide input data including assumptions, nodes and elements with label, geometry, material properties, boundary conditions, node restraints/releases, loads and load combinations, etc. Include schematic views of the input data and mesh if finite element analysis (FEA) is used. Provide post-processing results including an output list of the code checks and reactions plus schematic views showing stresses, deflections, shears,

and moments with the values. Include validation of the model and results. If requested by the government, analysis model source files must be provided for review at no additional cost.

PART 8 FIRE PROTECTION AND LIFE SAFETY

8.1 GENERAL

In order to meet new codes and standards, a fully functional fire suppression system will be installed throughout the facility.

8.1.1 Demolition

See architecture and electrical sections for demolition items.

8.1.2 Special requirements

8.1.2.1 The DFPE has approved Restricted Audible Mode Operation (RAMO) mode for the portions of this facility housing animals. RAMO mode will be required to comply with the most recent edition of NFPA 72. Visual notification appliances that strobe will not be allowed inside the animal housing area due to concerns of the animals' welfare. Bright flashing lights can cause anxiety, panic and seizures. LED textual signs for mass notification will be still required to be hung IAW ECB 2018-17 but will be required to be scrolling type LED signs instead of flashing signs.

8.2 DESIGN

Design fire protection systems in compliance with UFC 1-200-01, UFC 3-600-01 and all referenced standards, including NFPA codes, ICC codes, TIA standards, and Ft. Polk design requirements.

Ensure all design work is performed by a licensed fire protection engineer (FPE) who will serve as the qualified fire protection engineer (QFPE) as defined by UFC 3-600-01. NICET qualifications are not a substitute for a professional engineering license in evaluating an individual for this role. The QFPE must:

a. Be directly involved in all aspects of design, installation, acceptance testing and commissioning of fire protection, fire alarm, mass notification and life safety systems and features.

b. Personally conduct and/or witness all acceptance testing for fire protection, fire alarm, mass notification and life safety systems and features.

c. Review and approve designs and submittals for all trades to ensure that fire protection and life safety features are maintained throughout the contract prior to being submitted to the Government. This includes, but is not limited to, developing and submitting the review letter at the 100 percent design as described in UFC 3-600-01, Section 1-7.3.

d. Provide a complete design analysis in accordance with UFC 3-600-01.

8.3 LIFE SAFETY AND MEANS OF EGRESS

Provide life safety plans for all buildings in accordance with NFPA 101 and UFC 3-600-01 signed and sealed by the QFPE. All egress distances must comply with the occupancy requirements for sprinklered buildings. The QFPE must:

a. Coordinate with all trades to ensure design, installation and testing of all means of egress and life safety components and systems in accordance with UFC 3-600-01 and NFPA 101.

b. Review door hardware schedules prior to submittal to the Government to ensure proper rating of doors, frames and hardware in accordance with UFC 3-600-01 and NFPA 80.

8.4 FIRE PROTECTION SPRINKLERS

This facility requires a fully automatic fire sprinkler system as defined by UFC 3-600-01.

8.4.1 Fire Sprinkler Design

All buildings that meet the minimum requirements for fire sprinklers must be fully sprinklered in accordance with UFC 3-600-01.

a. Calculate minimum pressure and flow requirements to the base of the riser based on hydrant flow tests conducted by the QFPE. The BOR data must be on the nameplate for each sprinkler riser.

b. All buildings must have calculated fire flows for firefighting purposes performed in accordance with UFC 3-600-01 and NFPA 1. Provide the results in writing to the Government and the privatized utility provider prior to the initial design submittal.

c. The Privatized Utility Provider is responsible for providing water supplies for firefighting purposes and automatic sprinklers up to the point of demarcation defined in the Installations agreement with the privatized utility. This includes the design and installation of fire hydrants for the facility.

d. The QFPE is responsible for the site fire protection design providing adequate water supplies for firefighting purposes and automatic sprinklers. The QFPE must personally oversee all hydrant flow tests and ensure compliance with the requirements of NFPA 291. All water flow tests must be coordinated with the privatized utility provider.

e. Based on preliminary water flow tests, a fire pump is not anticipated for this building. However, it is the responsibility of the QFPE to make the final determination if a fire pump is needed for their design solution.

f. The QFPE is responsible for all aspects of the building fire sprinkler design, including but not limited to determining hazard classifications, design density,

water supply, locations of equipment and coordination with all trades and disciplines. QFPE must coordinate with all trades specifically to address sprinkler coverage and use of the attic spaces.

g. Provide concealed, quick response heads with cover plates factory painted to match ceiling color throughout all restored areas and provide standard quick response heads with cages where less than 8’ AFF or subject to mechanical damage in Mechanical, Electrical, Communications areas. Provide dry sidewall or pendant sprinklers fed off the wet-pipe sprinkler system for exterior where coverage is required by UFC 3-600-01 and NFPA 13.

h. All fire protection and life safety related requirements referenced in this RFP or UFC 3-600-01 that differ from NFPA standards must take precedence over NFPA requirements and must be explicitly included in the specifications and other design contract documents by the QFPE.

i. Shop drawings must be prepared by an individual with either a FPE license or a NICET Level III or IV certification in automatic sprinkler systems. The QFPE must review and approve all shop drawings prior to submitting to the Government.

j. A 12-psi minimum pressure drop for reduced pressure back flow preventers must be used. An 8-psi minimum pressure drop is allowed for double check backflow preventers.

8.4.2 Fire Sprinkler Construction

The QFPE must oversee the installation of the fire sprinkler system. This includes regular, on-site inspections and reports of progress, deficiencies, corrections, preparatory meetings, and acceptance testing.

Seal or repair all penetrations in walls and partitions as part of the installation of new sprinkler systems. The repairs or sealing performed in fire rated or smoke rated assemblies must be completed in strict accordance with UL or FM Global listed fire stop listings or an Engineering Judgment provided by the DOR and signed by the QFPE.

a. Paint new exposed sprinkler piping red and label in accordance with UFC 3-600-01. Inaccessible or concealed above ceiling sprinkler piping do not need to be painted but must be labeled.

b. No CPVC or non-metallic sprinkler systems shall be installed.

c. Flex hose is not permitted.

d. Specifications and shop drawings must require sprinkler heads to be installed center of tile in both directions and in straight lines down hallways and large spaces.

e. All drains (Main, Secondary, and Auxiliary) must include valves and piping to allow draining by maintenance personnel from walking surfaces at the facility. All drains must discharge to the exterior of the facility and must not interfere with exiting or exit discharge paths.

f. All sprinklers in mechanical rooms and other finished spaces less than 7 feet above finished floor or where subject to possible mechanical damage or where can be grabbed from the floor level must be provided with guards.

g. All sprinklers in telecommunication rooms and networking rooms must be provided with guards and troughs under exposed piping in accordance with applicable TIA standards.

h. Galvanized sprinkler piping is not allowed within the interior of the building.

i. Piping 2-inch and less must be minimum schedule 40. Piping larger than 2-inches must be minimum schedule 10. Piping less than Schedule 40 is not permitted to be threaded.

j. Extended coverage sprinklers are not permitted except for the protection of loading docks.

8.5 FIRE EXTINGUISHERS, CABINETS AND MOUNTING BRACKETS

Provide provisions for fire extinguishers including mounting hooks, cabinets, and signage in accordance with NFPA 10 and UFC 3-600-01, as required by NFPA 101. Fire extinguishers will be provided as Government-furnished equipment. Coordination of fire extinguisher layout must be coordinated with the architect; however, the design is the responsibility of the QFPE.

Use Semi-recessed cabinets in new construction and finished areas and surface-mounted in existing wall construction, and unfinished areas (such as mechanical rooms, electrical rooms, fire sprinkler riser rooms, etc.). Ensure fire extinguisher cabinets have a clear viewing window in the door and are not lockable.

PART 9 SUSTAINABILITY

9.1 SUSTAINABLE DESIGN

This project has been designed in accordance with UFC 1-200-02 “High Performance and Sustainable Building Requirements”.

This project does not exceed the minimum thresholds set by UFC 1-200-02 to require Sustainability Reporting and Third-Party Certification. LEED Silver Certification will not be required or pursued for this project.

PART 10 CYBERSECURITY

10.1 CYBERSECURITY

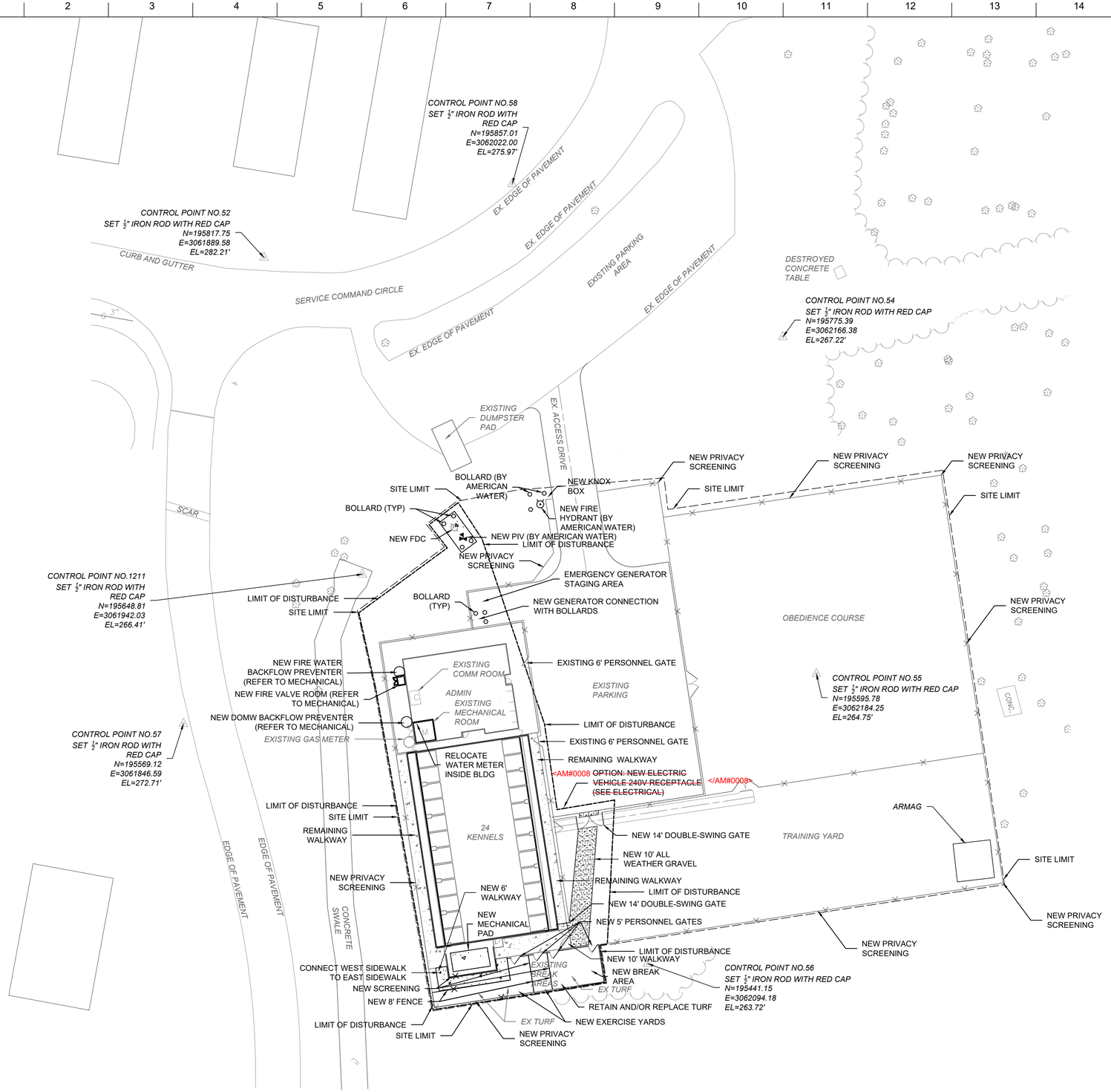
The AE is responsible for determining all related control systems/components that will need to be designed in accordance with Unified Facility Criteria (UFC) 4-010-06 Cybersecurity of Facility Related Control Systems (latest edition as of contract award.) These systems/components may include but are not limited to: Utility Monitoring Control Systems, Energy Management Control Systems, and AVB control systems. Reference the Department of Defense Platform IT Master list . A complete list of systems or components will be submitted to the Government as required in the design phases for approval.

After determining the facility related system items involved, the AE is responsible for all designer submissions, deliverables and functions as outlined in UFC 4-010-06. The AE is also responsible for delivery of an edited Unified Facility Guide Specification (UFGS) 25 05 11 Cybersecurity for Facility Related Control Systems for each facility control system or combined like control components identified and planned to be installed. All design submittals and deliverables will be reviewed and approved by the Government at all stages of the design.

The AE shall interface with the installation, via the COR, to define if systems beyond the Fire Life Safety exist that will connect to installation real property or real property equipment, Confidentiality Integrity Availability Impact Ratings, transport cybersecurity requirements (existing enclave, standalone, etc.), existing authorization status and type of authorization (DIACAP, RMF), local installation cyber-requirements and other items that may impact the security posture of the system or scope and level of work required.

The AE is responsible for submission of documentation required in accordance with the UFC 4-010-06.

Construction submittals will be submitted and approved per the approved Unified Facility Guide Specifications for each platform.



PLAN NORTH

0 30' 60'

A1 CONCEPT SITE PLAN
SCALE: 1" = 30'

CONCEPT, NOT FOR CONSTRUCTION

CONCEPT SITE PLAN

FOR INFORMATION ONLY

FORT POLK, LOUISIANA
L CAP 102842 ANIMAL BUILDING P2: 521232
FY26

CONCEPT, NOT FOR CONSTRUCTION