



**US Army Corps
of Engineers®**

Fort Worth District

Design-Build Request For Proposal

ANIMAL BUILDING
Fort Polk LA

Seed project
for Solicitation No: W9126G24R0124

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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 facility.	1	JA	\$ ***	\$ _____
0006	OPTION 2: All work to construct an ADA compliant restroom in the MWD facility.	1	JA	\$ ***	\$ _____
TOTAL OPTION 02:					\$ _____
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	\$ ***	\$ _____

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: 00 10 00

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Fort Polk, LA

CONTRACT LINE ITEM SCHEDULE

NOTES:

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

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

NOTE NO. 3. CONDITIONS GOVERNING EVALUATION OF OFFERS AND AWARD OF CONTRACTS:
The Government may require the delivery of the numbered line items, identified in the schedule as option items, in the quantity and at the price stated in the schedule. Subject to the availability of funds, the Contracting Officer may exercise the option by written notice to the Contractor within the time indicated in Section 00 72 00, FAR 52.217-7.

NOTE NO. 4. CLIN 0001, 0003, 0005, and 0007 design includes costs for efforts related to the design of the complex, as well as any related costs for the contractor's coordination during design (see UAI 5152.236-9011 Design-Build Construction Contracts). In general, include engineering and designer costs for efforts after the Design Complete or Issued for Construction documents in the construction CLIN's.

NOTE NO. 5. The Offeror must propose a total integrated contract duration in number of calendar days after the Notice to Proceed (NTP) is received by the Contractor. The total number of proposed calendar days for contract completion, must not exceed the number of calendar days specified in Section 01 00 00.00 44 ***Design and Construction Schedule***. The proposed duration shall become the required contract duration. Day number 1 is the day after the date of receipt of the NTP.

NOTE NO. 6. Responders are advised that this requirement may be delayed, cancelled, or revised at any time during the solicitation, selection, evaluation, negotiation and/or final award process based on decisions related to DOD changes in force structure and disposition of the Armed Forces.

NOTE NO. 7. The Army will procure this facility in accordance with the provisions set forth in this Request for Proposals (RFP). When awarded, it will be a "Firm Fixed Price Contract."

NOTE NO. 8. Any proposal that is materially unbalanced may be rejected. An unbalanced proposal is one that is based on prices significantly less than the cost for some work and prices that are significantly overstated for other work and can also exist where only overpricing or underpricing exists.

NOTE NO. 9. ABBREVIATIONS

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

- a. JA (Job)

NOTE NO. 10. Profit will not be paid on bonds or insurance.

END OF CLIN SCHEDULE

SECTION 00 21 30

SITE VISITS

PART 1 GENERAL

1.1 SITE VISITS

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

(b) Site visit information: See Section 00 21 00 INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS for site visit dates, time, location, and point of contact information. The site visit will be:

Date: May 12, 2026

Time: 1:00 PM

Location: Fort Polk USACE Resident Office
2315 Service Command Loop, Bldg. 4740
Fort Polk, LA 7145

POC: Penelope Smith

EMAIL: penelope.z.smith@usace.army.mil

Office Phone: 726-780-1173

Offerors and subcontractors wishing to participate must submit a complete listing of all personnel to attend the preproposal site visit, via encrypted email, to the referenced Base Access POC, a minimum of two (2) business days prior to the preproposal site visit. The Government will conduct a project briefing at the specified location prior to visiting the project site. Offerors may be limited to three (3) attendees for the briefing due to conference room limitations. There is no limit to the number of attendees for the site visit following the briefing. Include the following information for all attendees and subcontractors. The first name on the list will indicate: TEAM CHIEF (POC), and this individual will be responsible for all other personnel:

Offeror's and offeror's subcontractor personnel full names
Driver's License, including the State Issued
Firm

NOTE: The U.S. Government will conduct a check of every individual submitted; this will include checking all law enforcement databases. Persons with questionable criminal records or outstanding warrants will be denied access to the installation.

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

Animal Building

FJ25AB

of the contract.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

SECTION 00 72 00 - GENERAL CONDITIONS

The following have been added by reference:

52.222-9 (Dev)	Apprentices and Trainees (DEVIATION 2025-O0003)	MAR 2025
52.222-90	Addressing DEI Discrimination by Federal Contractors (DEVIATION 2026-O0038)	
52.244-6 (Dev)	Subcontracts for Commercial Products and Commercial OCT 2025 Services (DEVIATION 2025-O0003)	

The following have been added by full text:

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

The Contractor shall be required to (a) commence work under this contract within **AS INDICATED IN SECTION 01 00 00.00 44** calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than **AS INDICATED IN SECTION 01 00 00.00 44** * The time stated for completion shall include final cleanup of the premises.

*The Contracting Officer shall specify either a number of days after the date the contractor receives the notice to proceed, or a calendar date.

(End of clause)

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

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of **AS INDICATED IN SECTION 01 00 00.00 44** for each calendar day of delay until the work is completed or accepted.

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

(End of clause)

252.204-7021 CONTRACTOR COMPLIANCE WITH THE CYBERSECURITY MATURITY MODEL CERTIFICATION LEVEL REQUIREMENTS (NOV 2025)

(a) Definitions. As used in this clause-

Controlled unclassified information means information the Government creates or possesses, or information an entity creates or possesses for or on behalf of the Government, that a law, regulation, or Governmentwide policy requires or permits an agency to handle using safeguarding or dissemination controls (32 CFR 2002.4(h)). Current means--

(1) With regard to Conditional Cybersecurity Maturity Model Certification (CMMC) Status--

(i) Not older than 180 days for Conditional Level 2 (Self) assessments and Conditional Level 2 (certified third-party assessment organization (C3PAO)) assessments, with--

(A) No changes in compliance with the requirements at 32 CFR part 170 since the Conditional CMMC Status date (see 32 CFR 170.16 and 170.17); and

(B) A corresponding affirmation of continuous compliance by an affirming official (see 32 CFR 170.4); and

(ii) Not older than 180 days for Conditional Level 3 (Defense Industrial Base Cybersecurity Assessment Center (DIBCAC)) assessments, with--

(A) No changes in compliance with the requirements at 32 CFR part 170 since the Conditional CMMC Status date (see 32 CFR 170.18); and

(B) A corresponding affirmation of continuous compliance by an affirming official;

(2) With regard to Final CMMC Status--

(i) Not older than 1 year for Final Level 1 (Self), with--

(A) No changes in compliance with the requirements at 32 CFR part 170 since the Final CMMC Status date (see 32 CFR 170.15); and

(B) A corresponding affirmation of continuous compliance, not older than 1 year, by an affirming official;

(ii) Not older than 3 years for Final Level 2 (Self) assessments and Final Level 2 (C3PAO) assessments, with--(A) No changes in compliance with the requirements at 32 CFR part 170 since the Final CMMC Status date (see 32 CFR 170.16

and 170.17); and

(B) A corresponding affirmation of continuous compliance, not older than 1 year, by an affirming official; and

(iii) Not older than 3 years for Final Level 3 (DIBCAC) assessments, with--

(A) No changes in compliance with the requirements at 32 CFR part 170 since the Final CMMC Status date (see 32 CFR 170.18); and

(B) A corresponding affirmation of continuous compliance, not older than 1 year, by an affirming official; and (3) With regard to affirmation of continuous compliance (32 CFR 170.22), not older than 1 year with no changes in compliance with the requirements at 32 CFR part 170.

Cybersecurity Maturity Model Certification (CMMC) status means the result of meeting or exceeding the minimum required score for the corresponding assessment. The potential statuses are as follows:

- (1) Final Level 1 (Self).
- (2) Conditional Level 2 (Self).
- (3) Final Level 2 (Self).
- (4) Conditional Level 2 (C3PAO).
- (5) Final Level 2 (C3PAO).
- (6) Conditional Level 3 (DIBCAC).
- (7) Final Level 3 (DIBCAC).

Cybersecurity Maturity Model Certification unique identifier (CMMC UID) means 10 alpha-numeric characters assigned to each CMMC assessment and reflected in the Supplier Performance Risk System (SPRS) for each contractor information system.

Federal contract information (FCI) means information, not intended for public release, that is provided by or generated for the Government under a contract to develop or deliver a product or service to the Government. It does not include information provided by the Government to the public, such as on public websites, or simple transactional information, such as information necessary to process payments.

Plan of action and milestones means a document that identifies tasks to be accomplished. It details resources required to accomplish the elements of the plan, any milestones in meeting the tasks, and scheduled completion dates for the milestones, as defined in National Institute of Standards and Technology Special Publication 800-115 (32 CFR 170.21).

- (b) Framework. The Cybersecurity Maturity Model Certification (CMMC) is a framework for assessing a contractor's compliance with applicable information security protections (see 32 CFR part 170).
- (c) Duplication. The CMMC assessments will not duplicate efforts from any other comparable DoD assessment, except for rare circumstances when a reassessment may be necessary, for example, when there are indications of issues with cybersecurity and/or compliance with CMMC requirements.
- (d) Requirements. The Contractor shall--
 - (1)(i) Have and maintain for the duration of the contract a current CMMC status at the following CMMC level, or higher: CMMC Level 1 (Self); for all information systems used in performance of the contract, task order, or delivery order that process, store, or transmit FCI or CUI; and
 - (ii) Consult 32 CFR 170.23 related to the flow down of the CMMC requirements, and flow down the correct CMMC level to subcontracts and other contractual instruments;
 - (2) Only process, store, or transmit FCI or CUI on contractor information systems that have a CMMC status at the CMMC level required in paragraph (d)(1) of this clause, or higher;
 - (3) Complete on an annual basis, and maintain as current, an affirmation, by the affirming official (see 32 CFR 170.4), of continuous compliance with the requirements associated with the CMMC level required in paragraph (d)(1) of this clause in the Supplier Performance Risk System (SPRS) (<https://picc.eb.mil>) for each CMMC UID applicable to each of the contractor information systems that process, store, or transmit FCI or CUI and that are used in performance of the contract;
 - (4) Ensure all subcontractors and suppliers complete prior to subcontract award, and maintain on an annual basis, an affirmation, by the affirming official (see 32 CFR 170.4), of continuous compliance with the requirements associated with the CMMC level required for the subcontract or other contractual instrument for each of the subcontractor information systems that process, store, or transmit FCI or CUI and that are used in performance of the subcontract; and
 - (5) If the Contractor has a CMMC Status of Conditional, successfully close out a valid plan of action and milestones (32 CFR 170.21) to achieve a CMMC Status of Final.
- (e) Reporting. The Contractor shall--
 - (1) Submit to the Contracting Officer--
 - (i) The CMMC UID(s) issued by SPRS for contractor information systems that will process, store, or transmit FCI or CUI during performance of the contract; and
 - (ii) Any changes in the CMMC UIDs generated in SPRS throughout the life of the contract, task order, or delivery order, if applicable;
 - (2) Enter into SPRS the results of a current self-assessment for each CMMC UID, not covered by a C3PAO

assessment or DIBCAC assessment, applicable to each of the contractor information systems that process, store, or transmit FCI or CUI and that are used in performance of the contract; and

(3) Complete in SPRS on an annual basis and maintain as current an affirmation of continuous compliance by the affirming official (see 32 CFR 170.4) for each self-assessment, C3PAO assessment, or DIBCAC assessment required under the contract in SPRS. (f) Subcontracts. The Contractor shall--

(1) Insert the substance of this clause, including this paragraph

(f) and excluding paragraph (e)(1), in subcontracts and other contractual instruments, including those for the acquisition of commercial products and commercial services, excluding commercially available off-the-shelf items, if the subcontract or other contractual instrument will contain a requirement to process, store, or transmit FCI or CUI; and

(2) Prior to awarding a subcontract or other contractual instrument, ensure that the subcontractor has a current CMMC certificate or current CMMC status at the CMMC level that is appropriate for the information that is being flowed down to the subcontractor based on the requirements at 32 CFR 170.23. (End of clause)

The following have been modified:

52.216-32 TASK-ORDER AND DELIVERY-ORDER OMBUDSMAN (SEPT 2019)

(a) In accordance with 41 U.S.C. 4106(g), the Agency has designated the following task-order and delivery-order Ombudsman for this contract. The Ombudsman must review complaints from the Contractor concerning all task order and delivery-order actions for this contract and ensure the Contractor is afforded a fair opportunity for consideration in the award of orders, consistent with the procedures in the contract.

USACE-ContractingOmbudsman@usace.army.mil <https://www.usace.army.mil/Business-With-Us/>

(b) Consulting an ombudsman does not alter or postpone the timeline for any other process (e.g., protests).

(c) Before consulting with the Ombudsman, the Contractor is encouraged to first address complaints with the Contracting Officer for resolution. When requested by the Contractor, the Ombudsman may keep the identity of the concerned party or entity confidential, unless prohibited by law or agency procedure.

(End of clause)

52.217-7 OPTION FOR INCREASED QUANTITY--SEPARATELY PRICED LINE ITEM (MAR 1989)

In Phase Two, the Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor at the time of base award. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree. (End of clause)

The following have been deleted:

52.222-9	Apprentices and Trainees	JUL 2005
52.222-21	Prohibition Of Segregated Facilities	APR 2015
52.222-23	Notice of Requirement for Affirmative Action to Ensure FEB 1999 Equal Employment Opportunity for Construction	
52.222-26	Equal Opportunity	SEP 2016
52.222-27	Affirmative Action Compliance Requirements for Construction	APR 2015
52.244-6	Subcontracts for Commercial Products and Commercial	DEC 2023

SECTION 00 73 00 - SUPPLEMENTARY CONDITIONS

The following have been added by full text:

ORDERING INFORMATION

ORDERING INFORMATION

All MATOC Contractors will be given a fair opportunity to offer on Task Orders over the micro-purchase threshold (FAR 16.505(b)(1)) unless one of the FAR 16.505(b)(2)(i) exceptions apply.

If the order does not exceed the simplified acquisition threshold, the Contracting Officer need not contact each of the awardees before selecting an order awardee if the Contracting Officer has information available to ensure that each awardee is provided a fair opportunity to be considered for each order. **The competition requirements in FAR Part 6 and the policies in FAR Subpart 15.3 do not apply to the ordering process.** The task order solicitation and award process should be as streamlined as practical to reduce solicitation and proposal preparation costs and time for both the Government and Contractor, respectively.

When a task order solicitation is issued, the Government intends to select the most advantageous and responsible offer considering price and other factors. The Contracting Officer, in making decisions for award of any individual Task Order, may consider factors such as past performance on earlier Task Orders under the MATOC, quality, timeliness, small business participation, and other factors that the Contracting Officer determines to be relevant in awarding a particular Task Order.

The Government will identify the evaluation criteria in the task order solicitation. Evaluation factors may include, but are not limited to, price, approach, past performance, small business participation, and other factors relevant to the specific requirements of the task order. Price will always be a consideration. The task order Contracting Officer may use FAR Part 14 Sealed Bidding or FAR Subpart 15.3 Source Selection methods for task order competition, but it is not required. Comparative evaluations are also authorized. The task order contracting office is authorized to create task order competition criteria. All factors and methodologies will be stated in the task order solicitation. The relative importance, if any, of each evaluation factor will also be specified.

The Contractor is not authorized to commence performance prior to issuance of the task order without the PCO's written permission.

All task orders under this contract will be placed using the procedures under FAR 16.505 - Ordering. Specific requirements will be provided in the task order solicitation package.

1. When the Government has a new requirement, a solicitation will be issued. The solicitation shall include information concerning the statement of work (SOW), guide specifications, drawings, attachments, site visit information, and any other requirements for submissions (e.g., proposal requirements, price schedule, etc.). The solicitation will also include any applicable clauses required for execution of the project.
2. *The solicitation will clearly identify any Cybersecurity Maturity Model Certification (CMMC) requirements, if applicable, and specify the required CMMC level. The solicitation will also identify whether the submission of proposals containing Controlled Unclassified Information (CUI) is required and provide instructions for handling CUI in accordance with DFARS clause 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting.*
3. The contractor's attendance at site visits is strongly encouraged for preparation of competitive offers and to understand the total results desired by the Government. While failure to attend site visits shall not be used as an excuse for omission or miscalculation in offers, attendance may be considered a positive factor in evaluation. The Contractor will not be reimbursed for attendance during negotiation, site visits, proposal preparation or other pre-Task Order award costs. The Contracting Officer reserves the right to make attendance at site visits mandatory for specific Task Orders.
4. The contractor shall respond within the number of calendar days or by the specific date stated in the solicitation by submitting a proposal to the Contracting Officer in accordance with requirements stated in the solicitation. Due date extensions may be granted if requested in writing and approved by the Contracting Officer. The Government reserves the right to cancel the solicitation and pursue alternative methods to complete the work. Proposals that do not comply with the requirements outlined in the solicitation may not be evaluated. Failure to propose on a requirement may negatively affect a Contractor's performance evaluation for this contract. The Contractor shall provide a proposal including supporting documentation which verifies compliance with applicable rates contained in the base contract.
5. Award factors will vary depending on the unique requirements for each Task Order; however, pricing will always be a consideration. The Contracting Officer, in making decisions in award of any individual Task Order, may consider additional factors such as past performance on earlier Task Orders under this IDIQ, quality, timeliness, or other factors that the Contracting Officer determines to be relevant in awarding a particular Task Order. These factors will be clearly articulated in the solicitation.
6. Depending upon the requirements of each task order, the Contractor will provide one of the following in response to the solicitation: (a) lump sum price, (b) a price for each line item in the Schedule (when optional items are used), or (c) technical proposal in one package and the price proposal in a separate package as directed in the solicitation.
7. Task Order proposals will either be accepted as is or negotiated to the mutual agreement of both the Government and the Contractor. Whenever possible, award

will be made without discussions/interchanges. If discussions are held, MATOC Contractor(s) may be requested to provide a final proposal revision. Task Order award will be made based on the basis for award as described in the solicitation. Upon conclusion of satisfactory negotiations (if required), a Task Order will be issued by the Contracting Officer reflecting the negotiated order price and any other negotiated terms and conditions. In any instance where there is failure to reach agreement, the Government reserves the right to withdraw the project and have it completed by other means.

8. Task Orders will be issued on DD Form 1155. Orders may be placed via mail, telephone, facsimile, or electronic commerce. The Task Order becomes binding when the Contracting Officer signs the Order.
9. Contract actions are reported in the Federal Procurement Data System (FPDS) within 3 days after execution of the action. Each task order is reported as an order under the correct contract number. FPDS-NG system will propagate the NAICS code field in the task order action report with the NAICS code reported for the base contract. FPDS-NG is currently designed to accept only one NAICS code to be associated with a procurement action.

EMERGENCY ORDERING PROCEDURES

Only a warranted Contracting Officer is authorized to initiate emergency ordering procedures.

1. On rare occasions when the development of problems which may jeopardize the operation of the areas arise, contractor(s) will be required to respond to the Government needs within four (4) hours following telephone notification which may be made at any time in any twenty-four-hour period.
2. Contractors shall, within five (5) hours (unless the Contracting Officer determines that additional time is required) following such notification, provide a proposal. The time of commencement and completion shall be as specified by the Government.
3. Proposals will be reviewed for completeness and any concerns or inconsistencies will be negotiated.
4. The awardee may be verbally advised to proceed by a Contracting Officer. Notification may come verbally or via email.
5. Written confirmation by the Government and the requirements will be prepared and submitted the following workday, if practicable.
6. A task order will then be issued.

COST AND PRICE ANALYSES

Task orders will be issued under this contract on a firm-fixed price (FFP) basis. The Contractor shall not exceed the any rate ceilings. Task order solicitations will disclose the

estimated magnitude of construction, and any applicable statutory limitations associated with the project.

All task order solicitations will include price as a factor. The Government may use the proposal analysis techniques listed in FAR Subpart 15.4 or sealed bidding to establish the reasonableness of the proposal or bid. **As part of its evaluation, the Government will verify, when included, the NTE fully-loaded hourly labor rates negotiated in the base contract.** The Government will also verify the arithmetic accuracy of the proposed costs and prices. The Contracting Officer must determine fair and reasonable pricing for in accordance with the applicable regulation (FAR 14.408-2, 15.4, or 16.2) before the task order may be awarded.

CLAUSES INCORPORATED AT THE TASK ORDER LEVEL

While this base contract includes a comprehensive set of clauses, additional clauses or modifications to existing clauses may be applicable at the task order level based on the specific requirements of the individual task order. These additional or modified clauses will be included in the task order solicitation.

Furthermore, any clauses in this base contract that are marked "To Be Determined" (TBD) or otherwise incomplete will be fully defined and provided in the applicable task order solicitation. Contractors are responsible for reviewing all clauses provided in the solicitation to ensure a complete understanding of the requirements and obligations associated with each task order.

The Government may establish options on individual task orders issued hereunder. The price proposal shall consist of the offeror's price to accomplish the basic requirements as defined in the Statement of Work (SOW) or Performance Work Statement (PWS). The price proposal shall also include the offeror's price to accomplish each option as applicable. Options will be evaluated IAW 52.217-5, Evaluation of Options (Jul 1990) incorporated by reference into the award and by the evaluation criteria stated in the Request for Price Proposal. Evaluation of options will not obligate the Government to exercise the option(s). In the event an option is exercised, a contract modification will be issued to the task order.

TASK ORDER RESPONSIBILITY DETERMINATION

Before awarding any task order under this MATOC, the Contracting Officer will determine the prospective awardee to be responsible in accordance with FAR Subpart 9.1. This includes, but is not limited to, ensuring the contractor has the necessary financial resources, technical capabilities, and integrity to perform the work as required. An affirmative determination of responsibility is required before a task order can be awarded. The Government reserves the right to request additional information from the contractor to support the responsibility determination. Failure to provide requested information may result in the contractor being deemed non-responsible and ineligible for award of the task order.

SYNOPSIS

Task orders will not be synopsized in the System for Award Management (SAM.gov) in accordance with FAR 5.202, unless required. Specifically, individual task orders under a multiple-award contract are not required to be synopsized when:

- The order is placed under a multiple-award contract that was previously synopsisized in accordance with FAR Subpart 5.2 in the Governmentwide database.
- The order is for supplies or services that were described in the basic contract synopsis, using the appropriate North American Industry Classification System (NAICS) code.
- The order does not exceed the simplified acquisition threshold.

PROTESTING TASK ORDERS

Contractors may protest task order awards under this MATOC in accordance with DFARS 233.104 and applicable procedures. For task orders with a value exceeding \$35 million, contractors may submit a protest to the Government Accountability Office (GAO). For task orders with a value between \$25,000 and \$35 million, contractors may submit a protest to the ombudsman. Protests must be submitted in a timely manner, as specified in the applicable regulations. All protests shall be submitted in writing and shall state the grounds for the protest, including specific facts and supporting documentation. All agency protest will be processed in accordance with USACE policy.

• Task Order Ombudsman

The head of the agency has designated a task-order contract and delivery-order contract ombudsman. The ombudsman must review complaints from contractors and ensure they are afforded a fair opportunity to be considered, consistent with the procedures in the contract. The ombudsman is a senior agency official who is independent of the contracting officer and may be the agency's competition advocate. USACE-ContractingOmbudsman@usace.army.mil <https://www.usace.army.mil/Business-With-Us/>

GOVERNMENT CONTRACT ADMINISTRATION AND OVERSIGHT

Contracting Officer retains ultimate authority for all contractual matters.

- **Contracting Officer's Representative (COR):** A COR may be appointed by the Contracting Officer in writing to perform specific technical or administrative functions related to the contract or task orders. The COR's duties and limitations of authority will be clearly defined in a written appointment letter. Contractors shall not perform work outside the scope of the contract or task order without a properly authorized modification issued by the Contracting Officer.
- **Administrative Contracting Officer (ACO):** An ACO may be assigned to perform administrative functions related to the contract. The ACO's responsibilities will be defined in their appointment letter.

The appointment of a COR or ACO does not change the authority of the Contracting Officer. All contractual modifications, changes to the scope of work, or other contractual actions must be authorized in writing by the Contracting Officer. Contractors shall communicate directly with the Contracting Officer on all contractual matters, unless otherwise directed in writing by the Contracting Officer.

SOLE SOURCE

When it is necessary to negotiate with one offeror on a sole-source basis, the

Contractor shall provide a detailed cost/price proposal to establish a fair and reasonable price which shall be negotiated and incorporated into the Task Order. The justification for sole source will be documented in accordance with FAR and supplements as applicable.

For orders based on an exception to fair opportunity, in accordance with FAR 16.505(b)(2)(ii)(D) the Contracting Officer must post the required public notice within 14 days after placing the order. If exception an urgency exemption is used, the public notice must be posted within 30 days after placing the order. This posting requirement includes posting the justification approved for the exception at the Government point of entry: <https://sam.gov/content/home>. Note the actions excluded from this notice requirement are

- Disclosures that would compromise national security ;
- Socioeconomic set-asides under OASIS SB authorized by FAR 16.505(b)(2)(i)(F) and;
- Sole Source 8(a) orders up to the thresholds detailed in the Sole Source (Direct) 8(a)Orders section

CMMC AND CUI

Specific CMMC and CUI requirements, if any, will be detailed in each individual task order solicitation. The task order solicitation will identify the required CMMC level, if applicable, and specify the handling procedures for CUI. This may include, but is not limited to:

- **CMMC Level:** The task order solicitation will specify the required CMMC level, if any, for the performance of the work. Contractors must possess the specified CMMC level prior to the award of a task order requiring CMMC certification.
- **CUI Handling Procedures:** If the task order involves handling CUI, the solicitation will detail the specific requirements for safeguarding CUI in accordance with DFARS Clause 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting, and other applicable regulations. This may include requirements for specific security controls, incident reporting procedures, and other safeguards.

Contractors are responsible for carefully reviewing the task order solicitation and ensuring they can meet all specified CMMC or CUI requirements before submitting a proposal. Failure to meet these requirements may result in the proposal being deemed non-compliant and ineligible for award.

If it is anticipated that access to Controlled Unclassified Information (CUI) will be necessary, the task order solicitation will clearly identify CMMC or CUI requirements. Certain identified documents are not suitable for public release and will be made available upon request by requesting access through SAM. Only offerors who have complied with Defense Federal Acquisition Regulation Supplement (DFARS) clause 252.204-7012 will be given access. DFARS 252.204-7012 requires all Department of Defense contractors and subcontractors to implement cybersecurity requirements in National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171, Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations. Your NIST assessment results must be documented in the Supplier Performance Risk System (SPRS) at <https://www.sprs.csd.disa.mil/>. Offerors may go to the SPRS homepage for further information.

If the task order requires access to files, contractors may be required send an access request to the Points of Contact identified in the task order solicitation before receiving the full solicitation package.

To the maximum extent practicable, the Contractor shall identify and mark CUI and/or proprietary and restricted data. Any data that contains CUI shall be submitted to the contracting office via encrypted email. If encrypted email is not available, the vendor shall submit an email request to the Government POC to send the vendor a Department of Defense (DoD) Secure Access File Exchange (SAFE) "Drop Off" link <https://safe.apps.mil/>. Proposals may not be submitted to the Government via DoD Safe site; however, the Government may provide information to the offerors using the site. DoD SAFE does NOT guarantee a delivery time. Please allow up to 4 hours for delivery. The Government will reject, and thus will not consider, any files containing CUI or proprietary/restricted markings that are received without proper encryption.

REPORTING PAST PERFORMANCE

At completion of order performance, and annually for orders with a period of performance exceeding one year, the Contracting Officer is required by FAR 42.15 to complete a past performance record for the prime contractor at the thresholds identified at FAR 42.1205(c) or in Agency Guidance. Customer agencies participating in the Integrated Acquisition Environment have established a Government-wide past performance platform relying upon CPARS as a feeder system to SAM.

TASK ORDER CLOSEOUT

The Contracting Officer is strongly encouraged to utilize quick closeout procedures in FAR 42.708, when applicable, because it is a faster method of completing the closeout process. It allows the PCO to negotiate the indirect rates rather than waiting for the cognizant Administrative Contracting Officer (ACO) to negotiate the final indirect rates.

The Contractor agrees to cooperate with the Government to close out TOs as soon as practical after expiration, cancellation or termination of an order. Contractors shall adhere to the metrics for close-out as stipulated in FAR 4.804-1. The Contracting Officer will monitor the timeliness and effectiveness of close-out as part of the Contractor's performance assessment.

The base contract will be closed-out after all Task Orders have been closed out.

TASK ORDER CANCELLATION

Cancellation of a task order solicitation is at the discretion of the Contracting Officer. Task Orders solicitation cancellation requires minimal justification while RFP cancellation may be necessary and justified for any or all of the three (3) reasons listed below (drawn from best practices in case law), and it is a good practice for the Contracting Officer to document the cancellation decision rationale and have the cancellation decision approved pursuant to USACE policy:

- Services are no longer required, or are significantly changed;
- All offers received are at unreasonable prices, or only one offer is received, and the Contracting Officer cannot determine the reasonableness of the price;
- For other reasons, cancellation is clearly in the public's interest.

WAGE DETERMINATION

"General Decision Number: LA20250023 09/12/2025

Superseded General Decision Number: LA20240023

State: Louisiana

Construction Type: Building

County: Vernon County in Louisiana.

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

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

If the contract is entered	. Executive Order 14026	
into on or after January 30,	generally applies to the	
2022, or the contract is	contract.	
renewed or extended (e.g., an	. The contractor must pay	
option is exercised) on or	all covered workers at	
after January 30, 2022:	least \$17.75 per hour (or	
	the applicable wage rate	
	listed on this wage	
	determination, if it is	
	higher) for all hours	
	spent performing on the	
	contract in 2025.	
If the contract was awarded on	. Executive Order 13658	
or between January 1, 2015 and	generally applies to the	
January 29, 2022, and the	contract.	
contract is not renewed or	. The contractor must pay all	
extended on or after January	covered workers at least	
30, 2022:	\$13.30 per hour (or the	
	applicable wage rate listed	
	on this wage determination,	
	if it is higher) for all	
	hours spent performing on	
	that contract in 2025.	

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

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

Modification Number	Publication Date
0	01/03/2025
1	05/02/2025
2	09/12/2025

ASBE0053-001 09/02/2024

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 32.66	9.86

* ELEC0576-010 09/01/2025		
	Rates	Fringes
ELECTRICIAN (Excluding Low Voltage Wiring).....	\$ 30.00	4.25%+10.75

ELEC0861-008 09/01/2024		
	Rates	Fringes
ELECTRICIAN (Low Voltage Wiring Only).....	\$ 31.98	4.34%+13.75

PLUM0247-005 05/01/2020		
	Rates	Fringes
PLUMBER (Including HVAC Pipe Installation).....	\$ 26.50	13.39

ROOF0317-001 12/01/2022		
	Rates	Fringes
ROOFER.....	\$ 23.04	9.34

* SULA2012-008 09/22/2014		
	Rates	Fringes
BRICKLAYER.....	\$ 20.00	0.00
CARPENTER, Excludes Form Work....	\$ 16.30 **	0.00
FORM WORKER.....	\$ 14.25 **	0.00
LABORER: Common or General.....	\$ 11.17 **	0.00
OPERATOR:		
Backhoe/Excavator/Trackhoe.....	\$ 18.50	3.40
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 24.89	9.81
SPRINKLER FITTER (Fire Sprinklers).....	\$ 27.00	6.91
TRUCK DRIVER: Dump Truck.....	\$ 14.50 **	2.68

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

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.75) or 13658 (\$13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

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

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

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

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

Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

- 1) Has there been an initial decision in the matter? This can be:
 - a) a survey underlying a wage determination
 - b) an existing published wage determination
 - c) an initial WHD letter setting forth a position on a wage determination matter
 - d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

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

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

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

- 2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests

for review and reconsideration can be submitted via email to
dba.reconsideration@dol.gov or by mail to:

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

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

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

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

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END OF GENERAL DECISION"

(End of Summary of Changes)

SECTION 01 00 00.00 44

DESIGN AND CONSTRUCTION SCHEDULE

PART 1 GENERAL

1.1 SCHEDULE

Commence, prosecute, and complete the work under this contract in accordance with the following schedule and Section 00 73 00 SPECIAL CONTRACT REQUIREMENTS COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK and LIQUIDATED DAMAGES:

	Item of Work	Commencement of Work (Calendar days)	Completion of Work (Calendar days)	Liquidated Damages per calendar days
(1)	All work to design a remodel of a fully functional Military Working Dog Facility and any awarded options.	Upon receipt of Notice to Proceed.	180	\$ 610.00
(2)	All work to construct the remodel of a fully functional Military Working Dog Facility any awarded options.	From Design Complete.	360	\$ 920.00

a. All work on this project shall be completed within the number of calendar days stated in Work Item 1 above, inclusive of all review periods and Government phasing requirements specified. If the Government accepts a proposal for a completion period of lesser duration, and such proposal alters the time periods for review and phasing, the Contract shall be read to include the original periods for review and phasing. If a completion period of lesser duration is proposed and accepted by the Government, the accepted completion period will replace the original construction schedule listed above in the Schedule. If an alternate completion period is proposed, the Bid Schedule must reflect pricing information for the alternate proposed completion period. The liquidated damages stated above will be applied for each calendar day the Contractor exceeds the Contract scheduled duration.

b. See Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD), paragraph "SUBMISSION OF CONSTRUCTION DRAWINGS, SPECIFICATIONS, AND DESIGN ANALYSES," concerning submission of construction documents and

Section 01 00 00.00 44 paragraph, "SEQUENCE OF DESIGN/CONSTRUCTION," concerning start of construction.

Operation and Maintenance Manuals: See Section 01 78 00 CLOSEOUT SUBMITTALS, paragraph OPERATION AND MAINTENANCE MANUALS for requirements and to ensure completion of O&M Manuals.

Record Drawings: See Section 01 78 00 CLOSEOUT SUBMITTALS, paragraph titled RECORD DRAWINGS for requirements and to ensure completion of record drawings.

1.1.1 Testing of Heating and Air-Conditioning Systems

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

1.2 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (OCT 1989) (ER 415-1-15) (52.0001-4038 1/96)

a. This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the contract clause FAR 52.249-10 entitled "DEFAULT: (FIXED PRICE CONSTRUCTION)." In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the contractor.

b. The following schedule of monthly anticipated adverse weather delays due to precipitation and temperature is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities. Wind is not considered in the Monthly Anticipated Adverse Weather Calendar Day Schedule.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY WORK DAYS BASED ON (5) DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
5	5	4	4	5	6	5	4	4	4	4	5

c. Upon receipt of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the contractor's scheduled work day.

d. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph "b", above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the contract clause entitled "Default (Fixed Price Construction)."

1.3 WORK RESTRICTIONS

1.3.1 Working Hours

Normal working hours are Monday through Friday, 0700 to 1700 hours. Requests to work at times other than the stated working hours, including scheduled utility outages discussed below, shall be submitted to the Contracting Officer for approval. Contractor shall not work outside of the above stated working hours without prior written approval of the Contracting Officer.

1.3.2 Security Requirements

1.3.2.1 Installation Entrance Requirements

Entrance requirements to the Installation are specified in Section 01 35 12.00 44 SPECIAL PROJECT PROCEDURES FOR FORT POLK.

In addition to the requirements specified in Section 01 35 12.00 44 SPECIAL PROJECT PROCEDURES FOR FORT POLK and for the duration of this Contract, access to Fort POLK will be delayed between 5 minutes to 30 minutes or more due to increased security precautions, including the checking of vehicle occupants' IDs, vehicle manifests, and the searching of all vehicles. Any general or specific threat to the safety of those working or living at the Installation could result in longer waiting times at the access points to the Installation.

1.3.3 Identification of Employees

The Contractor shall be responsible for furnishing to each employee, and for requiring each employee engaged on the work to display, identification in accordance with Section 01 35 12.00 44.. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

1.4 UTILITIES

1.4.1 Payment for Utility Services

Utility availability and Payment For Utility Services are specified in Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROL and Section 01 35 12.00 44 SPECIAL PROJECT PROCEDURES FOR FORT POLK.

1.4.2 Coordination

The Contractor shall coordinate with local phone company for contractor telephone and internet service during construction.

1.4.3 Outages

The Contractor shall coordinate all requests for utility outages in accordance with Section 01 35 12.00 44 SPECIAL PROJECT PROCEDURES FOR FORT POLK.

1.5 PAPERLESS CONTRACT SUBMISSION

a. GENERAL INFORMATION ON PAPERLESS CONTRACT SUBMISSION

The goal is to reduce waste, decrease time, decrease associated costs, and to streamline most file transmission procedures.

b. METHODS OF DIGITAL SUBMISSION

This contract shall use digital submission methods to the greatest extent practicable. Acceptable methods are as follows, in order of precedence:

1. RMS - will be used to the greatest extent practicable. Some items may not be submittable via RMS due to program constraints. Those items shall use an alternate method. All ENGR 4025's shall be generated and submitted in RMS.

2. Secure, Password Protected Web-Based System Access must be allowed and approved by the Government Representative. This method shall not be used for security sensitive documents.

3. E-mail - Items not submitted via RMS, as discussed above, shall be submitted via e-mail, if possible. E-mail limitations for file size must be considered prior to submission.

4. CD/DVD - Will be accepted if no other method is possible and upon prior approval.

c. ITEMS TO BE SUBMITTED VIA HARDCOPY

Product samples, color boards, and any other item not feasible to submit digitally, shall be submitted hard copy. ENGR 4025 shall be submitted digitally always. The Government reserves the right to request hard copy submission on any item, if deemed necessary. Contractor shall be prepared to provide requested hard copy at any time.

1.6 CONTRACTOR PERFORMANCE EVALUATIONS

In accordance with the provisions of Subpart 36.201 (Evaluation of Contractor Performance) of the Federal Acquisition Regulation (FAR), construction contractor's performance shall be evaluated throughout the performance of the contract. The United States Army Corps of Engineers (USACE) follows the procedures outlined in Engineering Regulation 415-1-17 to fulfill this FAR requirement. For construction contracts awarded at or above \$750,000.00, the USACE will evaluate contractor's performance and prepare a performance report using the Contractor Performance Assessment Reporting System (CPARS), which is now a web-based system. After an evaluation (interim or final) is written up by the USACE, the contractor will have the ability to access, review and comment on the evaluation for a period of 60 days. Accessing and using CPARS requires specific software, called PKI certification, which is installed on the user's computer. The certification is a Department of Defense requirement and was implemented to

provide security in electronic transactions. The certification software could cost approximately \$110 - \$125 per certificate per year and is purchased from an External Certificate Authorities (ECA) vendor. Current information about the PKI certification process and for contacting vendors can be found on the web site: <http://www.cpars.csd.disa.mil/>. If the Contractor wishes to participate in the performance evaluation process, access to CPARS and PKI certification is the sole responsibility of the Contractor.

1.7 CONTRACTOR PAYROLL RECORD

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

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

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

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

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

- (1) commercially available;
- (2) compliant with appropriate Wage Rate Requirements statute payroll provisions in the Federal Acquisition Regulation (FAR);
- (3) able to accommodate the required numbers of employees and subcontractors planned to be employed under the contract
- (4) capable of producing an Excel spreadsheet-compatible electronic

output of weekly payroll records for export in an Excel spreadsheet;

(5) demonstrated security of data and data entry rights;

(6) ability to produce contractor-certified electronic versions of weekly payroll data;

(7) ability to identify erroneous entries and track the date/time of all versions of the certified Wage Rate Requirements statute payrolls submitted to the government over the life of the contract;

(8) capable of generating a durable record copy, that is, a CD or DVD and PDF file record of data from the system database at end of the contract closeout. This durable record copy of data from the electronic payroll processing system shall be provided to the Government during contract closeout.

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

1.9 ADDITIONAL CONTRACTOR PAYROLL RECORD

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

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

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

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

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

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

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

1.10 STREET CLOSINGS

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

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

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

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

1.11 SEQUENCE OF DESIGN/CONSTRUCTION

(a) After receipt of the Contract Notice to Proceed (NTP) the Contractor shall initiate design, comply with all design submission requirements as covered under Division 01 General Requirements, and obtain Government review of each submission. The Contractor may begin construction on portions of the work for which the Government has reviewed the final design submission and has determined satisfactory for purposes of beginning construction. The Contracting Officer will notify the Contractor when the design is cleared for construction. The Government will not grant any time extension for any design resubmittal required when, in the opinion of the Contracting Officer, the initial submission failed to meet the minimum quality requirements as set forth in the Contract.

(b) If the Government allows the Contractor to proceed with limited construction based on pending minor revisions to the reviewed Final Design submission, no payment will be made for any in-place construction related to the pending revisions until they are completed, resubmitted and are satisfactory to the Government.

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

Animal Building

FJ25AB

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

Section 01 10 00
STATEMENT OF WORK

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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 where 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

1.4.4 Option 3 – EVCF Plug Installation

Installation of exterior charging plug.

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.

As an option, an electric vehicle charging plug shall be installed in the existing parking area within the facility fence (see Electrical Section).

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 Contractor 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 Contractor. 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 REQUIREMENTS

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) REQUIREMENTS

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 contaminants 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 addition 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 Networkiness (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 compliant 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).

- (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.

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-Built 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.

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety -- Safety and Occupational Health (SOH) Requirements

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

View Location Map

Progress and Completion Pictures

Field Office Overhead & Accounting Practice

Delegation Of Authority

SD-04 Samples

Color Boards; G,

1.3 VIEW LOCATION MAP

Submit, prior to or with the first digital photograph submittals, a sketch or drawing indicating the required photographic locations. Update as required if the locations are moved.

1.4 PROGRESS AND COMPLETION PICTURES

Photographically document site conditions prior to start of construction operations. Provide monthly, and within one month of the completion of work, digital photographs, 1600x1200x24 bit true color minimum resolution in JPEG file format showing the sequence and progress of work. Take a minimum of 20 digital photographs each week throughout the entire project from a minimum of ten different viewpoints selected by the Contractor unless otherwise directed by the Contracting Officer. Submit with the

monthly invoice one set of digital photographs in the agency construction management system of record, cumulative of all photos to date. Indicate photographs demonstrating environmental procedures. Provide photographs for each month in a separate monthly directory and name each file to indicate its location on the view location sketch. Also provide the view location sketch with the submission in the agency construction management system of record as a digital file. Include a date designator in file names. Photographs provided are for unrestricted use by the Government.

1.5 MINIMUM INSURANCE REQUIREMENTS

Provide the minimum insurance coverage required by FAR 28.307-2 Liability, during the entire period of performance under this contract. Provide other insurance coverage as required by State law.

1.6 SUPERVISION

1.6.1 Superintendent Qualifications

Provide project superintendent with a minimum of 10 years experience in construction with at least 5 of those years as a superintendent on projects similar in size and complexity. The individual must be familiar with the requirements of EM 385-1-1 and have experience in the areas of hazard identification and safety compliance. The individual must be capable of interpreting a critical path schedule and construction drawings. The qualification requirements for the alternate superintendent are the same as for the project superintendent. The Contracting Officer may request proof of the superintendent's qualifications at any point in the project if the performance of the superintendent is in question.

1.6.2 Minimum Communication Requirements

Have at least one qualified superintendent, or competent alternate, capable of reading, writing, and conversing fluently in the English language, on the job-site at all times during the performance of Contract work. In addition, if a Quality Control (QC) representative is required on the Contract, then that individual must also have fluent English communication skills.

1.6.3 Duties

The project superintendent is primarily responsible for managing subcontractors and coordinating day-to-day production and schedule adherence on the project. The superintendent is required to attend Red Zone meetings, partnering meetings, and quality control meetings. The superintendent or qualified alternative must be on-site at all times during the performance of this contract until the work is completed and accepted. The project superintendent may not serve as the Site Safety & Health Officer (SSHO) or the QC Manager.

1.6.4 Non-Compliance Actions

The Project Superintendent is subject to removal by the Contracting Officer for non-compliance with requirements specified in the contract and for failure to manage the project to ensure timely completion. Furthermore, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders is acceptable as the subject of claim for extension of time or excess costs or damages by the Contractor.

1.7 Field Office Overhead

Notice to Offerors: You must declare below the accounting practice that you apply to contracts to calculate field office overhead for all change orders, modifications, and requests for equitable adjustment. Pursuant to Federal Acquisition Regulation (FAR) Parts 31.105(d)(3) and 31.203(d)(1), an accounting practice that varies from modification to modification is not allowable. Select one of the following:

a. If you use Time Distribution Base for Per Diem Rate practice, see "Field Office Overhead - Per Diem Rate" listed below.

b. If you use Direct Cost Distribution Base for a Percentage Mark-up practice, see "Field Office Overhead - Percentage Markup", listed below.

c. If you choose Other Accounting Practice That is Allowed Under the FAR and That Uses a Single Distribution Base, you must describe the accounting practice in sufficient detail below to allow the Contracting Officer to determine what accounting practice is being utilized by your company and that it complies with the criteria for acceptable accounting practices as set out in FAR Parts 31.105(d)(3) and 31.203(d)(1).

d. Contractor must declare the Accounting Practice to apply to this contract, in writing, within 10 days after Notice to Proceed is received.

1.7.1 Field Office Overhead - Per Diem Rate

The Contracting Officer shall make an equitable adjustment and modify the contract in writing for any change to the contract, issued pursuant to the Changes clause or otherwise, for which the Government is responsible, and which causes either an increase or decrease in the Contractor's costs as to time or performance under the contract. Under such an equitable adjustment, the Contractor's field office overhead shall be an allowable cost, in accordance with the Contractor's accounting practice as identified by the Contractor.

The Contractor shall declare which standard form of accounting practice it applies to field overhead costs: if a contractor indicates that it follows a per diem basis, no overhead percentage markup rate for office overhead costs shall be allowed.

Under such an equitable adjustment, the Contractor shall be reimbursed for field office overhead on a per diem basis when the completion of the contract is extended by reason of the change issued under any clause, except the Default clause, subject to the Contractor substantiating the variable expense by providing a detailed breakdown of its proposed increase or decrease of costs as required by the Contract Clause DFARS 252.236-7001 MODIFICATION OF PROPOSALS - PRICE BREAKDOWN. No payment of field office overhead on a per diem basis shall be allowed for any change when the completion of the contract is not extended by reason of the change.

1.7.2 Field Office Overhead - Percentage Markup

The Contracting Officer shall make an equitable adjustment and modify the contract in writing for any change to the contract, issued pursuant to the Changes clause or otherwise, for which the Government is responsible, and

which causes either an increase or decrease in the Contractor's costs as to time or performance under the contract. Under such an equitable adjustment, the Contractor's field office overhead shall be an allowable cost, in accordance with the Contractor's accounting practice as identified by the Contractor.

The Contractor shall declare which standard form of accounting practice it applies to field overhead costs: if a contractor indicates that it follows a percentage basis, no per diem rate for office overhead costs shall be allowed.

Under such an equitable adjustment, payment of office overhead costs shall be allowed for any change on a percentage markup basis regardless of whether the completion of the contract is, or, is not, extended by reason of the change, except for modifications issued pursuant to the Default Clause. The Contractor shall provide a detailed breakdown of its proposed increase or decrease of costs as required by Contract Clause DFARS 252.236 - 7001 MODIFICATION OF PROPOSALS - PRICE BREAKDOWN.

1.8 Delegation of Authority

Submit separate letters of authority for each individual with delegated authority to negotiate and/or sign documents on behalf of the contractor for this contract. Provide name, title, telephone number, and email address for each individual and state their delegated authorities, to include authority limits where applicable, for the following items:

- a. Serial Letters
- b. Price Proposals
- c. Authority to Negotiate (time and/or cost)
- d. Contract Modifications
- e. Prompt Payment Certification
- f. Certified Payroll Documents
- g. Safety incident notices and forms
- h. CPARS performance evaluations
- i. Release of Claims
- j. Delegation of Competent Person and/or Qualified Person

Each letter submitted shall include the individual's acknowledgement of their delegated authority and shall include the individual's handwritten signature and electronic signature.

Submit the letters within 10 days after receipt of Notice to Proceed.

Update the authority delegations, in writing, when changes in personnel or delegated authority occur.

1.9 PRECONSTRUCTION CONFERENCE

Upon completion of design and design acceptance by the government, prior to commencing any work at the site, coordinate with the Contracting Officer a time and place to meet for the Preconstruction Conference. The purpose of this conference is to discuss and develop a mutual understanding of the administrative requirements of the Contract including but not limited to: daily reporting, invoicing, value engineering, safety, base-access, outage requests, hot work permits, schedule requirements, quality control, schedule of prices or earned value report, shop drawings, submittals, cybersecurity, prosecution of the work, government acceptance, final inspections and contract close-out and the processes for joint risk

management between the Contractor and Government. Contractor must present and discuss their basic approach to scheduling the construction work and any required phasing.

1.10 PARTNERING

To most effectively accomplish this Contract, the Contractor and Government must form a cohesive partnership with the common goal of drawing on the strength of each organization in an effort to achieve a successful project that includes joint risk management, is without safety mishaps, conforming to the Contract, within budget and on schedule. The partnering team must consist of personnel from both the Government and Contractor including project level and corporate level leadership positions. Key Personnel from the supported command, end user, , Contractor, key subcontractors and the Designer of Record (DOR) (regardless of whether the contract is a design-build or a design-bid-build) are required to participate in the Partnering process.

1.10.1 Team-Led (Informal) Partnering

- a. The Contracting Officer will coordinate the initial Team-Led (Informal) Partnering Session with key personnel of the project team, including Contractor and Government personnel. The Partnering Session will be co-led by the Resident Engineer or Project Engineer and Contractor's Project Manager.
- b. The Initial Team-led Partnering session may be held concurrently with the Post-Award Kickoff meeting. Partnering sessions will be held at a location mutually agreed to by the Contracting Officer and the Contractor, typically at a conference room on-base or at the Contractor's temporary trailer.
- c. The Partners will determine the frequency of the follow-on sessions.
- d. Participants will bear their own costs for meals, lodging and transportation associated with Partnering.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 01 32 01.00 10

PROJECT SCHEDULE

PART 1 GENERAL

1.1 REFERENCES

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

AACE INTERNATIONAL (AACE)

AACE 29R-03	(2011) Forensic Schedule Analysis
AACE 52R-06	(2006) Time Impact Analysis - As Applied in Construction
AACE 84R-13	(2015) Planning and Accounting for Adverse Weather

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 67-17	(2017) Schedule Delay Analysis

U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 1-1-11	(2017) Administration -- Project Schedules

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Project Scheduler Qualifications; G,
- Preliminary Project Schedule; G,
- Initial Project Schedule; G,
- Periodic Schedule Update; G,

1.3 PROJECT SCHEDULER QUALIFICATIONS

Designate an authorized representative to be responsible for the preparation of the schedule and all required updating and production of reports. The Designated Project Scheduler must have prepared and maintained at least three previous construction schedules for projects of similar size and complexity to this contract, using Primavera P6. Representative must have a comprehensive knowledge of CPM scheduling

principles and application.

PART 2 PRODUCTS

2.1 SOFTWARE

The scheduling software utilized to produce and update the schedules required herein must be capable of meeting all requirements of this specification.

2.1.1 Government Default Software

The Government uses Primavera P6. Ensure exported schedule files are compatible with the version of P6 used by the Government.

2.1.2 Contractor Software

Scheduling software used by the contractor must be commercially available from the software vendor for purchase with vendor software support agreements available. The software routine used to create the required sdef file must be created and supported by the software manufacturer.

2.1.2.1 Primavera

If Primavera P6 is selected for use, provide the "xer" export file in a version of P6 importable by the Government system. Verify at the SEKO meeting which version of P6 is in use by the Government. Export the schedule in a version of P6 no newer than that used by the Government.

2.1.2.2 Other Than Primavera

If the Contractor chooses software other than Primavera P6, that is compliant with this specification, provide for the Government's use two licenses, two computers, and training for two Government employees in the use of the software. These computers will be stand-alone and not connected to Government network. Computers and licenses will be returned at project completion.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Prepare for approval a Project Schedule, as specified herein, pursuant to FAR Clause 52.236-15 Schedules for Construction Contracts. Show in the schedule the proposed sequence to perform the work and dates contemplated for starting and completing all schedule activities. The scheduling of the entire project is required. The scheduling of design and construction is the responsibility of the Contractor. Contractor management personnel must actively participate in its development. Designers, Subcontractors, and suppliers working on the project must also contribute in developing and maintaining an accurate Project Schedule. Provide a schedule that is a forward planning as well as a project monitoring tool. Use the Critical Path Method (CPM) of network calculation to generate all Project Schedules. Prepare each Project Schedule using the Precedence Diagram Method (PDM).

3.1.1 Scheduling Expectations Kickoff Meeting(SEKO)

In conjunction with the post award conference or pre construction

conference the Government and the Contractor will hold a separate and distinct Scheduling Expectations Kickoff Meeting(SEKO). The intent of this meeting is for the Government to review with the contractor the requirements of the scheduling specification, communicate the Government's expectations regarding schedule development and management, and answer any questions the Contractor may have regarding the schedule requirements.

3.2 BASIS FOR PAYMENT AND COST LOADING

The schedule is the basis for determining contract earnings during each update period and therefore the amount of each progress payment. The aggregate value of all activities coded to a contract CLIN must equal the value of the CLIN. Match the progress payment "Pay Period Thru" date in RMS to the schedule data date.

3.2.1 Activity Cost Loading

Activity cost loading must be reasonable and without front-end loading. Activities with a negative cost loading is not allowed. Provide additional documentation to demonstrate reasonableness if requested by the Contracting Officer.

3.2.2 Cost Loading of Submittals

No costs are to be assigned to activities for the preparation, review, or approval of submittals, except as described under paragraph COST LOADING OF CLOSEOUT ACTIVITIES, paragraph AS-BUILT DRAWINGS, design submittals, and paragraph O&M MANUALS.

3.2.3 Withholdings / Payment Rejection

Failure to meet the requirements of this specification may result in the disapproval of the preliminary, initial, or periodic schedule updates and subsequent rejection of payment requests until compliance is met.

In the event that the Contracting Officer directs schedule revisions and those revisions have not been included in subsequent Project Schedule revisions or updates, the Contracting Officer may withhold 10 percent of pay request amount from each payment period until such revisions to the project schedule have been made.

3.3 PROJECT SCHEDULE DETAILED REQUIREMENTS

3.3.1 Level of Detail Required

Develop the Project Schedule to the appropriate level of detail to address major milestones and to allow for satisfactory project planning and execution. Failure to develop the Project Schedule to an appropriate level of detail will result in its disapproval. The Contracting Officer will consider, but is not limited to, the following characteristics and requirements to determine appropriate level of detail:

3.3.2 Activity Durations

Reasonable activity durations are those that allow the progress of ongoing activities to be accurately determined between update periods. Non-procurement activities Original Durations (OD) are not to exceed 20 workdays or 30 calendar days.

3.3.3 Design and Permit Activities

Include design and permit activities with the necessary conferences and follow-up actions and design package submission dates. Include the design schedule in the project schedule, showing the sequence of events involved in carrying out the project design tasks within the specific contract period. Provide a detailed level of scheduling sufficient to identify all major design tasks, including those that control the flow of work. Also include review and correction periods associated with each item.

3.3.4 Procurement Activities

Include in the schedule activities associated with the critical submittals and their approvals, procurement, fabrication, and delivery of long lead materials, equipment, fabricated assemblies, and supplies. Long lead procurement activities are those with an anticipated procurement sequence of over 90 calendar days.

3.3.5 Mandatory Activities

Include the following activities in the initial project schedule and all updates.

- a. Submission, review and acceptance of SD-01 Preconstruction Submittals (individual activity for each).
- b. Submission, review and acceptance of design packages.
- c. Submission of mechanical/electrical/information systems layout drawings.
- d. Submission and approval of O & M manuals.
- e. Submission and approval of as-built drawings.
- f. Submission and approval of DD1354 data and installed equipment lists.
- g. Submission and approval of testing and air balance (TAB).
- h. Submission of TAB specialist design review report.
- i. Submission and approval of fire protection specialist.
- j. Submission and approval of Building Commissioning Plan, Controls testing plan, test data, and reports: Develop the schedule logic associated with testing and commissioning of mechanical systems to a level of detail consistent with the contract commissioning requirements. All tasks associated with building testing and commissioning will be completed prior to submission of building commissioning report and subsequent contract completion.

These activities may include but are not limited to: air and water balancing, building commissioning -functional performance testing, controls testing, and performance verification testing. Include other systems testing, if required. Include additional commissioning requirements noted elsewhere in the Contract as required in the schedule and discuss during the SEKO meeting, noted in paragraph SCHEDULING EXPECTATIONS KICKOFF MEETING (SEKO).

- k. Contractor's pre-final inspection.
- m. Correction of punch list from Contractor's pre-final inspection.
- n. Government's pre-final inspection.
- o. Correction of punch list from Government's pre-final inspection.
- p. Final inspection.

3.3.6 Government Activities

Show in schedule, Government and other agency activities that could impact progress. These activities include, but are not limited to acceptance, design reviews, environmental permit approvals by State regulators, inspections, utility tie-in, Government Furnished Equipment (GFE) and Notice to Proceed (NTP) for phasing requirements.

3.3.7 Standard Activity Coding Dictionary

Use the activity coding structure defined in the Standard Data Exchange Format (SDEF) in ER 1-1-11. This exact structure is mandatory. Develop and assign all Activity Codes to activities as detailed herein.

The SDEF format is as follows:

Field	Activity Code	Length	Description
1	WRKP	3	Workers per day
2	RESP	4	Responsible party
3	AREA	4	Area of work
4	MODF	6	Modification Number
5	BIDI	6	Bid Item (CLIN)
6	PHAS	2	Phase of work
7	CATW	1	Category of work
8	FOW	20	Feature of work*
*Some systems require that FEATURE OF WORK values be placed in several activity code fields. The notation shown is for Primavera P6. Refer to the specific software guidelines with respect to the FEATURE OF WORK field requirements.			

3.3.7.1 Workers Per Day (WRKP)

Assign Workers per Day for all field construction or direct work activities, if directed by the Contracting Officer. Workers per day is based on the average number of workers expected each day to perform a task

for the duration of that activity.

3.3.7.2 Responsible Party Coding (RESP)

Assign responsibility code for all activities to the Prime Contractor, Subcontractor(s) or Government agency(ies) responsible for performing the activity.

- a. Activities coded with a Government Responsibility code include, but are not limited to: Government approvals, Government design reviews, environmental permit approvals by State regulators, Government Furnished Property/Equipment (GFP) and Notice to Proceed (NTP) for phasing requirements.
- b. Activities cannot have more than one Responsibility Code. Examples of acceptable activity code values are: DOR (for the designer of record); ELEC (for the electrical subcontractor); MECH (for the mechanical subcontractor); and GOVT (for USACE).

3.3.7.3 Area of Work Coding (AREA)

Assign Work Area code to activities based upon the work area in which the activity occurs. Define work areas based on resource constraints or space constraints that would preclude a resource, such as a particular trade or craft work crew from working in more than one work area at a time due to restraints on resources or space. Examples of Work Area Coding include different areas within a floor of a building, different floors within a building, and different buildings within a complex of buildings. Activities cannot have more than one Work Area Code.

3.3.7.4 Modification Number (MODF)

Assign a Modification Number Code to any activity or sequence of activities added to the schedule as a result of a Contract Modification, when approved by Contracting Officer. Key all Code values to the Government's modification numbering system. An activity can have only one Modification Number Code.

3.3.7.5 Bid Item Coding (BIDI)

Assign a Bid Item Code to all activities using the Contract Line Item Number (CLIN) to which the activity belongs, even when an activity is not cost loaded. An activity can have only one BIDI Code.

3.3.7.6 Phase of Work Coding (PHAS)

Assign Phase of Work Code to all activities. Examples of phase of work are design phase, procurement phase and construction phase. Each activity can have only one Phase of Work code.

- a. If the contract specifies phasing with separately defined performance periods, identify a Phase Code to allow filtering and organizing the schedule accordingly.

3.3.7.7 Category of Work Coding (CATW)

Assign a Category of Work Code to all activities. Category of Work Codes

include, but are not limited to design, design submittal, design reviews, review conferences, permits, construction submittal, procurement, fabrication, weather sensitive installation, non-weather sensitive installation, start-up, and testing activities. Each activity can have no more than one Category of Work Code.

3.3.7.8 Feature of Work Coding (FOW)

Assign a Feature of Work Code to appropriate activities based on the Definable Feature of Work to which the activity belongs based on the approved QC plan.

Definable Feature of Work is defined in Section 01 45 00 QUALITY CONTROL. An activity can have only one Feature of Work Code.

3.3.8 Contract Milestones and Constraints

Milestone activities are to be used for significant project events including, but not limited to, project phasing, project start and end activities, or interim completion dates. The use of artificial float constraints such as "zero free float" or "zero total float" are prohibited.

Mandatory constraints that ignore or affect network logic are prohibited. No constrained dates are allowed in the schedule other than those specified herein. Submit additional constraints to the Contracting Officer for approval on a case by case basis.

3.3.8.1 Project Start Date Milestone and Constraint

The first activity in the project schedule must be a start milestone titled "NTP Received," which must have a "Start On" constraint date equal to the date that the NTP is received.

3.3.8.2 End Project Finish Milestone and Constraint

The last activity in the schedule must be a finish milestone titled "End Project."

Constrain the project schedule to the Contract Completion Date in such a way that if the schedule calculates an early finish, then the float calculation for "End Project" milestone reflects positive float on the longest path. If the project schedule calculates a late finish, then the "End Project" milestone float calculation reflects negative float on the longest path.

3.3.8.3 Interim Completion Dates and Constraints

Constrain contractually specified interim completion dates to show negative float when the calculated late finish date of the last activity in that phase is later than the specified interim completion date.

3.3.8.3.1 Start Phase

Use a start milestone as the first activity for a project phase. Call the start milestone "Start Phase X" where "X" refers to the phase of work.

3.3.8.3.2 End Phase

Use a finish milestone as the last activity for a project phase. Call the

finish milestone "End Phase X" where "X" refers to the phase of work.

3.3.9 Adverse Weather

Ensure anticipated adverse weather is accounted for in the Project Schedule. AACE 84R-13 provides methodologies for techniques in planning for adverse weather. If a method other than a weather calendar is proposed, discuss the reason during the SEKO meeting.

3.3.10 Calendars

Schedule activities on a Calendar to which the activity logically belongs. Develop calendars to accommodate any contract defined work period such as a 7-day calendar for Government Acceptance activities, concrete cure times, etc. Develop the default Calendar to match the physical work plan with non-work periods identified including weekends and holidays. Develop Seasonal Calendar(s) and assign to seasonally affected activities as applicable.

If a weather calendar is used its implementation and execution is to be in accordance with AACE 84R-13

3.3.11 Open Ended Logic

Only two open ended activities are allowed: the first activity "NTP Received" is to have no predecessor logic, and the last activity -"End Project" is to have no successor logic. Except as noted above, each activity must have at least a start-to-start or finish-to-start relationship with its predecessor and a finish-to-finish or finish-to-start relationship with its successor.

Predecessor open ended logic may be allowed in a time impact analyses upon the Contracting Officer's approval.

3.3.12 Default Progress Data Disallowed

Actual Start and Finish dates must not automatically update with default mechanisms included in the scheduling software. Updating of the percent complete and the remaining duration of any activity must be independent functions. Disable program features that calculate one of these parameters from the other. Activity Actual Start (AS) and Actual Finish (AF) dates assigned during the updating process must match those dates provided in the Contractor Quality Control Reports. Failure to document the AS and AF dates in the Daily Quality Control report will result in disapproval of the Contractor's schedule.

3.3.13 Out-of-Sequence Progress

Activities that have progressed before all preceding logic has been satisfied (Out-of-Sequence Progress) will be allowed only on a case-by-case basis subject to approval by the Contracting Officer. Propose logic corrections to eliminate out of sequence progress or justify not changing the sequencing for approval prior to submitting an updated project schedule. Address out of sequence progress or logic changes in the Narrative Report and in the periodic schedule update meetings.

3.3.14 Added and Deleted Activities

Do not delete activities from the project schedule or add new activities to

the schedule without approval from the Contracting Officer. Activity ID and description changes are considered new activities and cannot be changed without Contracting Officer approval.

3.3.15 Original Durations

Activity Original Durations (OD) must be reasonable to perform the work item. OD changes are prohibited unless justification is provided and approved by the Contracting Officer.

3.3.16 Leads, Lags, and Start to Finish Relationships

Lags must be reasonable as determined by the Government and not used in place of realistic original durations, must not be in place to artificially absorb or create float, or to replace proper schedule logic.

- a. Leads (negative lags) are prohibited.
- b. Start to Finish (SF) relationships are prohibited.

3.3.17 Retained Logic

Schedule calculations must retain the logic between predecessors and successors ("retained logic" mode) even when the successor activity(s) starts and the predecessor activity(s) has not finished (out-of-sequence progress). Software features that in effect sever the tie between predecessor and successor activities when the successor has started and the predecessor logic is not satisfied ("progress override") are not be allowed.

3.3.18 Percent Complete

Update the percent complete for each activity started, based on the realistic assessment of earned value. Activities which are complete but for remaining minor punch list work and which do not restrain the initiation of successor activities may be declared 100 percent complete to allow for proper schedule management, subject to COR approval. The Government may withhold funds in the pay application for the remaining punch list work until the punch list corrections have been completed and verified by the Government.

3.3.19 Remaining Duration

Update the remaining duration for each activity based on the number of estimated workdays it will take to complete the activity. Remaining duration may not mathematically correlate with percentage found under paragraph entitled Percent Complete. The remaining duration for unstarted activities are not to be less than its original duration.

3.3.20 Cost Loading of Closeout Activities

Cost load the "Correction of punch list from Government pre-final inspection" activity(ies) not less than 1 percent of the present contract value. Activity(ies) may be declared 100 percent complete upon the Government's verification of completion and correction of all punch list work identified during Government pre-final inspection(s).

3.3.20.1 As-Built Drawings

Cost load an activity for final as-built drawings with an amount of

\$35,000, or 1% of the present construction value up to \$200,000, whichever is the greater. No payment will be made on this activity until the final as-built drawing deliverables have been approved by the Government.

3.3.20.2 O & M Manuals

Cost load an activity for O&M manuals with an amount of \$20,000, or 1% of the present construction value up to \$200,000, whichever is the greater. No payment will be made on this activity until submittal and approval of all O&M manuals are complete.

3.3.21 Early Completion Schedule and the Right to Finish Early

An Early Completion Schedule is an Initial Project Schedule (IPS) that indicates all scope of the required contract work will be completed before the contractually required completion date.

- a. No IPS indicating an Early Completion will be accepted without being fully resource-loaded (including crew sizes and manhours) and the Government agreeing that the schedule is reasonable and achievable.
- b. The Government is under no obligation to accelerate work items it is responsible for to ensure that the early completion is met nor is it responsible to modify incremental funding (if applicable) for the project to meet the contractor's accelerated work.

3.4 PROJECT SCHEDULE SUBMISSIONS

Provide the submissions as described below. The data reports and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS. If the Contractor fails or refuses to furnish the information and schedule updates as set forth herein, the Contractor will be deemed not to have provided an estimate upon which a progress payment can be made.

Review comments made by the Government on the schedule(s) do not relieve the Contractor from compliance with requirements of the Contract Documents.

3.4.1 Preliminary Project Schedule Submission

Within 15 calendar days after the NTP is received, submit the Preliminary Project Schedule defining the planned operations detailed for the first 90 calendar days for approval. The approved Preliminary Project Schedule will be used for payment purposes not to exceed 90 calendar days after NTP. Completely cost load the Preliminary Project Schedule to balance the contract award CLINS shown on the Price Schedule. The Preliminary Project Schedule may be summary in nature for the remaining performance period. It must be early start and late finish constrained and logically tied as specified. The Preliminary Project Schedule forms the basis for the Initial Project Schedule specified herein and must include all of the required plan and program preparations, submissions and approvals identified in the contract (for example, Quality Control Plan, Safety Plan, and Environmental Protection Plan) as well as design activities, planned submissions of all early design packages, permitting activities, design review conference activities, and other non-construction activities intended to occur within the first 90 calendar days. Government acceptance of the associated design package(s) and all other specified Program and Plan approvals must occur prior to any planned construction activities. Code activities that are summary in nature, after the first 90 calendar

days, with the following activity codes: Bid Item (CLIN) code (BIDI), Responsibility Code (RESP), and Feature of Work code (FOW)..

3.4.2 Initial Project Schedule Submission

Submit the Initial Project Schedule for approval within 42 calendar days after notice to proceed is issued. The schedule must demonstrate a reasonable and realistic sequence of activities which represent all work through the entire contract performance period. Include in the design-build schedule detailed design and permitting activities, including but not limited to identification of individual design packages, design submission, reviews and conferences; permit submissions and any required Government actions; and long lead item acquisition prior to design completion. Also cover in the initial design-build schedule the entire construction effort with as much detail as is known at the time but, as a minimum, include all construction start and completion milestones, and detailed construction activities through the dry-in, including all activity coding and cost loading. Include the remaining construction, including cost loading, but it may be scheduled summary in nature. As the design proceeds and design packages are developed, fully detail the remaining construction activities concurrent with the monthly schedule updating process. Constrain construction activities by Government acceptance of associated designs. When the design is complete, incorporate into the then approved schedule update all remaining detailed construction activities that are planned to occur after the dry-in milestone. No payment will be made for work items not fully detailed in the Project Schedule.

3.4.2.1 Design Package Schedule Submission

With each design package submitted to the Government, submit a fragment schedule extracted from the then current Preliminary, Initial or Updated schedule which covers the activities associated with that Design Package including construction, procurement and permitting activities.

3.4.3 Periodic Schedule Updates

Update the Project Schedule on a regular basis, monthly at a minimum. Provide a draft Periodic Schedule Update for review at the schedule update meetings as prescribed in the paragraph PERIODIC SCHEDULE UPDATE MEETINGS. These updates will enable the Government to assess Contractor's progress. Update the schedule to include detailed construction activities as the design progresses, but not later than the submission of the final un-reviewed design submission for each separate design package. The Contracting Officer may require submission of detailed schedule activities for any distinct construction that is started prior to submission of a final design submission if such activity is authorized.

- a. Update information including Actual Start Dates (AS), Actual Finish Dates (AF), Remaining Durations (RD), and Percent Complete. Updated information is subject to the approval of the Government at the meeting.
- b. AS and AF dates must match the date(s) reported on the Contractor's Quality Control Report for an activity start or finish.

3.5 SUBMISSION REQUIREMENTS

Submit the following items for the Preliminary Schedule, Initial Schedule, and every Periodic Schedule Update throughout the life of the project:

3.5.1 Electronic Scheduling Data

Provide electronic scheduling data containing the current project schedule and all previously submitted schedules in the format of the scheduling software (e.g. .xer). Also include the Narrative Report and all required Schedule Reports. The electronic file is to identify the type of schedule (Preliminary, Initial, Update), full contract number, Data Date and schedule file name. Each schedule must have a unique file name and use project specific settings. The file naming convention is to be determined at SEKO meeting.

3.5.2 Narrative Report

Provide a Narrative Report with each schedule submission. The Schedule Narrative Report is a "stand alone" report in PDF or Word format. Title the report "Schedule Narrative Report". Show the Report date, schedule name, and contract number on the first page. Indicate who is responsible for the schedule update and narrative report. Provide a brief description of the Project Scope. The Narrative Report is expected to communicate to the Government the thorough analysis of the schedule output and the plans to compensate for problems, either current or potential, which are revealed through that analysis. Include the following information at a minimum in the Narrative Report:

- a. Identify and discuss the work scheduled to start in the next update period.
- b. Describe activities along the critical path in addition to activities on the next float path after the critical path.
- c. Describe current and anticipated problem areas, delaying factors and their impact, and an explanation of corrective actions taken or required to be taken. Identify the party responsible for delay, if applicable.
- d. Identify and explain why activities, based on their calculated late dates, should have either started or finished during the update period but did not.
- e. Identify and discuss all schedule changes by activity ID and activity name including what specifically was changed and why the change was needed. Include at a minimum new and deleted activities, logic changes, duration changes, calendar changes, lag changes, resource changes, and actual start and finish date changes.
- f. Identify and discuss out-of-sequence work. Include in discussion the reason the work was performed out of sequence.
- g. If the longest path changes from a monthly update to the next, provide an explanation of the factors driving the change.
- h. Respond to USACE Schedule Review Comments from the previous update(s).

3.5.3 Schedule Reports

The format, filtering, organizing, and sorting for each schedule report will be as directed by the Contracting Officer. Typically, reports contain Activity Numbers, Activity Description, Original Duration,

Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float, Actual Start Date, Actual Finish Date, and Percent Complete. Provide the reports electronically in .pdf format. The following lists typical reports that will be requested:

3.5.3.1 Activity Report

List of all activities sorted according to activity number.

3.5.3.2 Logic Report

List of detailed predecessor and successor activities for every activity in ascending order by activity number.

3.5.3.3 Total Float Report

A list of all incomplete activities sorted in ascending order of total float. List activities which have the same amount of total float in ascending order of Early Start Dates. Do not show completed activities on this report.

3.5.3.4 Earnings Report by CLIN

A compilation of the Total Earnings on the project from the NTP to the data date, which reflects the earnings of activities based on the agreements made in the schedule update meeting defined herein. Provided a complete schedule update has been furnished, this report serves as the basis of determining progress payments. Group activities by CLIN number and sort by activity number. Provide a total CLIN percent earned value, CLIN percent complete, and project percent complete. The electronic report must contain the following for each activity: the Activity Number, Activity Description, Original Budgeted Amount, Earnings to Date, Earnings this period, Total Quantity, Quantity to Date, and Percent Complete (based on cost).

3.5.3.5 Scheduling and Leveling Report

Provide a Scheduling/Leveling Report generated from the current project schedule being submitted.

3.5.4 Network Diagram

The Network Diagram is required for the Preliminary, Initial and Periodic Updates. Depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The Contracting Officer will use, but is not limited to, the following conditions to review compliance with this paragraph:

3.5.4.1 Continuous Flow

Show a continuous flow from left to right with no arrows from right to left. Show the activity number, description, duration, and estimated earned value on the diagram.

3.5.4.2 Project Milestone Dates

Show dates on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

3.5.4.3 Critical Path

Show all activities on the critical path. The critical path is defined as the longest path.

3.5.4.4 Grouping and Sorting

Group and sort activities as directed to assist in the understanding of the activity sequence. Typically, this flow will group activities by major elements of work, category of work, work area and/or responsibility.

3.5.4.5 Cash Flow / Schedule Variance Control (SVC) Diagram

With each schedule submission, provide a SVC diagram showing 1) Cash Flow S-Curves indicating planned project cost based on projected early and late activity finish dates, and 2) Earned Value to-date.

3.6 PERIODIC SCHEDULE UPDATE

3.6.1 Periodic Schedule Update Meetings

Conduct periodic schedule update meetings for the purpose of reviewing the proposed Periodic Schedule Update, Narrative Report, Schedule Reports, and progress payment. Conduct meetings at least monthly within five days of the proposed schedule data date. Provide a computer with the scheduling software loaded and a projector which allows all meeting participants to view the proposed schedule during the meeting. The Contractor's authorized scheduler must organize, group, sort, filter, perform schedule revisions as needed and review functions as requested by the Contractor and/or Government. The Contractor scheduler must attend in person unless virtual attendance is approved by Contracting Officer. The meeting is a working interactive exchange which allows the Government and Contractor the opportunity to review the updated schedule on a real time and interactive basis. The meeting will last no longer than 8 hours. Submit schedule file and narrative to the Government a minimum of two workdays in advance of the meeting. The Contractor's Project Manager must attend the meeting with the authorized representative of the Contracting Officer. Superintendents, foremen and major subcontractors must attend the meeting as required to discuss the project schedule and work. Following the schedule update meeting, make corrections to the schedule and resubmit, following the required schedule naming convention. Include only those changes approved by the Government in the schedule review meeting. Only approved schedules may be used to generate invoices for payment.

3.6.2 Update Submission Following Progress Meeting

Submit the complete Periodic Schedule Update of the Project Schedule containing all approved progress, revisions, and adjustments, pursuant to paragraph SUBMISSION REQUIREMENTS not later than 4 workdays after the periodic schedule update meeting.

3.7 WEEKLY PROGRESS MEETINGS

Conduct a weekly meeting with the Government (or as otherwise mutually agreed to) between the meetings described in paragraph entitled PERIODIC SCHEDULE UPDATE MEETINGS for the purpose of jointly reviewing the actual progress of the project as compared to the as planned progress and to review planned activities for the upcoming three weeks. Use the current approved schedule update for the purposes of this meeting and for the

production and review of reports. At the weekly progress meeting, address the status of RFIs, RFPs and Submittals. Contractor to provide meeting agenda and other related documents at least 24 hours in advance of meeting.

3.8 REQUESTS FOR TIME EXTENSIONS

ASCE 67-17 provides delay analysis guidelines. If there is a conflict between the contract and guidance provided in ASCE 67-17, the contract will govern. Provide justification of delay to the Contracting Officer in accordance with the contract provisions and clauses for approval, within 10 days of a delay occurring. Also prepare a time impact analysis for each Government request for proposal (RFP).

3.8.1 Justification of Delay

Provide a description of the event(s) that caused the delay and/or impact to the work. As part of the description, identify all schedule activities impacted. Show that the event that caused the delay/impact was the responsibility of the Government. Provide a time impact analysis that demonstrates the effects of the delay or impact on the project completion date, or interim completion date(s). Evaluate multiple impacts chronologically; each with its own justification of delay. With multiple impacts consider any concurrency of delay. A time extension and the schedule fragnet becomes part of the project schedule and all future schedule updates upon approval by the Contracting Officer.

3.8.2 Changes That Do Not Cause Delay

If it is determined that a change does not constitute a schedule time extension, a fragnet as described in paragraph FRAGMENTARY NETWORK, is to be created and inserted into the Project schedule.

3.8.3 Time Impact Analysis (Prospective Analysis)

Submit requests for time extensions based on a prospective analysis if the work involved or the impact identified has not already occurred. Where the impact is ongoing a prospective analysis may be considered. However, the Government reserves the right to require a retrospective analysis be prepared after the impact has ended.

Prepare a time impact analysis for approval by the Contracting Officer based on industry recommended practice AACE 52R-06. Utilize a copy of the last approved schedule prior to the first day of the impact or delay for the time impact analysis. If Contracting Officer determines the time frame between the last approved schedule and the first day of impact is too great, prepare an interim updated schedule to perform the time impact analysis. Unless approved by the Contracting Officer, no other changes may be incorporated into the schedule being used to justify the time impact.

3.8.4 Forensic Schedule Analysis (Retrospective Analysis)

Submit requests for time extensions based on a retrospective analysis if the work involved or the impact identified has already occurred. The analysis must account for the actual performance of both the impacted work and all other contract work in the schedule.

If a methodology is chosen from AACE 29R-03, the method must adhere to the principles identified in ASCE 67-17. If there is a conflict with the methodology chosen from AACE 29R-03 and ASCE 67-17, ASCE 67-17 will

govern. Choice of methodology should be discussed prior to submission to Government.

3.8.5 Fragmentary Network (Fragnet)

Prepare a proposed fragnet for time impact analysis consisting of a sequence of new activities that are proposed to be added to the project schedule to demonstrate the influence of the delay or impact to the project's contractual dates. Clearly show how the proposed fragnet is to be tied into the project schedule including all predecessors and successors to the fragnet activities. The proposed fragnet must be approved by the Contracting Officer prior to incorporation into the project schedule.

3.8.6 Time Extension

The Contracting Officer must approve the Justification of Delay including the time impact analysis before a time extension will be granted. No time extension will be granted unless the delay consumes all available Project Float and extends the projected finish date ("End Project" milestone) beyond the Contract Completion Date. The time extension will be in calendar days.

Actual delays that are found to be caused by the Contractor's own actions, which result in a calculated schedule delay, are not a cause for an extension to the performance period, completion date, or any interim milestone date.

3.8.7 Impact to Early Completion Schedule

No extended overhead will be paid for delay prior to the original Contract Completion Date for an Early Completion IPS unless the Contractor actually performed work in accordance with that Early Completion Schedule. The Contractor must show that an early completion was achievable had it not been for the impact.

3.9 FAILURE TO ACHIEVE PROGRESS

Should the progress fall behind the approved project schedule for reasons other than those that are excusable within the terms of the contract, the Contracting Officer may require provision of a written recovery plan for approval. The plan must detail how progress will be made-up to include which activities will be accelerated by adding additional crews, longer work hours, extra workdays, etc.

3.9.1 Artificially Improving Progress

Artificially improving progress by means such as, but not limited to, revising the schedule logic, modifying, or adding constraints, shortening activity durations, or changing calendars in the project schedule is prohibited. Indicate assumptions made and the basis for any logic, constraint, duration, and calendar changes used in the creation of the recovery plan. Any additional resources, manpower, or daily and weekly work hour changes proposed in the recovery plan must be evident at the work site and documented in the daily report along with the Schedule Narrative Report.

3.9.2 Failure to Perform

Failure to perform work and maintain progress in accordance with the

supplemental recovery plan may result in an interim and final unsatisfactory performance rating and may result in corrective action directed by the Contracting Officer pursuant to FAR 52.236-15 Schedules for Construction Contracts, FAR 52.249-10 Default (Fixed-Price Construction), and other contract provisions.

3.9.3 Recovery Schedule

Should the Contracting Officer find it necessary, submit a recovery schedule pursuant to FAR 52.236-15 Schedules for Construction Contracts.

3.10 OWNERSHIP OF FLOAT

Except for the provision given in the paragraph IMPACT TO EARLY COMPLETION SCHEDULE, float available in the schedule, at any time, belongs to the Project and is available for Contractor and Government use. This includes activity and project float. Activity float is the number of workdays that an activity can be delayed without causing a delay to the "End Project" finish milestone. Project float (if applicable) is the number of work days between the projected early finish and the "End Project" finish.

3.11 TRANSFER OF SCHEDULE DATA INTO RESIDENT MANAGEMENT SYSTEM

Ensure schedule data is uploaded to RMS. This data is additional supporting data in a form and detail required by the Contracting Officer pursuant to FAR 52.232-5 Payments under Fixed-Price Construction Contracts. The receipt of a proper payment request pursuant to FAR 52.232-27 Prompt Payment for Construction Contracts is contingent upon the Government receiving acceptable and approvable electronic version of the application for progress payment. Hard copy progress payment requests are not required unless specifically requested by the Contracting Officer.

3.12 PRIMAVERA P6 MANDATORY REQUIREMENTS

Ensure Primavera P6 settings provide a schedule capable of fulfilling the requirements of the contract. The following settings are mandatory and required in all schedule submissions to the Government:

- a. Activity Codes must be Project Level, not Global or EPS level.
- b. Calendars must be Project Level, not Global or Resource level.
- c. Activity Duration Types must be set to "Fixed Duration & Units".
- d. Percent Complete Types must be set to "Physical".
- e. Time Period Admin Preferences must remain the default "8.0 hr/day, 40 hr/week, 172 hr/month, 2000 hr/year". Set Calendar Work Hours/Day to 8.0 Hour days.
- f. Set Schedule Option for defining Critical Activities to "Longest Path".
- g. Set Schedule Option for defining progressed activities to "Retained Logic".
- h. Set up cost loading using a single lump sum non-labor resource. The Price/Unit must be \$1/hr, Default Units/Time must be "8h/d", and settings "Auto Compute Actuals" and "Calculate costs from units" un-selected.

- i. Activity ID's must not exceed 10 characters.
- j. Activity Names must have a verb-noun structure and contain the most defining and detailed description within the first 30 characters.
- k. The daily ending hour for all work calendars must be the same.

3.13 USACE P6 SCHEDULE NAMING CONVENTION (FORT WORTH DISTRICT)

Summary

Please ensure that all schedule submittals comply with the following:

- 1) **Sample Schedule NAME, (P6 Project ID): "M2004727-2INIT-V03"**. Use the RMS 8-digit "CONTRACT ID", a "-", a 5-digit schedule type identifier, another "-", and a 3-digit version identifier.
- 2) **Sample Schedule DESCRIPTION, (P6 Project Name): "W9126G-14-D-0050-0002, SAMMC-N Fire Station"**. Use the RMS 16-digit "Contract Number", (matching the format as awarded), (Omit the "-" and the Task Order number if none is used.)
- 3) **Sample P6 Export File Name: "M2004727-2INIT-V03.xer"**. Use the Schedule Name, (P6 Project ID), for the name of the export file.

Details

To ensure compatibility with the USACE Primavera database, the contractor's schedule submissions must follow the guidance for schedule IDs, Schedule Names and Schedule File Submittals, as shown below:

A. Schedule Name (P6 Project ID)

To ensure that all construction schedules can be distinguished in the USACE database, contractors must use the following P6 naming convention:

- 1) **Software Settings:** The "Project ID" must be set to the maximum of 20 characters. (The normal default.)
- 2) **Schedule Name**
 - a. The first eight characters of the Schedule Name, (P6 Project ID), must use the RMS "Contract ID". For the Fort Worth District, the Contract ID starts with "M200".
 - b. For legibility, use a "-" for the 9th character
 - c. Define the type of schedule with the next 5 characters (the leading number of this section lists the type of schedule in approximate chronological order of use)
 - i. "1PREL" for Preliminary
 - ii. "2INIT" for Initial
 - iii. "3MPCT" for Impact Schedules
 - iv. "4RBAS" for Re-Baselined schedules
 - v. "5UP##" for monthly update, i.e. "UP01" for the first monthly update
 - d. For legibility, use a "-" for the next character
 - e. Define the version with the next 3 characters. Use "V01" for the 1st version of the schedule, "V02" for the 2nd version of the schedule, etc. Note that the "0" is the number zero, not the letter "O")
 - f. Do not add additional characters or numbers to the name

3) Examples:

- a. M2003368-1PREL-V01 - The 1st version of the Preliminary schedule for project M2003368
- b. M2002479-2INIT-V03 - The 3rd version of the Initial schedule for project M2002479

- c. M2003451-3MPCT-V02 - The 2nd Impact for project M2003451
- d. M2001123-4RBAS-V01 - The 1st Re-Baselined/Recovery schedule for project M2001123
- e. M2001835-5UP11-V01 - The 1st version of the 11th update for project M2001835

B. Schedule Description (P6 Project Name)

To ensure that schedule descriptions are meaningful and consistent, contractors should use the following conventions for the P6 Project Name:

1) Use the RMS 16-digit "Contract Number", (matching the format as awarded). (Omit the "-" and Task Order number if none is used.)

2) Examples:

- a. For contract M2004358: W9126G14C0006, THAAD Battery - COF
- b. For contract M2002231: W9126G08C0036, Construct SAMMC North
- c. For contract M2002487: W9123806D0032-0003, HQ Bldg BCT-3

C. Schedule File

To ensure that there is a direct correlation between contractor's submitted schedule file and their respective schedules in our database, the contractor must:

1) Use the P6 schedule name (Project ID) for the exported file name for each schedule file submitted to the Corps. This will ensure that the schedule backup name matches the imported schedule name in our database.

2) Examples:

- a. The file export for a schedule named M2001244-5UP01-V01 should be named "M2001244-5UP01-V01.xer".
- b. The file export for a schedule named M2003451-3MPCT-V02 should be named "M2003451-3MPCT-V02.xer"

D. Creating the Schedule Exports:

Each schedule submittal will be saved in our database as a separate schedule for future reference. This means that a single project will have many schedules, one matching each of the contractor's submittals. These schedules will include all of the "Preliminary", "Initial", "Update", "Impact" and "Re-Baselined" schedules. To be able to keep track of these, the schedules must be uniquely-named using the following strategy:

1) Starting with the Preliminary or Initial schedule, create a schedule that represents the contractor's execution plan before any work is performed. For example, the first version of the Initial schedule will be named "M200###-2INIT-V01 (substituting the RMS Contract ID for the #'s).

2) Ensure that the "Project Name" is set correctly

3) When ready to submit the schedule, create a backup named exactly the same as the schedule. The easiest way to accomplish this is to:

- a. go to the P6 Project screen
- b. highlight the appropriate schedule in the Project Details window (Project ID)
- c. simultaneously press the CTRL key and "C" to copy the name into the copy buffer
- d. go to the P6 Activity screen
- e. execute a schedule backup (File, Export, etc.)
- f. when prompted for a file name, simultaneously press the CTRL and "V" key, pasting the P^ Project ID as the backup name
- g. execute the backup

4) When the Initial schedule is accepted by the Government, base your first update off of it by making a copy, renaming the schedule to the appropriate M200###-5UP01-V01, adding status, backing up to same name, submission.

- 5) Create a Government Approved "G" Submittal and Transmittal for each and every schedule submission:
- a. Indicate that the submittal is a schedule by starting the "Item Description" with word "Schedule"
 - b. Indicate the specific schedule, by name, in the "Item Description"
 - c. For MPCT, RBAS and schedule updates, add the time period using "- yyyy-MM"
 - d. **Example, Submittal Item Description:** "Schedule
"M2003666-5UP06-V01, 2013-06".

-- End of Section --

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Submittal Information

The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

Units of weights and measures used on all submittals are to be the same as those used in the contract drawings.

1.1.2 Project Type

The Contractor and the Designer of Record (DOR) shall check and approve all items before submittal and stamp, sign, and date indicating action taken. Proposed deviations from the contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

1.1.3 Submission of Submittals

Schedule and provide submittals requiring Government approval before acquiring the material or equipment covered thereby. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

1.2 DEFINITIONS

1.2.1 Submittal Descriptions (SD)

Submittal requirements are specified in the technical sections. Examples and descriptions of submittals identified by the Submittal Description (SD) numbers and titles follow:

SD-01 Preconstruction Submittals

Submittals that are required prior to or at the start of construction (work) or the next major phase of the construction on a multiphase contract.

Preconstruction Submittals include schedules and a tabular list of locations, features, and other pertinent information regarding products, materials, equipment, or components to be used in the work.

Certificates Of Insurance

Surety Bonds

List Of Proposed Subcontractors

List Of Proposed Products

Baseline Network Analysis Schedule (NAS)

Submittal Register

Schedule Of Prices Or Earned Value Report

Accident Prevention Plan

Work Plan

Quality Control (QC) plan

Environmental Protection Plan

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

SD-04 Samples

Fabricated or unfabricated physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.

Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards ensuring work can be judged. Includes assemblies or portions of assemblies that are to be incorporated into the project and those that will be removed at conclusion of the work.

SD-05 Design Data

Design calculations, mix designs, analyses or other data pertaining to a part of work.

Design submittals, design substantiation submittals and extensions of design submittals.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. Unless specified in another section, testing must have been within three years of date of contract award for the project.

Report that includes findings of a test required to be performed on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report that includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports

Daily logs and checklists

Final acceptance test and operational test procedure

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that the product, system, or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a manufacturer, supplier, installer or Subcontractor through Contractor. The document purpose is to further promote the orderly progression of a portion of the work by documenting procedures, acceptability of methods, or personnel qualifications.

Confined space entry permits

Text of posted operating instructions

SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including special notices and Safety Data Sheets (SDS) concerning impedances, hazards and safety precautions.

SD-10 Operation and Maintenance Data

Data provided by the manufacturer, or the system provider, including manufacturer's help and product line documentation, necessary to maintain and install equipment, for operating and maintenance use by

facility personnel.

Data required by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.

Data incorporated in an operations and maintenance manual or control system.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

Submittals required for Guiding Principle Validation (GPV) or Third Party Certification (TPC).

Special requirements necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.

1.2.2 Approving Authority

Office or designated person authorized to approve the submittal.

1.2.3 Work

As used in this section, on-site and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction. In exception, excludes work to produce SD-01 submittals.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Submittal Register; G

1.4 SUBMITTAL CLASSIFICATION

1.4.1 Government Approved (G)

Government approval is required for any variations from the Solicitation or the Accepted Proposal and for other items as designated by the Government.

Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, submittals are considered to be "shop drawings."

1.4.2 Design-Build Submittal Classifications

1.4.2.1 Designer of Record Approved (DA)

Designer of Record (DOR) approval is required on all submittals. Provide the Government with the number of copies designated hereinafter of all DOR approved submittals. The Government may review any or all Designer of Record approved submittals for conformance with the Solicitation, the Accepted Proposal, and the completed design. The Government will review all submittals designated as varying from the Solicitation or Accepted Proposal, as described below. Provide design submittals in accordance with Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD). Generally, list design submittals under SD-05 Design Data.

1.4.2.2 Government Conformance Review of Design (CR)

The Government will review all intermediate and final design submittals for conformance with the technical requirements of the Solicitation. Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) covers the design submittal and review process in detail. Review will be only for conformance with the applicable codes, standards, and contract requirements. Design data includes the design documents described in Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD).

1.4.2.3 Designer of Record Approved/Government Conformance Review (DA/CR)

1.4.2.3.1 Variations from the Accepted Design

DOR approval and the Government's concurrence are required for any proposed variation from the accepted design that still complies with the contract before the Contractor is authorized to proceed with material acquisition or installation. If necessary to facilitate the project schedule, before official submission to the Government, the Contractor and the DOR may discuss with the Contracting Officer's Representative a submittal proposing a variation. However, the Government reserves the right to review the submittal before providing an opinion. In any case, the Government will not formally agree to or provide a preliminary opinion on any variation without the DOR's approval or recommended approval. The Government reserves the right to reject any design, variation that may affect furniture, furnishings, equipment selections, or operational decisions that were made, based on the reviewed and concurred design.

1.4.2.3.2 Substitutions

Unless prohibited or otherwise provided for elsewhere in the contract, where the Accepted Proposal named products, systems, materials or equipment by manufacturer, brand name, model number, or other specific identification, and the Contractor desires to substitute a manufacturer or model after award, submit a requested substitution for Government concurrence. Include substantiation, through identifying information and the DOR's approval, that the substitute meets the contract requirements and that it is equal in function, performance, quality, and salient features to that in the accepted contract proposal. If the contract otherwise prohibits substitutions of equal named products, systems, materials or equipment by manufacturer, brand name, model number or other specific identification, the request is considered a "variation" to the contract. Variations are discussed below in paragraphs: "DESIGNER OF RECORD APPROVED/GOVERNMENT APPROVED" and VARIATIONS.

1.4.2.4 Designer of Record Approved/Government Approved (DA/GA)

In addition to the above-stated requirements for proposed variations to the accepted design, both DOR and Government Approval and, where applicable, a contract modification are required before the Contractor is authorized to proceed with material acquisition or installation for any proposed variation to the contract (the Solicitation or the Accepted Proposal), that constitutes a change to the contract terms. The Government reserves the right to accept or reject any such proposed variation.

1.4.3 For Information Only

Submittals not requiring Government approval will be for information only. Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are not considered to be "shop drawings."

1.4.4 Sustainability Reporting Submittals (S)

Submittals for Guiding Principle Validation (GPV) or Third Party Certification (TPC) are indicated with an "S" designation. These submittals are for information only and for use as specified in Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING.

Schedule submittals for these items throughout the course of construction as provided; do not wait until closeout.

1.5 PREPARATION

1.5.1 Transmittal Form

Use the ENG Form 4025-R transmittal form for submitting both Government-approved and information-only submittals. Submit in accordance with the instructions on the reverse side of the form. These forms or similar forms are included in the RMS CM software that the Contractor is required to use for this contract. Properly complete this form by filling out all the heading blank spaces and identifying each item submitted. Exercise special care to ensure proper listing of the specification paragraph and sheet number of the contract drawings pertinent to the data submitted for each item.

1.5.2 Submittal Format

1.5.2.1 Format of SD-01 Preconstruction Submittals

When the submittal includes a document that is to be used in the project, or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.2.2 Format for SD-02 Shop Drawings

Provide shop drawings not less than 8 1/2 by 11 inches nor more than 30 by 42 inches, except for full-size patterns or templates. Prepare drawings to accurate size, with scale indicated, unless another form is required. Ensure drawings are suitable for reproduction and of a quality to produce clear, distinct lines and letters, with dark lines on a white background.

- a. Include the nameplate data, size, and capacity on drawings. Also include applicable federal, military, industry, and technical society publication references.
- b. Dimension drawings, except diagrams and schematic drawings. Prepare drawings demonstrating interface with other trades to scale. Use the same unit of measure for shop drawings as indicated on the contract drawings. Identify materials and products for work shown.
- c. Submit an electronic copy of drawings in PDF format.

1.5.2.2.1 Drawing Identification

Include on each drawing the drawing title, number, date, and revision numbers and dates.

Number drawings in a logical sequence. Each drawing is to bear the number of the submittal in a uniform location next to the title block. Place the Government contract number in the margin, immediately below the title block, for each drawing.

1.5.2.3 Format of SD-03 Product Data

Present product data submittals for each section. Include a table of contents, listing the page and catalog item numbers for product data.

Indicate, by prominent notation, each product that is being submitted; indicate the specification section number and paragraph number to which it pertains.

1.5.2.3.1 Product Information

Supplement product data with material prepared for the project to satisfy the submittal requirements where product data does not exist. Identify this material as developed specifically for the project, with information and format as required for submission of SD-07 Certificates.

Provide product data in units used in the Contract documents. Where product data are included in preprinted catalogs with another unit, submit the dimensions in contract document units, on a separate sheet.

1.5.2.3.2 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.3.3 Data Submission

Collect required data submittals for each specific material, product, unit of work, or system into a single submittal that is marked for choices, options, and portions applicable to the submittal. Mark each copy of the product data identically. Partial submittals will not be accepted for expedition of the construction effort.

Submit the manufacturer's instructions before installation.

1.5.2.4 Format of SD-04 Samples

1.5.2.4.1 Sample Characteristics

Furnish samples in the following sizes, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:

- a. Sample of Equipment or Device: Full size.
- b. Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.
- c. Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.
- d. Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
- e. Sample Volume of Nonsolid Materials: Pint. Examples of nonsolid materials are sand and paint.
- f. Color Selection Samples: 2 by 4 inches. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified. Sizes and quantities of samples are to represent their respective standard unit.
- g. Sample Panel: 4 by 4 feet.
- h. Sample Installation: 100 square feet.

1.5.2.4.2 Sample Incorporation

Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at the time of use.

Recording of Sample Installation: Note and preserve the notation of any area constituting a sample installation, but remove the notation at the final clean-up of the project.

1.5.2.4.3 Comparison Sample

Samples Showing Range of Variation: Where variations in color, finish, pattern, or texture are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of

range. Mark each unit to describe its relation to the range of the variation.

When color, texture, or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.5.2.5 Format of SD-05 Design Data

Provide design data and certificates electronically in PDF format.

1.5.2.6 Format of SD-06 Test Reports

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.7 Format of SD-07 Certificates

Provide design data and certificates electronically in PDF format.

1.5.2.8 Format of SD-08 Manufacturer's Instructions

Present manufacturer's instructions submittals for each section. Include the manufacturer's name, trade name, place of manufacture, and catalog model or number on product data. Also include applicable federal, military, industry, and technical-society publication references. If supplemental information is needed to clarify the manufacturer's data, submit it as specified for SD-07 Certificates.

Submit the manufacturer's instructions before installation.

1.5.2.8.1 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.9 Format of SD-09 Manufacturer's Field Reports

Provide manufacturer's field reports electronically in PDF format, compiled in a single document.

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.10 Format of SD-10 Operation and Maintenance Data (O&M)

Comply with the requirements specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA for O&M Data format.

1.5.2.11 Format of SD-11 Closeout Submittals

When the submittal includes a document that is to be used in the project or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.3 Source Drawings for Shop Drawings

1.5.3.1 Source Drawings

The entire set of source drawing files (DWG) will be provided to the Contractor after award.

1.5.3.2 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction data for the referenced project. Any other use or reuse is at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim, and waives to the fullest extent permitted by law any claim or cause of action of any nature against the Government, its agents, or its subconsultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities, or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic source drawing files are not construction documents. Differences may exist between the source drawing files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic source drawing files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. The Contractor is responsible for determining if any conflict exists. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished source drawing files, the signed and sealed construction documents govern. Use of these source drawing files does not relieve the Contractor of the duty to fully comply with the contract documents, including and without limitation the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic source drawing files for use in producing construction data related to this contract, remove all previous indication of ownership (seals, logos, signatures, initials and dates).

1.5.4 Electronic File Format

Provide submittals in electronic format, with the exception of material samples required for SD-04 Samples items. Compile the submittal file as a single, complete document, to include the Transmittal Form described within, and also separately attach the native files which were used to create PDF. The attached files should include the original digital files used to create the submittal. Name the electronic submittal file specifically according to its contents, and coordinate the file naming convention with the Contracting Officer. Electronic files must be of

sufficient quality that all information is legible. Use PDF as the electronic format, unless otherwise specified or directed by the Contracting Officer. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is searchable and can be copied. If documents are scanned, optical character resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file. When required, the electronic file must include a valid electronic signature or a scan of a signature.

E-mail electronic submittal documents smaller than 10MB to an e-mail address as directed by the Contracting Officer. Provide electronic documents too large for RMS, through an electronic file sharing system such as the DOD SAFE Web Application located at the following website:
<https://safe.apps.mil/>.

1.6 QUANTITY OF SUBMITTALS

For all submittal types, besides SD-04, electronic submittals are required. Hard copies shall be provided only when requested by the Contracting Officer.

1.6.1 Number of SD-04 Samples

- a. Submit two samples, or two sets of samples showing the range of variation, of each required item. One approved sample or set of samples will be retained by the approving authority and one will be returned to the Contractor.
- b. Submit one sample panel or provide one sample installation where directed. Include components listed in the technical section or as directed.
- c. Submit one sample installation, where directed.
- d. Submit one sample of nonsolid materials.

1.7 INFORMATION ONLY SUBMITTALS

Submittals without a "G" designation must be certified by the QC manager and approved by the Designer of Record (DOR) prior to submitting to the Contracting Officer for information-only. Provide information-only submittals to the Contracting Officer a minimum of 14 calendar days prior to the Preparatory Meeting for the associated Definable Feature of Work (DFOW). Approval of the Contracting Officer is not required on information only submittals. The Contracting Officer will mark "receipt acknowledged" on submittals for information and will return only the transmittal cover sheet to the Contractor. Normally, submittals for information only will not be returned. However, the Government reserves the right to return unsatisfactory submittals and require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

1.8 PROJECT SUBMITTAL REGISTER

A sample Project Submittal Register showing items of equipment and materials for which submittals are required by the specifications is provided as "Submittal Register."

1.8.1 Submittal Management

Prepare and maintain a submittal register, as the work progresses. Do not change data that is output in columns (c), (d), (e), and (f) as delivered by Government; retain data that is output in columns (a), (g), (h), and (i) as approved. As an attachment, provide a submittal register showing items of equipment and materials for which submittals are required by the specifications. This list may not be all-inclusive and additional submittals may be required. Maintain a submittal register for the project in accordance with Section 01 45 00.15 10 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE(RMS CM). The Government will provide the initial submittal register in electronic format with the following fields completed, to the extent that will be required by the Government during subsequent usage.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD Number. and type, e.g., SD-02 Shop Drawings) required in each specification section.

Column (e): Lists one principal paragraph in each specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting the project requirements.

Thereafter, the Contractor is to track all submittals by maintaining a complete list, including completion of all data columns and all dates on which submittals are received by and returned by the Government.

1.8.2 Design-Build Submittal Register

The Designer of Record develops a complete list of submittals during design and identify required submittals in the specifications, and use the list to prepare the Submittal Register. The list may not be all inclusive and additional submittals may be required by other parts of the contract. The approved submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the contract period. Coordinate the submit dates and need dates with dates in the Contractor prepared progress schedule. Submit monthly or until all submittals have been satisfactorily completed, updates to the submittal register showing the Contractor action codes and actual dates with Government action codes. Revise the submittal register when the progress schedule is revised and submit both for approval.

1.8.3 Preconstruction Use of Submittal Register

Submit the submittal register. Verify that all submittals required for the project are listed and add missing submittals. Coordinate and complete the following fields on the register:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for the approving authority to receive submittals.

Column (h) Contractor Approval Date: Date that Contractor needs approval of submittal.

Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

1.8.4 Contractor Use of Submittal Register

Update the following fields in the Government-furnished submittal register program or equivalent fields in the program used by the Contractor with each submittal throughout the contract.

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.

Column (l) Date submittal transmitted.

Column (q) Date approval was received.

1.8.5 Approving Authority Use of Submittal Register

Update the following fields:

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (l) Date submittal was received.

Column (m) through (p) Dates of review actions.

Column (q) Date of return to Contractor.

1.8.6 Action Codes

1.8.6.1 Contractor Action Codes

DESIGN BUILD SUBMITTALS			
Submittal Classifications shown in UFGS Sections	Submittal Classification	Corresponding SpecsIntact Submittal Register Code which is populated in the SI Submittal Register. Software Limitations: (The software shows one character delineation in the SpecsIntact Submittal Register)	RMS - The following Submittal Classifications are populated in RMS when the SpecsIntact Submittal Data File is pulled into RMS)
G	Submittal requires Government	G	GA
BLANK	Submittal is For Information Only (FIO)	BLANK	FIO
DA	Submittal requires Designer of Record Approval	D	DA
CR	Submittal requires Government Conformance Review	C	CR
DA/CR	Submittal requires Designer of Record Approval and Government Conformance	R	DA/CR
DA/GA	Submittal requires Designer of Record Approval and Government Approval	A	DA/GA

1.8.7 Delivery of Copies

Submit an updated electronic copy of the submittal register to the Contracting Officer with each invoice request. Provide an updated Submittal Register monthly regardless of whether an invoice is submitted.

1.9 VARIATIONS

Variations from contract requirements require Contracting Officer approval pursuant to contract Clause FAR 52.236-21 Specifications and Drawings for Construction, and will be considered where advantageous to the Government.

1.9.1 Considering Variations

Discussion of variations with the Contracting Officer before submission will help ensure that functional and quality requirements are met and minimize rejections and resubmittals. For variations that include design changes or some material or product substitutions, the Government may require an evaluation and analysis by a licensed professional engineer hired by the contractor, other than the QC manager.

1.9.2 Proposing Variations

Check the column "variation" of ENG Form 4025 for submittals that include variations proposed by the Contractor. Set forth in writing the reason for any variations and note such variations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted variations.

Specifically point out variations from contract requirements in a ENG Form 4025. Failure to point out variations may cause the Government to require rejection and removal of such work at no additional cost to the Government.

1.9.3 Warranting that Variations are Compatible

When delivering a variation for approval, the Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.9.4 Review Schedule Extension

In addition to the normal submittal review period, a period of 14 calendar days will be allowed for the Government to consider submittals with variations.

1.10 SCHEDULING

Schedule and submit concurrently product data and shop drawings covering component items forming a system or items that are interrelated. Submit pertinent certifications at the same time. No delay damages or time extensions will be allowed for time lost in late submittals. Allow an additional 10 calendar days for review and approval of submittals for food service equipment and refrigeration and HVAC control systems.

- a. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that work will not be delayed by submittal processing. The Contractor is responsible for additional time required for Government reviews resulting from required resubmittals. The review period for each resubmittal is the same as for the initial submittal.
- b. Submittals required by the contract documents are listed on the submittal register. If a submittal is listed in the submittal register

but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the Contractor of supplying submittals required by the contract documents but that have been omitted from the register or marked "N/A."

- c. Resubmit the submittal register and annotate it monthly with actual submission and approval dates. When all items on the register have been fully approved, no further resubmittal is required.
- d. Contracting Officer review will be completed within 21 calendar days after the date of submission. Any item submitted after close of business, will be considered next business day.

1.10.1 Government Reviewed Design

The Government will review design submittals for conformance with the technical requirements of the Solicitation. Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) covers the design submittal and review process in detail. Government review is required for variations from the completed design. Review will be only for conformance with the contract requirements. Included are only those construction submittals for which the DOR's design documents do not include enough detail to ascertain contract compliance. The Government may, but is not required to, review extensions of design such as structural steel or reinforcement shop drawings.

1.11 GOVERNMENT APPROVING AUTHORITY

When the approving authority is the Contracting Officer, the Government will:

- a. Note the date on which the submittal was received.
- b. Review submittals for approval within the scheduling period specified and only for conformance with project design concepts and compliance with contract documents.
- c. Identify returned submittals with one of the actions defined in paragraph REVIEW NOTATIONS and with comments and markings appropriate for the action indicated.

1.11.1 Review Notations

Submittals will be returned to the Contractor with the following notations:

- a. Submittals marked "approved" or "accepted" authorize proceeding with the work covered.
- b. Submittals marked "approved as noted" or "approved, except as noted, resubmittal not required," authorize proceeding with the work covered provided that the Contractor takes no exception to the corrections.
- c. Submittals marked "not approved," "disapproved," or "revise and resubmit" indicate incomplete submittal or noncompliance with the contract requirements or design concept. Resubmit with appropriate changes. Do not proceed with work for this item until the resubmittal is approved.

- d. Submittals marked "not reviewed" indicate that the submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.
- e. Submittals marked "receipt acknowledged" indicate that submittals have been received by the Government. This applies only to "information-only submittals" as previously defined.

1.12 DISAPPROVED SUBMITTALS

Make corrections required by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications, give notice to the Contracting Officer as required under the FAR clause titled CHANGES. The Contractor is responsible for the dimensions and design of connection details and the construction of work. Failure to point out variations may cause the Government to require rejection and removal of such work at the Contractor's expense.

If changes are necessary to submittals, make such revisions and resubmit in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

1.13 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals is not to be construed as a complete check, and indicates only that the design, general method of construction, materials, detailing, and other information appear to meet the Solicitation and Accepted Proposal.

Approval or acceptance by the Government for a submittal does not relieve the Contractor of the responsibility for meeting the contract requirements or for any error that may exist, because under the Quality Control (QC) requirements of this contract, the Contractor is responsible for ensuring information contained within each submittal accurately conforms with the requirements of the contract documents.

After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.14 APPROVED SAMPLES

Approval of a sample is only for the characteristics or use named in such approval and is not to be construed to change or modify any contract requirements. Before submitting samples, provide assurance that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.

Match the approved samples for materials and equipment incorporated in the work. If requested, approved samples, including those that may be damaged in testing, will be returned to the Contractor, at its expense, upon

completion of the contract. Unapproved samples will also be returned to the Contractor at its expense, if so requested.

Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make as that material. The Government reserves the right to disapprove any material or equipment that has previously proved unsatisfactory in service.

Samples of various materials or equipment delivered on the site or in place may be taken by the Contracting Officer for testing. Samples failing to meet contract requirements will automatically void previous approvals. Replace such materials or equipment to meet contract requirements.

1.15 WITHHOLDING OF PAYMENT

No payment for materials incorporated in the work will be made unless all required DOR approvals or required Government approvals have been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information-only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

1.16 CERTIFICATION OF SUBMITTAL DATA

Certify the submittal data as follows on Form ENG 4025: "I certify that the above submitted items had been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.

_____ NAME OF CONTRACTOR _____ SIGNATURE OF CONTRACTOR

CONTRACTOR (Firm Name)
_____ Approved
_____ Approved with corrections as noted on submittal data and/or attached sheet (s)
SIGNATURE: _____
TITLE: _____
DATE: _____

For Design-Build construction, both the Contractor QC manager and the DOR are to stamp and sign to certify that the submittal meets contract requirements.

Animal Building

FJ25AB

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 33 16.00 10

DESIGN DATA (DESIGN AFTER AWARD)

PART 1 GENERAL

1.1 SUMMARY

After award, develop the accepted proposal into the completed design, as described herein. Use a collaborative, integrated design process for all stages of project delivery with comprehensive performance goals for site development, energy, water, material selection, indoor environmental quality, and waste diversion. Ensure incorporation of these goals in project delivery. Consider all stages of the building lifecycle, including deconstruction, rehabilitation, re-purposing, or demolition.

1.2 REFERENCES

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

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 19005-3	(2012) Document Management -- Electronic Document File Format for Long-Term Preservation -- Part 3: Use of ISO 32000-1 with Support for Embedded Files (PDF/A-3)
ISO 19115-1	(2014) Geographic Information -- Metadata -- Part 1: Fundamentals
ISO 32000-1	(2008) Document Management -- Portable Document Format -- Part 1: PDF 1.7

NATIONAL INSTITUTE OF BUILDING SCIENCES (NIBS)

NBIMS-US	(V3) National BIM Standard - United States
NCS	(V6) United States National CAD Standard

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 1110-1-2909	(2012) Engineering and Design -- Geospatial Data and Systems
ERDC/ITL SR-23-1	(2024) A/E/C Graphics Standard, Release 2.2
ERDC/ITL TR-19-7	(2019) A/E/C CAD Standard - Release 6.1

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-300-02	(2025) Unified Facilities Guide Specifications (UFGS) Format Standard
UFC 4-010-01	(2018; with Change 3, 2024) DoD Minimum Antiterrorism Standards for Buildings

1.3 DEFINITIONS

1.3.1 Designer of Record (DOR)

Professional Registered members of the Contractor's Design-Build team that check, approve, date, and certify, prior to submitting the deliverables to the Government, that the D-B design submittals comply with the contract requirements.

The DOR's stamp, sign, and date each design drawing and other design deliverables under their responsible discipline at final design submittal stage. The DOR(s) are responsible for maintaining the integrity of the design and for compliance with the contract requirements through construction and documentation of the as-built condition by coordination, review and approval of extensions of design, material, equipment and other construction submittals, review and approval or disapproval of requested deviations to the accepted design or to the contract, coordination with the Government of the above activities, and by performing other typical professional design responsibilities.

1.3.2 Government Furnished Material (GFM)

Government material that may be incorporated into, or attached to, an end item to be delivered under a contract or which may be consumed in the performance of a contract. It includes, but is not limited to, raw and processed material, parts, components, assemblies, and small tools and supplies.

1.3.3 Advanced Modeling

A subset of geospatial technologies as defined in EM 1110-1-2909 to include BIM, CIM, GIS, and CAD. Advanced Modeling is comprised of models and drawings that form a digital representation of the project, or part thereof, that are comprised of model elements with facility data.

1.3.4 Model Element

A self-contained graphical element with a unique identification that is used to populate a model, and whose behavior and properties are defined by facility/site data and software processes. Model elements can represent a physical entity, such as a pump, a concrete wall, or a utility vault and range from the simple to the complex and can be custom modified.

1.3.5 USACE Minimum Modeling Matrix (M3)

The USACE Minimum Modeling Matrix (M3) describes the minimum modeling and data requirements by defining the level of development (LOD) and element grade.

1.3.6 Facility Data

Non-graphical data attached to surface and subsurface components for both building and site model elements that describe various facility characteristics such as parametric values that drive physical sizes, material definitions (e.g. wood, metal), manufacturer data, industry standards (e.g. AISC steel properties), location, and project identification numbers. Facility data can also define supplementary physical entities that are not shown graphically in the model, such as the

system of a duct, hardware on a door, content of conduit, site surface, alignment, levee, channel or transformer properties.

1.3.7 Industry Foundation Class (IFC)

IFC are a standard and file format used for the exchange of model elements and data; see <http://www.iai-tech.org>. In the context of this section, IFC does not mean "Issued For Construction."

1.3.8 Model Uses

A Model Use is a method or strategy of applying modeling during a facility's life cycle to achieve one or more specific objectives. Reference NBIMS-US for the definitive list of Model Uses and definitions.

1.3.9 USACE BIM/CIM Platform Configuration Standards - Templates, Workspaces, Catalogs, and Environments

1.3.10 USACE CAD/BIM Technology Center

The USACE CAD/BIM Technology Center hosts all standard content for USACE. This content can be accessed through the CAD/BIM Technology Center website.

1.4 PRECONSTRUCTION ACTIVITIES

1.4.1 Design Quality Control Plan

Submit a Design Quality Control Plan in accordance with Section 01 45 00 QUALITY CONTROL before design may proceed.

1.4.2 Meetings and Conferences

1.4.2.1 Post Award Conference

The Government will conduct a post award conference at the project site , as soon as possible after Contract award, coordinated with issuance of the notice to proceed (NTP). Participation by the Contractor and major subcontractor representatives is mandatory. All designers need not attend this first meeting. The government will provide an agenda, meeting goals, meeting place, and meeting time to participants prior to the meeting.

As a minimum the following will be addressed during the conference: determination and introduction of contact person and their authorities; contract administration requirements; discussion of expected project progress processes; and coordination of subsequent meeting.

- a. The government will introduce the Government project delivery team members, facility users, facility command representatives, and installation representatives.
- b. Introduce key personnel, major subcontractors and other needed staff.
- c. Define expectations and duties of each participant.
- d. Develop a meeting roster with complete contact information including name, office, project role, phone, mailing and physical address, and e-mail address for distribution to all participants. Also, provide minutes of the meeting to all participants.

1.4.2.2 Initial Design Conference

After Contract award, conduct the initial design conference, and provide a record of the meeting. All Designers of Record must participate in the conference. The primary purpose of the meeting is to make sure any needs are assigned and due dates established, as well as points of contact identified. The initial design conference may be scheduled and conducted at the project installation after the Post Award Conference and prior to initiation of significant preliminary design development, although it is recommended that the partnering process be initiated at the time of or before the initial design conference. Limit any design work conducted after award and prior to this conference to site work.

1.4.2.3 Advanced Modeling Kick-Off Meeting

Conduct an Advanced Modeling Kick-Off Meeting prior to submission of the Advanced Modeling PxP, within 45 days after Notice to Proceed. Required meeting attendance includes, at a minimum, the DOR, the design drawing and modeling specialist and the Geographic District BIM Manager or delegate.

The intent of this meeting is to coordinate the expectations for the Advanced Modeling PxP.

1.4.2.4 Advanced Modeling PxP Demonstration Meeting

Within 30 days after the acceptance of the Advanced Modeling PxP and M3, conduct a demonstration to review the Plan for clarification, and to verify the functionality of planned Model technology workflow and processes. If modifications are required, complete the modifications and resubmit the Advanced Modeling PxP performing a subsequent demonstration for Government acceptance.

1.4.2.5 Pre-Construction Conference

Before starting any construction activities, jointly conduct an administrative conference with the Government to discuss any outstanding requirements and to review local installation requirements. It is possible there will be multiple Pre-Construction Conferences based on the configuration of the design packages. Provide minutes of the meeting(s) to all participants.

1.5 SUBMITTALS

Each submittal includes an associated approval level designation as defined in the following table:

Approval Level Designation	Definition
G	Government approval
no designation	for information only
D	Designer of Record approval
C	Government Conformance Review of Design

Approval Level Designation	Definition
R	Designer of Record Approval and Government Conformance Review
A	Designer of Record Approval and Government Approval
S	inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING

When used, a designation following the approval level designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Advanced Modeling Project Execution Plan (PxP); C,
 Design Quality Control Plan; G,
 Initial Design Conference
 Preconstruction Conference
 DCM Procedures; G,
 Submittal Register; G,

SD-05 Design Data

Design and Code Checklists; C,
 Sustainable Design; C,
 Interim Design Submittals; R,

 Conference Documentation
 Final Design Submittals; R,
 Design Complete Documents; C,

SD-11 Closeout Submittals

DD Form 1354; A,

1.6 DESIGN QUALITY CONTROL

1.6.1 Design And Code Checklists

Develop and utilize appropriate discipline-specific checklists during the design and quality control of each submittal. Submit these completed checklists with each design submittal, as applicable, as part of the project documentation.

1.6.2 Advanced Modeling Project Execution Plan (PxP)

Develop an Advanced Modeling Project Execution Plan ("Plan" or "PxP") documenting mandatory and Contractor-elected BIM Uses, analysis technologies and workflows. Submit the PxP within 45 days after issuance of Notice to Proceed.

Use the USACE ADVANCED MODELING PROJECT EXECUTION PLAN (PxP) Template located at the USACE CAD/BIM Technology Center website to develop an acceptable Plan and update to include platforms and processes to meet the requirements of the project.

1.6.2.1 M3 Template

Use the M3 Template located at the USACE CAD/BIM Technology Center website and submit as part of the Advanced Modeling PxP.

1.6.2.2 Model Uses

Mandatory Model Uses are predefined in the Project Execution Plan (PxP) and cannot be modified. Identify additional elected Model Uses in the PxP.

1.7 DELIVERY, STORAGE, AND HANDLING

1.7.1 Electronic Design Submittal

Provide identical copies of discs for approval, for each submittal required.

Provide quantities and sizes indicated in Paragraph SUBMITTAL DISTRIBUTION, MEDIA AND QUANTITIES.

1.7.1.1 Malicious Content

Scan all electronic files for malicious viruses using commercially available scanning program that is routinely updated to identify and remove current virus threats.

1.7.1.2 Storage Media

Provide project data on disc-based (DVD±R/RW) media. Provide the full submittal on one single disc whenever possible. When separation of the submittal is required separate deliverables onto separate media. Document any media divisions in the PxP for approval by the Contracting Officer.

- a. Directly print identification of contents onto storage media. Do not provide adhesived labels. Include the name of the submittal, project, project location, Contract number, Designer of Record firm/Prime Contractor company's name, title of submission, and security classification (in accordance with the applicable security classification labeling regulations) on the label. If multiple discs are provided, clearly document the contents of each disc on the label.
- b. Include the name and contact information of the individual who produced the final data disc to ensure that any problems with the data or media can be easily resolved.
- c. When browsed on any computer, the disc displays the following folders and their associated content:

- (1) Submittal files (containing all submittal data)

- (2) All supporting documents associated with the submittal
- (3) Readme containing one TXT, PDF, or HTML file with general use information, organizational instructions, and basic preparer contact information.

1.7.2 Advanced Model File Packaging

Execute the following actions for all design drawing and modeling files:

1.7.2.1 Autodesk AutoCAD

- a. Purge unused
- b. Audit
- c. Compress

1.7.3 PDF File Packaging

Utilize PDF file format in accordance with ISO 32000-1 and ISO 19005-3. Provide files from original sources, text-searchable, and saved in "Standard" (uncompressed) resolution whenever possible.

1.7.3.1 Bookmarking

- a. Bookmark drawing submittal PDF sets to include one Parent Bookmark per Discipline and one Child Bookmark per sheet within each Discipline. Format Parent Bookmarks as "Discipline" (e.g. Architectural). Format Child Bookmarks as "Sheet ID Sheet Title" (e.g. A-101 First Floor Plan).
- b. Bookmark specification submittal PDF sets using the SpecsIntact Print Processing PDF Print/Publish feature, combining processed sections into one PDF document. Insert the Submittal Register into the file where specified by Section 01 33 00 SUBMITTAL PROCEDURES and bookmark.
- c. Bookmark design analysis and calculation submittal PDF sets to include one Parent Bookmark per design analysis section and one Child Bookmark per major paragraph per section. Format Parent Bookmarks as "Section" (e.g. Architectural). Format Child Bookmarks as "major paragraph designation Sheet Title" (e.g. 2.1 Primary Facility Functions).

1.7.3.2 Hyperlinking

Hyperlink all reference annotation symbology (e.g. section cut symbology, detail callout symbology, elevation callout symbology) to the sheet referenced by the annotation.

1.7.4 Encryption

Encrypt deliverable data as directed by Project Office Engineer. Document the encryption in the PxP.

PART 2 PRODUCTS

2.1 ADVANCED MODELING DOCUMENTS

Provide all of the following documents with each design submittal.

2.1.1 Submitted Files List

Provide list of all submitted electronic files including a description, directory, and file name for each file submitted. Identify which files have been produced from the Model and Facility Data. For all Sheet files, include a list of the sheet titles and sheet numbers.

2.1.2 Advanced Modeling Submittal Checklist

Complete the USACE BIM/CIM Advanced Modeling Submittal Checklist and include with each submittal. Download the Checklist from the USACE CAD/BIM Technology Center website.

2.1.3 Advanced Modeling Electronic Files

Include all Advanced Modeling files associated with the contract scope of work.

2.1.3.1 3D Interactive Review Model

Provide a copy of each BIM Model in an approved interactive review format. Use Bentley Navigator version 2022 for the 3D Interactive Review Model format.

2.1.3.2 Industry Foundation Class (IFC) Coordination View

Provide an IFC Coordination View for all deliverables. Provide exported property set data for all IFC supported named building elements. Submit all IFC models in the IFC2x3 Coordination View V2.0 schema.

2.1.3.3 Quality Control (QC) Reports

As a minimum, include the following reports:

2.1.3.3.1 Model Standards Checks and Reports

Provide QC checks demonstrating adherence to the NCS v6.0 BIM Implementation section. Identify and report non-compliant elements and submit a corrective action plan. Provide the Government with detailed justification and request Government acceptance for any non-compliant elements that the Contractor proposes to be allowed to remain in the Model. Verify the following for the Model(s) and Facility Data set:

- a. No undefined, incorrectly defined, or duplicated elements.
- a. No errors when opening.
- c. No broken Links, References, or X-References.
- d. Minimized extraneous information.
- e. Content uses the coordinate system defined in the approved PxP.
- f. Models share a common alignment point.
- g. For a Design Complete or Record Submittal; no unloaded Links, References, or X-References exist.

2.1.3.3.2 Graphics Standards Checks and Report

Provide QC checks on all graphic deliverables demonstrating that the fonts, dimensions, symbology and other construction document formatting are compliant with the requirements of this specification. Identify and report non-compliant content.

2.1.3.3.3 CAD Standards Checks and Report

Provide QC checks on CAD Output demonstrating that filenames, sheet borders, layer/level names, and symbology are compliant with the requirements of this specification. Identify and report non-compliant content.

2.1.3.3.4 Interference Management (3D Coordination) Checks and Report

Execute Interference Management checks and provide a summary of the results noting total hard interferences (e.g., mechanical vs. structural, or mechanical vs. mechanical, overlaps in the same location) and soft interferences (e.g., conflicts regarding equipment clearance, service access, fireproofing, insulation, code space requirements).

2.1.3.3.5 Additional Parameters

Additional QC parameters as deemed appropriate for the Project may be developed and documented in the Advanced Modeling PxP.

2.1.4 Advanced Modeling Re-Submittals

If components of an Advanced Modeling submittal are rejected, provide the following for each Advanced Modeling Re-Submittal, in addition to re-submittal information required by Section 01 33 00 SUBMITTAL PROCEDURES:

- a. Re-submit all components required under paragraph ADVANCED MODELING PACKAGE, including a new Advanced Modeling Checklist and updated content in response to Government comments.
- b. Provide a copy of all Government review comments.
- c. Provide a response to each Government review comment for back check.

2.2 DESIGN DRAWINGS

From advanced model files, produce design drawings that describe the scope of the Contract for all required submittals including all interim and final deliverables.

2.2.1 Electronic Drawing Files

Provide electronic drawing files in PDF format for each project drawing in the design set.

2.2.2 Drawing Index

Provide an index of drawings sheet as part of the drawing set, and an electronic table of all drawings submitted. Include the electronic file name, the sheet reference number, the sheet number, and the sheet title containing the data for each drawing.

2.2.3 Shop Drawings Used as Design Drawings

Design drawings may be prepared similar to shop drawings to minimize construction submittals after the Design Complete Submittals. Prepare and submit with the design drawings, appropriate connection, fabrication, layout, and product specific drawings.

2.2.3.1 Drawing Format For Shop Drawings Used as Design Drawings

Use the Contractor-originated drawings as the basis for the record drawings. Conform shop drawings included as design documents with the same drawing requirements such as drawing format, sheet size, layering, lettering, and title block used in design drawings.

2.2.3.2 Identification of Shop Drawings Used as Design Drawings

Indicate which shop drawings are being submitted as design drawings in the transmittal letter.

2.2.4 Seal on Documents

Sign, date and seal all Contractor-originated design drawings by the registered architect or the registered engineer of the respective discipline. This is the seal of the Designer of Record for that drawing. Application of the electronic seal and signature accepts responsibility for the work shown thereon. Only required for Design Complete Documents.

2.3 SPECIFICATIONS

Provide a Contractor-originated design specification that, in conjunction with the drawings, demonstrates compliance with materials, equipment, execution, and field quality control requirements of the RFP and accepted proposal.

2.3.1 Specifications Format

Utilize the Unified Facility Guide Specifications (UFGS) current at the time of Contract award. Process the specifications with the SpecsIntact software package.

- a. Edit and expand the appropriate specifications to ensure that all project design requirements, current code requirements, and regulatory requirements are met. Provide non-proprietary, descriptive project specifications in compliance with the requirements in UFC 1-300-02. Do not provide proprietary information in the project specifications unless approved by the Contracting Officer.
- b. Note that the UFGS are based on design-bid-build contracting and will require editing to apply to a design-build project. For instance, they assume that the Government will approve most submittals, whereas in design-build, the DOR has that action, unless this solicitation requires Government approval for specific submittals.
- c. Organize project sections not based on UFGS in accordance with CSI MasterFormat and UFC 1-300-02.

2.3.2 Identification of Manufacturer's Product Data Used as Specifications.

Provide complete and legible catalog cut sheets, product data, installation

instructions, operation and maintenance instructions, warranty, and certifications for products and equipment for which final material and equipment choices have been made. Indicate, by prominent notation, each product that is being submitted including optional manufacturer's features, and indicate where the product data shows compliance with the Contract requirements.

2.3.3 Specifications Packaging

Provide specifications to include the following:

- a. Cover sheet and project table of contents.
- b. Specification sections, each section with a table of contents.
- c. Manufacturer's Product Data. If providing as attachments to the applicable specification section, incorporate as attachment reference within the section and section table of contents.

2.3.4 Specification Deliverable

Submit a bundled specification package in PDF format for each design package. As a minimum, bookmark each specification section in the bundled package. Also, submit the source files, in the processing system format, used to create the PDF.

2.4 DESIGN ANALYSIS

Prepare, organize, and present a design analysis that will document the general parameters, functional and technical requirements, design objectives, design assumptions, and provides design calculations applicable to a project's design. Organize the design analysis into three parts; Part 1 - General Description; Part 2 - Design Requirements and Provisions; and Part 3 - O&M Provisions.

The design analysis states the purpose, authorization, applicable criteria and the project description for the project, and provides a summary of the factors influencing the choice of the civil, environmental, architectural, structural, mechanical, electrical, communications, fire protection, physical security systems, HTRW, and sustainable design features used in the project along with an indication of how the initial costs and life cycle costs were factored into final selections. In the final design analysis clearly and succinctly include:

- a. An introductory description of the project concepts that addresses the salient points of the design
- b. An orderly and comprehensive documentation of criteria and rationale for system selection.
- c. The identification of any necessary licenses and permits that are anticipated to be required as a part of the design and/or construction process.
- d. Identify all applicable codes and criteria and highlight specific requirements within these codes and criteria for critical issues in the facility design.
- e. Required calculations as specified and as needed to support the design.

- h. Clearly identify "Antiterrorism" requirement and document the antiterrorism and force protection features as required by UFC 4-010-01.

2.4.1 Design Requirements and Provisions

Include subparts for each major design discipline and basic project design requirements for each discipline to the extent required in the scope of work.

2.4.1.1 Civil

Include soil analysis and survey data, site design, site improvements, planting and landscaping, paving, grading and drainage, water, waste-water and soil treatment, contaminant containment, utilities systems analysis and design, if required.

2.4.1.2 Environmental

Include an impact assessment checklist covering air, water and noise effects from the project and construction; worker health and safety; HTRW remediation cleanup and action levels; transportation and disposal regulation requirements; quality control for chemical sampling/analysis; wetlands determination (tidal and nontidal); special wildlife, plant, and endangered species considerations; ground water, waterway and floodplain protection assessment; pollution prevention control requirements; and design measures to be implemented (i.e., construction site sediment and erosion control requirements by Federal, state and local governments); and hazardous material management, natural and cultural resources, and environmental permits.

2.4.1.3 Physical Security

Include fencing, vaults, protective lighting, security systems, locks, arms rooms, controlled substances, entrances, guard facilities, classified material, patrol roads, clear zones, restricted areas, surveillance and penetration resistance.

2.4.2 Operations and Maintenance (O&M) Provisions

Identify design provisions made to enhance and to reduce the cost of operating and maintaining the facility when completed. Identify any special safety considerations or occupational health related considerations that may affect operation and maintenance activities as a result of the final design.

2.4.3 Design Analysis Packaging

2.4.3.1 Assembly and Identification

Assemble design analysis in a single volume with a table of contents if possible. Include a cover page in the basis of design for each discipline indicating the project title and locations, contract number, table of contents, and tabbed separations or bookmarks for quick reference. At a minimum tab or bookmark for each discipline.

2.4.4 Calculations

Place the signature and seal of the designer of record responsible for the work on the cover page of the calculations for the respective design discipline.

PART 3 EXECUTION

3.1 DESIGN SUBMITTALS

Include all deliverable products and associated support documents described in Part 2 of this specification with each design submittal.

3.2 Holiday Periods for Government Review or Actions

The Contractor shall not schedule meetings, Government reviews or responses during the last two weeks of December or other designated Government Holidays (including Friday after Thanksgiving) and shall exclude such dates and periods from any durations specified herein for Government actions.

3.3 Late Submittals and Reviews

If the Contractor cannot meet its scheduled submittal date for a design package, it must revise the proposed submittal date and notify the government in writing, at least one (1) week prior to the submittal, in order to accommodate the Government reviewers' other scheduled activities. If a design submittal is over one (1) day late in accordance with the latest revised design schedule, or if notification of a proposed design schedule change is less than seven (7) days from the anticipated design submission receipt date, the Government review period may be extended up to seven (7) days due to reviewers' schedule conflicts. If the Government is late in meeting its review commitment and the delay increases the Contractor's cost or delays completion of the project, the Suspension of Work and Defaults clauses provide the respective remedy or relief for the delay.

3.4 SUBMITTAL DISTRIBUTION, MEDIA AND QUANTITIES

3.4.1 Submittal Distribution and Quantities

General: The documents which the Contractor shall submit to the Government for each submittal are listed and generally described in this Section. Provide copies of each design submittal as follows (NOTE: If this is a Single Award or Multiple Award, Indefinite Delivery/Indefinite Quantity Contract, this information will be provided for each task order):

Activity and Address	Full Size Drawings (22x34) (Full Set)	Design Analysis and Specs (Full Set)	Half-Size Drawings (11x17) (Full Set)	Non-BIM Electronic Files as Necessary (PDF& Editable File Extension)	Furniture Submittal (FFE)	Structural Interior Design Submittal	BIM Electronic Files
U.S. Army Corps of Engineers Area Office	1	1	1	1	1	1	1
US Army Corps of Engineers Fort Worth District Office	1 Electronic Only	1 Electronic Only	1 Electronic Only	1 Electronic Only	1 Electronic Only	1 Electronic Only	1 Electronic Only
Installation	1	1	1	1	1	1	0
Information Systems Engineering Command (ISEC)	0	1	1	0	N/A	N/A	1
Other Offices							

3.4.2 Mailing of Design Submittals

Mail all design submittals to the Government during design and construction, using an overnight mailing service. The Government will furnish the Contractor addresses where each copy shall be mailed to after award of the contract (or individual task order if this is an indefinite delivery/indefinite quantity, task order contract). Mail the submittals to different addresses. Assemble drawing sheets, specs, design analyses, etc. into individual sets; do not combine duplicate pages from individual sets so that the government has to assemble a set.

a. Each design submittal shall have an Eng 4025 and a transmittal letter accompanying it indicating the date, design submittal phase, type of submittal, list of items submitted, transmittal number and point of contact with telephone number.

b. For electronic design submittals, the Government will furnish email addresses for electronic delivery of the files to the reviewers at the identified activities in the distribution table above. The contractor is responsible for distribution of the electronic files to each activity.

3.5 DESIGN SUBMITTALS PHASES

The stages of design submittals described below define requirements with respect to process and content. Determine how to best plan and execute the design and review process for the project, within the parameters listed below. As a minimum, provide at least one interim design submittal, at least one final design submittal, and at least one Design Complete submittal that documents the accepted design before construction of a design package may proceed.

3.5.1 Interim Design Submittals

Submit a single interim design for review, representing a complete package with all design disciplines. This is not necessarily a hold point for the design process; the Contractor may designate the interim design submittal(s) as a snapshot and proceed with design development at its own risk.

3.5.1.1 Interim Design Development Management

Maintain a fully functional configuration management system as described herein to track design revisions, regardless of whether or not there is a need for a formal interim design development review.

3.5.1.2 Fast-Tracking

Fast Tracking is not allowed.

3.5.2 Final Design Submissions

After acceptance of the interim design package, revise the design package to incorporate the comments generated and resolved, perform and document a back-check review and submit the final design package.

3.5.3 Design Complete Submittals

After the final design submission and review conference for a design package, revise the design package to incorporate the comments generated and resolved in the final review conferences, perform and document a back-check review and submit the final, design complete documents, which represents released for construction documents.

3.6 DESIGN PLATFORM AND FILE FORMATS

Design the project using the systems and platforms defined below:

3.6.1 GIS

Submit all GIS data in Environment Systems Research Institute's (ESRI) ArcGIS , Bentley Systems AECOSim Version 2018 in compliance with SDSFIE, and appropriate ISO 19115-1 metadata.

3.6.2 CAD

3.6.2.1 Native CAD Authoring Content

All content produced through CAD authoring software outside of any

object/element based BIM or CIM platform must be compliant with ERDC/ITL SR-23-1 and ERDC/ITL TR-19-7. Bentley Systems AECOSim Version 2018 Download form the CAD/BIM Technology Center website as part of the A/E/C Work Structure.

3.6.2.2 CAD Extracted From BIM/CIM Authoring Platforms

Provide editable CAD sheet files extracted from the BIM or CIM files. CAD content exported from a BIM or CIM modeling platform must comply with ERDC/ITL SR-23-1 and ERDC/ITL TR-19-7.

3.7 ADVANCED MODELING REQUIREMENTS

3.7.1 BIM and CIM Modeling Requirements

3.7.1.1 Minimum Modeling Requirements

Model to the requirements of the USACE M3 as identified in the approved Advanced Modeling PxP.

3.7.1.2 Graphics and Layer Standards

- a. All content produced with object/element based BIM and CIM authoring software platforms must be compliant with ERDC/ITL SR-23-1.
- b. All content produced with layer-centric BIM or CIM authoring software must be compliant with ERDC/ITL TR-19-7 and ERDC/ITL SR-23-1.

3.7.1.3 USACE Platform Configuration Standards

Download from the USACE CAD/BIM Technology Center website as part of the A/E/C Work Structure.] Download from the USACE CAD/BIM Technology Center website and, if required, upgrade to the Contract approved software version.

3.7.1.4 Classification

Include Facility Data referencing one or more classification system(s) identified in the M3 for all modeled elements.

3.7.1.5 Space/Room Data

In the model, include spatial data defining actual net square footage and data to develop the room finish schedule, including room names and numbers. Include program information to verify design space against programmed space, using this information to validate area quantities.

3.7.1.6 BIM Coordinate System

- a. Coordinate System: Geographic
- b. Zone (for State Plane or UTM): Louisiana North
- c. Horizontal Units of Measure: US Survey Feet
- d. Vertical Units of Measure: Feet
- e. Horizontal Datum: NAD 83/2011

- f. Vertical Datum: NAVD 88

3.7.1.7 CIM Coordinate System

- a. Coordinate System: Geographic
- b. Zone (for State Plane or UTM): Louisiana North
- c. Horizontal Units of Measure: US Survey Feet
- d. Vertical Units of Measure: Feet
- e. Horizontal Datum: NAD 83/2011
- f. Vertical Datum: NAVD 88

3.7.1.8 Modeling Schedules

Comply with the NCS BIM Implementation section, part "2.4 Schedules." Produce schedules from, and link to, the Facility/Site Data within the Model. Document any exceptions in the PxP and submit for review.

3.7.1.9 Details and Enlarged Sections

Comply with the NCS BIM Implementation section, part "3.2 Model Coordination and Delivery." Derive all details and enlarged sections necessary for construction from the Model when possible. For those details and enlarged sections not derived directly from the Model, verify that geometry and data depicting the details and enlarged sections are consistent with Model elements. Details with significant drafted content such as 'standard' and 'typical' details cannot contradict the model and must utilize the model as an underlay when possible for the purposes of verification and coordination. Three dimensional, isometric, and section isometric details derived from the model are preferred. Create details and enlarged sections that are not derived from the Model using native authoring tools within the Model or be embedded within the Model.

3.7.1.10 Drawing Indices

Comply with the NCS BIM Implementation section, part "2.3 Sheet Organization." Where BIM authoring platform supports it, derive drawing indices from a model-driven schedule.

3.7.2 GIS

3.7.2.1 Minimum Modeling Requirements

Provide final geo-referenced GIS database of the new building footprint, and site surface and subsurface features that exist outside the building footprint(s) out to the project extents compliant with current SDSFIE Adaptation.

Collect GIS georeferenced data pertaining to location and attribute data of subsurface utilities obtained at the time of project site excavation. Include the collection of elevation (Z) values in all data collection for underground utilities.

3.7.2.2 GIS Coordinate System

- a. Coordinate System: Geographic
- b. Zone (for State Plane or UTM): Louisiana North
- c. Horizontal Datum: NAD 83/2011
- d. Vertical Datum: NAVD 88
- e. Horizontal Units of Measure: US Survey Feet
- f. Vertical Units of Measure: Feet

3.7.2.3 Standard GIS Database SDSFIE Adaptation

Use the Standard GIS Database SDSFIE Adaptation provided by the Geospatial Support Office to produce the GIS deliverables required under this contract.

3.7.3 CAD

All content produced through layer-centric CAD authoring software outside of any object/element based BIM or CIM platform must be compliant with ERDC/ITL TR-19-7 and ERDC/ITL SR-23-1.

Bentley MicroStation Seed Files Most recent version at the time of Contract award. Download from the CAD/BIM Technology Center website as part of the A/E/C Work Structure.

3.8 DESIGN CONFIGURATION MANAGEMENT (DCM)

3.8.1 Procedures

Develop and maintain effective, DCM procedures to control and track all revisions to the design documents subsequent to the Interim Design Submission and continuing through submission of the As-Built documents. After the final design is accepted, this process provides control of and documents revisions to the accepted design (See UAI 5152.236-9011 Design Build Construction Contracts). Submit the DCM procedures within the Design Quality Control Plan.

- a. Include authorities and concurrences in the DCM system to authorize revisions, including documentation as to why the revision is required.
- b. An internal system may be used with interactive Government concurrences or the Government's "Dr Checks Design Review and Checking System" may be used.
- c. Make the DCM data available to the Government reviewers at all times.

3.8.2 Tracking Design Review Comments

Although an internal system for overall design configuration management is allowed, use the DrChecks Design Review and Checking System to initiate, respond to, resolve and track Government design review comments.

The Government will set up the project in DrChecks. Throughout the design process parties enter, track, and back-check comments using the DrChecks

system. Designers of Record annotate comments timely and specifically to indicate exactly the action to be taken or why the action is not required. After the design review conference and prior to the next design submittal for the package, the DORs annotate those comments that require DOR action or design revision to show how and where it has been addressed in the design documents. These procedures are part of the required design configuration management plan. Flag comments considered critical by the conference participants.

3.8.2.1 DrChecks Initial Account Set-Up

Identify a contact person within the office to act as the administrator for all Contractor personnel, including subcontractors, that will be accessing the PROJNET Dr Checks system. Through the Contracting Officer, coordinate with the Project Manager and the District PROJNET administrator for system access, system instruction and comment process instructions.

PROJNET contains an introductory file and other tutorial material that can be accessed once user accounts have been established. Upon log in, select Portals/User Documentation.

3.8.2.2 DrChecks Review Comments

Annotate and resolve all comments prior to the next submittal. Include the DrChecks comments and responses in the design analysis for record in the next design submittal for the package.

- a. Upon review of comments prior to the design review conference, the DOR(s) evaluate the comments. Include exactly what action will be taken or why action is not required.
- b. After the review conference, the DOR(s) formally respond to each applicable comment in DrChecks a second time, prior to the next submittal, clearly indicating what action was taken and what drawing/spec/analysis changed. Designers of Record are encouraged to directly contact reviewers to discuss and agree to the formal comment responses rather than relying only on DrChecks and review meetings to discuss comments. With the next design submittal, reviewers will back-check answers to the comments against the new submittal, in addition to reviewing additional design work.
- c. Clearly annotate in DrChecks those comments that require effort outside the requirements of the contract. Do not proceed with work outside the contract until a modification to the contract is properly executed.

3.9 DISCIPLINE DESIGN REQUIREMENTS

Provide interim design deliverables that include drawings, specifications, and design analysis for the part of design that the Contractor considers ready for review.

- a. Drawings: Include comments from any previous design conferences incorporated into the documents to provide an interim design for the feature of work submitted.
- b. Specifications: Provide specifications to ensure that all project design features are addressed, meeting current code requirements, and regulatory requirements. Use the track changes feature (redlines) to facilitate review of additions and deletions.

- c. Design Analysis: Prepare and present design analysis under the authority of the DOR, with calculations necessary to substantiate and support all design documents submitted. Address design substantiation required by the applicable codes and references.

- (1) Two C size (17 x 22) color prints, framed and matted behind glass with project title underneath the print.
- (2) One image file in JPG format for those in the submittal distribution list.

3.9.1 Geotechnical Investigations and Reports

Perform additional geotechnical investigations, as necessary, to determine the conditions for the actual locations of footings, other foundations and site paving features and other site features.

Submit a final geotechnical evaluation report, prepared by the licensed geotechnical engineer, along with the first foundation design submittal. Make this information available as early as possible.

- a. Summarize the subsurface conditions and provide recommendations for the design of appropriate utilities, foundations, floor slabs, retaining walls, embankments, and pavements.
- b. Include compaction requirements for fill and backfill under buildings, sidewalks, other structures and open areas.
- c. Recommend foundation systems to be used, allowable bearing pressures for footings, lateral load resistance capacities for foundation systems, elevations for footings, grade beams, slabs, etc.
- d. Provide an assessment of post-construction settlement potential including total and differential.
- e. Provide recommendations regarding lateral earth pressures (active, at-rest, passive) to be used in the design of retaining walls. Include the recommended spectral accelerations and Site Class for seismic design along with an evaluation of any seismic hazards and recommendations for mitigation, if required.
- f. Include calculations to support the recommendations for bearing capacity, settlement, and pavement sections.
- g. Include supporting documentation for all recommended design parameters such as Site Class, shear strength, earth pressure coefficients, friction factors, subgrade modulus, California Bearing Ratio (CBR).
- h. Provide earthwork recommendations, expected frost penetration, expected groundwater levels, recommendations for dewatering and groundwater control and the possible presence of any surface or subsurface features that may affect the construction of the project such as sinkholes, boulders, shallow rock, old fill, old structures, soft areas, or unusual soil conditions.
- i. Include pH tests, salinity tests, resistivity measurements, etc.,

required to design corrosion control and grounding systems.

j. Include the raw field data.

3.9.1.1 Inconsistency with the Preliminary Soils Information

Arrange a meeting with the Government subsequent to completion and evaluation of the site specific geotechnical exploration to outline any differences encountered that are inconsistent with the Government provided preliminary soils information. Clearly outline differences which require changes in the foundation type, or pavement and earthwork requirements from that possible and contemplated using the Government furnished preliminary soils investigation, which result in a change to the design or construction.

3.9.1.2 Vehicle Pavements

Provide flexible and rigid pavement designs, as applicable for the project, including design CBR and modulus of subgrade reaction and the required compaction effort for subgrades and pavement layers. Also, provide information on the types of base course materials available in the area and design strengths.

3.9.1.3 Certification

With the professional geotechnical engineer consultant, certify in writing that the design of the project has been developed consistent with the Contractor's final geotechnical report. Submit the certification, stamped by the consulting professional geotechnical engineer, with the first design submission. If revisions are made to the initial design submission, provide a new certification with the final design submission.

3.9.2 Civil Site and Utilities Design Contents

Include the following in the interim design for the site and utilities. This list is not intended to limit the contractor from providing different or additional information as needed to support the design presented.

- a. Storm drainage design
- b. Pavement design in coordination with the geotechnical investigation report.
- c. Location and vicinity maps
- d. Removal and/or relocation plan
- e. Layout plan
- f. Grading and drainage plan
- g. Utility Plan: Identify and locate water lines, sanitary sewer lines, force mains, industrial waste lines, and other subsurface utility features
- h. Road and parking area profiles
- i. Utility Profiles: Indicate invert elevations of all drainage structures, manholes, storm drainpipe with size and invert elevations, ground profile, and new or existing structures or utilities crossing

the new utilities.

- j. Civil details sheet
- k. Concrete Joint Plan: Provide a joint layout plan for each concrete apron, hardstands, road, pavement, etc
- l. Erosion and Sediment Control Plan
- m. Lawn and landscaping irrigation system
- n. Landscape, planting and turfing
- o. Site specific civil calculations

3.9.3 Plumbing Systems

- a. List all references used in the design including Government design documents and industry standards.
- b. Provide justification and brief description of the types of plumbing fixtures, piping materials and equipment proposed for use.
- c. Detail calculations for systems such as sizing of domestic hot water heater and piping; natural gas piping; LP gas piping and tanks; fuel oil piping and tanks.
- d. Show locations and general arrangement of plumbing fixtures and major equipment.
- e. Plan and isometric riser diagrams of all areas including hot water, cold water, waste and vent piping. Include natural gas (and meter as required), LP gas, fuel oil and other specialty systems as applicable.
- f. Include equipment and fixture connection schedules with descriptions, capacities, locations, connection sizes and other information as required.
- g. When the geotechnical report indicates expansive soils are present, indicate in the first piping design submittal how piping systems will be protected against damage or backfall/backflow due to soil heave (from penetration of slab to the 5 foot building line).

3.9.4 Specialty Equipment

3.9.4.1 Elevators

- a. List of criteria codes, documents and design conditions used.
- b. List of any required permits and registrations for construction of items of special mechanical systems and equipment.
- c. Description of the proposed control system.
- d. Description, approximate capacity and location of any special mechanical equipment for elevators.

3.9.4.2 Corrosion Control and Prevention Systems

Provide a report clearly describing structures, systems or components in soil or water to be protected. Describe methods proposed for protection of each. The report must be stamped by the licensed corrosion engineer or NACE specialist with the first design submission.

The designer must be qualified to engage in the practice of corrosion control of buried or submerged metallic surfaces. Either accreditation or certification by the National Association of Corrosion Engineers (NACE) as a NACE Accredited Corrosion Specialist or a NACE certified Cathodic Protection Specialist, or a registered professional engineer with a minimum of five years experience in corrosion control and cathodic protection is required.

3.10 INTERIM DESIGN REQUIREMENTS

At least one interim design submittal, review and review conference is required for each design package. Additional interim design conferences or over-the-shoulder reviews may be scheduled, as needed, to assure continued Government concurrence with the design work. Include the interim submittal review periods and conferences in the Section 01 32 01.00 10 PROJECT SCHEDULE and indicate in periodic schedule updates what part of the design work is at what percentage of completion.

3.10.1 Submission Review

After receipt of an Interim Design submission, the Government requires 21 calendar days after receipt of the interim design submission to review and comment on the interim design submittal.

- a. For each interim design review submittal, the Contracting Officer will furnish a single consolidated, validated set of comments from the various design sections and from other concerned agencies involved in the review process using the DrChecks Design Review and Checking System. The review will be for conformance with the technical requirements of the Contract.
- b. The Government reserves the right to reject design document submittals if comments are deemed significant.
- c. Furnish disposition of all comments, in writing, through DrChecks. If there are technical disagreements with any comments, clearly outline, with justification, the reasons for disagreement and noncompliance within five calendar days after receipt of these comments.
- d. The Contractor is cautioned that if it believes the action required by any comment exceeds the requirements of this contract, that it should take no action and notify the Contracting Officer in writing immediately.

3.10.2 Interim Review Conference

Hold an Interim Review conference for each design submittal at either the installation or as agreed upon as part of the partnering process. Attendees include, at a minimum, the DOR(s) involved in development of the design submittal. Schedule the conference to take place the week after the receipt of the comments. Notify the Contracting Officer of any comments that with concurrence would require further design development.

3.10.3 Conference Documentation

3.10.3.1 Minutes and Comment Process

Provide meeting minutes within two work days after the conference adjourns, and enter final resolution of all comments into DrChecks. Include copies of comments, annotated with comment action agreed on, with the minutes.

- a. Resolve issues remaining open after the conference adjourns by immediate follow-on action to close the issue within 30 calendar days.
- b. Incorporate comments as agreed upon during the conference.

3.10.3.2 Availability

In order to facilitate the Government code and contract conformance reviews, identify, track resolution of, and maintain all comments and action items generated during the design review process. Make this available to the designers and reviewers prior to the subsequent design reviews.

3.11 FINAL DESIGN REQUIREMENTS

Provide final design submittals that consist of 100 percent complete drawings, specifications, submittal register, design analyses for Government review and acceptance.

- a. Include any permits required by the contract for each package submitted.
- b. In order to expedite the final design review, prior to the conference, ensure that the design configuration management data and all review comment resolutions are up-to-date.
- c. Perform independent technical reviews and back-checks of previous comment resolutions, as required by Section 01 45 00 QUALITY CONTROL.

3.11.1 Submission Review

After receipt of an Final Design submission, the Government requires 21 calendar days after receipt of the final design submission to review and comment on the final design submittal.

- a. For the final design review submittal, the Contracting Officer will furnish a single consolidated, validated set of comments from the various design sections and from other concerned agencies involved in the review process using the DrChecks Design Review and Checking System. The review will be for conformance with the technical requirements of the Contract.
- b. The Government reserves the right to reject design document submittals if comments are deemed significant.
- c. Furnish disposition of all comments, in writing, through DrChecks. If there are technical disagreements with any comments, clearly outline, with justification, the reasons for disagreement and noncompliance within five calendar days after receipt of these comments.

- d. The Contractor is cautioned that if it believes the action required by any comment exceeds the requirements of this contract, that it should take no action and notify the Contracting Officer in writing immediately.

3.11.2 Final Review Conference

Hold a Final Review conference for the design submittal at either the installation or as agreed upon as part of the partnering process. Attendees include, at a minimum, the DOR(s) involved in development of the design submittal. Schedule the conference to take place the week after the receipt of the comments. Notify the Contracting Officer of any comments that with concurrence would require further design development.

3.11.3 Conference Documentation

3.11.3.1 Minutes and Comment Process

Provide meeting minutes within two work days after the conference adjourns, and enter final resolution of all comments into DrChecks. Include copies of comments, annotated with comment action agreed on, with the minutes.

- a. Resolve issues remaining open after the conference adjourns by immediate follow-on action to close the issue within 30 calendar days.
- b. Incorporate comments as agreed upon during the conference.

3.11.4 Design Drawings

Submit drawings complete with all contract requirements incorporated into the documents to provide a 100 percent design for each package submitted. In addition to all native Advanced Modeling files, provide separate electronic files in a PDF format.

3.11.4.1 Geo-Referenced Data

Capture geo-referenced coordinates of all changes that will be made to the existing site (facility footprint, utility line installations and alterations, roads, parking areas, etc) as a result of this contract.

Close-out requirements at the as-built stage, require final geo-referenced GIS Database of the new facility along with all exterior modifications. The Government will incorporate this data set into the Installation's GIS Masterplan or Enterprise GIS System. See also, Section 01 78 00 CLOSEOUT SUBMITTALS.

3.11.5 Design Analysis

Provide a design analysis with calculations necessary to validate and support all design work submitted. Expand and advance calculations and information presented in the interim design stage to the current level of design. The responsible DOR(s) stamp, sign and date the design analysis.

3.11.6 Specifications

Provide specifications 100 percent complete and in final form.

3.11.7 Submittal Register

Provide an updated, cumulative submittal register with each design package that identifies the design and construction submittals required by that design package.

3.11.8 Preparation of DD Form 1354 (Transfer of Real Property)

This form itemizes the types, quantities and costs of various equipment and systems that comprise the project, for the purpose of transferring the new construction project from the Corps Construction Division to the Installation's inventory of real property. The Government will furnish the Contractor's design manager a DD Form 1354 checklist to use to produce a draft Form 1354. Submit the completed checklist and prepared draft Form DD 1354 with the 100 percent design. The Government will use these documents to complete interim and final DD 1354s for turnover of a portion or all of the construction project.

3.12 DESIGN COMPLETE CONSTRUCTION DOCUMENT REQUIREMENTS

After the Final Design Submission and Review Conference, revise the design documents for the design package to incorporate the comments generated and resolved in the final review conference. Perform and document a back-check review and submit the final, design complete documents. The deliverable includes all documentation and supporting design analysis in final form, as well as the final review comments, disposition and the back-check. As part of the quality assurance process, the Government shall have 21 calendar days to perform a review of the design complete construction documents prior to acceptance and release for construction. Promptly correct any errors or omissions found during the Government review.

3.13 ACCEPTANCE AND RELEASE FOR CONSTRUCTION

After acceptance of the Design Complete Construction Document(s) the Contracting Officer will allow construction to start for that design package.

Government review and acceptance of design submittals is for contract conformance only and does not relieve the Contractor from responsibility to fully adhere to the requirements of the contract, including the Contractor's accepted proposal, or limit the Contractor's responsibility of design as prescribed under Section 00 72 00: UAI 5152.236-9011 Design Build Construction Contracts or limit the Government's rights under the terms of the contract. The Government reserves the right to rescind inadvertent acceptance of design submittals containing contract deviations not separately and expressly identified in the submittal for Government consideration and approval.

-- End of Section --

SECTION 01 33 29

SUSTAINABILITY REQUIREMENTS AND REPORTING

PART 1 GENERAL

1.1 REFERENCES

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

COUNCIL ON ENVIRONMENTAL QUALITY (CEQ) (WHITE HOUSE)

HPSB Guiding Principles	(2016) Guiding Principles for Sustainable Federal Buildings and Determining Compliance with the Guiding Principles for Sustainable Federal Buildings

INTERNATIONAL CODE COUNCIL (ICC)

ICC IgCC	(2018) International Green Construction Code

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-200-02	(2020; Change 2, 2022) High Performance and Sustainable Building Requirements
UFC 3-600-01	(2016; with Change 6, 2021) Fire Protection Engineering for Facilities

1.2 SUMMARY

This section includes requirements for Sustainability documentation and reporting submittals per the federally mandated High Performance and Sustainable Building (HPSB) or HPSB "Guiding Principles" (GP), in accordance with UFC 1-200-02 High Performance and Sustainable Building Requirements, and other identified requirements.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Not used.

SD-05 Design Data

SD-06 Test Reports

Animal Building

FJ25AB

Not used.

SD-11 Closeout Submittals

Not used.

1.4 GUIDING PRINCIPLES VALIDATION (GPV)

Not used.

1.4.1 Sustainability Action Plan

Not used.

1.4.2 Calculations

Not used.

1.5 SUSTAINABILITY SUBMITTALS

Not used.

1.5.1 "S" Submittals for Sustainability Documentation

Not used.

1.5.2 Sustainability eNotebook

1.5.2.1 Sustainability eNotebook Format

Not used.

1.5.2.2 Sustainability eNotebook Submittal Schedule

Not used.

1.6 DOCUMENTATION REQUIREMENTS

- a. Incorporate each of the following HPSB Guiding Principles requirements into project and provide documentation that proves compliance with each listed requirement. Items below are organized by HPSB Guiding Principles.
- b. For each of the following paragraphs that require the use of products listed on Government-required websites, provide documentation of the process used to select products, or process used to determine why listed products do not meet project performance requirements.

1.6.1 Address Climate Change Risk

For design submittal documentation, provide narrative of decisions for design associated with scoped requirements.

1.6.2 Additional Sustainability Requirements

Not used.

Animal Building

FJ25AB

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 SUSTAINABILITY COORDINATION

Not used.

3.2 THIRD PARTY CERTIFICATION CERTIFICATE, ASSESSMENT, OR VALIDATION AND COMPLIANCE REPORT

Not used.

3.3 TABLE 3-1 VOLATILE ORGANIC COMPOUNDS (VOC) (LOW EMITTING MATERIALS) REQUIREMENTS

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements				
Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Adhesives and Sealants	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	Adhesives (carpet, resilient, wood flooring; base cove; ceramic tile; drywall and panel; primers) Sealants (acoustical; firestop; HVAC Air duct; primers) Caulks	SCAQMD Rule 1168 (Use "other" category for HVAC duct sealant) (for firestop adhesive, UFC 3-600-01 overrides conflicting requirements)
			Aerosol adhesives	Section 3 of Green Seal Standard GS-36 (except: cleaners, solvent cements, and primers used with plastic piping and conduit in plumbing, fire suppression, and electrical systems; HVAC air duct sealants when the application space air temp is less than 40 F (4.5 C)).

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements				
Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Paints and Coatings	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	Flat and nonflat, nonflat high-gloss, specialty, basement specialty, fire-resistive, floor, low-solids, rust preventative, wood, reflective wall coatings; concrete/masonry sealers; primers; sealers; undercoaters; shellacs (clear and opaque); stains; varnishes; conjugated oil varnish; lacquer; clear brushing lacquer	Green Seal Standard GS-11

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements				
Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Paints and Coatings	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	Concrete curing compounds; dry fog, faux finishing, graphic arts (sign paints), industrial maintenance, mastic texture, metallic pigmented, multicolor, recycled coatings; pretreatment wash primers, reactive penetrating sealers; specialty primers, wood preservatives, and zinc primers	California Air Resources Board (CARB) Suggested Control Measure for Architectural Coatings or SCAQMD Rule 1113r
Paints and Coatings	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)	or	High-temperature coatings; stone consolidants; swimming-pool coatings; tub- and tile-refining coatings; and waterproofing membranes	California Air Resources Board (CARB) Suggested Control Measure for Architectural Coatings

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Floor Covering Materials	For carpet, all locations: CDPH/EHLB/Standard Method V1.1 (California Section 01350) or label for Section 9 of CDPH/EHLB/Standard Method V1.1 (California Section 01350)		none	none
Insulation	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)		none	none

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Composite Wood, Wood Structural Panel, and Agrifiber Products , no added urea-formaldehyde resins including laminating adhesives for composite wood and agrifiber assemblies - particleboard, medium density fiberboard (MDF), wheatboard, strawboard, panel substrates, door cores	Third-party certification (approved by CARB) of California Air Resource Board's (CARB) regulation Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products	or	none	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications) (except: Structural panel components such as plywood, particle board, wafer board, and oriented strand board identified as "EXPOSURE 1," "EXTERIOR," or "HUD-APPROVED" are considered acceptable for
Office Furniture Systems and Seating installed prior to occupancy	ANSI/BIFMA X7.1 ANSI/BIFMA X7.1: (95-percent of installed office furniture system workstations and seating units) Section 7.6.2 of ANSI/BIFMA e3 (50-percent of office furniture system workstations and seating units)		none	none

TABLE 3-1 Volatile Organic Compounds (VOC) (Low Emitting Materials) Requirements Source: ICC IgCC Chapter 8 (Materials) (Interior Applications Only)				
MATERIAL CATEGORY	EMISSIONS REQUIREMENT		MATERIALS WITH ADDED VOC REQUIREMENT	EMISSIONS REQUIREMENTS
Ceiling and Wall assemblies and systems including: acoustical treatments; ceiling panels and tiles; tackable wall panels and coverings; wall coverings; wall and ceiling paneling and planking	CDPH/EHLB/Standard method V1.1 (California Section 01350) (Use "office" or "classroom" space limits for all applications)		none	none

-- End of Section --

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SPECIAL PROJECT PROCEDURES FOR FORT POLK

PART 1 GENERAL

There are documents that are still referred to under the Fort Johnson name while the Installation name has been updated to Fort Polk. There are places throughout the document where the name may not be updated as those document names have not been changed or no current version with the name change exist to date.

1.1 REFERENCES

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

BUILDERS HARDWARE MANUFACTURERS ASSOCIATION (BHMA)

ANSI/BHMA A156.2 (2022) Bored and Preamsembled Locks and Latches

ANSI/BHMA A156.3 (2020) Exit Devices

ANSI/BHMA A156.4 (2024) Door Controls - Closers

FORT POLK DPW (FJ)

FPIPS (NOV 2020) FORT POLK INSTALLATION PLANNING STANDARDS, 2022

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.

SD-01 Preconstruction Submittals

Excavation And Trenching.

Secure required permits prior to performing any excavation or trenching on the installation.

SD-07 Certifications.

Hazardous Material Content.

For applicable materials, furnish manufacturer's certifications that materials installed on this project do not contain asbestos or the lead content does not exceed 0.06 percent (600 ppm).

Animal Building

FJ25AB

Solid Waste Disposition

Termite Control

SD-11 Closeout Submittals

Asbestos Certification Letter.
CADD And GIS Deliverables.

1.3 DIRECTIONS TO FORT POLK AND LOCAL MOTELS

a. The Eastern Area Office is located at 2315 Service Command Loop, Bldg. 4740, Fort POLK, LA 71459. The office telephone no. is (337) 531-2933. See local area maps.

Driving directions from Hwy 171: East on Entrance Road (Name changes to Louisiana Avenue after entering Fort POLK), stay on Louisiana Avenue; turn right on to Texas Avenue (at 7th Traffic Light). 1st left will be Service Command Circle. 1st parking lot on left will be Building 4740.

b. For base access, proceed to the Fort POLK Visitors Center located 2 miles from Highway 171 (on Entrance Road). Valid insurance, registration, and driver's license are required for a one day visitors pass. For more information, contact the Fort POLK Visitors Center at (337) 531-4978.

c. Web Sites:

Fort Worth District Website:
<http://www.swf.usace.army.mil/>

Joint Readiness Training Center and Fort POLK, LA:
<http://www.home.army.mil/johnson//>

Newcomers: www.militaryonesource.com

d. Hotels located in Leesville, LA

La Quinta Inn & Suites - 337-537-8200
Quality Inn - 337-653-6200
Comfort Suites - 337-404-3890
Best Western Stagecoach Inn - 337-392-1672
Holiday Inn Express - 337-239-2122
Hampton Inn - 337-239-9292
Motel 6 - 337-239-9970
Super 8 - 337-238-7860
Days Inn-337-239-2612

e. Hotels located in DeRidder, LA

Quality Inn - 337-462-0022
Country Inns of DeRidder - 337-462-3665
America's Best Value Inn - 337-460-7747
Best Western - 337-460-2066

f. Hotels located in Alexandria, LA

Holiday Inn - 318-487-9898
LaQuinta Inn and Suites - 318-442-3700

Animal Building

FJ25AB

Comfort Inn - 318-484-9155

Quality Inn - 318-445-6757

1.4 INSTALLATION ACCESS - CONTRACTOR PERSONNEL (Mar 2011)

All access rosters, as well as updates will now be submitted on the attached form electronically. Construction Contractors under contract to the Corps of Engineers must submit access control rosters to the Corps of Engineers. (Primes will be responsible for submitting their subcontractors.) Rosters will be submitted by e-mail to the following address by USACE:

DLL-CESWF-EAO-Johnson@usace.army.mil

PLEASE INCLUDE IN THE SUBJECT LINE OF YOUR EMAIL THE WORDS: ACCESS ROSTER

In order for a submitted access control roster to be accepted all data must be filled in on the attached roster. Adjustments or changes to the supplied access roster and or omission will result in the access roster being rejected. A complete roster should be submitted by the 5th working day of each month, AND each time there is a change in personnel.

****Start Date:** - use the date the form is being prepared. (This date will change upon each submission).

****End Date:** 6 months from start date is the maximum. This date will be used to determine the length of pass issued - therefore it is important that it be updated upon each submission.

Entries should be sorted alphabetically by company name, and personnel last name. For example: company A (and all their personnel) would be entered above company B (and all their personnel). The Prime contractor personnel do not need to be at the top of the list. Each company's personnel will be sorted alphabetically by last name. Middle initials are also required.

Any organizations submitting electronic access control rosters are required to provide personnel listed on the roster with a copy of the privacy act (See Section 3.4).

Rosters should be submitted 3 days in advance of access to allow time to consolidate the new information in the data base and validate each roster.

Personnel that have been successfully added to the access roster will go to the Visitor's Welcome Center located on Entrance Road at Gate#1, Building #5903, telephone number (337-531-0380), to register. Information required will be driver's license. For those not driving, a valid photo ID will be necessary. Upon successful vetting approval, a pass will be issued. The pass may be used at any of the Access Control Gates. Registration hours are 0600 to 1700 Monday through Friday.

Everyone (above the age of 16) riding in a vehicle must have Military ID, Visitors Pass, or Rapid Gate passes to be allowed on Post.

One day passes may be obtained by providing above referenced documentation at the Welcome Visitors Center.

Personnel that have Rapid Gate badges do not have to be listed on the access roster. More information concerning the Rapid Gate Program may be obtained by calling 1-877-727-4342.

To receive an electronic copy of the Access Roster form, send an emailed request to: DLL-CESWF-EAO-Johnson@usace.army.mil

The level of FPCON (Force Protection Condition) at Fort POLK reflects local, national, and international security threats. FPCON Alpha is the lowest security level, FPCON Bravo is the next higher security level and FPCON Charlie the next higher. Normally all contractor employees receiving a picture ID badge shall be allowed entry onto the base during FPCON Alpha, Bravo and Charlie. During FPCON Bravo and Charlie, only internal base security is heightened. At FPCON Delta, the highest security level, all access to the base shall be escorted and only allowed under special circumstances.

1.5 FORT POLK INSTALLATION PLANNING STANDARDS

In addition to the requirements of these specifications, the requirements of the FPIPS applies to this project.

1.6 CONTRACTOR LOTS (March 2011)

Contractor lots are available for use during the period of performance on a space available basis. The contractor will be required to enter into a lease agreement with the local governing agency, and follow the requirements set forth in such agreement. Coordination with the local governing agency shall be facilitated through the Contacting Officer. Additionally all requirements of contractor temporary facilities located in other portions of this contract shall apply to these lots as well.

1.6.1 CONSTRUCTION STORAGE AND PARKING

Contractor shall limit the storage of materials, equipment, and incidentals to the immediate construction site, the identified equipment lay-down/storage area, and/or as directed by the Corps of Engineers. It is recommended that the contractor make arrangements for storage of equipment and materials between its delivery and its installation, as security during non-working hours cannot be guaranteed by the government.

The contractor shall ensure the laydown area is enclosed by a temporary chain link fence during construction. The contractor shall ensure that any holes or damage to the laydown area as well as the parking area resulting from the construction of this project are repaired to match existing conditions at start of construction. The contractor shall ensure that the fence tension is maintained, screening is not required.

The contractor shall mow the construction area to maintain a kept appearance of the project site.

The contractor shall keep all storage areas free of debris, refuse, spills, leaks, stains, splashes and excessive materials. All storage areas shall be maintained in a neat, clean, and safe condition. The contractor at no additional expense to the government shall clean up any areas that incur contamination by any hazardous material or substances immediately.

Remediation may include subsequent soil analysis if directed by the government. The contractor shall store all hazardous materials in a contractor supplied trailer or storage unit, which shall be leak proof or contain secondary containment devices. The storage unit shall be secured when contract personnel are not present.

all contractor parking is to be within the construction limits or within the designated laydown/staging area

Limit use of premises to work in areas necessary to complete the work. Do not disturb portions of the project site beyond areas in which the work is indicated. The Contractor shall obtain approval from the ACO or COR for locating temporary office spaces and material storage yards. The contractor shall ensure that driveways, loading areas, and entrances serving premises are clear and available at all times for ordinary / emergency vehicles. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize the use of driveways and entrances, time requirements, and storage of materials / equipment on site.

1.7 EXCAVATION AND TRENCHING

Excavation and/or trenching operations to be performed outside the (designated) limits of construction, for utility tie-ins, correction of drainage problems, or for other reasons as may be required under the terms of the contract, shall not be performed without a permit; and such work shall only be performed during normal duty hours unless otherwise approved by the Contracting Officer. Permit requests must be submitted to the Contracting Officer a minimum of 14 calendar days prior to commencement of excavation or trenching operations beyond construction limits.

1.7.1 DIGGING AND UTILITIES

Do not interrupt utilities serving occupied facilities unless permitted under the following conditions and then only after arranging to provide temporary utility services according to the requirements indicated. Utility interruptions of occupied facilities shall be allowed only during non-duty hours and, if work is required, the Contractor shall arrange for security with the Government during the off hours of work. The Contractor shall: (1) notify the Government not less than 21 working days in advance of proposed utility interruptions; and (2) not proceed with utility interruptions without the Government's written permission. All requests for outages shall be submitted to the Quality Assurance Representative, cc Project Engineer for approval and shall be scheduled through the U.S. Army Corps of Engineers. The Point of Contact (POC) for these requests shall be provided at the Post-Award/Pre-construction meeting.

All facility outages in excess of 1 hour shall be conducted after 1400 hours, on weekends and or holidays unless coordinated with COE and facility users.

If digging, excavating, or drilling is required, the Contractor shall apply and obtain a dig permit/utility outage request. To initiate a dig permit, the Contractor shall proceed to Building 3307, DPW Work Reception. The Contractor shall then call Louisiana 1 Call at 1-800-272-3020 to obtain ticket numbers. The Contractor will then take the initiated dig permit, in person, with site drawings to Building 1700, for directions call 337-531-4019. The Contractor will be responsible for contacting all of the utility companies listed on the dig permit such as Awn, Corvias, etc. The Contractor will then hand carry the dig permit back to Bldg. 3307 where the receptionist will initiate two service orders (exterior electric and natural gas). This will begin the marking of the two utilities mentioned above. The Contractor will then retrieve the approved dig permit from Bldg. 3307.

Outages for power and natural gas must be coordinated through the Operations and Maintenance Division located at Building 3304 fourteen (14) days prior to the proposed work date or outage. All outages affecting domestic water shall require the submission and approval of the "American Water Application for Outage Form."

The Contractor shall provide a copy of the permits and outage requests to the USACE Area Office for review and acknowledgement prior to the processing. Upon receiving all necessary approvals, the approved permits and requests shall be submitted to USACE Area Office. In addition to obtaining a signed permit, the Contractor shall verify verbally with the USACE Area Office that the outage has been properly staffed to ensure all work is completed in a timely manner. Lastly, once utility location marks are placed, it is the Contractor's responsibility to maintain and upkeep all markings, including markings from all utility services. All utilities and any items damaged by construction operations shall be restored to its original condition by workers skilled in trades involved at no additional cost to the government.

1.8 PROTECTION OF THE RED-COCKADED WOODPECKER (RCW)

1.8.1 General

Construction activity shall be conducted in a manner which minimizes impacts to the RCW. The boundaries of RCW clusters are located as indicated in the contract drawings. Vehicle parking areas, material stockpiles, and portable toilets are prohibited within RCW clusters.

1.8.2 RCW Clusters

No construction activity shall occur within an RCW cluster unless indicated in the contract drawings. When work is indicated within an RCW cluster, no tree shall be removed from the cluster without first contacting the Contracting Officer and receiving approval from the Fort POLK Environmental and Natural Resources Management Division (ENRMD). When working within an RCW cluster, no earth-disturbing activities shall occur within 15 meters (50 feet) of a cavity tree. All cavity trees are marked by a white paint band. During the nesting season of 1 April through 30 June, no construction activity shall occur within an RCW cluster until ENRMD marks the nesting trees and the Contracting Officer gives approval, after which no activity shall occur within 60 meters (200 feet) of the marked nesting trees. Activity within the 60 meters (200 feet) limit shall not resume after nesting season until ENRMD determines that the fledglings have left the nests and the Contracting Officer approves resumption of the work. At all times, construction activity within RCW clusters shall start no earlier than 30 minutes after sunrise and shall halt at a minimum of 30 minutes prior to sunset. Any construction equipment which must operate within a cluster shall be moved outside of the cluster at the end of each day.

1.8.2.1 ENVIRONMENTAL REQUIREMENTS

The prime contractor shall designate an Environmental Compliance Officer (ECO) and Alternate ECO. One ECO will be required to be onsite during the construction period and maybe able to hold additional duties if approved. Per requirements included JRTC Reg. 200-1, ECO's are required to attend the 40 hour ECO course. The course is offered at the installation monthly. Registration information can be obtained by contacting DLL-CESWF-EAO-JOHNSON@USACE.ARMY.MIL

1.9 RECORD OF ENVIRONMENTAL CONSIDERATION (REC)

If a Record of Environmental Consideration (REC), or other pertinent environmental documentation has been provided as a part of this solicitation, upon completion of any required environmental testing the contractor shall provide a written narrative comparison of the results of subject testing in relation to the REC to the Contracting Officer. This narrative comparison shall acknowledge all corresponding results as well as identify any discrepancies, and shall be provided and approved prior to the commencement of any abatement work. It shall be noted that while these discrepancies, if any, shall be evaluated at that time, it shall be the Contractor's responsibility to adhere to the more stringent of the two documents unless otherwise instructed by the Contracting Officer.

1.10 DISPOSAL OF DEMOLITION AND CONSTRUCTION DEBRIS

Unless otherwise indicated, demolition and construction debris shall be disposed of outside the limits of Government controlled land and the Contractor shall comply with all local and state regulatory requirements in his disposal operations.

1.11 HAZARDOUS MATERIAL CONTENT

Materials installed on this project shall conform with the Consumer Product Safety Commission's safety standards, especially materials used primarily for roofing, building and roofing insulation, joint sealants, elastomeric joint sealants and calking, gypsum board, plaster, paint and coatings (interior and exterior), fireproofing, acoustical ceiling systems, acoustical wall systems, mechanical and electrical equipment insulation or pipe wrappings. Submit certifications from material manufacturers attesting that their materials that are installed on this project, as applicable, do not contain asbestos and that the lead content does not exceed 0.06 percent (600 ppm) by (dry) weight of the material's non-volatile content.

1.12 ASBESTOS CERTIFICATION LETTER

Prior to the final acceptance inspection, furnish a letter certifying that no asbestos-containing materials were installed in the project. The letter format is attached at Section 3.1.1.

1.13 SOLID WASTE DISPOSITION

The Army requires that the installation track all solid waste generated (disposed and recycled) at Fort POLK (AR REG 200-1 Chapter 10), which includes construction and demolition debris. As a result, contractors are required to report to DPW-ENRMD the quantities of solid waste taken off the installation. The requirement to report to DPW-ENRMD is found in JRTC and Fort POLK (Polk) Regulation 200-1 Chapter 9 Section 1. and the Contractor's Environmental Guide. Submit the report(s) to the Contracting Officer by email at: DLL-CESWF-EAO-Johnson@usace.army.mil. The report(s) is due to the Contracting Officer by the 5th working day of each month. The Corps will forward the report(s) to the Installation environmental office. See the Solid Waste Disposition form at Section 3.1.2.

1.14 TERMITE CONTROL

The contractor is required to use the approved termiticides as indicated in The Fort POLK Installation Pest Management Plan (IPMP).

1.15 FORT POLK CADD AND GIS DELIVERABLES

1.15.1 Data Standards

Spatial Data Standard for Facilities, Infrastructure and Environment (SDSFIE) current release shall be followed for Geospatial database structure and attributes to allow for data integration. CADD data shall be documented according to the current release of the Architecture, Engineering and Construction (AEC)/CADD standards. All GIS and CADD data will be documented in accordance with the Federal Geographic Data Committee (FGDC) Content Standards for Digital Geospatial Metadata.

1.15.2 Coordinate System Projection and Datum

All GIS data shall use the Universal Transverse Mercator Zone 15 North projection, World Geodetic System of 1984 (WGS84) datum, and the North American Vertical Datum of 1988 (NAVD88) using Metric as the working units to ensure data alignment and accuracy.

CADD data shall be geo-referenced in the State Plane Coordinate System 1983, using the North American 1983 Geodetic Datum with Survey Feet as the working units. The projection, datum and coordinate system must be defined and then documented in the metadata for both CADD and GIS and provided whenever the data is distributed.

1.15.3 CADD & GIS Deliverables

All CADD deliverables of As-built drawings shall be delivered in a MicroStation V8, DGN compatible format utilizing survey feet for the working units. A seed file can be obtained from the Fort POLK DPW CADD/GIS Center. GIS deliverables shall be delivered in current GeoMedia file format or an ArcView shape file format. An additional copy of the final drawings shall be provided in PDF format.

Deliverables for DPW shall include 1 hard copy and 1 CD/DVD with all specified digital formats. Please coordinate with the Area Office for Corps deliverables.

1.15.4 Point Of Contact

Contact: Fort POLK DPW CADD/GIS Center 337-531-6846

1.16 PRIVATIZED UTILITY PARTNER (PUP) INFORMATION

1.16.1 Regulatory and Contractual Requirements:

American Water Operations and Maintenance, Inc. (AW) is the owner and operator of the water and wastewater systems. Defense Energy Support Center (DESC) privatization contract (SP0600-08-C-8257) makes American Water responsible for evaluating the impacts of projects on the water and wastewater systems, designing system upgrades, and performing the upgrades necessary to provide dependable water and wastewater services at a reasonable cost. The contract makes AW responsible for "performing the necessary work on all necessary additions or modifications up to the established points of demarcation for new construction".

For Fort Polk Water and Wastewater Points of Demarcation see attachment at the end of this specification.

All work in regard to water and wastewater systems shall be completed in accordance with the current design specifications and standard details of American Water Military Services Group. Reference:

<https://www.amwater.com/corp/products-services/military-services/fort-johnson>

PVC water pipes shall not be used above grade unless specifically approved by the KO or ACO.

All connections (both fire and domestic) to the Fort POLK water system shall be equipped with a back flow prevention device. The device shall be furnished and installed by American Water.

Unless stated otherwise, when site demolition is required per the SOW, the Construction Contractor shall be responsible for the demolition of water and wastewater as it pertains to the awarded SOW. Cutting and capping of water and wastewater shall be by American Water Group. All new work shall be by American Water Group.

If the Contractor requires water in the performance of his contract for other than potable use, he may fill water tanks at the South Fort Water Plant located on Pennsylvania Avenue, Building 2902. Contractors are required to have an approved backflow prevention device to obtain water from the plant.

To schedule a time to fill water tanks, call 337- 531-2036 or 337-531-6596.

If the Contractor requires water at the project site, he shall submit an application for a written permit to connect to a designated installation fire hydrant. The Contractor shall submit his application to the DPW water system operators located at the South Fort Water Plant on Pennsylvania Avenue, Building 2902. The Contractor shall not draw water from any fire hydrants on Fort POLK without an installation permit in advance. The Contractor shall provide a copy of the permit application to the USACE Eastern Area Office for review and acknowledgement prior to its processing. Upon receiving all the necessary approvals, the approved permit application shall be submitted to the USACE Eastern Area Office. The Contractor shall be issued a written permit to draw water from a specific fire hydrant once his application is approved. The Contractor, after obtaining a permit, is required to use an approved backflow prevention device when drawing water from an installation's fire hydrant.

Water for Potable Use: If the Contractor requires water in the performance of their contract for potable use, he is authorized to use the installation's two potable water points. The South Fort potable water point is located on Georgia Avenue in the 2900 block. The North Fort potable water point is located on K Avenue, south of Access Control Point 7. Only containers properly marked "Potable Water" are authorized to be used at Fort POLK's potable water points.

HVAC closed loop-piping fluids shall first be tested prior to evacuation from the system. Fluid shall be analyzed for RCRA metal, reactivity, corrosiveness and ignitability to determine disposal method in accordance with local, state, and federal regulations. Sample shall be representative of all fluids that are to be disposed of by the contractor. It shall be specified to the EPA approved laboratory that analytical detection limits for the testing parameters are below the regulatory limits specified in 40

CFR 261 Subpart C.

Once analysis has been completed, copies of the results shall be provided to the KO and Fort POLK Environmental Division (EQD) located in Building 1647 along with the approximate volume of fluid to be disposed of by the contractor.

1.16.2 LDHH project approval process:

Louisiana Sanitary Code Title 51 Subpart XII paragraph 105 requires the owner of the water system to obtain LDHH approval prior to the start of construction for modifications to the water system that affect the capacity, hydraulic conditions, functioning of treatment processes or quality of finished water. All projects using water/wastewater services will require AW and LDHH approval. The Designer of Record shall be responsible for coordinating approval. Louisiana Sanitary Code requires this approval to be obtained prior to start of construction.

a) The Designer of Record shall determine the water and waste water requirements of the project and involve American Water throughout the project's initial, interim, and final design phase.

The Designer of Record (DOR) shall:

- 1) Determine maximum water flow and required tests for project
 - 2) Determine minimum pressure required for project
 - 3) Calculate average daily water usage required for project
 - 4) Furnish drawings indicating "Point of Demarcation" for both water and wastewater connections including elevations. The design shall be coordinated with American Water throughout the entire design process.
- Note: The wastewater elevation must be coordinated with American Water to ensure proper flow.

The Construction Contractor shall:

- 1) Furnish the proposed construction start date.
 - 2) Coordinate date service connections are required, 180 days prior to connection when possible.
- Note: Any change to the flow or pressure requirements will require new AW and LDHH approval. Changes could also impact timing and costs.
- b) The DOR shall furnish the USACE Contract Representative the information on the project's water and waste water requirements. The USACE Contract Representative shall coordinate with the DPW and American Water Contracting Officer Representative (COR) for requirements.
- c) American Water will evaluate the projects water and waste water loading on the water and waste water systems and determine system upgrades necessary for the project.
- d) American Water will submit the system upgrade requirements to the COR .
- e) The DPW COR will request firm costs prices for the system upgrades. All requests for proposals (RFP) will come from DESC to AW via Fort POLK COR. (FFP requires minimum 60 days, depending on size of project)

f) American Water will perform all water and wastewater system upgrades to the point of demarcation.

g) The DOR will submit the completed design drawings through the USACE contract representative to American Water for review. The design drawings must be the final drawings, signed and stamped by a licensed Louisiana P.E. These drawings must be submitted 8 weeks (2 week for AW review and 6 weeks for LDHH review) prior to the start of construction to allow for LDHH approval.

h) The DOR is responsible for obtaining LDHH approval and informing the USACE COR in writing, furnishing the LDHH approved permit, or notice of no permit required.

i) The DOR shall provide fire flow requirements for any proposed structure (flow rate and duration) and shall request through the USACE contract representative the water pressure at point of delivery, determined by flow tests.

j) During the initial design phases, the DOR shall consider all future expansions expected or otherwise planned by the installation that could impact sizing of project impacted water or wastewater main lines.

The following additional information should be provided if available:

- o Hydraulic Model results

1.16.3 Organizational Points of Contact:

DES-Fire Department	337-531-2026
DES-Physical Security	337-531-4913
DPW-Engineering	337-531-6186
DPW-Environmental & Natural Resources Management Div.	337-531-6008
DPW-Operations and Maintenance Div.	337-531-2421
DPW-Master Planning	337-531-6103
Preventive Medicine-EH	337-531-4846
American Water	337-537-1161

1.16.4 Electrical (ENTERGY)

ENTERGY is the owner and operator of the electrical distribution system at Fort POLK. The applicable Defense Energy Support Center (DESC) privatization contract identifies ENTERGY responsible for evaluating the impacts of projects on the electrical distribution system, designing system upgrades, and performing the upgrades necessary to provide dependable electrical services at a reasonable cost. The contract identifies that ENTERGY is responsible for "performing the necessary work on all necessary

additions or modifications up to the established Points of Demarcation (POD) for new construction".

The POD is defined as the Main Distribution Panel (MDP). ENTERGY shall set the transformer and pull the secondary through the provided conduit (at the 5'-0" line, provided by the construction contractor) into the MDP for final connection by the Construction Contractor.

Unless stated otherwise, ENTERGY shall be responsible for the demolition and new construction of all electrical infrastructure as it pertains to the awarded SOW up to POD.

1.17 LOUISIANA SALES TAX

Contractors are required to pay Louisiana sales tax on materials for all construction projects at Fort POLK. Sales tax exemption based on Louisiana Sales Tax Form R-1020 is not applicable to Corps of Engineers' contracts.

1.17 UTILITY INSTALLATION REQUIREMENTS

1.18 American Water and Entergy Louisiana, LLC Electric Requirements

The following utilities on Fort POLK are owned and operated by the following Government Contractors, identified as the System Owner; Entergy , Louisiana, LLC for electrical, and site lighting features, and American Water (AW) Operations and Maintenance, Inc for water and sanitary sewer. The Government will issue separate contracts to the system owners for utility services for the project site, up to the point of demarcation for each utility, and the work may be performed concurrently with this construction contract. The contractor shall plan for and be prepared to share the construction site with system owners and/or their contractors. As the Prime Contractor you shall enter into an agreement with the System Owner, including "tap in" the new utility infrastructure from the new facility point of demarcation to the System Owner utility. The Prime Contractor shall be responsible for negotiating and finalizing a schedule with the System Owner(s) and include in activities for utility work (by others) in their project schedule. Work completed by the Systems Owner will not be included in project cost. Prime contractor will coordinate with the USACE COR to ensure proper coordination with the privatized utilities.

COR contact information:

Randy Jansch
COR/QAS Privatized Utilities
Directorate of Public Works
Fort POLK, Louisiana
Ph: 337-531-1439 (DSN 863)
EMAIL: randy.j.jansch@usace.army.mil

Privatized Utility Partners (PuP) contact information:

Entergy Louisiana, LLC
4809 Jefferson Highway
Jefferson, LA 7012-3126
Webstite: <http://www.entergy.com>

American Water Operations and Maintenance, Inc
1 Water Street
Camden, NJ 08102

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Office Tel: (856) 995-4001

Website: <http://amwater.com>

1.19 DOOR HARDWARE (Sep 2010)

Unless otherwise required by project requirements, hardware shall conform to the current ANSI/BHMA standards, grade 1. Locks, cylinders, and cores shall comply with ANSI/BHMA A156.13, Mortise Locks & Latches Series 1000, ANSI/BHMA A156.2 Bored and Preassembled Locks and Latches, and ANSI/BHMA A156.3 Exit Devices. Cylinders shall have key removable type cores. Cores shall have not less than seven pins. Extensions of the existing keying systems shall be provided. Cylinders and cores for locksets including those for mechanical rooms shall be 7-pin interchangeable "F" Keyway type compatible with the existing Base Keying System. Disassembly of knob or lockset shall not be required to remove core from lockset. All locksets, exit devices, and padlocks shall accept same interchangeable cores.

Disassembly of knob or lockset shall not be required to remove core from lockset. All locksets, exit devices, and padlocks shall accept same interchangeable cores.

a. Cores and cylinders shall fit locksets without the use of adaptors and without play. The key shall easily lock and unlock the lockset without binding or other difficulties. Control key shall easily remove and install cores.

b. Locks shall be keyed in sets or subsets in accordance with the approved schedule. Furnish locks with the manufacturer's standard construction cores and key system. Send permanent cylinders, cores, keys, and the lock set-up code to the Contracting Officer by registered mail or other approved means.

c. Furnish a quantity of key blanks equal to 20 percent of the total number of file keys.

d. All keys shall be marked with "U.S. GOVERNMENT - DO NOT DUPLICATE". Do not place room number on keys other than control/core keys. Stamp all control/core keys with building code and building number, and the letter "C".

e. All keys shall be stamped with 1/16" to 1/8" high characters.

f. Furnish keys to the Contracting Officer arranged in a container suitable for key control system storage in sets or subsets as scheduled.

g. Closers: ANSI/BHMA A156.4, Surface type closers shall be Grade 1, Series C02000 Full Cover with options PT-4H, Size 1 or 2 through Size 6, and PT-4D with back check position valve. Provide with brackets, arms, mounting devices, fasteners, full size covers, except at storefront mounting, pivots, cement cases, and other features necessary for the particular application. Provide manufacturer's 10 year warranty.

(1) Closers for out swinging exterior doors shall have parallel arms or shall be top jamb mounted. Provide narrow projection closers for doors close to a wall so as not to strike the wall at the 90-degree open position.

(2) Closers on doors accessible to the physically handicapped shall have the closing force set for a push-pull of 2.27 kg (5 pounds) applied at

the knob or handle for interior doors; for exterior doors, set to the minimum required to relatch the door.

1.20 DIRECT DIGITAL CONTROL (DDC) SYSTEM REQUIREMENTS

1. Provide all DDC components, including gateways and relays, to alarm, trend, and monitor/control the equipment from the DDC system via seamless BACnet communication protocol.
2. Mechanical equipment located in the facility that requires integration includes dedicated outdoor air systems, fan coil units, exhaust fans, electric unit heaters, chilled water components, and hot water components.
3. Plumbing equipment located in the facility that requires integration includes the water meter.
4. Electrical equipment located in the facility that requires integration includes the electric meter.
5. Other equipment located in the facility that requires integration includes the natural gas meter.
6. All utility monitoring components must be compatible and in conformance with the Fort POLK UMCS accredited product line and installed by an accredited partner.
7. Contractor shall provide a notebook computer complete with all DDC application software and all licenses to control the building systems.
8. Provide Tridium Vykon JACE 8000 series (with the latest version of Niagara 4) as the building point of connection (BPOC).
9. Provide Honeywell Spyder ILC programmable controllers at all fan coils and variable frequency drives.
10. Provide Honeywell TR-42 adjustable temperature sensors at each room and provide Honeywell TR-40-H RH sensors in each hallway.
11. DOAS controllers must be BACnet MSTP compatible for integration into Spyder controllers.
12. Communication from each JACE to the Spyderys shall be BACnet communication from the JACEs to the UMCS front end shall be secure.
13. Display all graphic floor plans, equipment graphics, DDC ladder diagrams, and complete sequence of operations graphic pages and provide alarm, trend services, and schedules and other BACnet services and configurations as described.
14. The BAS owner and point of contact (POC) is the Directorate of Public Works.
15. Network architecture: the control system network architecture shall be set up as direct JACE connections.
 - a. System installation must comply with the current UMCS ATO prior to acceptance.

- b. BACnet/IP shall use UDP14 port 0XBAC0. The port number shall be configurable.
 - c. BACnet MS/TP shall be 2- wire with shield at 38.4 kbps.
 - d. Device MAC addresses shall be configurable or changeable via hardware switches on the device.
 - e. All BACnet networks shall be connected via BACnet routers. Routers shall forward all valid ASHRAE-135 packets.
 - f. MS/TP networks shall connect to IP networks, not to other MS/TP networks.
 - g. Device IDs and network IDs shall be coordinated with the project site; contractor shall propose a device and network ID numbering scheme.
 - h. Except as permitted for gateways, no non-BACnet network shall be used.
16. DDC hardware: all DDC hardware ("controllers") shall meet the following requirements:
- a. Conform to the BACnet testing lab's (BTL) device implementation guidelines.
 - b. Be BTL listed.
 - c. The device as installed and operating shall meet the requirements for its BTL listing.
 - d. Be connected to the ASHRAE-135 internetwork and communicate using ASHRAE- 135 exclusively.
 - e. Niagara framework systems shall be capable of communicating with the UMCS via the FOX protocol, but shall use ASHRAE-135 for all communication within the building control system, including between Niagara framework components (e.g. Niagara framework supervisory gateways shall use ASHRAE-135 exclusively for communicating with each other).
 - f. Device-IDs and network-IDs shall be configurable to any valid value.
 - g. Support a configurable object name of at least 12 characters length.
 - h. Support a configurable object description of at least 24 characters length.
 - i. Do not use any of the following BACnet services for application control functionality or communication: atomicfile or atomicfilewrite, conflrmedtextmessage or unconfirmed text message, confirmed private transfer or unconfirmed private transfer, any proprietary object, property, or service.
 - j. Devices supporting DS-RP-A(16) shall also support DS-COV-A(17) and attempt to use the subscribecov service. These devices shall

automatically fall back to DS-RP-A when the server does not support DSCOV-B(18).

k. Other than devices controlling terminal units, all devices shall support DS-COV-B.

l. Be capable of responding to WHO-IS/I-AM and WHO-HAS/I-HAVE service requests.

m. All settings and parameters shown on the points schedule or required by the sequence of operation shall be configurable.

17. Gateways may be used provided that each gateway communicates with and performs protocol translation for control hardware controlling one and only one package unit. Gateways shall not be used to control built-up units, or any equipment that was not furnished with factory-installed controls. The non-BACnet network connecting the gateway to the package unit controller shall be no longer than 20 feet and shall have exactly 2 devices connected to it - the packaged unit controller and the gateway.

18. Perform a performance verification test (PVT) under government supervision prior to system acceptance. During the PVT, demonstrate that the system performs as specified, including but not limited to demonstrating that the system is open and correctly performs the sequences of operation.

19. Provide a 1-year unconditional warranty on the installed system and on all service call work. The warranty shall include labor and material necessary to restore the equipment involved in the initial service call to a fully operable condition. Warranty shall start upon acceptance testing.

20. Provide training at the project site on the installed building system, including but not limited to training on all software provided, the sequences of operation, the use of LDPS and the features and functions of all DDC hardware. Upon completion of this training each student, using appropriate documentation, should be able to start the system, operate the system, recover the system after a failure, perform routine maintenance and describe the specific hardware, architecture, and operation of the system.

21. The system shall use BACnet as the native communication protocol between distributed controllers communicating on the controller network (i.e., Field Bus) and must, as a minimum, support the following Objects and Application Services (Conformance Class 3):

- a. Objects > Binary Input Services > Read property
- b. Binary Output Write property
- c. Binary Value
- d. Analog Input
- e. Analog Output Read Multiple Property
- f. Analog Value Write Multiple Property
- g. Calendar
- h. Schedules

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PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 FORMS

3.1.1 Asbestos Certification Letter

CERTIFICATION LETTER

Project Name: _____

Name of Contractor: _____

Project Contract/Delivery Order Number: _____

Facility Number: _____

Date: _____

To Whom It May Concern:

This letter is to certify that the project indicated above has been constructed using no asbestos-containing materials in accordance with the design requirements.

Sincerely,

Typed Name: _____

Signature: _____

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3.1.2 SOLID WASTE DISPOSITION (Mar 2011)

Contractor Name, address, phone number, contract number:

Contractor Name, address, phone number, contract number	Date	Name of Contractor	Name of Disposal Facility / POC	Disposal or Recycle Transaction	Cubic Yards
Concrete (Cubic Yds) per haul					
Asphalt (Cubic Yds) per haul					
Routine Mixed Debris (Cubic Yds per					
Asbestos Abatement (lbs per ticket)					
Universal Waste (lbs per ticket)					
Land Clearing Debris, Stumps (Cubic Yds per haul)					
Concrete: Must be disposed off-site.					
Asphalt: Call COE Office for Info					
Routine Mixed Debris: Contractor option to permitted facility					
Asbestos Abatement: Permitted facility of choice					

Contractor Name, address, phone number, contract number	Date	Name of Contractor	Name of Disposal Facility / POC	Disposal or Recycle Transaction	Cubic Yards
Universal Waste: Contractor option at permitted facility					
Land Clearing Debris, IE stumps etc: Should be taken to chipping operation for recycle credit if available					

3.2 INSTALLATION SPECIFIC SECURITY REQUIREMENTS FOR PWS/SOW/SOO

3.2.1 Installation Physical Security

1. Contractor's must provide an access roster to Directorate of Emergency Services (DES), Physical Security Office of all employees monthly or when any personnel change occurs for access to Fort POLK. An access roster will also be furnished to the Security and Intelligence Division (S&ID), DPTMS quarterly or upon request. Access rosters must be forwarded by the COR to the visitors control center using a specific format electronically from a government computer. All personnel employed under this contract will adhere to all Fort POLK access control policies which include, weapons registration, transportation of weapons on the installation, access control policies, use of installation passes and ID cards and the operation of motor vehicles.

2. A check of records through the National Crime Information Center (NCIC) Interstate Identification Index (III) is the Army minimum baseline background check for entrance onto Army installations for non-CAC holders to include entrance of visitors. Contractors will identity proof all employees using e-verify and ensure that no illegal immigrants are employed under the umbrella of this contract. Access to the installation will be in accordance with the current and/or future governing Command Access Control Policy Memorandums.

3. Short term visitors may register online and request a one-day pass at https://visit.gvt.us/steps/installation_selection. The requestor will receive a text message indicating pass is ready for pickup or receive a text message indicating a problem has occurred and the pass was not issued.

4. The contractor shall provide employees with company identification (ID) cards prior to their commencement of work. The ID format is subject to approval by the government. IDs shall be laminated and include the company's name, ID number, issue and expiration dates, employee name, job title and color photograph. Employees shall wear ID cards on front exterior clothing, above the waist, when performing under the Performance of Work Statement (PWS)/Statement of Work (SOW) unless otherwise specified herein or approved by the government.

5. Physical Security Plan. The Contractor shall submit a Physical Security Plan if required to access government-furnished or contractor-controlled

facilities. The contractor shall address the physical security aspects associated with contract performance in government furnished facilities. The plan shall describe how the Security Plan shall prevent unauthorized access, vandalism, pilferage, larceny, sabotage, and arson directed toward contractor controlled facilities. A list of installation buildings for which the contractor shall be responsible shall be included in the plan. The contractor shall maintain an active security checklist for each facility under the contractor's control. The plan shall comply with the provisions of AR 190-11, AR 190-13, AR 190-51, DoD 5100.76(D), 5220.22(D) and the Fort POLK, LA Installation Physical Security Plan. This security plan will be reviewed annually by the DES to ensure regulatory requirements.

6. Information Systems Security Plan. The Contractor shall submit an Information Systems Security Plan if required to access a government information system. The information systems security plan shall establish security procedures for all computer systems and communications utilized in the performance of this PWS/SOW/SOO. The plan shall conform to AR 25-2, AR 25-1, AR 380-5 and AR 380-67.

7. Key Control Plan. The Contractor shall submit a Key Control Plan if required to access a government facility. The contractor's key control plan shall provide for government access, 24 hours a day, seven days a week, to all government-furnished facilities. The plan shall comply with AR 190-13, the Army Physical Security Program, and AR 190-51.

8. The contractor shall ensure that its employees, performing under this contract that has access to government information systems receive annual DoD Cyber Awareness security training. This training can be acquired at:

<https://public.cyber.mil/training/cyber-awareness-challenge/>

9. The contractor shall immediately notify the contracting officer when an employee terminates employment that has access to government information systems or data. The contractor shall ensure all common access cards issued to employees are returned to the government upon termination of employment and released employee names are to be stricken from the roster maintained by DES & S&ID immediately upon release.

3.2.2 Installation Antiterrorism/Force Protection (AT/FP)

1. Pursuant to DoDI O-2000.16-V1, DoD Antiterrorism (AT) Standards, dated November 17, 2016, Change 3, May 7, 2021, each Contractor employee requiring access to a federally-controlled installation, facility and/or federally controlled information system(s) shall complete AT Level I Awareness Training on an annual basis and receive a certificate of completion. The training is accessible from any computer and is available at:

<https://jkodirect.jten.mil/Atlas2/page/login/Login.jsf>.

The Contractor is responsible for ensuring that all applicable employees have completed antiterrorism awareness training and shall certify that their workforce has completed the training through the submission of completion certificate(s) to the KO and COR (if appointed) within five working days after contract award or prior to access to a federally controlled installation or information system.

2. In the event that the automated system is not available (e.g., server problems), AT Level I Awareness Training can be provided by a qualified

instructor. Contact the installation AT/FP Office for guidance. If the training is not completed online, the Level I AT Awareness instructor qualification must be coordinated with the installation Antiterrorism Officer or (installation security equivalent) and the resultant name(s) of approved instructors shall be provided to the contracting officer or designee along with all associated cost or schedule impacts to the contract.

3. Antiterrorism performance (AT Level I Awareness Training attendance and compliance) may be documented as a performance metric under the resultant contract and be part of past performance information in support of future source selections.

4. IAW DoDI 2000.12, all DoD and non-DoD Tenants will comply with the installation AT Program.

3.2.3 Installation Operations Security (OPSEC)

1. IAW AR 530-1, Operations Security (OPSEC), dated 26 September 2014, and DoDM 5205.02-M, DoD Operations Security (OPSEC) Program Manual, dated 03 November 2008, Incorporating Change 1, Effective April 26, 2018, contract personnel shall receive initial OPSEC Level I training which consists of initial and continual awareness training. Within the first 30 days of arrival on Fort POLK contract personnel shall receive initial OPSEC training either by on-line training through the Fort POLK SharePoint OPSEC site on the intranet, or the Defense Security Services website at:

<https://securityawareness.usalearning.gov/opsec/>

2. The Contractor shall ensure all applicable employees have completed OPSEC initial training and annual refresher training and shall certify that their workforce has completed the training through the submission of completion certificate(s) to the KO and the COR (if appointed) within 30 days of arrival on post.

3. OPSEC Awareness Training attendance and compliance may be documented as a performance metric under the resultant contract and be part of past performance information in support of future source selections.

3.2.4 Homeland Security Presidential Directive 12 (HSPD 12) Requirements

1. Requirements apply to any contract where contractor employees will access multiple Installations or require access to the government information systems.

2. All personnel hired under this contract who do not require a security clearance must have a favorable Tier 1 (T-1), National Agency Check with Inquiries (NACI). The Contracting Officer Representative (COR) will ensure new hires complete a T-1 investigation through the Personnel Security Investigation Portal (PSIP) by initiating a request through S&ID no later than 15 days from the date of hire and completing the investigation (submission to OPM) within 30 days. Personnel who require a security clearance must be processed by their company Facility Security Officer (FSO) or company Security Manager.

3. Instructions for completing the T-1 process will be sent to the Project/Program Manager, Security Manager and the COR once the contract has been awarded and one of the above personnel notifies S&ID for the initiation. The contractor shall schedule fingerprinting appointments with S&ID. Personnel will not be able to work under this contract until the T-1

has been submitted to PSIP as required. Personnel who do not receive a favorable investigation will not be allowed to perform services under this contract.

4. All employees requiring a common access card (CAC) for physical access to the government information systems may be granted a CAC after the successful submission of the T-1 investigation through PSIP and a favorable fingerprint review by S&ID. An unfavorable adjudication can result in the loss or denial of computer access, physical access or employment on a federal installation.

5. IAW HQDA G2 Memorandum, "Guidance for Verification of U.S. Citizenship or Legal Status of Uncleared Contractors in Support of Homeland Security Presidential Directive-12", dated 21 March 2016, all Tier 1 investigative requests for any Contractor(s) that are either (1) U.S Citizen born outside the U.S. or (2) non-U.S. Citizen, will be rejected unless a copy of the citizenship or legal status document is uploaded as part of the investigation request.

3.2.5 Installation Access

1. All unescorted visitors to Fort POLK must be vetted at the Visitors Center, located adjacent to the main gate on Louisiana Avenue. (Building 5903). Personnel requiring unescorted access will present a state issued Real ID Act compliant driver's license (check status of your state at: <https://www.dhs.gov/real-id-enforcement-brief>). Visitors who do not have a Real ID act compliant driver's license may use alternate forms of ID to prove their identity. Contact the Fort POLK Visitor's Center at (337) 531-0380 to obtain a listing of authorized alternate forms of identity. Each visitor with acceptable screening results will be issued an access control credential for unescorted access to the installation. Personnel with unfavorable screening results may be denied unescorted access to Fort POLK. Law enforcement data obtained during the vetting process will not be released by personnel at the Visitors Center. A waiver process has been established for personnel who are denied unescorted access. Generally, waivers will be processed within five days of completion.

2. Escorted visitors who are accompanied by Department of Defense-affiliated personnel (active-duty Soldiers, civilian common access card holders, retiree ID card holders, DoD dependent ID card holders, and civilian contractor CAC holders) will not require vetting for access and will only need to produce a valid ID card; these visitors must be in the immediate vehicle of the escorting card holder. DoD affiliated personnel will be responsible for their escorted visitors on the installation. Personnel who are enrolled and vetted through the Rapid Gate program or possess an installation issued ID/Pass do not have escorting privileges.

3. The Fort POLK Visitors Center is open seven days per week Monday - Friday, 0500 - 2100, Saturday - Sunday, 0800 -1600. For additional information concerning access control, please contact the Visitors Center at (337) 531-0380.

3.2.6 Contractor Photography

1. In accordance with IAW USC Title 18 and in the interest of National Defense, it is unlawful to take any photographs, render sketches, drawings, maps, or geographical representation or other media of JRTC and Fort POLK military installation or training areas without first obtaining approval from the Directorate of Plans, Training, Mobility and Security: Chief,

S&ID; AT/FP Officer; Visual Information; and Directorate of Emergency Services, Physical Security Office.

2. Contractors must have prior approval for any activity that involves photographs, video or drawings of installation infrastructure. Pass Requests will be directed to DLL-CESWF-EAO-Johnson@usace.army.mil. This policy does not apply to Government Quality Assurance personnel and the COR performing inspections or contract surveillance.

3. Personnel taking photographs, videos, sketches, drawings, maps or other presentations of JRTC and Fort POLK must be in possession of an approved photo request and present it to law enforcement or competent authority upon demand.

4. Report all unauthorized photographic activity to the DES 911 Center or the Installation Operations Center.

3.2.7 Installation Threat Awareness and Reporting Program (TARP)

1. AR 381-12, 1 June 2016, paragraph 1-101, all Contractors shall attend live TARP training at least annually. Live training must be scheduled with the local Counterintelligence (CI) office (902d Military Intelligence).

2. Contractors are required to report threat-related incidents, behavioral indicators, and other matters of counterintelligence interest specified in AR 381-12, paragraph 3 to the facility security officer, the nearest military CI office, the Federal Bureau of Investigations, or the Defense Security Service. Methods of reporting include online at <https://www.inscom.army.mil/isalute/> and by phone at 1-800-CALL-SPY (1-800-225-5779).

3.3 STREET CLOSURES

A street closure notification is required 21 days prior to closure. The notification period is required for publicizing the closures to the Fort POLK community. The contractor shall coordinate with the USACE contract representative for proposed closures.

3.4 PRIVACY ACT STATEMENT

Privacy Act Statements for Rosters

Access Control Rosters

In accordance with Army Regulations 340-21 (The Army Privacy Program) and 190-16 (Physical Security) the following information is provided to all personnel asked to provide the personal information necessary to be placed on JRTC and Fort POLK Access Control Rosters:

All information provided will be electronically stored on government servers and handheld scanners in order to identify authorized personnel upon entry to the installation. This information will be used to identify personnel that have been previously granted access to the installation in either their individual capacity or by affiliation with an installation organization. It will also be used by security and law enforcement personnel for traffic studies, access control studies, investigations, enforcing debarments and suspensions.

Providing this information is voluntary. Failure to provide this

Animal Building

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information will require manual identification through manually prepared pass or other means.

In Accordance with Title 5, U.S.C. § 552a (Privacy Act of 1974) as implemented by the Federal Register, Department of Defense, Department of the Army, 32 CFR Part 505, The Army Privacy Program; Final Rule, protected personal information (Social Security Numbers, Drivers License Numbers, Dates of Birth and Personal phone numbers) will not be disclosed from this roster to any individual outside the Department of Defense except to Law Enforcement and Access Control / Security Personnel pursuant to a legal criminal investigation. As to the preceding exception, consent to disclosure is expressly given by individuals and organizations listed below. This information will be safeguarded IAW paragraph § 505.2, of the Federal Register named above. When updated, obsolete copies will be destroyed as required by paragraph 4-501, AR 25-55, The Department of the Army Freedom of Information Act Program.

NOTE: All Fort POLK documents containing Privacy Act Data are to be considered FOUO and shall be destroyed as outlined below:
Paragraph 4-501, AR 25-55 states: Non-record copies of FOUO materials may be destroyed by tearing (or shredding) each copy into pieces to preclude reconstructing, and placing them in regular trash containers. All electronic forms of Privacy Act Data will be safeguarded by CAC enabled computers and will only be processed by authorized users on government systems.

-- End of Section --

ACCESS CONTROL ROSTER

All information must be provided in order to be added to the installation access control roster. **Complete Drivers License Number or State ID Number, Date of Birth, and Middle Initial** must be provided in order to positively identify authorized patrons of Fort Polk. **Enclusive Start and Ends Dates** must also be provided. Failure to comply with these instructions will result in denial of access to the installation under this program. See attached Privacy Act Statement. Access control rosters must be submitted from a .mil, .af, .navy, .acoe or other DoD address in order to be accepted. Any roster submitted by a commercial ISP (example @yahoo.com, @gmail.com, etc) will not be accepted.

[illegible]

Privacy Act Statements for Rosters

Access Control Rosters

In accordance with Army Regulations 340-21 (The Army Privacy Program) and 190-16 (Physical Security) the following information is provided to all personnel asked to provide the personal information necessary to be placed on JRTC and Fort Polk Access Control Rosters:

All information provided will be electronically stored on government servers and handheld scanners in order to identify authorized personnel upon entry to the installation. This information will be used to identify personnel that have been previously granted access to the installation in either their individual capacity or by affiliation with an installation organization. It will also be used by security and law enforcement personnel for traffic studies, access control studies, investigations, enforcing debarments and suspensions.

Providing this information is voluntary. Failure to provide this information will require manual identification through manually prepared pass or other means.

In Accordance with Title 5, U.S.C. § 552a (Privacy Act of 1974) as implemented by the Federal Register, Department of Defense, Department of the Army, 32 CFR Part 505, The Army Privacy Program; Final Rule, protected personal information (Social Security Numbers, Drivers License Numbers, Dates of Birth and Personal phone numbers) will not be disclosed from this roster to any individual outside the Department of Defense except to Law Enforcement and Access Control / Security Personnel pursuant to a legal criminal investigation. As to the preceding exception, consent to disclosure is expressly given by individuals and organizations listed below. This information will be safeguarded IAW paragraph § 505.2, of the Federal Register named above. When updated, obsolete copies will be destroyed as required by paragraph 4-501, AR 25-55, The Department of the Army Freedom of Information Act Program.

NOTE: All Fort Polk documents containing Privacy Act Data are to be considered FOUO and shall be destroyed as outlined below:

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Fort Johnson Haul Routes

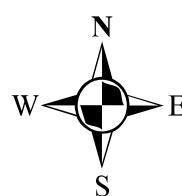
North Fort Johnson

06/20/2023

- Disposal Area
- ACP (Access control point)
- Haul Route
- Installation Boundary
- Fence
- Buildings
- Structures
- Recreation
- Water Body



0 500 1,000 2,000 3,000 4,000 Feet



ACP #7

ACP #8

ACP #6

ACP #2

ACP #3

Top Soil, Asphalt,
Usable Soils
Disposal Area

ACP #9

ACP #4

Closed to Traffic

ACP #5

ACP #1

Fort Polk Utility Location & Dig Permit Request***Requires no less than 7 days advance of digging and no more than 14 days ***

Building 3307, Ft. Polk, La 71459
 Work Reception Office (337) 531-1379

Date	
Location of dig (for training areas, include coordinates)	
Scope of Work	
POC & Company Name	
POC Number	

Directions

-Requesting contractor shall mark area to be excavated in **WHITE PAINT**. All marked areas shall be circular or rectangular – NO single line marks permitted. ****DO NOT EXCEED THIS AREA****

-When approaching 3 feet either side of any utility mark, contractor shall hand dig until utility is physically located.

-Report any utility hit immediately at **531-1379**.

-Any negligence on the part of the digging contractor shall be subject to an Industry Standard repair fee.

For La 1 Call:

1. Louisiana Law requires the requesting contractor contact Louisiana 1 Call at 1-800-272-3020 – seven days in advance and have digging location information available at the time of the call. Utilities that subscribe to La 1 Call will mark their respective utility within 48 hours. **La 1 Call ticket number** _____

La 1 Call “Mark By” Date _____

For local Utilities: (Requesting contractor is responsible for keeping utility markings/flags maintained; once excavation is complete, all utility marking flags shall be removed.)

1. For telephone, Data Lines, and Fiber Optic Line locations on Fort Polk:
 - a. **Requesting contractor must appear in person at Bldg 1700 for directions – 531-4019**
 - b. Dig Request and map must be presented at time of visit.
 - c. NEC Ticket Number/comments _____
2. American Warrior Network (AWN) 537-4711 or **353-2424** –
AWN Ticket Number/comments _____
3. Corvias Military Housing (geo-thermal wells) _____
Bldg. 330/Magnolia RCI office 531-6000
4. For “Training Area/Range” dig sites go to Bldg. 3225 – Range Officer (concur/non-concur) _____
5. Upon completion of the above, hand carry this form with the map back to bldg 3307 Work Reception who will initiate DMOs for the following:
 Ext. Electric DMO # _____ Nat Gas DMO# _____ Storm Drain DMO# _____
 Chill Water DMO# _____ Hot Water DMO# _____
6. After all dates and times have been met, requesting contractor may pick up the approved Dig Permit and proceed with excavation.
7. Permit to excavate at requested location above is approved on _____

Date/DPW Initials

8. Upon completion of the digging portion of the project, requesting contractor shall record the completion date on this form and return it to Work Reception, bldg. 3307 no later than next business day. Date completed _____

NOTE: If excavation is not started within 30 days of the approval date above, this permit is VOID.

Requesting contractor shall reprocess Dig Permit request.

NOTE: If excavation results in a hit/ruptured utility outside of excavation area, requesting contractor may be held responsible for repair costs.

Revised 7Jun2019

SECTION 01 35 26

GOVERNMENTAL SAFETY REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN SOCIETY OF SAFETY PROFESSIONALS (ASSP)

ANSI/ASSP A10.34 (2021) Protection of the Public on or Adjacent to Construction Sites

ANSI/ASSP A10.44 (2020) Control of Energy Sources (Lockout/Tagout) for Construction and Demolition Operations

ASTM INTERNATIONAL (ASTM)

ASTM F855 (2020) Standard Specifications for Temporary Protective Grounds to Be Used on De-energized Electric Power Lines and Equipment

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE 1048 (2016) Guide for Protective Grounding of Power Lines

IEEE C2 (2023) National Electrical Safety Code

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION (ISEA)

ANSI/ISEA Z89.1 (2014; R 2019) American National Standard for Industrial Head Protection

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 51B (2024) Standard for Fire Prevention During Welding, Cutting, and Other Hot Work

NFPA 70 (2023; ERTA 1 2024; TIA 24-1) National Electrical Code

NFPA 70E (2024) Standard for Electrical Safety in the Workplace

NFPA 241 (2022) Standard for Safeguarding Construction, Alteration, and Demolition Operations

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety -- Safety and Occupational Health (SOH) Requirements

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

10 CFR 20 Standards for Protection Against Radiation

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1915 Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment

29 CFR 1926 Safety and Health Regulations for Construction

49 CFR 173 Shippers - General Requirements for Shipments and Packagings

CPL 2.100 (1995) Application of the Permit-Required Confined Spaces (PRCS) Standards, 29 CFR 1910.146

1.2 DEFINITIONS

The following definitions are for the convenience of the reader. If there is a referenced document in the text of this specification section, that is the document that should define terms for that paragraph. If further clarification is needed, contact the Contracting Officer.

1.2.1 Site Safety and Health Officer (SSHO)

A Contractor Employee that is responsible for overseeing and ensuring implementation of the prime Contractor's Safety and Occupational Health (SOH) program according to the Contract, EM 385-1-1, applicable federal, state, and local requirements.

1.2.1.1 Level One SSHO

A designated employee with full-time SOH responsibility that meets and follows the requirements of EM 385-1-1.

1.2.1.2 Level Two SSHO

A designated employee with Level Two SSHO responsibility that meets and follows the requirements of EM 385-1-1. Level Two SSHOs cannot be assigned to projects that have a residual Risk Assessment Code (RAC) of high or extremely high.

1.2.1.3 Level Three SSHO

A designated Qualified Person or Competent Person with SOH responsibility that meets and follows the requirements of EM 385-1-1. Level 3 SSHOs cannot be assigned to projects that have a residual RAC of high or extremely high.

1.2.1.4 Alternate SSHO

An employee that meets the definition of the contract-required level SSHO, but is not the primary SSHO.

1.2.2 Competent Person (CP)

The CP is a person designated in writing, who, through training, knowledge and experience, is capable of identifying, evaluating, and addressing existing and predictable hazards in the working environment or working conditions that are unsanitary, hazardous, or dangerous to personnel, and who has authorization to take prompt corrective measures to eliminate them.

1.2.3 Qualified Person (QP)

The QP is a person designated in writing, who, by possession of a recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems related to the subject matter, the work, or the project.

1.3 SUBMITTALS

Government Acceptance or Approval does not remove responsibility from the Contractors for their actions or liability.

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G,

SD-06 Test Reports

Accident Reports; G,

LHE Inspection Reports

Monthly Exposure Reports; G,

SD-07 Certificates

Activity Hazard Analysis (AHA); G,

Certificate of Compliance

Hot Work Permit

License Certificates

Portable Gauge Operations Planning Worksheet; G,

Radiography Operation Planning Work Sheet; G,

Standard Lift Plan; G,

1.4 PUBLIC HEALTH EMERGENCIES

In the event of a declared public health emergency, follow safety precautions as required by the Occupational Safety and Health Administration (OSHA) www.osha.gov, the Centers for Disease Control and Prevention (CDC) www.cdc.gov, and as required by federal, state and local requirements.

1.5 MONTHLY EXPOSURE REPORTS

Provide a Monthly Exposure Report by the fifth of each month. This report is a compilation of employee-hours worked each month for all site workers, both Prime and subcontractor. Failure to submit the report may result in retention of up to 10 percent of the progress payment.

1.6 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this Contract, comply with the most recent edition of USACE EM 385-1-1, and the following federal, state, and local laws, ordinances, criteria, rules and regulations at the date of the Solicitation for this Contract. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements govern.

1.7 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

1.7.1 Site Safety and Health Officer (SSHO)

1.7.1.1 Qualifications of SSHO

A Level One SSHO is required to be provided. All SSHOs will have met the training, experience requirements identified in the EM 385-1-1 and this Contract.

1.7.1.2 Duties of SSHO

All SSHOs will carry out the roles and responsibilities as identified in this Contract and the EM 385-1-1. All SSHOs will be designated on an ENG Form 6282. The form can be found at

[https://www.publications.usace.army.mil/Portals/76/Eng Form 6282 2023Aug28.pdf](https://www.publications.usace.army.mil/Portals/76/Eng%20Form%206282%202023Aug28.pdf)

Superintendent, QC Manager, and SSHO are subject to dismissal if their required duties are not being effectively carried out. If either the Superintendent, QC Manager, or SSHO are dismissed, project work will be stopped and will not be allowed to resume until a suitable replacement is approved and the above duties are again being effectively carried out.

1.7.1.3 Additional Site Safety and Health Officer (SSHO) Requirements and Duties

The SSHO may not serve as the Quality Control Manager. The SSHO may not serve as the Superintendent. The SSHO shall be assigned no other duties.

1.7.1.4 Safety Meetings

Conduct safety meetings to review past activities, plan for new or changed

operations, review pertinent aspects of appropriate AHA (by trade), establish safe working procedures for anticipated hazards, and provide pertinent Safety and Occupational Health (SOH) training and motivation. Conduct meetings at least once a month for all supervisors at the project location. The SSHO, supervisors, or foremen must conduct meetings at least once a week for the trade workers. Document meeting minutes to include the date, persons in attendance, subjects discussed, and names of individual(s) who conducted the meeting. Maintain documentation on-site and furnish copies to the Contracting Officer on request. Notify the Contracting Officer of all scheduled meetings 7 calendar days in advance.

1.7.2 Roles and Responsibilities of Prime Contractor and SSHO

The Prime Contractor and SSHO must ensure that the requirements of all applicable OSHA and EM 385-1-1 are met for the project. The Prime Contractor must ensure an SSHO or an equally qualified Alternate SSHO(s) is at the worksite at all times to implement and administer the Contractor's safety program and Government accepted Accident Prevention Plan. If the required SSHO has to temporarily (that is, up to 24 hours / 1 day) leave the site of work due to unforeseen or emergency situations, a Level One, Two, or Three SSHO may be used in the interim and must be on the site of work at all times when work is being performed.

If the SSHO must be off-site for a period longer than 24 hours / 1 day, a qualified alternate that meets the contract requirements must be onsite.

a. Prime contractor must ensure all SSHOs:

- (1) Are designated on an ENG Form 6282.
- (2) Meet minimum training and experience requirements identified in EM 385-1-1.
- (3) Execute roles and responsibilities identified in EM 385-1-1.

1.7.3 Competent Person for Confined Space Entry

Provide a CP for Confined Space Entry who meets the requirements of EM 385-1-1 and herein. The CP for Confined Space Entry must supervise the entry into each confined space in accordance with EM 385-1-1.

1.7.4 Preconstruction Conference

- a. Contractor representatives who have a responsibility or significant role in accident prevention on the project must attend the preconstruction conference. This includes the project superintendent, Site Safety and Occupational Health Officer, quality control manager, or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).
- b. Discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the Contract. This list of proposed AHAs will be reviewed and an agreement will be reached between the Contractor and the Contracting Officer as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, and Government review of AHAs to preclude project delays. The creation of the APP and Schedule will be created

after being given Notice to Proceed.

- c. Deficiencies in the submitted APP, identified during the Contracting Officer's review, must be corrected, and the APP re-submitted for review prior to the start of construction. Work is not permitted to begin until an APP is established that is acceptable to the Contracting Officer.

1.8 ACCIDENT PREVENTION PLAN (APP)

1.8.1 Accident Prevention Plan (APP) - Design

Provide a site-specific Accident Prevention Plan (APP), including Activity Hazard Analyses (AHA), in accordance with EM 385-1-1, ENG Form 6293, for the design team to follow during site visits and investigations. For subsequent visits, update the plan if there are changes in the personnel who will be attending, or the tasks to be performed. Submit the APP for review and acceptance by the Government at least 15 calendar days prior to the start of the design field work after being given Notice to Proceed. Field work must not begin until the design APP is accepted by the Contracting Officer. Prior to the start of construction incorporate the Design APP into the Construction APP so that one site specific APP exists for the project and submit to the Contracting Officer for acceptance.

If the design scope includes borings or other subsurface investigations, include in the APP the type of field investigation and verification techniques, such as visual, local utility locating service scanning and third party subcontractor scanning, potholing, or hand digging within two feet of a known utility that will be required. Mark underground utilities before starting any ground-disturbing actions. Notify the Contracting Officer 15 days prior to the start of soil borings or sub-surface investigations.

1.8.2 Accident Prevention Plan (APP) - Construction

Submit the Accident Prevention Plan (APP) for review and acceptance by the Government at least 15 calendar days prior to the start, after being given Notice to Proceed. A competent person must prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of EM 385-1-1, ENG Form 6293, and herein. The APP must be job-specific and address any unusual or unique aspects of the project or activity for which it is written. The APP must interface with the Contractor's overall safety and occupational health program referenced in the APP in the applicable APP element, and made site-specific. Describe the methods to evaluate past safety performance of potential subcontractors in the selection process. Also, describe innovative methods used to ensure and monitor safe work practices of subcontractors. The Government considers the Prime Contractor to be the "controlling employer" for all worksite safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the Contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP must be signed in accordance with the APP and ENG Form 6293 Accident Prevention Plan Worksheet. The SSHO must provide and maintain the APP and a log of signatures by each subcontractor foreman, attesting that they have read and understand the APP, and make the APP and log available on-site to the

Contracting Officer. If English is not the foreman's primary language, the Prime Contractor must provide an interpreter.

Submit the APP to the Contracting Officer 15 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP. Once reviewed and accepted by the Contracting Officer, the APP and attachments will be enforced as part of the Contract. Disregarding the provisions of this Contract or the accepted APP is cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified. Continuously review and amend the APP, as necessary, throughout the life of the Contract. Changes to the accepted APP must be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO and Quality Control Manager. Incorporate unusual or high-hazard activities not identified in the original APP as they are discovered. Should any severe hazard exposure (i.e., imminent danger) become evident, stop work in the area, secure the area, and develop a plan to remove the exposure and control the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate and remove the hazard. In the interim, take all necessary action to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by ANSI/ASSP A10.34), and the environment.

1.8.3 Names and Qualifications

Provide plans in accordance with the requirements outlined in EM 385-1-1, including the following:

- a. Names and qualifications (resumes including education, training, experience and certifications) of site safety and health personnel designated to perform work on this project to include the designated Site Safety and Health Officer and other competent and qualified personnel to be used. Specify the duties of each position.
- b. As a minimum, designate and submit qualifications of Competent Persons (CP) for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; and personal protective equipment and clothing to include selection, use and maintenance. Designate and submit qualifications for additional CPs as applicable to the work performed under this Contract.

1.8.4 Plans

Provide plans in the APP in accordance with the requirements outlined in EM 385-1-1.

1.9 ACTIVITY HAZARD ANALYSIS (AHA)

Before beginning each activity, task or Definable Feature of Work (DFOW) involving a type of work presenting hazards not experienced in previous project operations, or where a new work crew or subcontractor is to perform the work, the Contractor(s) performing that work activity must prepare an AHA. AHAs must be developed by the Prime Contractor, subcontractor, or supplier performing the work, and provided for Prime Contractor review and approval before submitting to the Contracting Officer. AHAs must be signed by the SSHO, Superintendent, QC Manager and the subcontractor Foreman performing the work. Format the AHA in accordance with EM 385-1-1 or as

directed by the Contracting Officer. Submit the AHA for review at least 15 working days prior to the start of each activity task, or DFO. The Government reserves the right to require the Contractor to revise and resubmit the AHA if it fails to effectively identify the work sequences, specific anticipated hazards, site conditions, equipment, materials, personnel and the control measures to be implemented.

AHAs must identify competent persons required for phases involving high risk activities, including confined entry, crane and rigging, excavations, trenching, electrical work, fall protection, and scaffolding.

1.9.1 AHA Management

Review the AHA list periodically (at least monthly) at the Contractor supervisory safety meeting, and update as necessary when procedures, scheduling, or hazards change. Use the AHA during daily inspections by the SSHO to ensure the implementation and effectiveness of the required safety and health controls for that work activity.

1.9.2 AHA Signature Log

Each employee performing work as part of an activity, task or DFO must review the AHA for that work and sign a signature log specifically maintained for that AHA prior to starting work on that activity. The SSHO must maintain a signature log on site for every AHA. Provide employees whose primary language is other than English, with an interpreter to ensure a clear understanding of the AHA and its contents.

1.10 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in paragraph REFERENCES. Maintain applicable equipment manufacturer's manuals.

1.11 EMERGENCY MEDICAL TREATMENT

Contractors must arrange for their own emergency medical treatment in accordance with EM 385-1-1. The Government has no responsibility to provide emergency medical treatment.

1.12 NOTIFICATIONS AND REPORTS

1.12.1 Accident Notification

Notify the Contracting Officer in accordance with the EM 385-1-1 Accident Reporting Timeline.

Table Accident Reporting Required Timeline		
Accident Type	Notify KO or COR	Complete Final Accident Report on ENG 3394 and provide to KO or COR

Table Accident Reporting Required Timeline		
Fatality, in-patient hospitalization, amputation, eye loss, or property damage over \$600,000.	Immediately, no later than (NLT) 8 Hours	Within 7 Days
All other accidents and near misses	Immediately, no later than (NLT) 24 Hours	Within 7 Days

Within notification include Contractor name; Contract title; type of Contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (for example, type of construction equipment used and PPE used). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted. Assist and cooperate fully with the Government's investigation(s) of any accident or near miss.

1.12.2 Accident Reports

- a. Conduct an accident investigation for recordable injuries and illnesses, property damage, and near misses as defined in EM 385-1-1, to establish the root cause(s) of the accident. All accidents are reportable, regardless of whether or not it is recordable. Complete the applicable USACE Accident Report, ENG Form 3394, and provide the report to the Contracting Officer within 7 calendar days of the accident. The Contracting Officer will provide copies of any required or special forms. All accidents are reportable, regardless of whether or not it is recordable.
- b. Near Misses: For Army projects, report all "Near Misses" to the Contracting Officer, using local accident reporting procedures, within 24 hours. The Contracting Officer will provide the Contractor the required forms. Near miss reports are considered positive and proactive Contractor safety management actions.

1.12.3 LHE Inspection Reports

Submit LHE inspection reports required in accordance with EM 385-1-1 and as specified herein with Daily Reports of Inspections.

1.12.4 Certificate of Compliance and Pre-lift Plan/Checklist for LHE and Rigging

Provide a Certificate of Compliance for LHE entering an activity under this Contract and in accordance with EM 385-1-1. Post certifications on the crane.

Develop a Standard Lift Plan (SLP) in accordance with EM 385-1-1 and using Standard Pre-Lift Crane Plan/Checklist for each lift planned. Submit SLP to the Contracting Officer for approval within 15 calendar days in advance of planned lift.

1.13 HOT WORK PERMIT

1.13.1 Permit and Personnel Requirements

Submit and obtain a written permit prior to performing "Hot Work" (i.e., welding or cutting) or operating other flame-producing/spark producing devices, from the Fire Division. A permit is required from the Explosives Safety Office for work in and around where explosives are processed, stored, or handled. Contractors are required to meet all criteria before a permit is issued. Provide at least two 20 pound 4A:20 BC rated extinguishers for normal "Hot Work". The extinguishers must be current inspection tagged, and contain an approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch must be trained in accordance with NFPA 51B and remain on-site for a minimum of 1 hour after completion of the task or as specified on the hot work permit.

When starting work in the facility, require personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency Fire Division phone number. Report any fire, no matter how small, to the responsible Fire Division immediately.

1.13.2 Work Around Flammable Materials

Obtain permit approval from a NFPA Certified Marine Chemist, or Certified Industrial Hygienist for "Hot Work" within or around flammable materials (such as fuel systems or welding/cutting on fuel pipes) or confined spaces (such as sewer wet wells, manholes, or vaults) that have the potential for flammable or explosive atmospheres.

Whenever these materials, except beryllium and chromium (VI), are encountered in indoor operations, local mechanical exhaust ventilation systems that are sufficient to reduce and maintain personal exposures to within acceptable limits must be used and maintained in accordance with manufacturer's instruction and supplemented by exceptions noted in EM 385-1-1.

1.14 RADIATION SAFETY REQUIREMENTS

Submit License Certificates, employee training records, and Leak Test Reports for radiation materials and equipment to the Contracting Officer and Radiation Safety Office (RSO) for all specialized and licensed material and equipment proposed for use on the construction project (excludes portable machine sources of ionizing radiation including moisture density and X-Ray Fluorescence (XRF)). Maintain on-site records whenever licensed radiological materials or ionizing equipment are on Government property.

Protect workers from radiation exposure in accordance with 10 CFR 20, ensuring any personnel exposures are maintained As Low As Reasonably Achievable.

1.14.1 Radiography Operation Planning Work Sheet

Submit a Gamma and X-Ray Radiography Operation Planning Work Sheet to Contracting Officer 14 days prior to commencement of operations involving radioactive materials or radiation generating devices. For portable machine sources of ionizing radiation, including moisture density and XRF, use and submit the Portable Gauge Operations Planning Worksheet instead. The Contracting Officer will review the submitted worksheet and provide

questions and comments.

Contractors must use primary dosimeters process by a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory.

1.14.2 Site Access and Security

Coordinate site access and security requirements with the Contracting Officer for all radiological materials and equipment containing ionizing radiation that are proposed for use on a government facility. For gamma radiography materials and equipment, a Government escort is required for any travels on the Installation. The Government authorized representative will meet the Contractor at a designated location outside the Installation, ensure safety of the materials being transported, and will escort the Contractor for gamma sources onto the Installation, to the job site, and off the Installation. For portable machine sources of ionizing radiation, including moisture density and XRF, the Government authorized representative will meet the Contractor at the job site.

Provide a copy of all calibration records, and utilization records for radiological operations performed on the site.

1.14.3 Loss or Release and Unplanned Personnel Exposure

Loss or release of radioactive materials, and unplanned personnel exposures must be reported immediately to the Contracting Officer, RSO, and Base Security Department Emergency Number.

1.14.4 Site Demarcation and Barricade

Properly demark and barricade an area surrounding radiological operations to preclude personnel entrance, in accordance with EM 385-1-1, Nuclear Regulatory Commission, and Applicable State regulations and license requirements, and in accordance with requirements established in the accepted Radiography Operation Planning Work Sheet.

Do not close or obstruct streets, walks, and other facilities occupied and used by the Government without written permission from the Contracting Officer.

1.14.5 Security of Material and Equipment

Properly secure the radiological material and ionizing radiation equipment at all times, including keeping the devices in a properly marked and locked container, and secondarily locking the container to a secure point in the Contractor's vehicle or other approved storage location during transportation and while not in use. While in use, maintain a continuous visual observation on the radiological material and ionizing radiation equipment. In instances where radiography is scheduled near or adjacent to buildings or areas having limited access or one-way doors, make no assumptions as to building occupancy. Where necessary, the Contracting Officer will direct the Contractor to conduct an actual building entry, search, and alert. Where removal of personnel from such a building cannot be accomplished and it is otherwise safe to proceed with the radiography, position a fully instructed employee inside the building or area to prevent exiting while external radiographic operations are in process.

1.14.6 Transportation of Material

Comply with 49 CFR 173 for Transportation of Regulated Amounts of Radioactive Material. Notify Local Fire authorities and the site Radiation Safety Officer (RSO) of any Radioactive Material use.

1.14.7 Schedule for Exposure or Unshielding

Actual exposure of the radiographic film or unshielding the source must not be initiated until after 5 p.m. on weekdays.

1.14.8 Transmitter Requirements

Adhere to the base policy concerning the use of transmitters, such as radios and cell phones. Obey Emissions control (EMCON) restrictions.

1.15 CONFINED SPACE ENTRY REQUIREMENTS

Confined space entry must comply with EM 385-1-1, 29 CFR 1926, 29 CFR 1910, and Directive CPL 2.100. Any potential for a hazard in the confined space requires a permit system to be used.

1.15.1 Rescue Procedures and Coordination with Local Emergency Responders

Develop and implement an on-site rescue and recovery plan and procedures. The rescue plan must not rely on local emergency responders for rescue from a confined space.

1.16 SEVERE STORM PLAN

In the event of a severe storm warning, the Contractor must comply with the applicable Storm Plan and:

- a. Secure outside equipment and materials and place materials that could be damaged in protected areas.
- b. Check surrounding area, including roof, for loose material, equipment, debris, and other objects that could be blown away or against existing facilities.
- c. Ensure that temporary erosion controls are adequate.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK

Comply with EM 385-1-1, NFPA 70, NFPA 70E, NFPA 241, the APP, the AHA, Federal and State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard prevails.

PPE is governed in all areas by the nature of the work the employee is performing. Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks. Safety glasses must be worn or carried/available on each person. Mandatory PPE includes:

- a. Head Protection that meets ANSI/ISEA Z89.1
- b. Long Pants
- c. Appropriate Safety Footwear
- d. Appropriate Class Reflective Vests

3.1.1 Worksite Communication

Employees working alone in a remote location or away from other workers must be provided an effective means of emergency communications (i.e., cellular phone, two-way radios, land-line telephones or other acceptable means). The selected communication must be readily available (easily within the immediate reach) of the employee and must be tested prior to the start of work to verify that it effectively operates in the area/environment. Develop an employee check-in/check-out communication procedure to ensure employee safety.

3.1.2 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this Contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint, and hexavalent chromium, are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials. Low mercury lamps used within fluorescent lighting fixtures are allowed as an exception without further Contracting Officer approval. Notify the Radiation Safety Officer (RSO) prior to excepted items of radioactive material and devices being brought on base.

3.1.3 Unforeseen Hazardous Material

Contract documents identify materials such as PCB, lead paint, and friable and non-friable asbestos and other OSHA regulated chemicals (i.e., 29 CFR Part 1910.1000). If material(s) that may be hazardous to human health upon disturbance are encountered during demolition, repair, renovation, or construction operations. Stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification.

3.2 UTILITY OUTAGE REQUIREMENTS

Apply for utility outages in advance. Refer to Section 01 00 00.00 44 DESIGN AND CONSTRUCTION SCHEDULE. At a minimum, the written request must include the location of the outage, utilities being affected, duration of outage, any necessary sketches, and a description of the means to fulfill energy isolation requirements in accordance with EM 385-1-1. In accordance with EM 385-1-1, where outages involve Government or Utility personnel, coordinate with the Government on all activities involving the control of hazardous energy.

These activities include, but are not limited to, a review of Hazardous Energy Control Program (HECP) and HEC procedures, as well as applicable Activity Hazard Analyses (AHAs). In accordance with EM 385-1-1 and NFPA 70E, work on energized electrical circuits must not be performed without prior Government authorization. Government permission is considered through the permit process and submission of a detailed AHA. Energized work permits are considered only when de-energizing introduces additional or increased hazard or when de-energizing is infeasible.

3.3 OUTAGE COORDINATION MEETING

After the utility outage request is approved and prior to beginning work on the utility system requiring shut-down, conduct a pre-outage coordination meeting in accordance with EM 385-1-1. This meeting must include the Prime Contractor, the Prime and subcontractors performing the work, the Contracting Officer, and the Installation representative. All parties must fully coordinate HEC activities with one another. During the coordination meeting, all parties must discuss and coordinate on the scope of work, HEC procedures (specifically, the lock-out/tag-out procedures for worker and utility protection), the AHA, assurance of trade personnel qualifications, identification of competent persons, and compliance with HECP training in accordance with EM 385-1-1. Clarify when personal protective equipment is required during switching operations, inspection, and verification.

3.4 CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

Provide and operate a Hazardous Energy Control Program (HECP) in accordance with EM 385-1-1, 29 CFR 1910, 29 CFR 1915, ANSI/ASSP A10.44, NFPA 70E.

3.4.1 Safety Preparatory Inspection Coordination Meeting with the Government or Utility

For electrical distribution equipment that is to be operated by Government or Utility personnel, the Prime Contractor and the subcontractor performing the work must attend the safety preparatory inspection coordination meeting, which will also be attended by the Contracting Officer's Representative, and required by EM 385-1-1. The meeting will occur immediately preceding the start of work and following the completion of the outage coordination meeting. Both the safety preparatory inspection coordination meeting and the outage coordination meeting must occur prior to conducting the outage and commencing with lockout/tagout procedures.

3.4.2 Lockout/Tagout Isolation

Where the Government or Utility performs equipment isolation and lockout/tagout, the Contractor must place their own locks and tags on each energy-isolating device and proceed in accordance with the HECP. Before any work begins, both the Contractor and the Government or Utility must perform energy isolation verification testing while wearing required PPE detailed in the Contractor's AHA and required by EM 385-1-1. Install personal protective grounds, with tags, to eliminate the potential for induced voltage in accordance with EM 385-1-1.

3.4.3 Lockout/Tagout Removal

Upon completion of work, conduct lockout/tagout removal procedure in accordance with the HECP. In accordance with EM 385-1-1, each lock and tag must be removed from each energy isolating device by the authorized

individual or systems operator who applied the device. Provide formal notification to the Government (by completing the Government form if provided by Contracting Officer's Representative), confirming that steps of de-energization and lockout/tagout removal procedure have been conducted and certified through inspection and verification. Government or Utility locks and tags used to support the Contractor's work will not be removed until the authorized Government employee receives the formal notification.

3.5 FALL PROTECTION PROGRAM

Establish a fall protection program, for the protection of all employees exposed to fall hazards. Within the program include company policy, identify roles and responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures in accordance with EM 385-1-1.

3.5.1 Fall Protection Equipment and Systems

Enforce use of personal fall protection equipment and systems designated (to include fall arrest, restraint, and positioning) for each specific work activity in the Site Specific Fall Protection and Prevention Plan and AHA at all times when an employee is exposed to a fall hazard. Protect employees from fall hazards as specified in EM 385-1-1.

Provide personal fall protection equipment, systems, subsystems, and components that comply with EM 385-1-1 and 29 CFR 1926.

3.5.1.1 Additional Personal Fall Protection Measures

In addition to the required fall protection systems, other protective measures such as safety skiffs, personal floatation devices, and life rings, are required when working above or next to water in accordance with EM 385-1-1. Personal fall protection systems and equipment are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall protection systems are required when operating other equipment such as scissor lifts. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, travel, or while performing work.

3.5.1.2 Personal Fall Protection Equipment

Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. The use of body belts is not acceptable. Harnesses must have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Snap hooks and carabineers must be self-closing and self-locking, capable of being opened only by at least two consecutive deliberate actions and have a minimum gate strength of 3,600 lbs in all directions. Use webbing, straps, and ropes made of synthetic fiber. The maximum free fall distance when using fall arrest equipment must not exceed 6 feet, unless the proper energy absorbing lanyard is used. Always take into consideration the total fall distance and any swinging of the worker (pendulum-like motion), that can occur during a fall, when attaching a person to a fall arrest system. Equip all full body harnesses with Suspension Trauma Preventers such as stirrups, relief steps, or similar in order to provide short-term relief from the effects of orthostatic intolerance in accordance with EM 385-1-1.

3.6 EQUIPMENT

3.6.1 Use of Explosives

Explosives must not be used or brought to the project site without prior written approval from the Contracting Officer. Such approval does not relieve the Contractor of responsibility for injury to persons or for damage to property due to blasting operations.

Storage of explosives, when permitted on Government property, must be only where directed and in approved storage facilities. These facilities must be kept locked at all times except for inspection, delivery, and withdrawal of explosives.

3.7 ELECTRICAL

Perform electrical work in accordance with EM 385-1-1.

3.7.1 Electrical Work

As described in EM 385-1-1, electrical work is to be conducted in a de-energized state unless there is no alternative method for accomplishing the work. In those cases obtain an energized work permit from the Contracting Officer. The energized work permit application must be accompanied by the AHA and a summary of why the equipment/circuit needs to be worked energized. Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables that will be cut must be positively identified and de-energized prior to performing each cut. Attach temporary grounds in accordance with ASTM F855 and IEEE 1048. Perform all high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator is allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method.

When working in energized substations, only qualified electrical workers are permitted to enter. When work requires work near energized circuits as defined by NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety footwear, insulating gloves and electrical arc flash protection for personnel as required by NFPA 70E. Insulating blankets, hearing protection, and switching suits may also be required, depending on the specific job and as delineated in the Contractor's AHA. Ensure that each employee is familiar with and complies with these procedures and 29 CFR 1910.

3.7.2 Qualifications

Electrical work must be performed by QP with verifiable credentials who are familiar with applicable code requirements. Verifiable credentials consist of State, National and Local Certifications or Licenses that a Master or Journeyman Electrician may hold, depending on work being performed, and must be identified in the appropriate AHA. Journeyman/Apprentice ratio must be in accordance with State, Local requirements applicable to where work is being performed.

3.7.3 Arc Flash

Conduct a hazard analysis/arc flash hazard analysis whenever work on or

near energized parts greater than 50 volts is necessary, in accordance with NFPA 70E.

All personnel entering the identified arc flash protection boundary must be QPs and properly trained in NFPA 70E requirements and procedures. Unless permitted by NFPA 70E, no Unqualified Person is permitted to approach nearer than the Limited Approach Boundary of energized conductors and circuit parts. Training must be administered by an electrically qualified source and documented.

3.7.4 Grounding

Ground electrical circuits, equipment and enclosures in accordance with NFPA 70 and IEEE C2 to provide a permanent, continuous and effective path to ground unless otherwise noted by EM 385-1-1.

3.7.5 Testing

Temporary electrical distribution systems and devices must be inspected, tested and found acceptable for Ground-Fault Circuit Interrupter (GFCI) protection, polarity, ground continuity, and ground resistance before initial use, before use after modification and at least monthly. Monthly inspections and tests must be maintained for each temporary electrical distribution system, and signed by the electrical CP or QP.

-- End of Section --

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization (e.g., ASTM B564 Standard Specification for Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided.

AACE INTERNATIONAL (AACE)
726 East Park Avenue #180
Fairmont, WV 26554 USA
Ph: 304-296-8444
Fax: 304-291-5728
Internet: <https://web.aacei.org/>

ACOUSTICAL SOCIETY OF AMERICA (ASA)
1305 Walt Whitman Road, Suite 110
Melville, NY 11747-4300
Ph: 516-576-2360
Fax: 631-923-2875
E-mail: asa@acousticalsociety.org
Internet: <https://acousticalsociety.org/>

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC. (AIA/NAS)
1000 Wilson Blvd, Suite 1700
Arlington, VA 22209-3928
Ph: 703-358-1000
E-mail: aia@aia-aerospace.org
Internet: <https://www.aia-aerospace.org/>

AIR BARRIER ASSOCIATION OF AMERICA (ABAA)
1600 Boston-Providence Hwy
Walpole, MA 02081
Ph: 1-866-956-5888
Fax: 1-866-956-5819
E-mail: abaa@airbarrier.org
Internet: <https://www.airbarrier.org/>

AIR CONDITIONING CONTRACTORS OF AMERICA (ACCA)
1520 Belle View Blvd #5220
Alexandria, VA 22307

Animal Building

FJ25AB

Ph: 703-575-4477
Internet: <https://www.acca.org/>

AIR DUCT COUNCIL (ADC)
1300 Summer Ave.
Cleveland, OH 44115
Ph: 216-241-7333

E-mail: info@flexibleduct.org
Internet: <https://flexibleduct.org/>

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC. (AMCA)
30 West University Drive
Arlington Heights, IL 60004-1893
Ph: 847-394-0150
Fax: 847-253-0088
E-mail: communications@amca.org
Internet: <http://www.amca.org>

AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE (AHRI)
2311 Wilson Blvd, Suite 400
Arlington, VA 22201
Ph: 703-524-8800
Internet: <http://www.ahrinet.org>

ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS (ATIS)
1200 G Street, NW, Suite 500
Washington, D.C. 20005
Ph: 202-628-6380

Internet: <http://www.atis.org>

ALUMINUM ASSOCIATION (AA)
1400 Crystal Drive
Suite 430
Arlington, VA 22202
Ph: 703-358-2960

Internet: <https://www.aluminum.org/>

AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)
1900 E Golf Rd, Suite 1250
Schaumburg, IL 60173
Ph: 847-303-5664
E-mail: customerservice@FGIAonline.org
Internet: <https://fgiaonline.org/>

AMERICAN ASSOCIATION OF RADON SCIENTISTS AND TECHNOLOGISTS (AARST)
527 N Justice Street
Hendersonville, NC 28739
Ph: 828-348-0185

E-mail: info@aarst.org
Internet: <http://aarst-nrpp.com/wp/>

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)
555 12th Street NW, Suite 1000
Washington, DC 20004

Animal Building

FJ25AB

Ph: 202-624-5800
Fax: 202-624-5806
E-Mail: info@aatcc.org
Internet: <https://www.transportation.org/>

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)
1 Davis Drive
P.O. Box 12215
Research Triangle Park, NC 27709-2215
Ph: 919-549-8141

E-Mail: ordering@aatcc.org
Internet: <https://www.aatcc.org/>

AMERICAN BEARING MANUFACTURERS ASSOCIATION (ABMA)
1001 N. Fairfax Street Suite 500
Alexandria, VA 22314
Ph: 703-842-0030
E-mail: info@americanbearings.org
Internet: <https://www.americanbearings.org/>

AMERICAN BOILER MANUFACTURERS ASSOCIATION (ABMA/BOIL)
8221 Old Courthouse Road, Suite 380
Vienna, VA 22182
Ph: 703-356-7172
E-mail: info@abma.com
Internet: <https://www.abma.com/>

AMERICAN BUREAU OF SHIPPING (ABS)
ABS Plaza
1701 City Plaza Drive
Spring, TX 77389 United States
Ph: 281-877-6000
Fax: 281-877-5976
E-Mail: ABS-WorldHQ@eagle.org
Internet: <https://ww2.eagle.org/>

AMERICAN COLLEGE OF RADIOLOGY (ACR)
1891 Preston White Dr.
Reston, VA 20191
Ph: 703-648-8900
E-mail: info@acr.org
Internet: <https://www.acr.org/>

AMERICAN COMPOSITES MANUFACTURERS ASSOCIATION (ACMA)
2000 N. 15th St, Suite 250
Arlington, VA 22201
Ph: 703-525-0511
Fax: 703-525-0743
Internet: <https://acmanet.org>

AMERICAN CONCRETE INSTITUTE (ACI)
38800 Country Club Drive
Farmington Hills, MI 48331-3439
Ph: 248-848-3800
Fax: 248-848-3701
Internet: <https://www.concrete.org/>

AMERICAN CONCRETE PIPE ASSOCIATION (ACPA)
5605 N. MacArthur Blvd, Suite 340
Irving, TX 75038
Ph: 972-506-7216
Fax: 972-506-7682
E-mail: info@concrete-pipe.org
Internet: <https://www.concretepipe.org/>

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)
3640 Park 42 Drive
Cincinnati, OH 45241
Ph: 513-742-2020
Fax: 513-742-3355
Email: customerservice@acgih.org
Internet: <https://www.acgih.org/>

AMERICAN FOREST FOUNDATION (AFF)
American Tree Farm System
2000 M Street, NW, Suite 550
Washington, DC 20036
Ph: 202-765-3660
Fax: 202-827-7924
Email: info@forestfoundation.org
Internet: <https://www.treefarmssystem.org>

AMERICAN FOREST AND PAPER ASSOCIATION (AF&PA)
American Wood Council
Public Policy Office
1101 K Street NW, Suite 700
Washington, DC 20005
Ph: 800-890-7732 or 202-463-2766
Fax: 412-741-0609
E-mail: info@awc.org
Internet: <https://www.awc.org/>

AMERICAN GAS ASSOCIATION (AGA)
400 North Capitol Street, NW
Suite 450
Washington, D.C. 20001
Ph: 202-824-7000
Internet: <https://www.aga.org/>

AMERICAN GEAR MANUFACTURERS ASSOCIATION (AGMA)
1001 N. Fairfax Street, Suite 500
Alexandria, VA 22314-1587
Ph: 703-684-0211
Fax: 703-684-0242
E-mail: tech@agma.org
Internet: <https://www.agma.org/>

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)
3141 Fairview Park Dr, Suite 360
Falls Church, VA 22042
Tel: 703-849-8888
Fax: 703-207-3561
E-mail: infonet@aiha.org
Internet: <https://www.aiha.org/>

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
130 East Randolph, Suite 2000
Chicago, IL 60601
Ph: 312-670-2400
Fax: 312-670-5403
Steel Solutions Center: 866-275-2472
E-mail: solutions@aisc.org
Internet: <https://www.aisc.org/>

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)
1010 South 336th Street #210
Federal Way, WA 98003
Ph: 253-835-3344

Internet: <http://www.plib.org/aitc/?ag>

AMERICAN IRON AND STEEL INSTITUTE (AISI)
25 Massachusetts Avenue, NW Suite 800
Washington, DC 20001
Ph: 202-452-7100
Internet: <https://www.steel.org/>

AMERICAN LADDER INSTITUTE (ALI)
1300 Summer Avenue
Cleveland, OH 44115
Ph: 216-241-7333
Fax: 216-241-0105
E-mail: info@americanladderinstitute.org
Internet: <https://www.americanladderinstitute.org>

AMERICAN LUMBER STANDARDS COMMITTEE (ALSC)
7470 New Technology Way, Suite F
Frederick, MD 21703
Ph: 301-972-1700
Fax: 301-540-8004
E-mail: alsc@alsc.org
Internet: <http://www.alsc.org>

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
1899 L Street, NW, 11th Floor
Washington, DC 20036
Ph: 202-293-8020
Fax: 202-293-9287
E-mail: info@ansi.org
Internet: <https://www.ansi.org/>

AMERICAN PETROLEUM INSTITUTE (API)
200 Massachusetts Avenue NW Suite 1100
Washington, DC 20001-5571
Ph: 202-682-8000
Internet: <https://www.api.org/>

AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION
(AREMA)
4471 Nicole Drive, Unit 1
Lanham, MD 20706
Ph: 301-459-3200
E-mail: info@arema.org
Internet: <https://www.arema.org>

AMERICAN SOCIETY FOR NONDESTRUCTIVE TESTING (ASNT)
1201 Dublin Road Suite G04

Columbus, OH 43215-1045
Ph: 800-222-2768 or 614-274-6003

E-mail: customersupport@asnt.org
Internet: <https://www.asnt.org/>

AMERICAN SOCIETY FOR QUALITY (ASQ)
600 North Plankinton Avenue
Milwaukee, WI 53203

-or-

P.O. Box 3005
Milwaukee, WI 53201-3005
Ph: 800-248-1946; 414-272-8575
Fax: 414-272-1734
E-mail: help@asq.org
Internet: <https://asq.org/>

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)
1801 Alexander Bell Drive
Reston, VA 20191
Ph: 800-548-2723; 703-295-6300
Email: customercare@asce.org
Internet: <https://www.asce.org/>

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS (ASHRAE)
180 Technology Parkway NW
Peachtree Corners, GA 30092
Ph: 404-636-8400 or 800-527-4723
Fax: 404-321-5478
E-mail: ashrae@ashrae.org
Internet: <https://www.ashrae.org/>

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)
Two Park Avenue
New York, NY 10016-5990
Ph: 800-843-2763
Fax: 973-882-1717
E-mail: customercare@asme.org
Internet: <https://www.asme.org/>

AMERICAN SOCIETY OF SAFETY PROFESSIONALS (ASSP)
520 N. Northwest Highway
Park Ridge, IL 60068
Ph: 847-699-2929
E-mail: customerservice@assp.org
Internet: <https://www.assp.org/>

AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE)
18927 Hickory Creek Drive, Suite 220
Mokena, IL 60448
Ph: 708-995-3019
Fax: 708-479-6139
Internet: <http://www.asse-plumbing.org>

AMERICAN WATER WORKS ASSOCIATION (AWWA)
6666 W. Quincy Avenue
Denver, CO 80235 USA
Ph: 303-794-7711 or 800-926-7337
Fax: 303-347-0804
Internet: <https://www.awwa.org/>

AMERICAN WELDING SOCIETY (AWS)
8669 NW 36 Street, #130
Miami, FL 33166-6672
Ph: 800-443-9353
Email: customercare@aws.org
Internet: <https://www.aws.org/>

AMERICAN CLEAN POWER ASSOCIATION (ACP)
1501 M St. NW, Suite 900
Washington, DC 20005
Ph: 202-383-2500
Internet: <https://cleanpower.org/>

AMERICAN WOOD COUNCIL (AWC)
50 Catoctin Circle SE, Suite 201
Leesburg, VA 20176
Ph: 800-890-7732 or 202-463-2766
Fax: 412-741-0609
E-mail: info@awc.org
Internet: <https://www.awc.org/>

AMERICAN WOOD PROTECTION ASSOCIATION (AWPA)
P.O. Box 361784
Birmingham, AL 35236-1784
Ph: 205-733-4077
Fax: 205-733-4075
Internet: <http://www.awpa.com>

AmericanHort (AH)
2130 Stella Court
Columbus, OH 43215
Ph: 614-487-1117 OH
Ph: 202-789-2900 DC
Internet: <https://www.americanhort.org/>

APA - THE ENGINEERED WOOD ASSOCIATION (APA)
7011 South 19th St.
Tacoma, WA 98466-5333
Ph: 253-565-6600
Fax: 253-565-7265
Internet: <https://www.apawood.org/>

ARCHITECTURAL WOODWORK INSTITUTE (AWI)
46179 Westlake Drive, Suite 120
Potomac Falls, VA 20165
Ph: 571-323-3636
Fax: 571-323-3630
E-mail: info@awinet.org
Internet: <http://www.awinet.org>

ASM INTERNATIONAL (ASM)
9639 Kinsman Road

Materials Park, OH 44073-0002
Ph: 440-671-3800 (US),
E-mail: memberservicecenter@asminternational.org
Internet: <https://www.asminternational.org/>

ASPHALT INSTITUTE (AI)
2696 Research Park Drive
Lexington, KY 40511-8480
Ph: 859-288-4960 or 1-866-540-9577
Fax: 859-288-4999
E-mail: info@asphaltinstitute.org
Internet: <http://www.asphaltinstitute.org>

ASPHALT RECYCLING AND RECLAIMING ASSOCIATION (ARRA)
800 Roosevelt Road, Building C-312
Glen Ellyn, IL 60137
Ph: 630-942-6578
E-mail: annew@cmservices.com
Internet: <https://www.arra.org/>

ASPHALT ROOFING MANUFACTURERS ASSOCIATION (ARMA)
2331 Rock Spring Road
Forest Hill, MD 21050

Ph: 443-640-1075
Fax: 443-640-1031
Email: info@asphaltroofing.org
Internet: <https://asphaltroofing.org/>

ASSOCIATED AIR BALANCE COUNCIL (AABC)
1015 18th St. NW Suite 603
Washington, DC 20036
Ph: 202-737-0202
Fax: 202-315-0285
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Internet: <https://safetyequipment.org/>

INTERNATIONAL SOCIETY OF AUTOMATION (ISA)
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INTERNATIONAL SOCIETY OF EXPLOSIVES ENGINEERS (ISEE)
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Internet: <https://www.isee.org/>

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<https://cals.cornell.edu/school-integrative-plant-science/school-sections/plant->

LOCKHEED MARTIN CORPORATION (LM)

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(NAVFAC EXWC)
1100 23rd Avenue
Port Hueneme, CA 93043-4301
Internet: <https://exwc.navfac.navy.mil/1>

NATIONAL WOOD FLOORING ASSOCIATION (NWFA) (formerly NOFMA)
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Internet: <https://www.nwfa.org/>

NAVY AND MARINE CORPS PUBLIC HEALTH CENTER (NMCPHC)
620 John Paul Jones Circle, Suite 1100
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Ph: 757-953-0700
Internet: <https://www.med.navy.mil/sites/nmcphc/Pages/Home.aspx>

NEW YORK STATE DEPARTMENT OF TRANSPORTATION MATERIALS BUREAU
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NORTH ATLANTIC TREATY ORGANIZATION (NATO)
Internet: <https://www.nato.int/>
Obtain documents through the Acquisition Streamlining and
Standardization Information System (ASSIST)
<https://assist.dla.mil/online/start/>; account registration required

NORTHEASTERN LUMBER MANUFACTURERS ASSOCIATION (NELMA)
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Internet: <http://www.aqmd.gov>

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Sacramento, CA 95834-1243
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Internet: <https://bhgs.dca.ca.gov/>

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Fax: 415-703-1758
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Internet: <https://www.steeldoorg.org/>

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Internet: <https://www.steelwindows.com/>

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Office of Corporate Communications

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Obtain Unified Facilities Criteria (UFC) from:
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National Institute of Building Sciences (NIBS)
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Fax: 202-289-1092
Internet:
<https://www.wbdg.org/ffc/dod/unified-facilities-criteria-ufc>

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Internet: <https://www.energy.gov/>

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Forrestal Building
1000 Independence Avenue, SW
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Internet:
<https://www.energy.gov/eere/femp/federal-energy-management-program>

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Washington, DC 20350-1200
Internet: <https://www.navy.mil/>

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Internet: <https://www.transportation.gov/>

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Ph: 202-685-9387
Internet: <http://www.navfac.navy.mil>

U.S. NAVAL SEA SYSTEMS COMMAND (NAVSEA)
Commander Naval Sea Systems Command
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Washington Navy Yard, DC 20376
Ph: 202-781-0000
Internet: <https://www.navsea.navy.mil/>

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VIBRATION ISOLATION AND SEISMIC CONTROL MANUFACTURERS ASSOCIATION
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Internet: <https://www.wef.org/>

WATER QUALITY ASSOCIATION (WQA)
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Fax: 630-505-9637
Internet: <https://www.wqa.org/>

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Internet: <https://www.wdma.com/>

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PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

-- End of Section --

SECTION 01 45 00

QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM D3740 (2019) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

ASTM E329 (2023) Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety -- Safety and Occupational Health (SOH) Requirements

ER 1110-3-12 (2021) Military Engineering and Design Quality Management

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program. Include all associated costs in the applicable CLIN Schedule item.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.

SD-01 Preconstruction Submittals

Contractor Quality Control (CQC) Plan; G,

Additional Requirements For Design Quality Control (DQC) Plan; G,

SD-05 Design Data

Design Quality Control

Discipline-Specific Checklists

SD-06 Test Reports

Verification Statement

1.4 GENERAL REQUIREMENTS

Establish and maintain an effective quality control (QC) system that complies with FAR 52.246-12 Inspection of Construction. QC is comprised of plans, procedures, and organization necessary to produce an end product that complies with the Contract requirements. The QC system covers all design and construction operations, both onsite and offsite, and must be keyed to the proposed design and construction sequence. The Quality Control Manager, Superintendent, Site Safety and Health Officer (SSHO), and all on-site supervisors are responsible for the quality of work and are subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the Contract. The Quality Control Manager must maintain a physical presence at the work site at all times and is the primary individual responsible for all quality control.

1.5 QUALITY CONTROL (QC) PROGRAM REQUIREMENTS

Establish and maintain a QC program as described in this section. The QC program consists of a QC Organization, QC Plan, QC Plan Meeting(s), a Coordination and Mutual Understanding Meeting, QC meetings, three phases of control, submittal review and approval, testing, completion inspections, QC certifications, and documentation necessary to provide materials, equipment, workmanship, fabrication, construction and operations that comply with the requirements of this Contract. The QC program must cover on-site and off-site work and be keyed to the work sequence. No construction work or testing may be performed unless the QC Manager is on the work site. The QC Manager must report to an officer of the firm and not be subordinate to the Project Superintendent or the Project Manager. The QC Manager, Project Superintendent and Project Manager must work together effectively. Although the QC Manager is the primary individual responsible for quality control, all individuals will be held responsible for the quality of work on the job.

1.5.1 Meetings

1.5.1.1 Quality Control Plan Meeting

Prior to submission of the QC Plan, the Contractor may request a meeting with the Contracting Officer to discuss the QC Plan requirements of this Contract.

The purpose of this meeting is to develop a mutual understanding of the QC Plan requirements prior to plan development and submission and to agree on the Contractor's list of Definable Feature of Work (DFOW).

1.5.1.2 Coordination and Mutual Understanding Meeting

After the Post Award Conference, before start of design or construction, and prior to acceptance by the Government of the CQC Plan, meet with the Contracting Officer and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details must be developed, including the forms for recording the CQC operations, design

activities, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting will be prepared by the QC Manager and signed by the Contractor, the Architect/Engineer (A/E), and the Government. Provide a copy of the signed minutes to all attendees and include in the QC Plan. At a minimum the Coordination and Mutual Understanding Meeting must be repeated when a new QC Manager is appointed. There can be other occasions when subsequent conferences will be called by either party to reconfirm mutual understandings or address deficiencies in the CQC system or procedures which can require corrective action by the Contractor.

1.5.1.2.1 Purpose

The purpose of this meeting is to develop a mutual understanding of the QC details, including documentation, administration for on-site and off-site work, design intent, environmental requirements and procedures, coordination of activities to be performed, and the coordination of the Contractor's management, production, and QC personnel. At the meeting, the Contractor must explain in detail how three phases of control will be implemented for each DFO, as well as how each DFO will be affected by each management plan or requirement as listed below:

- a. Waste Management Plan.
- b. Procedures for noise and acoustics management.
- c. Environmental Protection Plan.
- d. Environmental regulatory requirements.

1.5.1.2.2 Coordination of Activities

Coordinate activities included in various sections to assure efficient and orderly installation of each component. Coordinate operations included under different sections that are dependent on each other for proper installation and operation.

1.5.1.2.3 Attendees

As a minimum, the Contractor's personnel required to attend include an officer of the firm, the Project Manager, Project Superintendent, QC Manager, Alternate QC Manager, QC Specialists, Environmental Manager, and subcontractor representatives.

1.5.1.3 Quality Control (QC) Meetings

After the start of construction, conduct weekly QC meetings led by the QC Manager at the work site with the Project Superintendent, the QC Specialists, Qualified Fire Protection Engineer (QFPE) and the other personnel as necessary. The QC Manager is to prepare the minutes of the meeting and provide a copy to the Contracting Officer within 2 working days after the meeting. The Contracting Officer may attend these meetings. As a minimum, accomplish the following at each meeting:

- a. Review the minutes of the previous meeting.
- b. Review the schedule and the status of work and deficiencies/rework.
Review the most current approved schedule (in accordance with schedule

specification) and the status of work and deficiencies/rework.

- c. Review the status of submittals and Request For Information (RFIs).
- d. Review the work to be accomplished in the next 3 weeks as defined by the schedule section paragraph WEEKLY PROGRESS MEETINGS in Section 01 32 01.00 10 PROJECT SCHEDULE and all documentation required for that work.
- e. Review Testing Plan and Log including status of tests performed since last QC Meeting.
- f. Resolve QC and production problems. Discuss status of pending change orders.
- g. Address items that may require revising the QC Plan.
- h. Review Accident Prevention Plan (APP) and effectiveness of the safety program.
- i. Review environmental requirements and procedures.
- j. Review Environmental Management Plan.
- k. Review Waste Management Plan.
- l. Review the status of training completion.

1.5.2 Contractor Quality Control (CQC) Plan

Submit no later than 10 days after receipt of notice to proceed, the CQC Plan proposed to implement the requirements FAR 52.246-12 Inspection of Construction. The Government will consider an interim plan for the first 60 days of operation. Design and Construction will be permitted to begin only after acceptance of the CQC Plan and other Contract requirements or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional work. Design work is not permitted to start prior to approval of a Design Quality Control Plan.

1.5.2.1 Content of Contractor Quality Control (CQC) Plan

Provide a CQC Plan, prior to start of construction that includes a table of contents, with major sections identified, pages numbered sequentially, and that documents the proposed methods and responsibilities for accomplishing quality control during the construction of the project. The CQC Plan must at a minimum include the following sections:

- a. A description of the quality control organization and acknowledgment that the CQC staff will implement the three phase control system for all aspects of the work specified.
- b. An organizational chart showing the quality control organization with individual names and job titles and lines of authority up to an executive of the company at the home office.
- c. NAMES AND QUALIFICATIONS: Names and qualifications, in resume format, (including position titles and durations for qualifying experiences)

for each person in the QC organization. Include the Construction Quality Management (CQM) for Contractor's course certifications for the QC personnel as required by the paragraph CONSTRUCTION QUALITY MANAGEMENT TRAINING.

- d. DUTIES, RESPONSIBILITY AND AUTHORITY OF QC PERSONNEL: Duties, responsibilities, and authorities of each person in the QC organization.
- e. OUTSIDE ORGANIZATIONS: A listing of outside organizations, such as architectural and consulting engineering firms, that will be employed by the Contractor and a description of the services these firms will provide.
- f. APPOINTMENT LETTERS: Letters signed by an officer of the firm appointing the QC Manager and Alternate QC Manager, Design Quality Control Manager, and stating that they are responsible for implementing and managing the QC program as described in this Contract. Include in this letter the responsibility of the QC Manager and Alternate QC Manager to implement and manage the three phases of control, and their authority to stop work that is not in compliance with the Contract. Letters of direction are to be issued by the QC Manager to all other QC Specialists or quality control representatives outlining their duties, authorities, and responsibilities. Include copies of the letters in the QC Plan.
- g. SUBMITTAL PROCEDURES: Procedures for reviewing, approving, scheduling, and managing submittals, including those of subcontractors, designers of record, consultants, architect-engineers (AE), offsite fabricators, suppliers, and purchasing agents.
- h. TESTING LABORATORY INFORMATION: Testing laboratory information required by the paragraph ACCREDITATION REQUIREMENTS, as applicable.
- i. TESTING PLAN AND LOG: A Testing Plan and Log that includes the tests required, associated feature of work required, referenced by the specification paragraph number requiring the test, the frequency, and the person responsible for each test.
- j. Procedures to complete design and construction deficiencies from identification through acceptable corrective action. Establish verification procedures that identified deficiencies have been corrected. These procedures are discussed as part of the preparatory meeting prior to beginning work on each definable feature of work, after all required plans, documents, materials are approved, and after copies are at the work site.
- k. Reporting procedures, including proposed reporting formats.
- l. Procedures for submitting and reviewing design changes/variations prior to submission to the Contracting Officer.
- m. LIST OF DEFINABLE FEATURES: A Definable Feature of Work (DFOW) is a task that is separate and distinct from other tasks and has control requirements and work crews unique to that task. A DFOW is identified by different trades or disciplines, or it is work by the same trade in a different environment. A DFOW is by definition any item or activity on the construction schedule, and the schedule specification provides direction regarding how the DFOWs are to be structured. Include in the list of DFOWs for all activities on the Construction Schedule. Provide

separate DFOWs in the Network Analysis Schedule for each design development stage and submittal package. Although each section of the specifications can generally be considered as a definable feature of work, there are frequently more than one definable feature under a particular section. Identify the specification section number and schedule activity ID for each DFOW listed. The DFOW list will be reviewed in coordination with the construction schedule and agreed upon during the Coordination of Mutual Understanding Meeting.

- n. PROCEDURES FOR PERFORMING AND TRACKING THE THREE PHASES OF CONTROL: Identify procedures used to ensure the three phases of control to manage the quality on this project. For each Definable Feature of Work (DFOW), a Preparatory and Initial phase checklist will be filled out during the Preparatory and Initial phase meetings. Conduct the Preparatory and Initial Phases and meetings with a view towards obtaining quality construction by planning ahead and identifying potential problems for each DFOW.

1.5.2.2 Additional Requirements for Design Quality Control (DQC) Plan

The following additional requirements apply to the DQC Plan:

- a. Submit and maintain a DQC Plan as an effective quality control program which assures that all services required by this Contract are performed and provided in a manner that meets professional architectural and engineering quality standards. As a minimum, all documents must be technically reviewed by competent, independent reviewers identified in the DQC Plan. The same element that produced the product may not perform the Independent Technical Review (ITR). Correct errors and deficiencies in the design documents prior to submitting them to the Government.
- b. Include the design schedule in the master project schedule, showing the sequence of events involved in carrying out the project design tasks within the specific Contract period. Schedule must include sufficient detail to identify all major design tasks, including those that control the flow of work. Include review and correction periods associated with each item. Schedule must be a forward planning as well as a project monitoring tool. The schedule reflects calendar days and not dates for each activity. If the schedule is changed, submit a revised schedule reflecting the change within 7 calendar days.
- c. Include in the DQC Plan the discipline-specific checklists to be used during the design and quality control of each submittal. Submit at each design phase as part of the project documentation these completed discipline-specific checklists. ER 1110-3-12 provides some useful information in developing checklists.
- d. Implement the DQC Plan by a Design Quality Control Manager who has the responsibility of being cognizant of and assuring that all documents on the project have been coordinated and who coordinates work with and reports to the Contracting Officer via the QC Manager. Notify the Contracting Officer, in writing, of the name of the individual and the name of an alternate person assigned to the position.
- e. Provide Quality Control Documentation procedures such as QC review sets and QC comments to demonstrate that cross checking of all engineering discipline's design drawings and specifications has taken place. The QC review documentation must exhibit a checking process of the design

documents for completeness, accuracy, and constructability.

1.5.3 Acceptance of the Quality Control (QC) and Design Quality Control (DQC) Plan

The Contracting Officer's acceptance of the Contractor QC Plan, or interim plan applicable to the particular feature of work to be started, and Design Quality Control Plan is required prior to the start of design and construction. The Contracting Officer reserves the right to require changes in the QC and DQC Plan and operations as necessary, including removal or addition of personnel, to ensure the specified quality of work. The Contracting Officer reserves the right to interview any member of the QC and DQC organization at any time to verify the submitted qualifications. All QC and DQC organization personnel are subject to acceptance by the Contracting Officer. The Contracting Officer may require the removal of any individual for non-compliance with quality requirements specified in the Contract.

1.5.4 Notification of Changes

Notify the Contracting Officer, in writing, of any proposed changes in the QC Plan or changes to the QC organization personnel. Proposed changes are subject to acceptance by the Contracting Officer.

1.5.5 Special Inspections

Coordinate all required Special Inspections per Section 01 45 35 SPECIAL INSPECTIONS, the statement of Special Inspections and the Schedule of Special Inspections.

1.6 QUALITY CONTROL (QC) ORGANIZATION

1.6.1 Personnel Requirements

The requirements for the CQC organization are a Site Safety and Health Officer (SSHO), QC Manager, a Design Quality Manager, full time, onsite Submittals/RMS Data Clerk, and enough qualified personnel to ensure safety and Contract compliance. The SSHO reports directly to a senior project (or corporate) official independent from the QC Manager. The SSHO will also serve as a member of the CQC Staff Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly. The CQC staff always maintains a presence at the site during progress of the work and have complete authority and responsibility to take any action necessary to ensure Contract compliance. The CQC staff will be subject to acceptance by the Contracting Officer. Provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Promptly complete and furnish all letters, material submittals, shop drawing submittals, schedules, and all other project documentation to the CQC organization. The CQC organization is responsible for always maintaining these documents and records at the site, except as otherwise acceptable to the Contracting Officer.

1.6.2 Quality Control (QC) Manager

1.6.2.1 Duties

Provide a QC Manager at the work site to implement and manage the QC program. The QC Manager must be employed by the Prime Contractor. The only duties and responsibilities of the QC Manager are to manage and implement the QC

program on this Contract. The QC Manager must attend the Coordination and Mutual Understanding Meeting, perform the three phases of control, perform submittal review and approval, ensure testing is performed and provide QC certifications and documentation required in this Contract. The QC Manager is responsible for managing and coordinating the three phases of control and documentation performed by the QC Specialists, testing laboratory personnel and any other inspection and testing personnel required by this Contract. The QC Manager is the manager of all QC activities. The QC manager is responsible for notifying the Special Inspector of activities which require their review. The QC manager is responsible for coordinating the Special Inspection activities, see paragraph CONTRACTOR'S QUALITY CONTROL (QC) MANAGER, in Section 01 45 35 SPECIAL INSPECTIONS.

1.6.2.2 Qualifications

The QC Manager must possess at least a Bachelor's degree in engineering, architecture, or construction management, with a minimum of 5 years construction quality control experience on construction similar to this Contract or be a construction person with a minimum of ten years of construction experience, of which a minimum of five years experience must be in construction quality control on construction similar to this contract. The individual must be familiar with the requirements of EM 385-1-1 and have experience in the areas of hazard identification, safety compliance, and sustainability.

The QC Manager and all members of the QC organization must be capable of reading, writing, and conversing fluently in the English language.

1.6.2.3 Construction Quality Management Training

In addition to the above experience and education requirements, the QC Manager and all members of the QC team, except for the submittal/RMS Data clerk must have completed the CQM for Contractors course. If the QC Manager does not have a current certification, obtain the CQM for Contractors course certification within 90 days of award. This course is periodically offered by the Naval Facilities Engineering Systems Command and the Army Corps of Engineers. Contact the Contracting Officer for information on the next scheduled class.

The Construction Quality Management Training certificate expires after 5 years. Retake the course prior to certificate expiration to remain current with training through contract completion.

1.6.3 Organizational Changes

Maintain the QC staff with personnel as required by the specification section at all times. When it is necessary to make changes to the QC staff, revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

1.6.4 Design Quality Control (DQC) Manager

The DQC Manager must be a member of the QC organization, must coordinate actions with the QC Manager, and must not be subordinate to the Project Superintendent or the Project Manager. The DQC Manager may also act as the CxC if all CxC qualifications are met.

1.6.4.1 Qualifications

- a. Must be a person who has verifiable engineering or architectural design experience and is a registered professional engineer or architect.

1.6.4.2 Responsibilities

- a. Be responsible for the design integrity, professional design standards, and all design services required.

1.6.5 Alternate Quality Control (QC) Manager Duties and Qualifications

Designate an alternate for the QC Manager at the work site to serve in the event of the designated QC Manager's absence. The qualification requirements for the Alternate QC Manager must be the same as for the QC Manager.

1.6.6 Quality Control (QC) Specialists

Provide a separate QC Specialist at the work site for each of the areas as listed in the Matrix below, who must assist and report to the QC Manager and who must have no duties other than their assigned quality control duties. These individuals or specialized technical companies are directly employed by the Prime Contractor and cannot be employed by a supplier or subcontractor on this project. A single person can cover more than one area provided that the single person is qualified to perform quality control activities in each area designated and that workload allows. QC Specialists must be physically present at the work site to participate in the QC Meetings, perform the three phases of control, including participation in Preparatory and Initial Phase meetings, and to perform and document Follow-up inspections as an extension of the QC Manager for each definable feature of work in their area of responsibility. QC Specialist must assist and be present for training events, and Critical System Acceptance inspections by the Government. Qualification, and experience are provided in Matrix listed herein.

Experience Matrix	
1. Area	2-1. Qualification and/or 2-2. Experience
Submittals/RMS Data Clerk	2-1. Submittal/RMS Data Clerk 2-2. 1 year experience
Fire Protection QC Specialist (FPQC)	Note: See paragraph FIRE PROTECTION QC SPECIALIST (FPQC)

1.6.6.1 Fire Protection QC Specialist (FPQC)

Provide a Fire Protection Quality Control Specialist (FPQC) within the QC organization to perform quality control related activities as specified herein on fire protection and life safety systems installed under this Contract. The FPQC is also referred to as the Qualified Fire Protection Engineer (QFPE) in other specifications. FPQC and QFPE are used interchangeably in the construction plans and specs.

1.6.6.1.1 Qualifications

The FPQC must have the following qualifications:

- a. Be a registered Professional Engineer (P.E.) licensed by a Licensing Board in the United States, the District of Columbia, Guam or Puerto Rico, having passed the National Council of Examiners for Engineering and Surveying (NCEES) examination specifically in the discipline of Fire Protection Engineering.
- b. Have a minimum of 5 years of Fire Protection Engineering experience on projects of similar relevance and complexity to the fire protection work specified under this Contract.
- c. Other than the contractual obligations with the Prime Contractor, the FPQC must have no other business relationship (i.e., employee, owner, partner, operating officer, distributor, salesman, technical representative, family relationship, or financial investment) with the Prime Contractor or subcontractors.
- d. Be employed by an independent engineering firm or company or be the Fire Protection Engineer on the Prime Contractor's Design-Build team. The firm may identify multiple, to a maximum of five, licensed Fire Protection Engineers for the performance of the duties under this Contract but must submit the names and qualifications for Government approval for all individuals identified prior to them performing any work under this Contract. These individuals may not be substituted without prior approval from the Contracting Officer.

1.6.6.1.2 Responsibilities

FPQC duties and responsibilities:

- a. Assist in the development of the QC Plan including the Testing Plan and Log and executing the three phases of control for work involving the installation and testing of fire protection and life safety systems as an extension of the QC Manager.
- b. Participate in project QC Meetings. Participate in Preparatory and Initial Phase meetings and perform and Follow-up inspections for work involving the installation and testing of fire protection and life safety systems.
- c. Review and certify that all submittals pertaining to fire protection and life safety systems are complete and accurate prior to submission to the Government for surveillance. Forward each submittal reviewed by the FPQC to the Government for surveillance within 10 working days of FPQC certification. The FPQC Specialist is responsible for ensuring submittals are complete and accurate and all corrections have been made prior to submission to the Government. The Government reserves the right to reject any submittal that has not first been reviewed and certified by the FPQC and so marked, in writing, attesting to such review and completeness of the submittal. FPQC and QC Manager need to approve the submittals before submitting to the Government.
- d. The Government reserves the right to reject any submittal or construction that is not in compliance to Contract. Government reviews do not relieve the Contractor responsibility for providing adequate quality control measures and do not constitute or imply acceptance of

Contract variation.

- e. Perform construction surveillance in accordance with the Schedule of Fire Protection System Inspections. Construction surveillance includes but is not limited to performing periodic on-site inspections during construction at specified milestones, performing a pre-final inspection of installed systems and witnessing functional testing; and participating and documenting in an on-site final acceptance inspection of fire protection and life safety systems with the Government FPE.
- f. Document inspection results on a FPQC report prepared each day inspections are performed. The report must include a description of the visual inspection or observation performed, a written summary of findings, a conclusion on compliance with the Contract documents, and signature of the FPQC Specialist. Forward the FPQC daily report to the QC Manager who must include the report with the submission of their daily QC Report to the Government each day. Every site visit by the FPQC must be documented on a FPQC daily report.

1.6.6.1.3 Schedule of Fire Protection System Inspections

A schedule, prepared by the Fire Protection DOR, which lists each of the required visual inspections and observations required by the FPQC. The schedule is included at the end of this UFGS section.

1.6.7 Special Inspector

The Special Inspector (SI) must be an independent third party hired directly by the Prime Contractor. The SI must not be a company employee of the Contractor or any subcontractor performing the work to be inspected. The qualifications of the SI are defined in Section 01 45 35 SPECIAL INSPECTION.1.7 SUBMITTAL AND DELIVERABLES REVIEW AND APPROVAL

Procedures for submission, review and approval of submittals are described in Section 01 33 00 SUBMITTAL PROCEDURES. Procedures must include field verification of relevant dimensions and component characteristics by the QC organization prior to submittal being sent to the Contracting Officer. The CQC organization is responsible for certifying that all submittals and deliverables are in compliance with the Contract.

1.8 THREE PHASES OF CONTROL

CQC enables the Contractor to ensure that the construction, including that of subcontractors and suppliers, complies with the requirements of the Contract. At least three phases of control must be conducted by the QC Manager to adequately cover both on-site and off-site work for each definable feature of the construction work as follows:

1.8.1 Preparatory Phase

Document the results of the preparatory phase actions by separate minutes prepared by the QC Manager and attach to the daily CQC report. Instruct applicable workers as to the acceptable level of workmanship required to meet Contract specifications.

Notify the Contracting Officer at least 2 business days in advance of each preparatory phase meeting. The meeting will be conducted by the QC Manager and attended by the QC Specialists, the Project Superintendent, the CxC, the Special Inspector, and the foreman responsible for the DFO, as

applicable. When the DFOV will be accomplished by a subcontractor, that subcontractor's foreman must attend the preparatory phase meeting. This phase is performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. Perform the following prior to beginning work on each DFOV:

- a. Review each paragraph of the applicable specification sections, reference codes, and standards. Make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field. Maintain and make available in the field for use by Government personnel until final acceptance of the work.
- b. Review the Contract drawings.
- c. Verify that field measurements are as indicated on construction or shop drawings or both before confirming product orders, to minimize waste due to excessive materials.
- d. Verify that appropriate shop drawings and submittals for materials and equipment have been submitted and approved. Verify receipt of approved factory test results, when required.
- e. Review the testing plan and ensure that provisions have been made to provide the required QC testing.
- f. Examine the work area to ensure that the required preliminary work has been completed and complies with the Contract and ensure any deficiencies/rework items in the preliminary work have been corrected and confirmed by the Contracting Officer.
- g. Review coordination of product/material delivery to designated prepared areas to execute the work.
- h. Examine the required materials, equipment and sample work to ensure that they are on hand and conform to the approved shop drawings and submitted data and are properly stored.
- i. Check to assure that all materials and equipment have been tested, submitted, and approved.
- j. Discuss specific controls to be used, construction methods, construction tolerances, workmanship standards, and the approach that will be used to provide quality construction by planning ahead and identifying potential problems for each DFOV. Ensure any portion of the plan requiring separate Contracting Officer acceptance has been approved.
- k. Review the APP and appropriate Activity Hazard Analysis (AHA) to ensure that applicable safety requirements are met, and that required Safety Data Sheets (SDS) are submitted.

1.8.2 Initial Phase

Notify the Contracting Officer at least 2 business days in advance of each initial phase. When construction crews are ready to start work on a DFOV, conduct the initial phase with the Project Superintendent, and the foreman responsible for that DFOV. Observe the initial segment of the DFOV to

ensure that the work complies with Contract requirements. Document the results of the initial phase in the daily CQC Report and in the Initial Phase Checklist. Repeat the initial phase for each new crew to work on-site when acceptable levels of specified quality are not being met. Indicate the exact location of initial phase for definable feature of work for future reference and comparison with follow-up phases. Perform the following for each DFOV:

- a. Check work to ensure that it is in full compliance with Contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full Contract compliance. Verify required control inspection and testing comply with the Contract.
- c. Establish level of workmanship and verify that it meets the minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve any workmanship issues.
- e. Ensure that testing is performed by the approved laboratory.
- f. Check work procedures for compliance with the APP and the appropriate AHA to ensure that applicable safety requirements are met.
- g. Review project specific work plans (i.e., HAZMAT Abatement, Stormwater Management) to ensure all preparatory work items have been completed and documented.

1.8.3 Follow-Up Phase

Perform the following for on-going DFOV daily, or more frequently as necessary, until the completion of each DFOV. The Final Follow-Up for any DFOV will clearly note in the daily report the DFOV is completed, and all deficiencies/rework items have been completed in accordance with the paragraph DEFICIENCY/REWORK ITEMS LIST. Each DFOV that has completed the Initial Phase and has not completed the Final Follow-up must be included on each daily report. If no work was performed on that DFOV for the period of that daily report, it must be so noted. Document all Follow-Up activities for DFOVs in the daily CQC Report:

- a. Ensure the work including control testing complies with Contract requirements until completion of that particular work feature. Record checks in the CQC documentation.
- b. Maintain the quality of workmanship required.
- c. Ensure that testing is performed by the approved laboratory.
- d. Ensure that deficiencies/rework items are being corrected. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of work which may be affected by the deficient work.
- e. Do not build upon nor conceal non-conforming work.
- f. Assure manufacturers' representatives have performed necessary inspections if required and perform safety inspections.

1.8.4 Additional Preparatory and Initial Phases

Conduct additional preparatory and initial phases on the same DFOW if the quality of on-going work is unacceptable, if there are changes in the applicable QC organization, if there are changes in the on-site production supervision or work crew, if work on a DFOW has not started within a substantial period of the initial preparatory meeting or has resumed after a substantial period of inactivity, or if other problems develop.

1.8.5 Notification of Three Phases of Control for Off-Site Work

Notify the Contracting Officer at least 2 weeks prior to the start of the preparatory and initial phases.

1.8.6 Deficiency/Rework Items List

The QC Manager must maintain a list of work that does not comply with the Contract, identifying what items need to be corrected, the activity ID number associated with the item, the date the item was originally discovered, the date the item will be corrected by, and the date the item was corrected.

The QC Manager reviews the list at each weekly QC Meeting:

- a. There is no requirement to report a deficiency/rework item that is corrected the same day it is discovered.
- b. No successor task may be advanced beyond the preparatory phase meeting until all deficiencies/rework items have been cleared by the QC Manager and concurred with by the Contracting Officer. This must be confirmed as part of the Preparatory Phase activities.
- c. Attach a copy of the "Deficiency/Rework Items List" to the last daily CQC Report of each month.
- d. The Contractor is responsible for including those items identified by the Contracting Officer.
- e. All deficiencies/rework items must be confirmed as corrected by the QC Manager, and concurred by the Contracting Officer, prior to commencement of any completion inspections per paragraph COMPLETION INSPECTIONS unless specifically exempted by the Contracting Officer.
- f. Non-Compliance with these requirements is grounds for removal in accordance with paragraph ACCEPTANCE OF THE QUALITY CONTROL (QC) and DESIGN QUALITY CONTROL (DQC) PLAN.
- g. All delays, concurrent or related to failure to manage, monitor, control, and correct deficiencies/rework items are entirely the responsibility of the Contractor and can not be made the subject, or any component of any request for additional time or compensation.

1.9 TESTING

Perform specified or required tests to verify that control measures are adequate to provide a product which conforms to Contract requirements. Upon request, furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and acceptance tests when specified. Procure the services of an U.S. Army

Corps of Engineers approved testing laboratory or establish an approved testing laboratory. Perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with Contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all test documentation requirements, have been prepared.
- e. Record results of all tests taken, both passing and failing on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test. If approved by the Contracting Officer, actual test reports are submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility directly to the Contracting Officer. Failure to submit timely test reports as stated results in nonpayment for related work performed and disapproval of the test facility for this Contract.
- f. Contractor to notify the Government at least 24 hours in advance of conduct of tests.

1.9.1 Laboratory Accreditation Authorities

All testing laboratories must be validated by the USACE Material Testing Center (MTC) for the tests to be performed. Information on the USACE MTC with web-links to both a list of validated testing laboratories and for the laboratory inspection request for can be found at:

<https://mtc.erdcdren.mil>

1.9.2 Capability Check

The Contracting Officer retains the right to check laboratory equipment in the proposed laboratory and the laboratory technician's testing procedures, techniques, and other items pertinent to testing, for compliance with the standards set forth in this Contract. Laboratories utilized for testing soils, concrete, asphalt, and steel must meet criteria detailed in ASTM D3740 and ASTM E329.

1.9.2.1 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$2,000 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the Contract amount due the Contractor.

1.9.2.2 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

1.9.3 Test Results

Cite applicable Contract requirements, tests or analytical procedures used. Provide actual results and include a statement that the item tested or analyzed conforms or fails to conform to specified requirements. If the item fails to conform, notify the Contracting Officer immediately. Conspicuously stamp the cover sheet for each report in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements, whichever is applicable. Test results must be signed by a testing laboratory representative authorized to sign certified test reports. Furnish the signed reports, certifications, and other documentation to the Contracting Officer via the QC Manager.

1.10 COMPLETION INSPECTIONS

1.10.1 Punch-Out Inspection

Near the completion of all work or any increment thereof, established by a completion time stated in the Contract Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the QC Manager and QC staff must conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings, specifications, and Contract. Include in the punch list any remaining items on the "Deficiency/Rework Items List", that were not corrected prior to the Punch-Out Inspection as approved by the Contracting Officer in accordance with the paragraph DEFICIENCY/REWORK ITEMS LIST. Include within the punch list the estimated date by which the deficiencies will be corrected. Provide a copy of the punch list to the Contracting Officer.

The QC Manager, or staff, must make follow-on inspections to ascertain that all deficiencies have been corrected. All punch list items must be confirmed as corrected by the QC Manager and concurred by the Contracting Officer. Once this is accomplished, notify the Government that the facility is ready for the Government "Pre-Final Inspection".

1.10.2 Pre-Final Inspection

The Government and QC Manager will perform this inspection to verify that the facility is complete and ready to be occupied. A Government "Pre-Final Punch List" will be documented by the QC Manager as a result of this inspection. The QC Manager will ensure that all items on this list are corrected and concurred by the Contracting Officer prior to notifying the Government that a "Final" inspection with the Client can be scheduled. All items noted on the "Pre-Final" inspection must be corrected and concurred by the Contracting Officer in a timely manner and be accomplished before the Contract completion date for the work, or any increment thereof, if the project is divided into increments by separate completion dates unless exceptions are directed by the Contracting Officer.

1.10.3 Final Acceptance Inspection

Notify the Contracting Officer at least 14 calendar days prior to the date a final acceptance inspection can be held. State within the notice that all items previously identified on the pre-final punch list will be corrected and acceptable, along with any other unfinished Contract work, by the date of the final acceptance inspection. The Contractor must be represented by the QC Manager, the Project Superintendent, and others deemed necessary.

Attendees for the Government will include the Contracting Officer, other Government QA personnel, and personnel representing the Client. Failure of the Contractor to have all Contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the Contract Clause entitled "Inspection of Construction."

1.11 QUALITY CONTROL (QC) CERTIFICATIONS

1.11.1 Contractor Quality Control (CQC) Report Certification

Contain the following statement within the CQC Report: "On behalf of the Contractor, I certify that this report is complete and correct and equipment and material used, and work performed during this reporting period is in compliance with the Contract drawings and specifications to the best of my knowledge, except as noted in this report."

1.11.2 Completion Certification

Upon completion of work under this Contract, the QC Manager must furnish a certificate to the Contracting Officer attesting that "the work has been completed, inspected, tested and is in compliance with the Contract." Provide a copy of this final QC Certification for completion to the preparer of the Operation & Maintenance (O&M) documentation.

1.12 DOCUMENTATION AND INFORMATION FOR THE CONTRACTING OFFICER

Maintain current and complete records of on-site and off-site QC program operations and activities.

Contact the Contracting Officer for sample forms or print from RMS-CM as needed. Prior to commencing work on construction, the Contractor must obtain a copy set of the current report forms. The report forms will consist of the Contractor Quality Control (CQC) Report, CQC Report (Continuation Sheet), Contractor Production Report, Contractor Production Report (Continuation Sheet), Preparatory Phase Checklist, Initial Phase Checklist, Testing Plan and Log, and Rework Items List.

1.12.1 Construction Documentation

Reports are required for each day that work is performed and must be attached to the Contractor Quality Control Report prepared for the same day. Maintain current and complete records of on-site and off-site QC program operations and activities. Reports are required for each day work is performed. Account for each calendar day throughout the life of the Contract.

The Project Superintendent and the QC Manager must prepare and sign the Contractor Production and CQC Reports, respectively. Every space on the forms must be filled in. Use N/A if nothing can be reported in one of the spaces. The reporting of work must be identified by terminology consistent with the construction schedule. In the "Remarks" sections of the reports, enter pertinent information including directions received, problems encountered during construction, work progress and delays, conflicts or errors in the drawings or specifications, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered, a record of visitors to the work site, quality control problem areas, deviations from the QC Plan, construction deficiencies encountered, and meetings held. For each entry in the report(s), identify the Schedule

Activity No. that is associated with the entered remark.

1.12.2 Quality Control Activities

CQC and Contractor Production reports will be prepared daily to maintain current records providing factual evidence that required quality control activities and tests have been performed. Include in these records the work of subcontractors and suppliers on an acceptable form that includes, as a minimum, the following information:

- a. The name and area of responsibility of the Contractors and any subcontractors.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When a Network Analysis Schedule (NAS) is used, identify each item of work performed each day by NAS activity number.
- d. Control phase activities performed. Preparatory, and Initial phase Checklists associated with the DFOW referenced to the construction schedule. Follow-up phase activities identified to the DFOW. If testing or specific QC Specialist activities are associated with the Follow-up phase activities for a specific DFOW note this and include those reports.
- e. Test and control activities performed with results and references to specifications and drawings requirements. Identify the control phase (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action in accordance with the paragraph DEFICIENCY/REWORK ITEMS LIST.
- f. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications and drawings requirements.
- g. Submittals and deliverables reviewed, with Contract reference, by whom, and action taken.
- h. Offsite surveillance activities, including actions taken.
- i. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- j. Instructions given/received and conflicts in plans and specifications.
- k. Provide documentation of design quality control activities. For independent design reviews, provide, as a minimum, identification of the Independent Technical Review (ITR) team and their review comments, responses and the record of resolution of the comments.

1.12.3 Verification Statement

Indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. Cover both conforming and deficient features and include a statement that equipment and materials incorporated in the work and workmanship comply with the Contract.

Furnish the original of these records in report form to the Government at least 24 hours in advance of beginning the initial phase for definable feature of work. As a minimum, prepare and submit one report for every 7 days of no work and on the last day of a no work period. All calendar days need to be accounted for throughout the life of the Contract. The first report following a day of no work will be for that day only. Reports need to be signed and dated by the QC Manager. Include copies of test reports and copies of reports prepared by all subordinate quality control personnel within the QC Manager Report.

1.12.4 Quality Control Validation

Establish and maintain the following in an electronic folder. Divide folder into a series of tabbed sections as shown below. Ensure folder is updated at each required progress meeting.

- a. CQC Meeting minutes in accordance with paragraph QUALITY CONTROL (QC) MEETINGS.
- b. All completed Preparatory and Initial Phase Checklists, arranged by specification section, further sorted by DFOW referenced to the construction schedule. Submit each individual Phase Checklist the day the phase event occurs as part of the CQC daily report.
- c. All milestone inspections, arranged by Activity Number referenced to the construction schedule.
- d. An up-to-date copy of the Testing Plan and Log with supporting field test reports, arranged by specification section referenced to the DFOW to which individual reports results are associated. Individual field test reports will be submitted within 2 working days after the test is performed in accordance with the paragraph QUALITY CONTROL ACTIVITIES.
- e. Copies of all Contract modifications, arranged in numerical order. Also include documentation that modified work was accomplished.
- f. An up-to-date copy of the paragraph DEFICIENCY/REWORK ITEMS LIST.
- g. Upon commencement of Completion Inspections of the entire project or any defined portion, maintain up-to-date copies of all punch lists issued by the QC staff to the Contractor and subcontractors and all punch lists issued by the Government in accordance with the paragraph COMPLETION INSPECTIONS.

1.12.5 Testing Plan and Log

As tests are performed, the QC Manager will record on the "Testing Plan and Log" the date the test was performed and the date the test results were forwarded to the Contracting Officer. Attach a copy of the updated "Testing Plan and Log" to the last daily CQC Report of each month. Provide a copy of the final "Testing Plan and Log" to the preparer of the Operation & Maintenance (O&M) documentation.

1.12.6 As-Built Drawings

The QC Manager must ensure the as-built drawings, required by Section 01 78 00 CLOSEOUT SUBMITTALS are kept current on a daily basis and marked to show deviations which have been made from the Contract drawings. The

as-built drawings document commences with the QC Manager ensuring all amendments, or changes to the Contract prior to Contract award are accurately noted in the initial document set creating the accurate baseline of the Contract prior to any work starting. Ensure each deviation has been identified with the appropriate modifying documentation (e.g., PC No., Modification No., Request for Information No.). The QC Manager must initial each revision. Upon completion of work, the QC Manager will furnish a certificate attesting to the accuracy of the as-built drawings prior to submission to the Contracting Officer.

1.13 NOTIFICATION ON NON-COMPLIANCE

The Contracting Officer will notify the Contractor of any detected non-compliance with the Contract. Take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, is deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be made the subject of a claim for extension of time for excess costs or damages by the Contractor.

1.14 DELIVERY, STORAGE, AND HANDLING

Designate receiving/storage areas for incoming material to be delivered according to installation schedule and to be placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. Store and handle materials in a manner as to prevent loss from weather and other damage. Keep materials, products, and accessories covered and off the ground, and store in a dry, secure area. Prevent contact with material that may cause corrosion, discoloration, or staining. Protect all materials and installations from damage by the activities of other trades.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 01 45 00.15 10

RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)

PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety -- Safety and Occupational Health (SOH) Requirements

1.2 MEASUREMENT AND PAYMENT

The work of this section is not measured for payment. The Contractor is responsible for the work of this section, without any direct compensation other than the payment received for contract items.

1.3 CONTRACT ADMINISTRATION

The Government will use the Resident Management System (RMS) to assist in its monitoring and administration of this contract. The Government accesses the system using the Government Mode of RMS (RMS GM) and the Contractor accesses the system using the Contractor Mode (RMS CM). The term RMS will be used in the remainder of this section for both RMS GM and RMS CM. The joint Government-Contractor use of RMS facilitates electronic exchange of information and overall management of the contract. The Contractor accesses RMS to record, maintain, input, track, and electronically share information with the Government throughout the contract period in the following areas:

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

1.3.1 Correspondence and Electronic Communications

For ease and speed of communications, exchange correspondence and other documents in electronic format to the maximum extent feasible. Hard copies are not required unless specified or unless requested by the Contracting Officer.

1.3.2 Other Factors

Other portions of this document have a direct relationship to the reporting accomplished through RMS. Particular attention is directed to FAR 52.236-15 Schedules for Construction Contracts; FAR 52.232-27 Prompt Payment for Construction Contracts; FAR 52.232-5 Payments Under

Fixed-Priced Construction Contracts; Section 01 32 01.00 10 PROJECT SCHEDULE; Section 01 33 00 SUBMITTAL PROCEDURES; Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS; and Section 01 45 00 QUALITY CONTROL.

1.4 RMS SOFTWARE

RMS is a web based application. Download, install and be able to utilize the latest version of RMS within 7 calendar days of receipt of the Notice to Proceed. RMS software, user manuals, access and installation instructions, program updates and training information are available from the RMS website (<https://rms.usace.army.mil>). The Government and the Contractor will have different access authorities to the same contract database through RMS. The common database will be updated automatically each time a user finalizes an entry or change.

1.5 CONTRACT DATABASE - GOVERNMENT

The Government will enter the basic contract award data in RMS prior to granting the Contractor access. The Government entries into RMS will generally be related to submittal reviews, correspondence status, and Quality Assurance (QA) comments, as well as other miscellaneous administrative information.

1.6 CONTRACT DATABASE - CONTRACTOR

Contractor entries into RMS establish, maintain, and update data throughout the duration of the contract. Contractor entries generally include prime and subcontractor information, daily reports, submittals, RFI's, schedule updates and payment requests. RMS includes the ability to import attachments and export reports in many of the modules, including submittals. The Contractor responsibilities for entries in RMS typically include the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

Enter all current Contractor administrative data and information into RMS within 7 calendar days of receiving access to the contract in RMS. This includes, but is not limited to, Contractor's name, address, telephone numbers, management staff, and other required items.

1.6.1.2 Subcontractor Information

Enter all missing subcontractor administrative data and information into RMS CM within seven calendar days of receiving access to the Contract in RMS or within seven calendar days of the signing of the subcontractor agreement for agreements signed at a later date. This includes name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor is listed separately for each trade to be performed.

1.6.1.3 Correspondence

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

"C" or "RFP".

1.6.1.4 Equipment

Enter and maintain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates in accordance with Section 01 45 00 QUALITY CONTROL.

1.6.1.5 Reports

Track the status of the project using the reports available in RMS. The value of these reports reflects the quality of the data input. These reports include but are not limited to the Progress Payment Request worksheet, Quality Control (QC) comments, Deficiency Tracking Log, Submittal Register Status, and Three-Phase Control worksheets in accordance with Sections 01 20 00 PRICE AND PAYMENT PROCEDURES, Section 01 32 01.00 10 PROJECT SCHEDULE, 01 33 00 SUBMITTAL PROCEDURES, and 01 45 00 QUALITY CONTROL.

1.6.1.6 Request For Information (RFI)

Create and track all Requests For Information (RFI) in the RMS Administration Module for Government review and response. Provide status at weekly progress meeting in accordance with Section 01 32 01.00 10 PROJECT SCHEDULE.

1.6.2 Finances

1.6.2.1 Pay Activity Data

Develop and enter a list of pay activities in conjunction with the project schedule in accordance with Section 01 32 01.00 10 PROJECT SCHEDULE. The sum of pay activities equals the total Contract amount, including modifications. Each pay activity must be assigned to a Contract Line Item Number (CLIN). The sum of the activities assigned to a CLIN equals the amount of each CLIN.

1.6.2.2 Payment Requests

Prepare all progress payment requests using RMS. Update the work completed under the Contract at least monthly, measured as percent or as specific quantities. After the update, generate a payment request and prompt payment certification using RMS. Submit the signed prompt payment certification and payment request as well as supporting data, electronically. Unless requested by the Contracting Officer, a signed paper copy of the approved payment certification and request is not required.

1.6.3 Quality Control (QC)

Enter and track implementation of the 3-phase QC Control System, QC testing, transferred and installed property and warranties in RMS. Link each deficiency and QC test to a pay activity. Prepare daily reports, identify and track deficiencies, document progress of work, and support other Contractor QC requirements in RMS. Maintain all data on a daily basis. Ensure that RMS reflects all quality control methods, tests and actions contained within the Contractor Quality Control (CQC) Plan and Government review comments. Provide within seven calendar days of Government acceptance of the CQC Plan.

1.6.3.1 Quality Control (QC) Reports

The Contractor's Quality Control (QC) Daily Report in RMS is the official report. The Contractor can use other supplemental formats to record QC data, but information from any supplemental formats are to be consolidated and entered into the RMS QC Daily Report. Any supplemental information may be entered into RMS as an attachment to the report. QC Daily Reports must be finalized and signed in RMS within 24 hours after the date covered by the report. A printed signed copy of the QC Daily Report is not required unless specifically requested by the Contracting Officer.

1.6.3.2 Deficiency Tracking

Use the QC Daily Report Module to enter and track deficiencies. Deficiencies identified and entered into RMS by the Contractor or the Government will be sequentially numbered with a QC or QA prefix for tracking purposes. Enter each deficiency into RMS the same day that the deficiency is identified. Monitor, track and resolve all QC and QA entered deficiencies. A deficiency is not considered to be corrected until the Government indicates concurrence in RMS.

1.6.3.3 Three-Phase Control Meetings

Maintain scheduled and actual dates and times of preparatory and initial control meetings in RMS, and upload meeting minutes of the meetings. Worksheets for the three-phase control meetings are generated within RMS.

1.6.3.4 Labor and Equipment Hours

Enter labor and equipment exposure hours on a daily basis. Roll up the labor and equipment exposure data into a monthly exposure report.

1.6.3.5 Accident/Safety Reporting

Both the Contractor and the Government enter safety related comments in RMS as a deficiency. The Contractor must monitor, track and show resolution for safety issues in the QC Daily Report area of the RMS QC Module. In addition, follow all reporting requirements for accidents and incidents as required in EM 385-1-1, Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS and as required by any other applicable Federal, State or local agencies.

1.6.3.6 Definable Features of Work

Enter each feature of work, as defined in the approved CQC Plan, into the RMS QC Module. A feature of work may be associated with a single or multiple pay activities, however a pay activity is only to be linked to a single feature of work.

1.6.3.7 Activity Hazard Analysis

Import activity hazard analysis electronic document files into the RMS QC Module utilizing the document package manager. Prepare activity hazard analysis in accordance with Section 01 35 26 GOVERNMENT SAFETY REQUIREMENTS.

1.6.4 Submittal Management

Enter all current submittal register data and information into [RMS within seven calendar days of receiving access to the Contract in RMS] [within the

time frame directed by the Contracting Officer]. [Contractor is responsible for entering Activity Numbers for each submittal item corresponding to their Schedule.] [The Contractor will import the information shown in the submittal register following the specification Section 01 33 00 SUBMITTAL PROCEDURES unless otherwise directed by the Contracting Officer.] Group electronic submittal documents into transmittal packages to send to the Government, except very large electronic files, samples, spare parts, mock ups, and color boards. Track transmittals and update the submittal register in RMS on a daily basis throughout the duration of the Contract.

Enter all submittals as listed in the approved design's submittal register within [14] [30] calendar days of design approval for construction.

Contractor may request submittals to be added to RMS throughout the lifecycle of the project. Approval/disapproval of Contractor requests is at the discretion of the Contracting Officer. Submittals entry into RMS must be updated daily or as practical for performance of the Contract, as approved by the Contracting Officer.

1.6.5 Schedule

Enter and update the contract project schedule in RMS by either manually entering all schedule data or by importing the Standard Data Exchange Format (SDEF) file, based on the requirements in Section 01 32 01.00 10 PROJECT SCHEDULE.

1.6.6 Closeout

Closeout documents, processes and forms are managed and tracked in RMS by both the Contractor and the Government. Ensure that all closeout documents are entered, completed and documented within RMS.

1.7 IMPLEMENTATION

Use of RMS as described in the preceding paragraphs is mandatory. Ensure that sufficient resources are available to maintain contract data within the RMS system. RMS is an integral part of the Contractor's required management of quality control.

1.8 NOTIFICATION OF NONCOMPLIANCE

Take corrective action within seven calendar days after receipt of notice of RMS non-compliance by the Contracting Officer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 45 35

SPECIAL INSPECTIONS

PART 1 GENERAL

1.1 REFERENCES

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

INTERNATIONAL CODE COUNCIL (ICC)

ICC IBC (2018) International Building Code

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 3-301-01 (2019) Structural Engineering

1.2 GENERAL REQUIREMENTS

Perform Special Inspections in accordance with the Statement of Special Inspections, Schedule of Special Inspections and Chapter 17 of ICC IBC. The Statement of Special Inspections and Schedule of Special Inspections are to be developed by the SER. Special Inspections are to be performed by an independent third party and are intended to ensure that the work of the Prime Contractor is in accordance with the Contract Documents and applicable building codes. Special inspections do not take the place of the three phases of control inspections performed by the Contractor's QC Manager or any testing and inspections required by other sections of the specifications.

Structural observations will be performed by the Structural Engineer of Record on the Contractor's Design-Build team. The Contractor must provide notification to the Structural Engineer of Record and Contracting Officer 14 days prior to the following points of construction to allow for structural observation:

- a. As specified by the designer of record.

1.3 DEFINITIONS

1.3.1 Continuous Special Inspections

Continuous Special Inspections is the constant monitoring of specific tasks by a special inspector. These inspections must be carried out continuously over the duration of the particular tasks.

1.3.2 Perform

Perform these Special Inspections tasks for each welded joint or member.

1.3.3 Observe

Observe these Special Inspections items on a periodic daily basis. Operations need not be delayed pending these inspections.

1.3.4 Special Inspector (SI)

A qualified person retained by the Contractor and approved by the Contracting Officer as having the competence necessary to inspect a particular type of construction requiring Special Inspections. The SI must be an independent third party hired directly by the Prime Contractor.

1.3.5 Associate Special Inspector (ASI)

A qualified person who assists the SI in performing Special Inspections but must perform inspection under the direct supervision of the SI and cannot perform inspections without the SI on site.

1.3.6 Third Party

A Special inspector must not be an employee of the Contractor or of any Sub-Contractor performing the work to be inspected.

1.3.7 Contracting Officer

The Government official having overall authority for administrative contracting actions. Certain contracting actions may be delegated to the Contracting Officer's Representative (COR).

1.3.8 Contractor's Quality Control (QC) Manager

An individual retained by the Prime Contractor and qualified in accordance with the Section 01 45 00 QUALITY CONTROL having the overall responsibility for the Contractor's QC organization.

1.3.9 Structural Engineer of Record (SER)

A registered design professional retained by the Prime Contractor responsible for the overall design and review of submittal documents prepared by others. The SER is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws in the state in which the design professional works. The SER is also referred to as the Engineer of Record (EOR) in design code documents.

1.3.10 Statement of Special Inspections (SSI)

A document developed by the SER identifying the material, systems, components and work required to have Special Inspections.

1.3.11 Schedule of Special Inspections (SSI)

A schedule which lists each of the required Special Inspections, the extent to which each Special Inspection is to be performed, and the required frequency for each in accordance with ICC IBC Chapter 17.

1.3.12 Definable Feature of Work (DFOW)

An inspection group that is separate and distinct from other inspection groups, having inspection requirements or inspectors that are unique.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Special Inspections Project Manual; G

Special Inspections Agency's Written NDT Practices with method and evidence of regular equipment calibration where applicable

SD-06 Test Reports

Special Inspections Daily Reports

Special Inspections Biweekly Reports

SD-07 Certificates

AISC Certified Steel Fabricator

Steel Truss Plant Quality Assurance Program

Wood Truss Plant Quality Assurance Program

AC472 Accreditation

Steel Joist Institute Membership

Precast Concrete Institute (PCI) Certified Plant

Certificate of Compliance

Special Inspector Qualifications; G

Qualification Records for NDT technicians

SD-11 Closeout Submittals

Comprehensive Final Report of Special Inspections; G

1.5 SPECIAL INSPECTOR QUALIFICATIONS

Submit qualifications for each special inspector.

1.5.1 Steel Construction and High Strength Bolting

1.5.1.1 Special Inspector

- a. ICC Structural Steel and Bolting Special Inspector certificate with one year of related experience, or

- b. Registered Professional Engineer with three years of related experience

1.5.1.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.2 Welding Structural Steel

1.5.2.1 Special Inspector

- a. ICC Structural Welding Special Inspector certificate with one year of related experience, or
- b. AWS Certified Welding Inspector

1.5.2.2 Associate Special Inspector

AWS Certified Associate Welding Inspector

1.5.3 Nondestructive Testing of Welds

1.5.3.1 Special Inspector

NDT Level III Certificate

1.5.3.2 Associate Special Inspector

NDT Level II Certificate plus one year of related experience

1.5.4 Cold Formed Steel Framing

1.5.4.1 Special Inspector

- a. ICC Structural Steel and Bolting Special Inspector certificate with one year of related experience, or
- b. ICC Commercial Building Inspector with one year of experience, or
- c. ICC Residential Building Inspector with one year of experience, or
- d. Registered Professional Engineer with three years related experience

1.5.4.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.5 Concrete Construction

1.5.5.1 Special Inspector

- a. ICC Reinforced Concrete Special Inspector Certificate with one year of related experience, or
- b. ACI Concrete Construction Special Inspector, or
- c. Registered Professional Engineer with three years of related experience

1.5.5.2 Associate Special Inspector

- a. ACI Concrete Construction Special Inspector in Training, or
- b. Engineer-In-Training with one year of related experience

1.5.6 Prestressed Concrete Construction

1.5.6.1 Special Inspector

- a. ICC Pre-stressed Special Inspector Certificate with one year of related experience, or
- b. PCI Quality Control Technician/ Inspector Level II Certificate with one year of related experience, or
- c. Registered Professional Engineer with three years of related experience

1.5.6.2 Associate Special Inspector

- a. PCI Quality Control Technician/ Inspector Level I Certificate with one year of related experience, or
- b. Engineer-In-Training with one year of related experience

1.5.7 Post-tensioned Concrete Construction

1.5.7.1 Special Inspector

- a. PTI Level 2 Unbonded PT Inspector Certificate, or
- b. Registered Professional Engineer with three years of related experience

1.5.7.2 Associate Special Inspector

- a. PTI Level 1 Unbonded PT Inspector Certificate with one year of related experience, or
- b. Engineer-In-Training with one year of related experience

1.5.8 Masonry Construction

1.5.8.1 Special Inspector

- a. ICC Structural Masonry Special Inspector Certificate with one year of related experience, or
- b. Registered Professional Engineer with three years of related experience

1.5.8.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.9 Wood

1.5.9.1 Special Inspector

- a. ICC Commercial Building Inspector Certificate with one year of related experience, or

- b. ICC Residential Building Inspector with one year of experience, or
- c. Registered Professional Engineer with three years of related experience

1.5.9.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.10 Verification of Site Soil Condition, Fill Placement and Load-Bearing Requirements

1.5.10.1 Special Inspector

- a. ICC Soils Special Inspector Certificate with one year of related experience, or
- b. NICET Soils Technician Level II Certificate in Construction Material Testing, or
- c. Geologist-In-Training with three years of related experience, or
- d. Registered Professional Engineer with three years of related experience

1.5.10.2 Associate Special Inspector

- a. NICET Soils Technician Level I Certificate in Construction Material Testing with one year of related experience, or
- b. Engineer-In-Training with one year of related experience

1.5.11 Deep Foundations

1.5.11.1 Special Inspector

- a. NICET Soils Technician Level II Certificate in Construction Material Testing, or
- b. Geologist-In-Training with three years of related experience, or
- c. Registered Professional Engineer with three years of related experience

1.5.11.2 Associate Special Inspector

- a. NICET Soils Technician Level I Certificate in Construction Material Testing with one year of related experience, or
- b. NICET Geotechnical Engineering Technician Level I Construction or Generalist Certificate with one year of related experience, or
- c. Engineer-In-Training with one year of related experience

1.5.12 Sprayed Fire Resistant Material

1.5.12.1 Special Inspector

- a. ICC Spray-applied Fireproofing Special Inspector Certificate, or
- b. ICC Fire Inspector I Certificate with one year of related experience, or

- c. Registered Professional Engineer or Architect with related experience

1.5.12.2 Associate Special Inspector

Engineer-In-Training with one year of related experience

1.5.13 Mastic and Intumescent Fire Resistant Coatings

1.5.13.1 Special Inspector

- a. ICC Spray-applied Fireproofing Special Inspector Certificate, or
- b. ICC Fire Inspector I Certificate with one year of related experience, or
- c. Registered Professional Engineer or Architect with related experience

1.5.13.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.14 Exterior Insulation and Finish System (EIFS)

1.5.14.1 Special Inspector

- a. AWCI EIFS Inspector Certificate, or
- b. Exterior Design Institute Certificate, or
- c. Registered Professional Engineer or Architect with related experience

1.5.14.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.15 Fire-Resistant Penetrations and Joints

1.5.15.1 Special Inspector

- a. Passed the UL Firestop Exam with one year of related experience, or
- b. Passed the FM Firestop Exam with one year of related experience, or
- c. Registered Professional Engineer with related experience

1.5.15.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.16 Smoke Control

1.5.16.1 Special Inspector

- a. AABC Technician Certification with one year of related experience, or
- b. Registered Professional Engineer with related experience

1.5.16.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

PART 2 PRODUCTS

2.1 FABRICATOR SPECIAL INSPECTIONS

Special Inspections of fabricator's work performed in the fabricator's shop is required to be inspected in accordance with the Statement of Special Inspections and the Schedule of Special Inspections unless the fabricator is certified by the approved agency to perform such work without Special Inspections. Submit the following certifications to the Contracting Officer for information to allow work performed in the fabricator's shop to not be subjected to Special Inspections.

AISC Certified Steel Fabricator.

Truss Plate Institute (TPI) steel truss plant quality assurance program certification.

Truss Plate Institute (TPI) wood truss plant quality assurance program certification.

International Accreditation Service, AC472 Accreditation

Steel Joist Institute Membership

Precast Concrete Institute (PCI) Certified Plant, Group C

At the completion of fabrication, submit a certificate of compliance, to be included with the comprehensive final report of Special Inspections, stating that the materials supplied and work performed by the fabricator are in accordance with the construction documents.

PART 3 EXECUTION

3.1 RESPONSIBILITIES

3.1.1 Quality Control Manager

- a. Supervise all Special Inspectors required by the Contract Documents and the IBC.
- b. Verify the qualifications of all of the Special Inspectors.
- c. Verify the qualifications of fabricators.
- d. Maintain a 3-ring binder for the Special Inspector's daily and biweekly reports. This file must be located in a conspicuous place in the project trailer/office to allow review by the Contracting Officer and the SER.
- e. Maintain a rework items list that includes discrepancies noted on the Special Inspectors daily report.

3.1.2 Special Inspectors

- a. Inspect all elements of the project for which the special inspector is

qualified to inspect and are identified in the Schedule of Special Inspections.

- b. Attend preparatory phase meetings related to the Definable Feature of Work (DFOW) for which the special inspector is qualified to inspect.
- c. Submit a copy of the daily reports to the QC Manager.
- d. Report discrepancies that are observed during Special Inspections to the QC Manager for correction. If discrepancies are not corrected before the special inspector leaves the site the observed discrepancies must be documented in the daily report.
- e. Submit a biweekly Special Inspection Report until all inspections are complete. A report is required for each biweekly period in which Special Inspections activity occurs, and must include the following:
 - (1) A brief summary of the work performed during the reporting time frame.
 - (2) Changes and discrepancies with the drawings, specifications that were observed during the reporting period.
 - (3) Discrepancies which were resolved or corrected.
 - (4) A list of nonconforming items requiring resolution.
 - (5) All applicable test result including nondestructive testing reports.
- j. At the completion of the project submit a comprehensive final report of Special Inspections that documents the Special Inspections completed for the project and corrections of all discrepancies noted in the daily reports. The comprehensive final report of Special Inspections must be signed, dated and indicate the certification of the special inspector qualifying them to conduct the inspection.

3.1.3 Structural Engineer of Record (SER)

- a. Develop the Statement of Special Inspections and the Schedule of Special Inspections as defined in Chapter 17 of ICC IBC. Submit the Statement of Special Inspections and the Schedule of Special Inspections for approval by the Contracting Officer.

The Statement of Special Inspection must include the following information:

- (1) List of Architectural Designated Seismic Systems.
- (2) List of Mechanical Designated Seismic Systems.
- (3) List of the Electrical Designated Seismic Systems.
- (4) Define the periodic walk-down inspections required by UFC 3-301-01.
- (5) List of elements that are part of the progressive collapse resistance system.

Develop Schedule of Special Inspection using the template located on the Whole Building Design Guide website at: www.wbdg.org/ffc/dod/

unified-facilities-guide-specifications-ufgs/ufgs-01-45-35

- b. Prior to the start of structural observations submit a written statement identifying the frequency and delineation wind/seismic force resisting system requiring structural observations.
- c. At the conclusion of the structural observations submit a final report of structural observations indicating that the structural observation site visits have been made and identify any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved.

3.2 DEFECTIVE WORK

Check work as it progresses, but failure to detect any defective work or materials must in no way prevent later rejection if defective work or materials are discovered, nor obligate the Contracting Officer to accept such work.

-- End of Section --

SECTION 01 50 00

TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C511 (2017; R 2021) Reduced-Pressure Principle Backflow Prevention Assembly

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (2023; ERTA 1 2024; TIA 24-1) National Electrical Code

NFPA 241 (2022) Standard for Safeguarding Construction, Alteration, and Demolition Operations

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety -- Safety and Occupational Health (SOH) Requirements

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)

MUTCD (2023) Manual on Uniform Traffic Control Devices

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Site Plan; G,

Traffic Control Plan; G,

Haul Road Plan; G,

Contractor Computer Cybersecurity Compliance Statements; G,

Contractor Temporary Network Cybersecurity Compliance Statements; G,

SD-06 Test Reports

Backflow Preventer Tests

SD-07 Certificates

Backflow Tester Certification

Backflow Preventers Certificate of Full Approval

1.3 CONSTRUCTION SITE PLAN

Prior to the start of work, submit for Government approval a site plan showing the locations and dimensions of temporary facilities (including layouts and details, equipment and material storage area (onsite and offsite), and access and haul routes, avenues of ingress/egress to the fenced area and details of the fence installation. Identify any areas which may have to be graveled to prevent the tracking of mud. Indicate if the use of a supplemental or other staging area is desired. Show locations of safety and construction fences, site trailers, construction entrances, trash dumpsters, temporary sanitary facilities, and worker parking areas.

1.4 DOD CONDITION OF READINESS (COR)

DOD will set the Condition of Readiness (COR) based on the weather forecast for sustained winds 50 knots (58 mph) or greater. Contact the Contracting Officer for the current COR setting.

Monitor weather conditions a minimum of twice a day and take appropriate actions according to the approved Emergency Plan in the accepted Accident Prevention Plan, EM 385-1-1 Emergency Plan requirements and the instructions below.

Unless otherwise directed by the Contracting Officer, comply with:

- a. Condition FOUR (Sustained winds of 58 mph or greater expected within 72 hours): Normal daily jobsite cleanup and good housekeeping practices. Collect and store in piles or containers scrap lumber, waste material, and rubbish for removal and disposal at the close of each work day. Maintain the construction site including storage areas, free of accumulation of debris. Stack form lumber in neat piles less than 3.3 feet high. Remove all debris, trash, or objects that could become missile hazards. Review requirements pertaining to "Condition THREE" and continue action as necessary to attain "Condition FOUR" readiness. Contact Contracting Officer for weather and COR updates and completion of required actions.
- b. Condition THREE (Sustained winds of 58 mph or greater expected within 48 hours): Maintain "Condition FOUR" requirements and commence securing operations necessary for "Condition ONE" which cannot be completed within 18 hours. Cease all routine activities which might interfere with securing operations. Commence securing and stow all gear and portable equipment. Make preparations for securing buildings. Reinforce or remove formwork and scaffolding. Secure machinery, tools, equipment, materials, or remove from the jobsite. Expend every effort to clear all missile hazards and loose equipment

from general base areas. Contact Contracting Officer for weather and COR updates and completion of required actions. Review requirements pertaining to "Condition TWO" and continue action as necessary to attain "Condition THREE" readiness.

- c. Condition TWO (Sustained winds of 58 mph or greater expected within 24 hours): Secure the jobsite, and leave Government premises.
- d. Condition ONE. (Sustained winds of 58 mph or greater expected within 12 hours): Contractor access to the jobsite and Government premises is prohibited.

1.5 CYBERSECURITY DURING CONSTRUCTION

{For Reference Only: This subpart (and its subparts) relates to AC-18, SA-3, CCI-00258.} Meet the following requirements throughout the construction process.

1.5.1 Contractor Computer Equipment

Contractor owned computers may be used for construction. When used, contractor computers must meet the following requirements:

1.5.1.1 Operating System

The operating system must be an operating system currently supported by the manufacturer of the operating system. The operating system must be current on security patches and operating system manufacturer required updates.

1.5.1.2 Anti-Malware Software

The computer must run anti-malware software from a reputable software manufacturer. Anti-malware software must be a version currently supported by the software manufacturer, must be current on all patches and updates, and must use the latest definitions file. All computers used on this project must be scanned using the installed software at least once per day.

1.5.1.3 Passwords and Passphrases

The passwords and passphrases for all computers must be changed from their default values. Passwords must be a minimum of eight characters with a minimum of one uppercase letter, one lowercase letter, one number and one special character.

1.5.1.4 Contractor Computer Cybersecurity Compliance Statements

Provide a single submittal containing completed Contractor Computer Cybersecurity Compliance Statements for each company using contractor owned computers. Contractor Computer Cybersecurity Compliance Statements must use the template published at <https://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-50-00>. Each Statement must be signed by a cybersecurity representative for the relevant company.

1.5.2 Temporary IP Networks

Temporary Contractor-installed IP networks may be used during construction. When used, temporary contractor-installed IP networks must meet the following requirements:

1.5.2.1 Network Boundaries and Connections

The network must not extend outside the project site and must not connect to any IP network other than IP networks provided under this project or Government furnished IP networks provided for this purpose. Any and all network access from outside the project site is prohibited.

1.5.3 Government Access to Network

Government personnel, as defined, prescribed, and identified by the Contracting Officer, must be allowed to have complete and immediate access to the network at any time in order to verify compliance with this specification. If there is a Government agency responsible for network access, identify that agency.

1.5.4 Temporary Wireless IP Networks

1.5.4.1 Contractor Provided Wi-Fi Network

Provide standalone Wi-Fi network for authorized Government personnel. Network access must be available throughout the jobsite and for the entire Contract period. The Government will use the Wi-Fi service for coordination in the field and related activities. Do not attach or connect the temporary Wi-Fi network to Government networks or systems unrelated to construction activities.

Password information must adhere to requirements outlined in Paragraph PASSWORDS AND PASSPHRASES. Provide password and Wi-Fi network name (SSID) to the Contracting Officer for Government personnel access. Wi-Fi performance must be capable of handling bandwidth to support Government and Contractor activities, including drawing and model access onsite. Provide a point of contact for reporting Wi-Fi outages.

1.5.4.2 Temporary Wireless IP Networks Security

In addition to the other requirements on temporary IP networks, temporary wireless IP (WiFi) networks must not interfere with existing wireless network and must use WPA2 security. Network names (SSID) for wireless networks must be changed from their default values.

1.5.5 Passwords and Passphrases

The passwords and passphrases for all network devices and network access must be changed from their default values. Passwords must be a minimum 8 characters with a minimum of one uppercase letter, one lowercase letter, one number and one special character.

1.5.6 Contractor Temporary Network Cybersecurity Compliance Statements

Provide a single submittal containing completed Contractor Temporary Network Cybersecurity Compliance Statements for each company implementing a temporary IP network. Contractor Temporary Network Cybersecurity Compliance Statements must use the template published at <https://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-50-00>. Each Statement must be signed by a cybersecurity representative for the relevant company. If no temporary IP networks will be used, provide a single copy of the Statement indicating this.

PART 2 PRODUCTS

2.1 TEMPORARY SIGNAGE

2.1.1 Bulletin Board

Prior to the commencement of work activities, provide a clear weatherproof covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the Contract, Wage Rate Information poster, Safety and Health Information as required by EM 385-1-1 and other information approved by the Contracting Officer. Coordinate requirements herein with 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS. Locate the bulletin board at the project site in a conspicuous place easily accessible to all employees, and in location as approved by the Contracting Officer.

2.1.2 Project Identification Signs

The requirements for the signs, their content, and location are as specified in Section 01 58 00 PROJECT IDENTIFICATION. Erect signs within 15 days after receipt of the notice to proceed. Correct the data required by the safety sign daily, with light colored metallic or non-metallic numerals.

2.1.3 Warning Signs

Post temporary signs, tags, and labels to give workers and the public adequate warning and caution of construction hazards according to the EM 385-1-1. Attach signs to the perimeter fencing every 150 feet warning the public of the presence of construction hazards. Signs must require unauthorized persons to keep out of the construction site. Correct the data required by safety signs daily. Post signs at all points of entry designating the construction site as a hard hat area.

2.2 TEMPORARY TRAFFIC CONTROL

2.2.1 Haul Roads

Construct access and haul roads necessary for proper prosecution of the work under this Contract in accordance with EM 385-1-1. Construct with suitable grades and widths; avoid sharp curves, blind corners, and dangerous cross traffic. Submit haul road plan for approval. Provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, must be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and haul roads are subject to approval by the Contracting Officer. Lighting must be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations.

2.2.2 Barricades

Erect and maintain temporary barricades to limit public access to hazardous areas. Barricades are required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Securely place barricades clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

2.3 FENCING

Provide fencing along the construction site and at all open excavations and tunnels to control access by unauthorized personnel. Safety fencing must be highly visible to be seen by pedestrians and vehicular traffic. All fencing must meet the requirements of EM 385-1-1. Remove the fence upon completion and acceptance of the work.

2.3.1 Polyethylene Mesh Safety Fencing

Temporary safety fencing must be a high visibility orange colored, high density polyethylene grid, a minimum of 48 inches high and maximum mesh size of 2 inches. Fencing must extend from the grade to a minimum of 48 inches above the grade and be tightly secured to T-posts spaced as necessary to maintain a rigid and taut fence. Fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection.

2.3.2 Chain Link Panel Fencing

Temporary panel fencing must be galvanized steel chain link panels 8 feet high. Multiple fencing panels may be linked together at the bases to form long spans as needed. Each panel base must be weighted down using sand bags or other suitable materials in order for the fencing to withstand anticipated winds while remaining upright. Fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection. Equip fence with a lockable gate. Gate must remain locked when construction personnel are not present.

2.3.3 Post-Driven Chain Link Fencing

Temporary post-driven fencing must be galvanized chain link fencing 8 feet high supported by an tightly secured to galvanized steel posts driven below grade. Fence posts must be located on minimum 10 foot centers. Posts may be set in various surfaces such as sand, soil, asphalt or concrete as necessary. Chain link fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection. Completely remove fencing and posts at the completion of construction and restore surfaces disturbed or damaged to its original condition. Locate and identify underground utilities prior to setting fence posts. Equip fence with a lockable gate. Gate must remain locked when construction personnel are not present.

2.4 TEMPORARY WIRING

Provide temporary wiring in accordance with EM 385-1-1, NFPA 241 and NFPA 70. Include monthly inspection and testing of all equipment and apparatus.

2.5 BACKFLOW PREVENTERS

Certificate of Full Approval from FCCCHR List, University of Southern California, attesting that the design, size and make of each backflow preventer has satisfactorily passed the complete sequence of performance testing and evaluation for the respective level of approval. Certificate of Provisional Approval is not acceptable.

Reduced pressure principle type conforming to the applicable requirements AWWA C511. Provide backflow preventers complete with 150 pound flanged , bronze or brass mounted gate valve and strainer, 304 stainless steel or

bronze, internal parts.

PART 3 EXECUTION

3.1 EMPLOYEE PARKING

Construction Contract employees must park privately owned vehicles in an area designated by the Contracting Officer. Employee parking must not interfere with existing and established parking requirements of the Government installation.

3.2 AVAILABILITY AND USE OF UTILITY SERVICES

3.2.1 Temporary Utilities

Provide temporary utilities required for construction. Materials may be new or used, must be adequate for the required usage, not create unsafe conditions, and not violate applicable codes and standards.

3.2.2 Payment for Utility Services

- a. The Contractor must provide their own utilities. Contractor must coordinate with privatized utility provider.

3.2.3 Meters and Temporary Connections

Provide and maintain necessary temporary connections, distribution lines, and meter bases required to measure the amount of each utility used for the purpose of determining charges. The Government will inspect and approve the Contractor's temporary wiring installation prior to final electrical connection with the PUP.

3.2.4 Final Meter Reading

Not used.

3.2.5 Sanitation

Provide and maintain within the construction area minimum field-type sanitary facilities in accordance with EM 385-1-1. Locate the facilities behind the construction fence or out of the public view. Clean units and empty wastes at least once a week or more frequently into a municipal, district, or station sanitary sewage system, or remove waste to a commercial facility. Obtain approval from the system owner prior to discharge into a municipal, district, or commercial sanitary sewer system. Penalties or fines associated with improper discharge will be the responsibility of the Contractor. Coordinate with the Contracting Officer and follow station regulations and procedures when discharging into the station sanitary sewer system. Maintain these conveniences at all times. Include provisions for pest control and elimination of odors. Government toilet facilities will not be available to Contractor's personnel.

3.2.6 Telephone

Make arrangements and pay all costs for telephone facilities desired.

3.2.7 Fire Protection

Provide temporary fire protection equipment for the protection of personnel

and property during construction. Remove debris and flammable materials daily to minimize potential hazards.

3.3 TRAFFIC PROVISIONS

3.3.1 Maintenance of Traffic

- a. Conduct operations in a manner that will not close a thoroughfare or interfere with traffic on railways or highways except with written permission of the Contracting Officer at least 15 calendar days prior to the proposed modification date, and provide a Traffic Control Plan for Government approval detailing the proposed controls to traffic movement for approval. The plan must be in accordance with State and local regulations and the MUTCD, Part VI.] Contractor may move oversized and slow-moving vehicles to the worksite provided requirements of the highway authority have been met.
- b. Conduct work so as to minimize obstruction of traffic, and maintain traffic on at least half of the roadway width at all times. Obtain approval from the Contracting Officer prior to starting any activity that will obstruct traffic.
- c. Provide, erect, and maintain, at Contractor's expense, lights, barriers, signals, passageways, detours, Life Safety Signage, overhead protection, and other items that may be required by the authority having jurisdiction.
- d. Provide cones, signs, barricades, lights, or other traffic control devices and personnel required to control traffic. Do not use foil-backed material for temporary pavement marking because of its potential to conduct electricity during accidents involving downed power lines.

3.3.2 Protection of Traffic

Maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment the work, and the erection and maintenance of adequate warning, danger, and direction signs, will be as required by the State and local authorities having jurisdiction. Provide self-illuminated (lighted) barricades during hours of darkness. All personnel working in roadways will wear brightly-colored vests or other high visibility apparel in accordance with EM 385-1-1. Protect the traveling public from damage to person and property. Minimize the interference with public traffic on roads selected for hauling material to and from the site. Investigate the adequacy of existing roads and their allowable load limit. Contractor is responsible for the repair of damage to roads caused by construction operations.

3.3.3 Rush Hour Restrictions

Do not interfere with the peak traffic flows preceding and during normal operations without notification to and approval by the Contracting Officer.

3.3.4 Dust Control

Dust control methods and procedures must be approved by the Contracting

Officer. Coordinate dust control methods with 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS.

3.4 REDUCED PRESSURE BACKFLOW PREVENTERS

Provide an approved reduced pressure backflow prevention assembly at each location where the Contractor taps into the Government potable water supply.

Perform backflow preventer tests using test equipment, procedures, and certification forms conforming to those outlined in the latest edition of the Manual of Cross-Connection Control published by the FCCCHR Manual. Test and tag each reduced pressure backflow preventer upon initial installation (prior to continued water use) and monthly thereafter. Tag must contain the following information: make, model, serial number, dates of tests, results, maintenance performed, and signature of tester. Record test results on certification forms conforming to requirements cited earlier in this paragraph.

3.5 CONTRACTOR'S TEMPORARY FACILITIES

Contractor is responsible for security of their property. Provide adequate outside security lighting at the temporary facilities. Trailers must be anchored to resist high winds and meet applicable state or local standards for anchoring mobile trailers. Coordinate anchoring with EM 385-1-1. The Contract Clause entitled "FAR 52.236-10, Operations and Storage Areas" and the following apply:

3.5.1 Administrative Field Offices

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

In the event a new building is constructed for the temporary project field office, it must be a minimum 12 feet in width, 16 feet in length and have a minimum of 7 feet headroom. Equip the building with approved electrical wiring, at least one double convenience outlet and the required switches and fuses to provide 110-120 volt power. Provide a work table with stool, desk with chair, two additional chairs, and one legal size file cabinet that can be locked. The building must be waterproof, supplied with a heater, have a minimum of two doors, electric lights, a telephone, a battery-operated smoke detector alarm, a sufficient number of adjustable windows for adequate light and ventilation, and a supply of approved drinking water. Provide approved sanitary facilities. Screen the windows and doors and provide the doors with deadbolt type locking devices or a padlock and heavy-duty hasp bolted to the door. Door hinge pins must be non-removable. Arrange the windows to open and to be securely fastened from the inside. Protect glass panels in windows by bars or heavy mesh screens to prevent easy access. In warm weather, provide air conditioning capable of maintaining the office at 50 percent relative humidity and a room temperature 20 degrees F below the outside temperature when the outside temperature is 95 degrees F. Unless otherwise directed by the Contracting Officer, remove the building from the site upon completion and acceptance of the work.

3.5.2 Storage Area

Construct a temporary 6 foot high chain link fence around trailers and

materials. Include plastic strip inserts, colored brown, so that visibility through the fence is obstructed. Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Do not place or store trailers, materials, or equipment outside the fenced area unless such trailers, materials, or equipment are assigned a separate and distinct storage area by the Contracting Officer away from the vicinity of the construction site but within the installation boundaries. Trailers, equipment, or materials must not be open to public view with the exception of those items which are in support of ongoing work on the current day. Do not stockpile materials outside the fence in preparation for the next day's work. Park mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks, and like equipment within the fenced area at the end of each work day.

Keep fencing in a state of good repair and proper alignment. If the Contractor elects to traverse grassed or unpaved areas which are not established roadways with construction equipment or other vehicles, cover the grassed or unpaved areas with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation must be at the Contractor's discretion. Mow and maintain grass located within the boundaries of the construction site for the duration of the project. Grass and vegetation along fences, structures, under trailers, and in areas not accessible to mowers must be edged or trimmed neatly.

3.5.3 Supplemental Storage Area

Upon request, and pending availability, the Contracting Officer will designate another or supplemental area for the use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site but will be within the installation boundaries. Maintain the area in a clean and orderly fashion and secured if needed to protect supplies and equipment. Utilities will not be provided to this area by the Government.

3.5.4 Appearance of Trailers

- a. Trailers must be roadworthy and comply with all appropriate state and local vehicle requirements. Trailers which are rusted, have peeling paint or are otherwise in need of repair will not be allowed on Installation property. Trailers must present a clean and neat exterior appearance and be in a state of good repair.
- b. Maintain the temporary facilities. Failure to do so will be sufficient reason to require their removal at the Contractor's expense.

3.5.5 Safety Systems

Protect the integrity of all installed safety systems or personnel safety devices. Obtain prior approval from the Contracting Officer if entrance into systems serving safety devices is required. If it is temporarily necessary to remove or disable personnel safety devices in order to accomplish Contract requirements, provide alternative means of protection prior to removing or disabling any permanently installed safety devices or equipment and obtain approval from the Contracting Officer.

3.5.6 Weather Protection of Temporary Facilities and Stored Materials

Take necessary precautions to ensure that roof openings and other critical

openings in the building are monitored carefully. Take immediate actions required to seal off such openings when rain or other detrimental weather is imminent, and at the end of each workday. Ensure that the openings are completely sealed off to protect materials and equipment in the building from damage.

3.5.6.1 Building and Site Storm Protection

When a warning of gale force winds is issued, take precautions to minimize danger to persons, and protect the work and nearby Government property. Precautions must include, but are not limited to, closing openings; removing loose materials, tools and equipment from exposed locations; and removing or securing scaffolding and other temporary work. Close openings in the work when storms of lesser intensity pose a threat to the work or any nearby Government property.

3.6 PLANT COMMUNICATIONS

Whenever the individual elements of the plant are located so that operation by normal voice between these elements is not satisfactory, install a satisfactory means of communication, such as telephone or other suitable devices and make available for use by Government personnel.

3.7 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, furnish and erect temporary project safety fencing at the work site. Maintain the safety fencing during the life of the Contract and, upon completion and acceptance of the work, remove from the work site.

3.8 CLEANUP

Remove construction debris, waste materials, packaging material and the like from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways must be cleaned away. Store all salvageable materials resulting from demolition activities within the fenced area described above or at the supplemental storage area. Neatly stack stored materials not in trailers, whether new or salvaged.

3.9 RESTORATION OF STORAGE AREA

Upon completion of the project remove the bulletin board, signs, barricades, haul roads, and all other temporary products from the site. After removal of trailers, materials, and equipment from within the fenced area, remove the fence. Restore areas used during the performance of the Contract to the original or better condition. Remove gravel used to traverse grassed areas and restore the area to its original condition, including top soil and seeding as necessary.

-- End of Section --

SECTION 01 57 19

TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.1 REFERENCES

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

ASSOCIATION OF ILLINOIS SOIL AND WATER CONSERVATION DISTRICTS
(AISWCD)

IUM (2020) Illinois Urban Manual

ASTM INTERNATIONAL (ASTM)

ASTM E2356 (2018) Standard Practice for Comprehensive
Building Asbestos Surveys

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA)

35 IAC 900-901 Title 35 of Illinois Administrative Code,
Subtitle H: Noise, Chapter I: Pollution
Control Board

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM)

327 IAC 2-6.1 Indiana Administrative Code, Volume 6,
Title 327, Article 2, Rule 6.1. Spills;
Reporting, Containment, and Response

327 IAC 15-5 Indiana Administrative Code, Volume 6,
Title 327, Article 15, Section 5. Storm
Water Run-off Associated with Construction
Activity

327 IAC 15-5-6 Indiana Administrative Code, Volume 6,
Title 327, Article 15, Section 5-6.
Submittal of an NOI Letter and
Construction Plans

327 IAC 15-5-6.5 Indiana Administrative Code, Volume 6,
Title 327, Article 15, Section 5-6.5.
Requirements for Construction Plans

327 IAC 15-5-7 Indiana Administrative Code, Volume 6,
Title 327, Article 15, Section 5-7.
General Requirements for Storm Water
Quality Control

INSTRUCTIONS AND STANDARDS FOR NAVBASE GUANTANAMO BAY CUBA
(COMNAVBASEGTMOINST)

1710.10 Outdoor Recreational and Wildlife

Animal Building

FJ25AB

Instruction

4400.2A Consolidated Hazardous Material
Reutilization and Inventory Management
Program

5090.1 Hazardous Waste Management Plan

5090.4 Standard Operating Procedures for Landfill

5090.7 Pollution Control Procedures for Oil and
Hazardous Substances

5090.8 Asbestos Program Management

5100.13 Hazardous Material/Excess Hazardous
Material Control and Safety Program

FGS (1994) Final Governing Standards for
Environmental Protection by U.S. Forces in
Cuba

PUGET SOUND CLEAN AIR AGENCY (PSCAA)

PSCAA Regulation Regulation I, II, and III

STATE OF VIRGINIA ADMINISTRATIVE CODE (VAC)

9 VAC 25-840 Title 9, Agency 25, Chapter 840: Erosion
And Sediment Control Regulations

9 VAC 25-850 Title 9, Agency 25, Chapter 850: Erosion
And Sediment Control And Stormwater
Management Certification Regulations

9 VAC 25-870 Title 9, Agency 25, Chapter 870: Virginia
Stormwater Management Program (VSMP)
Regulation

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety -- Safety and Occupational
Health (SOH) Requirements

U.S. DEPARTMENT OF DEFENSE (DOD)

DOD 4715.05 (2020) Overseas Environmental Baseline
Guidance Document: Conservation

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA SW-846 (Third Edition; Update IV) Test Methods
for Evaluating Solid Waste:
Physical/Chemical Methods

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.1053 Respirable Crystalline Silica

29 CFR 1910.1200	Hazard Communication
29 CFR 1926.1153	Respirable Crystalline Silica
40 CFR 50	National Primary and Secondary Ambient Air Quality Standards
40 CFR 60	Standards of Performance for New Stationary Sources
40 CFR 61.145	Standard for Demolition and Renovation
40 CFR 63	National Emission Standards for Hazardous Air Pollutants for Source Categories
40 CFR 64	Compliance Assurance Monitoring
40 CFR 68	Chemical Accident Prevention Provisions
40 CFR 82	Protection of Stratospheric Ozone
40 CFR 112	Oil Pollution Prevention
40 CFR 122.26	Storm Water Discharges (Applicable to State NPDES Programs, see section 123.25)
40 CFR 152	Pesticide Registration and Classification Procedures
40 CFR 152 - 186	Pesticide Programs
40 CFR 241	Guidelines for Disposal of Solid Waste
40 CFR 243	Guidelines for the Storage and Collection of Residential, Commercial, and Institutional Solid Waste
40 CFR 258	Subtitle D Landfill Requirements
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 261.7	Residues of Hazardous Waste in Empty Containers
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 262.11	Hazardous Waste Determination and Recordkeeping
40 CFR 262.34	Standards Applicable to Generators of Hazardous Waste-Accumulation Time
40 CFR 263	Standards Applicable to Transporters of Hazardous Waste

Animal Building

FJ25AB

40 CFR 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 266	Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities
40 CFR 268	Land Disposal Restrictions
40 CFR 273	Standards for Universal Waste Management
40 CFR 273.2	Standards for Universal Waste Management - Batteries
40 CFR 273.3	Standards for Universal Waste Management - Pesticides
40 CFR 273.4	Standards for Universal Waste Management - Mercury Containing Equipment
40 CFR 273.5	Standards for Universal Waste Management - Lamps
40 CFR 273.6	Applicability - Aerosol Cans
40 CFR 279	Standards for the Management of Used Oil
40 CFR 300	National Oil and Hazardous Substances Pollution Contingency Plan
40 CFR 300.125	National Oil and Hazardous Substances Pollution Contingency Plan - Notification and Communications
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
40 CFR 403	General Pretreatment Regulations for Existing and New Sources of Pollution
40 CFR 745	Lead-Based Paint Poisoning Prevention in Certain Residential Structures
40 CFR 761	Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials

	Communications, Emergency Response Information, and Training Requirements
49 CFR 172.101	Hazardous Material Regulation-Purpose and Use of Hazardous Material Table
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
49 CFR 178	Specifications for Packagings
77 FR 12286	Final National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities

WASHINGTON STATE ADMINISTRATIVE CODE (WAC)

WAC-173-60	Maximum Environmental Noise Levels
WAC-173-160	Minimum Standards for Construction and Maintenance of Wells
WAC-173-303	Washington Dangerous Waste Regulations
WAC-173-303-330	Personnel Training
WAC-173-303-573	Standards for Universal Waste Management
WAC-173-303-573(2)	Standards for Universal Waste Management - Batteries
WAC-173-303-573(3)	Standards for Universal Waste Management - Mercury-containing Equipment
WAC-173-303-573(5)	Standards for Universal Waste Management - Lamps
WAC-173-350	Solid Waste Handling Standards
WAC-222-30	Timber Harvesting
WAC-246-290	Department of Health Drinking Water Regulation

WASHINGTON STATE DEPARTMENT OF ECOLOGY (WSDE)

WSDE SMM	(2014) Washington State Stormwater Management Manual for Western Washington

WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR)

s. NR 415, Wis. Adm. Code	Control of Particulate Emissions

1.2 DEFINITIONS

1.2.1 Class I and II Ozone Depleting Substance (ODS)

Class I ODS is defined in Section 602(a) of The Clean Air Act. A list of

Class I ODS can be found on the EPA website at the following weblink.
<https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances>.

Class II ODS is defined in Section 602(s) of The Clean Air Act. A list of Class II ODS can be found on the EPA website at the following weblink.
<https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances>.

1.2.2 Contractor Generated Hazardous Waste

Contractor generated hazardous waste is materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e., methyl ethyl ketone, toluene), waste thinners, excess paints, excess solvents, waste solvents, excess pesticides, and contaminated pesticide equipment rinse water.

1.2.3 Electronics Waste

Electronics waste is discarded electronic devices intended for salvage, recycling, or disposal.

1.2.4 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally or historically.

1.2.5 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2.6 Hazardous Debris

As defined in paragraph SOLID WASTE, debris that contains listed hazardous waste (either on the debris surface, or in its interstices, such as pore structure) in accordance with 40 CFR 261. Hazardous debris also includes debris that exhibits a characteristic of hazardous waste in accordance with 40 CFR 261.

1.2.7 Hazardous Materials

Hazardous material is any material that: Is defined in 49 CFR 171, listed in 49 CFR 172, regulated as a hazardous material in accordance with 49 CFR 173; or requires a Safety Data Sheet (SDS) in accordance with 29 CFR 1910.1200; or during end use, treatment, handling, packaging, storage, transportation, or disposal meets or has components that meet or have potential to meet the definition of a hazardous waste as defined by 40 CFR 261 Subparts A, B, C, or D. Designation of a material by this definition, when separately regulated or controlled by other sections or

directives, does not eliminate the need for adherence to that hazard-specific guidance which takes precedence over this section for "control" purposes. Such material includes ammunition, weapons, explosive actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical supplies, medical waste and infectious materials, bulk fuels, radioactive materials, and other materials such as asbestos, mercury, and polychlorinated biphenyls (PCBs).

1.2.8 Hazardous Waste

Hazardous Waste is any material that meets the definition of a solid waste and exhibits a hazardous characteristic (ignitability, corrosivity, reactivity, or toxicity) as specified in 40 CFR 261, Subpart C, or contains a listed hazardous waste as identified in 40 CFR 261, Subpart D, or meets a state, local, or host nation definition of a hazardous waste.

1.2.9 Installation Pest Management Coordinator

Installation Pest Management Coordinator (IPMC) is the individual officially designated by the Installation Commander to oversee the Installation Pest Management Program and the Installation Pest Management Plan.

1.2.10 Land Application

Land Application means spreading or spraying discharge water at a rate that allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" must occur. Comply with federal, state, and local laws and regulations.

1.2.11 Municipal Separate Storm Sewer System (MS4) Permit

MS4 permits are those held by municipalities or installations to obtain NPDES permit coverage for their stormwater discharges.

1.2.12 National Pollutant Discharge Elimination System (NPDES)

The NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

1.2.13 Oily Waste

Oily waste are those materials that are, or were, mixed with Petroleum, Oils, and Lubricants (POLs) and have become separated from that POLs. Oily wastes also means materials, including wastewaters, centrifuge solids, filter residues or sludges, bottom sediments, tank bottoms, and sorbents which have come into contact with and have been contaminated by, POLs and may be appropriately tested and discarded in a manner which is in compliance with other state and local requirements.

This definition includes materials such as oily rags, "kitty litter" sorbent clay and organic sorbent material. These materials may be land filled provided that: It is not prohibited in other state regulations or local ordinances; the amount generated is "de minimus" (a small amount); it is the result of minor leaks or spills resulting from normal process operations; and free-flowing oil has been removed to the practicable extent possible. Large quantities of this material, generated as a result of a major spill or in lieu of proper maintenance of the processing equipment,

are a solid waste. As a solid waste, perform a hazardous waste determination prior to disposal. As this can be an expensive process, it is recommended that this type of waste be minimized through good housekeeping practices and employee education.

1.2.14 Pesticide

Pesticide is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

1.2.15 Pesticide Treatment Plan

A plan for the prevention, monitoring, and control to eliminate pest infestation.

1.2.16 Pests

Pests are arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

1.2.17 Project Pesticide Coordinator

The Project Pesticide Coordinator (PPC) is an individual who resides at a Civil Works Project office and who is responsible overseeing of pesticide application on project grounds.

1.2.18 Regulated Waste

Regulated waste are solid wastes that have specific additional federal, state, or local controls for handling, storage, or disposal.

1.2.19 Sediment

Sediment is soil and other debris that have eroded and have been transported by runoff water or wind.

1.2.20 Solid Waste

Solid waste is a solid, liquid, semi-solid or contained gaseous waste. A solid waste can be a hazardous waste, non-hazardous waste, or non-Resource Conservation and Recovery Act (RCRA) regulated waste. Types of solid waste typically generated at construction sites may include:

1.2.20.1 Debris

Debris is non-hazardous solid material generated during the construction, demolition, or renovation of a structure that exceeds 2.5-inch particle size that is: a manufactured object; plant or animal matter; or natural geologic material (for example, cobbles and boulders), broken or removed concrete, masonry, and rock asphalt paving; ceramics; roofing paper and shingles. Inert materials [may] [may not] be reinforced with or contain ferrous wire, rods, accessories and weldments. A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on

visual inspection.

1.2.20.2 Clean Construction and Demolition Debris (CCDD)

As defined by the Illinois Environmental Protection Agency, CCDD is uncontaminated broken concrete without protruding metal bars, bricks, rock, stone, or reclaimed asphalt pavement generated from construction or demolition activities. When uncontaminated soil is mixed with any of these materials, the uncontaminated soil is considered CCDD.

1.2.20.3 Green Waste

Green waste is the vegetative matter from landscaping, land clearing and grubbing, including, but not limited to, grass, bushes, scrubs, small trees and saplings, tree stumps and plant roots. Marketable trees, grasses and plants that are indicated to remain, be re-located, or be re-used are not included.

1.2.20.4 Material Not Regulated As Solid Waste

Material not regulated as solid waste is nuclear source or byproduct materials regulated under the Federal Atomic Energy Act of 1954 as amended; suspended or dissolved materials in domestic sewage effluent or irrigation return flows, or other regulated point source discharges; regulated air emissions; and fluids or wastes associated with natural gas or crude oil exploration or production.

1.2.20.5 Non-Hazardous Waste

Non-hazardous waste is waste that is excluded from, or does not meet, hazardous waste criteria in accordance with 40 CFR 261.

1.2.20.6 Recyclables

Recyclables are materials, equipment and assemblies such as doors, windows, door and window frames, plumbing fixtures, glazing and mirrors that are recovered and sold as recyclable, [wiring,] [insulated/non-insulated copper wire cable,] [wire rope,] and structural components. It also includes commercial-grade refrigeration equipment with Freon removed, household appliances where the basic material content is metal, clean polyethylene terephthalate bottles, cooking oil, used fuel oil, textiles, high-grade paper products and corrugated cardboard, stackable pallets in good condition, clean crating material, and clean rubber/vehicle tires. Metal meeting the definition of lead contaminated or lead based paint contaminated [may] [may not] be included as recyclable if sold to a scrap metal company. Paint cans that meet the definition of empty containers in accordance with 40 CFR 261.7 may be included as recyclable if sold to a scrap metal company.

1.2.20.7 Surplus Soil

Surplus soil is existing soil that is in excess of what is required for this work, including aggregates intended, but not used, for on-site mixing of concrete, mortars, and paving. Contaminated soil meeting the definition of hazardous material or hazardous waste is not included and must be managed in accordance with paragraph HAZARDOUS MATERIAL MANAGEMENT.

1.2.20.8 Scrap Metal

This includes scrap and excess ferrous and non-ferrous metals such as reinforcing steel, structural shapes, pipe, and wire that are recovered or collected and disposed of as scrap. Scrap metal meeting the definition of hazardous material or hazardous waste is not included.

1.2.20.9 Wood

Wood is dimension and non-dimension lumber, plywood, chipboard, hardboard. Treated or painted wood that meets the definition of lead contaminated or lead based contaminated paint is not included. Treated wood includes, but is not limited to, lumber, utility poles, crossties, and other wood products with chemical treatment.

1.2.21 Surface Discharge

Surface discharge means discharge of water into drainage ditches, storm sewers, or creeks meeting the definition of "waters of the United States". Surface discharges from construction sites are discrete, identifiable sources and require a permit from the governing agency. Comply with federal, state, and local laws and regulations.

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, or "waters of the United States" and would require a permit to discharge water from the governing agency. All projects with land disturbances greater than or equal to one acre in total area must have a National Pollution Discharge Elimination System (NPDES) Construction Site Activity Storm Water Permit to discharge surface water from a construction site, issued by the Illinois Environmental Protection Agency. All projects with discharge of dredged or fill material to waters of the United States must have a Section 401 Water Quality Permit issued by the Illinois Environmental Protection Agency.

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, or "waters of the United States". All projects with land disturbances greater than or equal to one acre in total area must have a National Pollution Discharge Elimination System (NPDES) Construction Site Activity Storm Water Permit, issued by the Indiana Department of Environmental Management. All projects with discharge of dredged or fill material to waters of the United States must have a Section 401 Water Quality Permit issued by the Indiana Department of Environmental Management.

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, or "waters of the United States". All projects with land disturbances greater than or equal to one acre in total area must have a National Pollution Discharge Elimination System (NPDES) Construction Site Activity Storm Water Permit, issued by the Wisconsin Department of Natural Resources (WDNR). All projects with discharge of dredged or fill material to waters of the United States must comply with Sections 404 and 401 of the

Clean Water Act, including obtaining all required permits and approvals.

1.2.22 Wastewater

Wastewater is the used water and solids that flow through a sanitary sewer to a treatment plant.

1.2.22.1 Stormwater

Stormwater is any precipitation in an urban or suburban area that does not evaporate or soak into the ground, but instead collects and flows into storm drains, rivers, and streams.

1.2.23 Waters of the United States

Waters of the United States means Federally jurisdictional waters, including wetlands, that are subject to regulation under Section 404 of the Clean Water Act or navigable waters, as defined under the Rivers and Harbors Act.

1.2.24 Wetlands

Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

1.2.25 Universal Waste

The universal waste regulations streamline collection requirements for certain hazardous wastes in the following categories: batteries, pesticides, mercury-containing equipment (for example, thermostats), and lamps (for example, fluorescent bulbs). The rule is designed to reduce hazardous waste in the municipal solid waste (MSW) stream by making it easier for universal waste handlers to collect these items and send them for recycling or proper disposal. These regulations can be found at 40 CFR 273.

1.2.26 Location Specific Universal Waste

Any of the following dangerous waste that are subject to the universal waste requirements of WAC-173-303-573: Batteries as described in WAC-173-303-573(2); Lamps as described in WAC-173-303-573(5); Mercury-containing equipment as described in WAC-173-303-573(3).

1.2.27 Dangerous Waste

Waste defined as dangerous waste in accordance with WAC-173-303. This includes, but is not limited to, hazardous waste, extremely hazardous waste and state-only dangerous waste.

1.2.28 Encountered Waste

Material that is of Government origin that becomes a waste during construction at or on Government property. This term includes both foreseen and unforeseen Government waste discovered at the worksite.

1.2.29 Firewood

Raw, woody material cut into short lengths and burned to produce energy.

1.2.30 Fugitive Dust

Particulate matter or any visible air contaminant (smoke, dust, or fume) other than uncombined water that is not collected by a capture system and emitted from a stack, but is released to the atmosphere at the point of generation.

1.2.31 Ozone Depleting Substance (ODS) Substitute

Any chemical or product, whether existing or new, that is used by any person as an EPA-approved replacement for a Class I or Class II ODS in a given refrigeration or air-conditioning end-use.

1.2.32 Refrigerant

Any substance consisting in part or whole of a Class I or Class II ODS, or an ODS substitute that is used for heat transfer purposes and provides a cooling effect.

1.2.33 Refuse

Includes, but is not limited to garbage, rubbish, trash, some soils, and non-painted demolition and construction debris. The Government will designate refuse. When designated as "refuse," the Government has determined the waste is not "Dangerous Waste."

1.2.34 Sewage

Liquid waste designated by the Government as "domestic sanitary sewage" and normally discharged through domestic sanitary sewage systems. Liquids designated as "sewage" include human body waste, and wastewater from sinks, showers, laundries, dishwashers, and garbage disposals when these liquids use only chemicals approved by the Government for discharge into the sanitary sewer.

1.2.35 Spill Event

A spill is any release of oil or hazardous substances to the water or ground that is not controlled or permitted. This includes any spilling, leaking, pumping, emitting, discharging, injecting, escaping, leaching, disposing, or dumping of liquid or solid material that is not authorized in writing by the Contracting Officer.

1.2.35.1 Reportable Release

A reportable release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of a known or unknown material or hazardous substance that poses an immediate threat to human health or the environment to the air, soil, or water. Reportable releases are: a sheen of oil on the water; a violation of the Installation's or project's water permit (NPDES permit); a sewage spill that threatens human health or the environment; a Comprehensive Environmental Response, Compensation, and Liability Act reportable quantity for hazardous/toxic substances (40 CFR 302); an air or hazardous substance release that is a threat to human health or the

environment, or released outside the facility boundaries; any discharge from an underground storage tank regulated under WAC 173-360; or oil spilled to the ground or to permeable secondary containment of 42 gallons and greater.

1.2.35.2 Non-emergency Spill Event

A non-emergency spill event is a discharge of a known material or any hazardous substance that does not pose an immediate threat to human health or the environment, can be cleaned up as part of normal housekeeping by the personnel who discovered the spill, and is not released on the soil or into any waterway inlet (for example, storm drain) or outside Navy property boundaries.

1.2.36 Timber, Merchantable

Any raw material yielded by a forest that is of a size, quality and condition suitable for marketing under given economic conditions, even if it is situated such that it is not immediately accessible for logging.

1.2.37 Nonroad Engine

Any internal combustion engine, except motor vehicle (highway engines, stationary engines, or engines that remain at one location for more than 12 months), engines used solely for competition, or engines used in aircraft. This definition is based on the principle of mobility and portability, and includes engines installed on (1) self-propelled equipment, (2) equipment that is propelled while performing its function, or (3) equipment that is portable or transportable, as indicated by the presence of wheels, skids, carrying handles, dolly, trailer, or platform. Examples of regulated applications include farm tractors, excavators, bulldozers, wheel loaders, backhoe loaders, road graders, diesel lawn tractors, logging equipment, portable generators, skid steer loaders, or forklifts.

[1.2.38 Landfill-Controlled Waste

Waste containing harmful substances but not designated as dangerous in accordance with WAC-173-303 that are screened by a receiving facility to ensure that it meets the requirements of their operating permit. Examples include petroleum-contaminated soil, abrasive blast grit, street or dry-dock sweepings, treated wood, oily debris, and waste containing free liquids as determined by the Paint Filter Liquids Test method 9095.

]1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Waste Originator Training Certification; G, [____]

Animal Building

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[PSCAA Nonroad Engine Notification Form; G, [_____]]

[Notice of Construction, [PSCAA] [ORCAA] [NWCAA]; G, [_____]]

[Dewatering Permit]

[[Florida Environmental Resource Permit]

[Excavation Permits; G, [_____]]

Storage Material Inventory; G, [_____]]

Preconstruction Survey

Regulatory Notifications; G, [_____]]

Environmental Manager Qualifications; G, [_____]]

Employee Training Records; G, [_____]]

Environmental Protection Plan; G, [_____]]

Dirt and Dust Control Plan; G, [_____]]

Solid Waste Management Permit; G, [_____]]

[Stormwater Pollution Prevention Plan (SWPPP); G, [_____]]

[[Stormwater Notice of Intent (for NPDES coverage under the general permit for construction activities); G, [_____]]

[Spill Prevention Control And Countermeasure (SPCC) Plan; G, [_____]]

[Project Report]

[[Contractor's Operation and Maintenance (O & M) Plan]

[SD-06 Test Reports]

Monthly Solid Waste Disposal Report; G, [_____]]

[Inspection Reports]

[[Laboratory Analysis]

[SD-07 Certificates]

ECATTS Certificate Of Completion; G, [_____]]

Employee Training Records; G, [_____]]

[Erosion and Sediment Control Inspector Qualifications]

[]

Certificate of Competency

- Storm Drain and Sanitary Sewer Discharge Approval; G, [_____]
- [Monthly Project Waste Summary Report
-][Landfill Disposal Form; G, [_____]
-][Dangerous Waste Profile; G, [_____]
-][Dangerous Waste Manifests; G, [_____]
-][Contractor Request for 45/90-Day Hazardous Waste Accumulation Certification/Recertification; G, [_____]
-][Contractor Request for Hazardous Waste Satellite Accumulation Area (SAA) Registration; G, [_____]
-] Accumulation Area Inspection Record
- [Hazardous Waste Accumulation Area Registration Form
-] Certificate Of Final Disposal; G, [_____]

SD-11 Closeout Submittals

- Refrigerant Work Checklist; G, [_____]
- [Refuse and Recycle Quantity Form; G, [_____]
-][Project Completion Report; G, [_____]
-][Operation and Maintenance Records (Air Pollution Sources)
-] Notice of Completion, [PSCAA] [NWCAA] [ORCAA]
- Solid Waste Tracking Sheet
- Regulatory Notifications; G, [_____]
- Assembled Employee Training Records; G, [_____]
- Solid Waste Management Permit; G, [_____]
- [Stormwater Pollution Prevention Plan Compliance Notebook; G, [_____]
-][Stormwater Notice of Termination (for NPDES coverage under the general permit for construction activities); G, [_____]
-][As-Built Topographic Survey
-] Waste Determination Documentation; G, [_____]
- Project Solid Waste Disposal Documentation Report; G, [_____]

Sales Documentation; G, [_____]

[Contractor Certification

] Hazardous Waste/Debris Management; G, [_____]

Disposal Documentation for Hazardous and Regulated Waste; G,
[_____]

Contractor Hazardous Material Inventory Log; G, [_____]

[Hazardous Waste Inspection Logs; G, [_____]

] 1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Protect the environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire duration of this Contract. Comply with federal, state, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

Tests and procedures assessing whether construction operations comply with Applicable Environmental Laws may be required. Analytical work must be performed by qualified laboratories; and where required by law, the laboratories must be certified.

1.4.1 Training in Environmental Compliance Assessment Training and Tracking System (ECATTS)

1.4.1.1 Personnel Requirements

The Environmental Manager is responsible for environmental compliance on projects. The Environmental Manager[and other staff], must complete applicable ECATTS training modules (installation specific or general) prior to starting respective portions of on-site work under this Contract. If personnel changes occur for any of these positions after starting work, replacement personnel must complete applicable ECATTS training within 14 days of assignment to the project.

1.4.1.2 Certification

Submit an ECATTS certificate of completion for personnel who have completed the required ECATTS training. This training is web-based and can be accessed from any computer with Internet access using the following instructions.

Register for NAVFAC Environmental Compliance Assessment, Training, and Tracking System, by logging on to <https://environmentaltraining.ecatts.com/>. Obtain the password for registration from the Contracting Officer.

1.4.1.3 Refresher Training

This training has been structured to allow contractor personnel to receive credit under this contract and to carry forward credit to future contracts. Ensure the Environmental Manager review their training plans for new modules or updated training requirements prior to beginning work. Some training modules are tailored for specific state regulatory requirements; therefore, Contractors working in multiple states will be required to retake modules tailored to the state where the contract work is being performed.

1.4.2 Conformance with the Environmental Management System

Perform work under this contract consistent with the policy and objectives identified in the installation's Environmental Management System (EMS). Perform work in a manner that conforms to objectives and targets of the environmental programs and operational controls identified by the EMS. Support Government personnel when environmental compliance and EMS audits are conducted by escorting auditors at the Project site, answering questions, and providing proof of records being maintained. Provide monitoring and measurement information as necessary to address environmental performance relative to environmental, energy, and transportation management goals. In the event an EMS nonconformance or environmental noncompliance associated with the contracted services, tasks, or actions occurs, take corrective and preventative actions. In addition, employees must be aware of their roles and responsibilities under the installation EMS and of how these EMS roles and responsibilities affect work performed under the contract.

Coordinate with the installation's EMS coordinator to identify training needs associated with environmental aspects and the EMS, and arrange training or take other action to meet these needs. Provide training documentation to the Contracting Officer. The Installation Environmental Office will retain associated environmental compliance records. Make EMS Awareness training completion certificates available to Government auditors during EMS audits and include the certificates in the Employee Training Records. See paragraph EMPLOYEE TRAINING RECORDS.

1.5 SPECIAL ENVIRONMENTAL REQUIREMENTS

Comply with the special environmental requirements listed here [_____] and attached at the end of this section.

1.5.1 Mid-Atlantic

Comply with the following state, regional, and local requirements.

1.5.1.1 Virginia

1.5.1.1.1 Definition and Disposal Requirements of Empty Paint Cans

Paint Cans: Paint cans that are empty (free of liquids and as defined in 40 CFR 261.7) of paints, solvents, thinners and adhesives may be disposed of in dumpsters.

Metal paint cans that meet the empty standard can be placed in dumpsters marked "metal only"; plastic cans may be placed in solid waste dumpsters. Manage paint cans with liquid or more than one inch of solidified oil-based paint as a hazardous waste and label properly. Manage paint cans with

excess water-based paint as non-hazardous waste provided that they do not contain free liquids or contain any substance with a hazardous characteristic as defined in 40 CFR 261. Contact NAVFAC MIDLANT Environmental Services for management requirements.

1.5.1.1.2 Erosion and Sediment Control Measures and Stormwater Management

1.5.1.1.2.1 Erosion and Sediment Control

Submit an erosion and sediment control plan, and comply with the requirements specified in the Virginia Erosion and Sediment Control Law and Regulations. (Virginia Code: 9 VAC 25-840). Obtain a Certificate of Competency in accordance with 9 VAC 25-850.

1.5.1.1.2.2 Construction Dewatering

Construction site stormwater runoff must be treated using proper erosion control measures or stormwater management practices prior to release from the construction site. Pollutants, including but not limited to chemicals, fuels, lubricants, sewage, paints, sedimentation, and other harmful materials must not be discharged into or alongside any river, stream, or impoundment, or into any channels leading to them. Implement appropriate erosion and sediment control measures to all disturbed areas or bare soils to prevent unauthorized offsite sedimentation. Apply stabilization measures to denuded portions of a project that are at final grade or where work has temporarily ceased within 7 days.

1.5.1.1.3 Virginia Stormwater Management

Where land disturbance is equal to or exceeds one acre, prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) and comply with the requirements specified in the Virginia Stormwater Management Law and Regulations (Virginia Code: 9 VAC 25-870). Obtain Certificate of Competency in accordance with 9 VAC 25-850.

1.5.1.1.3.1 Stormwater General Permit for Construction Activities Registration Statement

In accordance with 9 VAC 25-870, submit a Registration Statement to the State to obtain Virginia Stormwater Management Program General Permit coverage, and as required under the General Permit, develop a SWPPP for the project. The SWPPP must meet the requirements of the State General Permit for storm water discharges from construction activities. Submit the Registration Statement and appropriate permit fees to the appropriate state agency for approval a minimum of 15 calendar days prior to the start of any land disturbing activities. Maintain an approved copy of the SWPPP at the onsite construction office, and continually update as regulations require, reflecting current site conditions.

Coverage under this permit requires the Contractor to prepare a SWPPP, prepare and submit a Registration Statement and provide the permit fee to the responsible state agency before any land disturbing activities begin. File for permit coverage on behalf of both the Contractor and the Construction Officer, and file a Notice of Termination once construction is complete and the site is stabilized with a final sustainable cover. Install, inspect, maintain best management practices (BMPs), and submit stormwater BMP inspection reports and SWPPP inspection reports as required under the terms and conditions of the permit. Ensure construction operations and management comply with the terms and conditions of the

general permit for stormwater discharges from construction activities.

1.5.1.1.3.2 Stormwater General Permit Inspection Reports

Complete and document, in the SWPPP Notebook, the Stormwater Inspection Reports as required by the State VSMP General Permit. The Stormwater inspections reports must include items required by the General Permit and must be completed at the inspection frequency detailed in 9 VAC 25-870. Obtain certificate of competency in accordance with 9 VAC 25-850.

1.5.1.1.4 Asbestos Abatement and Notification Procedures

Structures must be surveyed for the presence of asbestos prior to demolition or renovation in accordance with 40 CFR 61.145. A structure is defined as including any load-bearing portion of a structure. The survey must be performed by a licensed, certified, accredited asbestos inspector in accordance with ASTM E2356.

Notify EPA and Virginia Department of Labor and Industry (VADOLI) at least 20 calendar days before start of asbestos abatement if asbestos is expected to total at least 260 linear feet, 160 square feet, or 35 cubic feet. Provide copies of notifications to the environmental office (Air Manager) through the Contracting Officer prior to beginning work. Make notifications for any project that includes asbestos abatement (and for all demolition projects, regardless of whether asbestos containing materials are present in the structure or facility) in accordance with paragraph DEMOLITION. Notification is not required if asbestos is nonfriable asbestos containing roofing, flooring, or siding materials that when installed, encapsulated, or removed do not become friable. If the material is damaged, the matrix binding the asbestos fibers has deteriorated, or mechanical removal results in more-than-incidental breakage, then notification is required. Activities such as grinding, mechanical chipping, sawing or drilling can make the asbestos containing material friable and would require notification.

1.5.1.1.4.1 Best Management Practices

Use BMPs to ensure EPA and VADOLI requirements are met, including: preventing airborne emissions via wetting asbestos prior to removal; using glove bags or containment; using HEPA-filtered vacuum or ventilation systems; restricting access to asbestos-control areas until thoroughly cleaned and inspected, and acceptable air-samples have been received. Consideration should be given to other environmental program requirements such as Clean Water Act (CWA) requirements when making decisions regarding BMPs.

1.5.1.1.4.2 Asbestos Waste Disposal

For asbestos waste disposal, phone the NAVFAC MIDLANT Environmental (EV) Service Desk to arrange pick up in your area. A manifest must be signed by this office prior to waste being removed from the installation. Provide copies of manifests and notifications to NAVFAC Mid-Atlantic EV Hazardous Waste (HW) Program Manager.

1.5.1.1.5 Hazardous Waste Requirements for Virginia Installations

1.5.1.1.5.1 Demolition

Remove the following items from the site prior to demolition:

polychlorinated biphenyls (PCBs), fluorescent bulbs, mercury and metal components (such as furnaces, ducts, and piping), and any hazardous materials. Manage lead, fluorescent bulbs, mercury-containing equipment, and any other waste as "hazardous or universal waste" as appropriate (see paragraph HAZARDOUS AND UNIVERSAL WASTE GENERATION). If the demolition activity encompasses the whole building (the building must be demolished to the ground), the resulting construction debris (including lead paint) requires Toxicity Characteristic Leaching Procedure (TCLP) analysis to make a waste determination and ensure proper management and disposal before it can be disposed as solid waste.

1.5.1.1.5.2 Hazardous and Universal Waste Generation

Hazardous and Universal Waste includes fluorescent bulbs, PCB ballast, lead paint, and mercury-containing equipment. Contact the EV HW Program Manager to set up an appropriate accumulation area. Manage waste in a satellite accumulation area (SAA), hazardous waste accumulation area (HWAA), or universal waste accumulation area (UWAA) as directed by the EV HW Program Manager through the Contracting Officer. Keep containers securely closed unless adding or removing material and waste. Ensure custodians managing the accumulation area(s) have appropriate training that has been taken within the year prior to the area being established. Training is an annual requirement that can be taken on the <https://environmentaltraining.ecatts.com/> site. Keep copies of training records and certificates on site.

Hazardous Waste Accumulation Areas (less than 90-day sites) require Virginia Department of Environmental Quality (VDEQ) notification. Notify the HA Media Manager (HW MM) 14 days prior to the start of waste accumulation. The EV HW Program Manager is authorized to notify VDEQ when Hazardous Waste Accumulation Areas are established. A copy of the Activity Hazardous Material Reutilization, Hazardous Waste Minimization and Disposal Guide will be provided by the Contracting Officer. For waste disposal, phone the NAVFAC MIDLANT EV Service Desk to arrange pick up in your area. Fax a completed DD 1348-1A to the Service Desk for all waste turn-ins. Notify the Service Desk if any containers are leaking or are in poor condition. A representative from NAVFAC MIDLANT EV Services is the authorized entity approved to sign manifests for off-site waste disposal.

[1.5.1.1.5.3 Waste Management - Disposal by the Contractor

Manage and dispose of all Hazardous Waste generated or discovered during the project. Dispose of all waste in accordance with all federal and state environmental regulations. Sign and submit all paperwork (lab analyses, profiles, manifests) and records to the Navy. Allow inspection by the Regional Environmental Core for compliance with federal, state and Navy requirements.

1.5.1.1.5.3.1 Contractor Site Custodian

- a. Designate a Site Custodian and an Alternate for waste management. Provide 24-hour phone numbers where Site Custodian and alternate can be contacted in the event of an emergency.
- b. Personnel must be trained in hazardous waste management procedures to comply with the requirements of 40 CFR 262.34 and 40 CFR 265.16.

1.5.1.1.5.3.2 Waste Accumulation

- a. Establish a SAA, UWAA or a temporary 90-Day HWAA for waste accumulation. Obtain the HW Media Manager approval. Do not use accumulation areas as lay-down areas.
- b. EV Core HW MM will notify VDEQ. Notify the HW MM 14 days prior to the start of waste accumulation. All agency notifications will originate from the Regional Environmental Core.
- c. The Site Custodian and Alternate must attend the HW MM training session for the management of the SAA, UWAA or HWAA.

1.5.1.1.5.3.3 Waste Disposal

- a. The Navy will be considered the "generator" for all wastes that are generated on Navy property, regardless if the waste was generated as result of Contractor activity.
- b. Pack, mark, label and transport all waste in accordance with Department of Transportation 49 CFR Regulations.
- c. Obtain the EPA Hazardous Waste Identification Number (EPA ID#) for the installation or off-site Contractor location, from the EV Core HW MM. Use the generator's EPA ID# on the Hazardous Waste Manifest.
 - (1) Provide the name and EPA ID Number for the Hazardous Waste Transporter and the disposal facility to the HW MM.
 - (2) Submit all waste profiles and documentation supporting the waste disposal to the HW MM for review.
- d. Obtain the Hazardous Waste Manifest signature from designated representative of the Regional Environmental Services Group (EV Services). Contact the Environmental Services Department Dispatcher to schedule this service. Obtain signature on the day the waste is scheduled to be picked up.
- e. The Contractor is to ensure that the Certificates of Disposal and Manifests are mailed to EV Services, in accordance with the all Federal and State regulations.

] 1.5.1.1.5.4 Waste Management - Disposal by the Navy

Coordinate waste management actions with the HW MM responsible for the installation. Manage all hazardous waste in accordance with federal, state and Navy Environmental Regulations. Sign and submit all paperwork (lab analyses, profiles, manifests) and records to the Navy. Allow inspection by the Regional Environmental Core for compliance with federal, state and Navy requirements.

1.5.1.1.5.4.1 Contractor Site Custodian

- a. Designate a Site Custodian and an alternate for waste management. Provide 24-hour phone numbers where Site Custodian or Site Manager and alternate can be contacted in the event of an emergency.
- b. Personnel must be trained in hazardous waste management procedures to comply with the requirements of 40 CFR 262.34 and 40 CFR 265.16.

1.5.1.1.5.4.2 Waste Accumulation

- a. Establish a Satellite Accumulation Area (SAA), Universal Waste Accumulation Area (UWAA) or a temporary 90-Day Hazardous Waste Accumulation Area (HWAA) for waste accumulation. Do not use accumulation areas as Contractor lay-down areas.
- b. EV Core HW MM will notify VDEQ. Notify the HW MM 14 days prior to the start of waste accumulation. All agency notifications will originate from the Regional Environmental Core.
- c. The Site Custodian and alternate must attend the HW MM training session for the management of the SAA, UWAA or HWAA.
- d. Manage waste containers in accordance with all applicable Federal, State, and Navy regulations.

1.5.1.1.5.4.3 Waste Disposal

- a. The Navy will be considered the "generator" (EPA definition) for all wastes that are generated on Navy property, regardless if the waste was generated as result of Contractor activity.
- b. Obtain a Job Order Number from the NAVFAC MIDLANT Financial Management Business Line, Accounts Receivable Department.
- c. Submit all waste profiles and documentation supporting the waste disposal to the HW MM for review.
- d. Coordinate with the HW MM for waste pickup by EV Services. EV Services will pick up the waste and coordinate transport to an off-site permitted Treatment Storage or Disposal facility.
- e. Obtain the Hazardous Waste Manifest signature from designated representative of the Regional EV Services. Contact the Environmental Services Department Dispatcher to schedule this service. Obtain signature on the day the waste is scheduled to be picked up.

]1.5.1.1.5.5 Excavation

If soil is to be reused onsite, sampling is not required unless otherwise directed. Excavated soil may be reused within the construction site with no testing necessary. Soil may be stockpiled until the end of the project, then reused as much as possible prior to sampling and analysis for residual soil to be disposed. Store in a manner that prevents rain from infiltrating the soil matrix and preventing runoff into the surrounding soil or pavement (for example, store the soil on top of plastic sheets and covered with plastic sheets or store in lined, covered dumpsters). If the soil is going to be relocated or disposed outside the construction site, sampling and analysis is required. Contact the installation HW Program Manager prior to disposal to determine the appropriate sampling and test parameter. Soil disposal requirements will depend on test results. If soil is to be shipped to a destination outside the fire ant quarantine area (outside of James City County, York County, Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, or Williamsburg) it MUST have a valid inspection certificate issued by an Officer of the Plant Protection and Quarantine Program (PPQ) of the U.S. Department of Agriculture. Contact the EV Pest Management Coordinator for

additional information.

1.5.1.1.5.6 Painting and Paint Removal

Air-drying cans for disposal are allowed only if liquid residue is less than one inch; keep all paint or solvent containers closed and secured when not adding or removing material or waste. Waste paint chips and debris must be collected and sampled to determine the proper disposal method. Contact the NAVFAC MIDLANT EV HW Program Manager for sampling requirements. If waste paint is determined to be hazardous, waste must be managed as hazardous and an appropriate accumulation area must be established. Contact the NAVFAC MIDLANT EV HW Program Manager for site setup.

1.5.1.1.5.7 Dumpsters

Label trash containers to appropriately describe the contents.

1.5.1.1.6 Air Requirements

1.5.1.1.6.1 Concrete Crushing

Secure an air permit for the crusher from the regulatory agency where the equipment is home-based (in Virginia contact VADEQ). Provide a copy of the permit to the EV Office (Air Program Manager) through the Contracting Officer at least 30 days prior to bringing crusher onsite.

1.5.1.1.7 Spill Response and Reporting

Report spills at Hampton Roads Navy installations to the appropriate installation Emergency Call Center (ECC) immediately upon discovery.

After notifying the installation ECC, notify the Navy point of contact. Refer to the Installation Hazardous Material Reutilization, Hazardous Waste Minimization and Disposal Guide Appendix 3 for spill contact procedures. Refer to Table 1 - Spill Reporting Contact Number for the appropriate point of contact.

1.5.1.2 Maryland

- a. Patuxent River

1.5.1.3 West Virginia

- a. Sugar Grove

1.5.1.4 Pennsylvania

1.5.1.5 New Jersey

1.5.1.6 North Carolina

1.5.1.6.1 Camp Lejeune

1.5.1.6.1.1 Removal of Waste from Camp Lejeune

Remove and dispose of rubbish and debris from Government property. Provide 24-hour advance written notice to the Contracting Office of Contractor's intention to dispose rubbish and debris off base. Disposal at sites or landfills not holding a valid state of North Carolina permit is

specifically prohibited. The prohibition also applies to sites where a permit may have been applied for but not yet obtained. If construction debris has been disposed off-base outside the parameter of this paragraph at a site without state permits or not in accordance with regulatory requirements, remove, transport, and relocate the debris to a state-approved site at Contractor expense. Pay any required fines, penalties, or fees related to the illegal disposal of construction debris. Metal will not be accepted at the Base Sanitary Landfill.

1.5.1.6.1.2 Surplus Soils Disposal for Camp Lejeune & MCAS New River

Transport all surplus soil to one of the designated locations on government property. No surplus material will leave government property without approval of installation Environmental Program Manager and the Contracting Officer. Deliver and properly manage surplus soil that cannot be reused on its originating site to one of the following locations:

- a. Area managed by G-3/5 for reuse on training areas for various maintenance activities:

3.5 acre storage, within TLZ Condor off Verona Loop Road, approximate coordinates 34d 38'07.3"N 77d 26' 41.7"W.

Coordinate with G-3/5 Project Development Specialist, MCIEAST-MCB CAMLEJ at (910) 451-5772 to determine capacity available at the storage location, prior to delivery.

This site operates Monday through Thursday between 0730 and 1500.

- b. Area managed by PWD for use as daily cover:

Base landfill, located on Piney Green Road, approximate coordinates 34d 41' 26.9"N 77d 19' 27.4"W.

Contractor must provide temporary silt fencing around designated stockpile areas as needed.

Coordinate with Landfill Manager at (910) 451-8666. Landfill use letters will be provided so that deliveries can be tracked.

This site operates Monday through Thursday between 0730 and 1500 and on Friday between 0700 and 1400.

Contact POCs listed above 7 to 10 days in advance to coordinate delivery of material at the storage locations.

Prior to transportation to one of the designated locations, screen all surplus soil to remove all objects greater than 3 inches and deleterious material. Deleterious material consists of organic debris such as roots, stumps, timber, and construction debris. Construction debris may include, but is not limited to wood, plastic, glass, concrete, brick, and metal. Dispose of deleterious material and objects larger than 3 inches as specified.

Provide all plant, material, and labor for placement and management of the surplus material at the designated locations. Grade surplus material to a flat condition and slope to provide positive drainage daily. Submit the following verification documents to the Contracting Officer for review and approval:

- (1) Photographic documentation that surplus soil has been properly placed. Photograph will include time and date of image.
- (2) Certification statement indicating volume, in cubic yards (CY), of material delivered and confirming material is free of contaminants.

NOTE: Soil contaminated with debris or chemicals cannot be disposed at the stockpile locations. If contaminated soils are suspected or confirmed through presence of UXO, odors, or visual staining, affected soils must be properly tested, manifested, and disposed of in accordance with RCRA regulations. Contact Base EMD, ER Program Manager, for more information.

1.5.1.6.2 MCAS Cherry Point

1.5.1.7 New York

1.5.1.8 Maine

1.5.1.9 District of Columbia

1.5.2 Northwest (Washington and Oregon)

Comply with the following state, regional, and local requirements.

1.5.2.1 Contractor Employee Training Records

Train employees in accordance with WAC-173-303-330. Training must be completed and documented prior to the generation of waste.

1.5.2.1.1 Waste Originator Training for NBK Bangor

NBK Environmental Division Waste Originator Training Certification is obtained by attending the Bangor Waste Originator Class and passing the Originator Test given at the end of the class. Contact the Contracting Officer for dates and times of the Originator Class.

1.5.2.1.2 Waste Originator Training for NBK Keyport

NBK Keyport Waste Originator Training Certification is obtained by taking the electronic "Hazardous Waste Site Manager/Alternate (Waste Generator)" training module (contact the Contracting Officer for an electronic copy) and passing the test at the end of the training module. Training must be completed and documented prior to the generation of waste.

1.5.2.1.3 Waste Originator Training for NBK Bremerton

Employees must be familiar (read and understand) the approved Environmental Protection Plan and the "Contractor's Guide to Environmental Compliance." Complete the ECATTS course titled "Site Specific Hazardous Waste Management Training for the Bremerton Naval Complex" in order to satisfy the Contractor Employee Training Records submittal requirement. Taken annually, this course will satisfy the refresher-training requirement of WAC-173-303 for work at NBK Bremerton and is not required on a per project basis.

1.5.2.1.4 Waste Originator Training for NBK Everett

Contractor personnel generating hazardous waste must obtain Site-Specific

Hazardous Waste Training. Allow one hour for training. Coordinate with the NAVFAC NW PWC Environmental Division, 425-304-3470.

1.5.2.2 Refrigerant Work Checklist

Submit a completed Refrigerant Work Checklist form to document that work was performed in compliance with 40 CFR 82 requirements. Complete one form for each piece of equipment containing refrigerant that must be installed, removed, or serviced as part of this Contract.

1.5.2.3 Environmental Protection Plan (EPP)

The following clarifications and requirements supplement paragraph ENVIRONMENTAL PROTECTION PLAN.

1.5.2.3.1 Solid Waste Management

[Include the Solid Waste Management Plan as part of the EPP. Identify each solid-waste disposal facility, including: the type of facility, name, physical address, phone numbers, issuing authority and approval signature, permitted entity and period of issuance for waste. Submit a copy of the county hauling permit (for nonexempt franchised haulers).] [Include the Solid Waste Management Plan from as part of the EPP. Specify name and address of permitted refuse disposal facilities (clearly state how asbestos waste will be handled). Specify procedures for providing the Contracting Officer with dump tickets that include waste quantities and dates of disposal. Specify procedures for providing refuse waste quantities, dates and certifications of disposal on the Refuse and Recycle Quantity Form.]

Perform waste management practices in accordance with[PSNS&IMFINST 5090.30, Water Pollution Prevention and Control Plan; PSNS&IMFINST 5090.5, Waste Management Plan][Bremerton-Kitsap County Health District Ordinance 2010-1, Solid Waste Regulations;][Jefferson County Code, Chapter 8.10, Solid Waste Regulations;] WAC-173-303, WAC-173-350, 40 CFR 262, 40 CFR 263, 40 CFR 264, 49 CFR 172, and 49 CFR 178.

1.5.2.3.2 Control and Management of Hazardous Waste

[1.5.2.3.2.1 Dangerous Waste Turn-in

Specify procedures to handle, process and dispose of dangerous waste. Project-generated dangerous waste must be turned into the Government for disposal. Collect dangerous waste in Department of Transportation (DOT)-approved containers in accordance with 49 CFR 171, 49 CFR 172, and 49 CFR 178 properly labeled to identify the type of waste, hazard to personnel, and the start date. Containers and labels will be supplied by the Government.

Notify the Contracting Officer 14 calendar days in advance for request of bulk containers. Request is accomplished by submission of a Waste Information Specification including an estimated quantity of dangerous waste and the number of containers. Identify dangerous waste generated within the confines of the station by the use of the station's EPA generator identification (ID) number. Accumulate in an approved satellite or 90-day accumulation area that meets the requirements set forth in WAC-173-303. Contact the Contracting Officer no more than 45 calendar days from the start date for 90-day accumulation areas to arrange for transport. Accumulate bulk dangerous waste in a 90-day area. Turn in non-bulk dangerous waste from a 90-day area within 45 days of the start

date. Turn in dangerous waste from satellite accumulation areas to the Government prior to exceeding time and quantity limits. Onsite treatment of waste is prohibited.

1.5.2.3.2.1.1 Naval Base Kitsap (NBK) Bangor

Complete Waste Information Specification in accordance with paragraph WASTE DETERMINATION DOCUMENTATION, for each waste stream. Contractor personnel submitting Waste Information Specification forms must have already received Bangor Waste Originator Training and Certification.

1.5.2.3.2.1.2 Naval Base Kitsap (NBK) Keyport

NBK Keyport will not provide a copy of the Hazardous Waste Management Plan. Information required for the control and disposal of Hazardous Waste at NBK Keyport is included in the "Hazardous Waste Site Manager/Alternate (Waste Generator)" training module and the NAVSEA Keyport Contractor's Guide to Environmental Compliance.

Explain how waste designated by the Government will be disposed of in accordance with Waste Generation Record (WGR) instructions. Complete WGR in accordance with paragraph WASTE DETERMINATION DOCUMENTATION, for each waste stream. Contractor personnel submitting WGR forms must have already received Keyport Waste Originator Training and Certification.

1.5.2.3.2.1.3 Indian Island

Complete Waste Generation Record in accordance with paragraph WASTE DETERMINATION DOCUMENTATION for each waste stream. Contractor personnel submitting WGR forms must have already received Bangor Waste Originator Training and Certification.

] 1.5.2.3.2.2 Dangerous Waste Disposal

Specify procedures to handle, process, and dispose of dangerous waste. For disposal at a TSDF, provide the following if the TSDF is not on the approved list of the Defense Reutilization and Marketing Service (DRMS) <https://www.dla.mil/DispositionServices/Offers/Disposal/HazardousWaste/QualifiedFacilitiesList/>: facility name, physical address, telephone number, description of the facility, EPA waste numbers that the facility accepts, and date of most recent Resource Conservation and Recovery Act (RCRA) inspection. If the TDSF is on the DRMS list, then provide the name and physical address.

For transporters to be used to transport dangerous waste, furnish the following: name, address, EPA ID number, and phone numbers of the transport firm and the principal Contractor. Onsite treatment of waste is prohibited.

] 1.5.2.3.3 Stormwater Management and Control

[This project disturbs more than one acre. A SWPPP[including mandatory Bremerton Naval Complex BMPs and WSDE SMM BMPs] is required.

] [A narrative of the storm water management and control is required. Include the following:

a. A brief project description

- b. Total disturbed acreage in accordance with EPA's Construction General Permit definitions.
- c. United States Waters that the project will drain onto
- d. The sequence of construction events
- e. Stormwater BMPs that will be applied to the site[including mandatory Bremerton Naval Complex BMPs].
- f. Site map showing location of BMP measures
- g. Description of periodic and routine inspections
- h. How and where hazardous materials will be handled and stored on site
- i. Exposed soil coverage practices
- j. Final site stabilization method(s)

] [1.5.2.3.4 Clean Air Act Compliance for [NBK Bangor] [NBK Keyport] [NBK Bremerton] [Everett]

Identify any air pollution generating equipment or processes that may require a Notice of Construction pursuant to[PSCAA] Regulation.

Identify portable and stationary internal combustion engines (ICEs) that will must be supplied, used, or serviced. Address compliance with 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ, and[PSCAA] Regulations as applicable. Include PSCAA Nonroad Engine Notification Form.

] 1.5.2.3.5 Clean Air Act Compliance for Whidbey Island and Indian Island

Identify any air pollution generating equipment or processes that may require a Notice of Construction pursuant to [ORCAA] [NWCAA] Regulation.

Identify portable and stationary internal combustion engines (ICEs) that must be supplied, used, or serviced. Address compliance with 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ, and [ORCAA] [NWCAA] Regulations as applicable.

As a minimum, include the following:

- a. Identify engine certification status.
- b. Identify non-resettable hour meter status.
- c. For portable (skid- or trailer-mounted) ICEs, identify the make, model, manufacture date, size, and brake horsepower.
- d. Identify methods of recording run time and reason for operation.
- e. Do NOT include motor vehicles.

1.5.2.3.6 Notice of Construction (NOC) and Notice of Completion Licenses and Permits

Allow up to 120 days to receive approval from outside regulatory agencies for NOC permits. Prepare and forward the permit application package to the

Contracting Officer for [approval] [review] and submittal to the applicable regulatory agency. Pay for associated fees. Permit approval must be obtained prior to the start of work covered by the permit. Upon completion of work, notify the Contracting Officer, who will submit the Notification of Completion to the applicable regulatory agency.

Equipment and work provided as part of this Contract must comply with the terms and conditions of the permit, and other applicable federal, state, and local air pollution-control regulations.

1.5.3 Southeast

Comply with the following state, regional, and local requirements.

1.5.3.1 Florida

[Dewatering Permit

] [Florida Environmental Resource Permit

] 1.5.3.1.1 Naval Air Station (NAS) Jacksonville

1.5.3.1.1.1 Definition: Petroleum-Contaminated Waste

Surface water, groundwater, soil, or sediment that has the presence of petroleum or petroleum products or their chemical constituents (except hazardous waste as defined in the paragraph HAZARDOUS WASTE in quantities that exceed the applicable cleanup target levels as stated in FL 62-780.

1.5.3.1.1.2 Environmental Protection Requirements

NAS Jacksonville is governed by the Federal Facilities Agreement (FFA) signed by the Government, the EPA, and the Florida Department of Environmental Protection. The FFA is incorporated by reference into this Contract and subcontracts. Specific restoration sites have been identified in the FFA, and other Contractors or Government personnel may undertake sampling, investigative work, or remediation actions related to other projects simultaneously with the efforts related to this project. Information concerning this agreement or specific site information may be obtained from the Facilities Department at NAS Jacksonville.

1.5.3.1.1.3 Employee Training Records

Maintain a copy of the training certificate at the job site showing that the required module(s) were completed in accordance with requirements in paragraph TRAINING IN ENVIRONMENTAL COMPLIANCE ASSESSMENT TRAINING AND TRACKING SYSTEM (ECATTS). Complete this training prior to starting work on this project, but not later than 30 days after award of the Contract. Contractor employees must carry a wallet-size card demonstrating that the required module(s) have been completed. The card must be presented to the Contracting Officer or the Contracting Officer's Representative upon request.

1.5.3.1.1.4 Control and Management of Hazardous Waste

Dispose of hazardous waste generated during construction through PWC Jacksonville; do not take hazardous waste off station. Pay disposal costs in accordance with PWC Jacksonville's published rates. Air-drying any containers to render them empty is prohibited.

1.5.3.1.1.5 Battery Disposal

Comply with hazardous waste requirements when disposing of waste lead-acid batteries and electrolyte.

1.5.3.1.1.6 Mercury Containing Devices Management and Disposal

Manage mercury-containing devices in compliance with hazardous waste or universal waste management and disposal, as applicable.

1.5.3.1.2 Naval Air Station (NAS) Pensacola

1.5.3.1.2.1 Excavation Permits

Before any excavation is started, obtain an approved NAS Pensacola Permit through the Contracting Officer (excavation is defined as digging or opening of an existing surface to a depth exceeding 8 inches below the existing grade, as well as driving of piles or auger borings). The permit form is self-explanatory. Fill in the applicable items on the permit and give it to the Contracting Officer in sufficient time for Station personnel to process the permit, but not less than 5 working days prior to the planned excavation.

Ensure each employee and subcontractor employee performing construction or service work on this project completes a course entitled "NAS Pensacola Environmental Compliance Training" using the website developed by the Government and Florida Department of Environmental Protection <http://www.navfac.navy.mil>. Log on: contract (lower case), Password: navfac (lower case).

After gaining entry to the website, establish a unique password. Each Contractor and subcontractor employee doing (or managing) construction or service work on this project must complete the course and have a certificate on file at the job site. Employees (except those involved in any painting, caulking, asbestos work, or well pointing) will complete training within 30 days of mobilization on this project. Employees performing painting, caulking, asbestos work, or well pointing must complete training before starting work on this project. Within 30 days of mobilization, submit a letter to the Contracting Officer certifying that employees have obtained training and provide copies of certificates. The letter must certify that future employees will obtain training in accordance with this specification requirement.

1.5.3.2 Georgia

a. Naval Submarine Base (NSB) Kings Bay

1.5.3.3 Mississippi

1.5.3.3.1 Naval Construction Battalion Command (NCBC) Gulfport

1.5.3.3.1.1 Excavation Permits

Before any excavation is started, obtain an approved NCBC Gulfport permit through the Public Works Management Engineering Division via the Contracting Officer (excavation is defined as digging or opening of an existing surface to a depth exceeding 8 inches below the existing grade, as well as driving of piles or auger borings). The permit form is

self-explanatory. Fill in the applicable items on the permit and give it to the Contracting Officer in sufficient time for Station personnel to process the permit, but not less than 5 working days prior to planned excavation.

1.5.3.3.2 Naval Air Station (NAS) Meridian

1.5.3.3.2.1 Contractor Hazardous Material Inventory Log

Submit a "Contractor Hazardous Material Inventory Log" to the Contracting Officer on the 10th day of each month. Copies of the Station-specific forms can be obtained from the Contracting Officer.

1.5.3.4 South Carolina

- a. Naval Weapons Station (NWS) Charleston

1.5.3.5 Texas

- a. Naval Air Station (NAS) Corpus Christi
- b. Naval Air Station (NAS) Dallas

1.5.3.6 Cuba

1.5.3.6.1 Naval Station, Guantanamo Bay (GTMO)

1.5.3.6.1.1 Contractor Liabilities for Environmental Protection

Obtain copies of the following GTMO instructions prior to the start of work: 4400.2A, 5090.1, 5090.4, 5090.7, 5090.8, 5100.13 and 1710.10. The station is subject to Commander Fleet Forces Command or Naval Facilities Engineering Systems Command - Southeast inspections to review compliance with environmental protection laws. A Multi-media inspection by CFFC or NAVFAC SE may include questioning of Contractor personnel who are working with or have contact with Hazardous Materials and waste.

Complete and provide documentation for environmental training required by the FGS/OEGBD and station instructions. Ensure employees, even during employee off-duty hours, are aware and comply with Station regulations.

1.5.3.6.1.2 Licenses and Permits

A permit is required for welding. Allow 14 calendar days for processing of the application. Obtain a Landfill Pass for asbestos-containing materials and solid waste being disposed at the landfill, in accordance with 5090.4. The initial stop for the Landfill Pass is the Recycling Center at Building 1751, off Rogers Road North of Sherman Avenue, for non-asbestos items, and Building 850 (Hazardous Waste Facility) for asbestos loads.

1.5.3.6.1.3 Environmental Protection Plan (EPP)

Meet with the Contracting Officer to discuss the proposed EPP 10 days after the award of Contract. Submit the EPP for further discussion, review, and approval 14 days after the meeting. The EPP should include the following, in addition to what is listed in paragraph ENVIRONMENTAL PROTECTION PLAN:

- a. A listing of any hazardous materials planned for use on the station, in accordance with 4400.2A. The total amount of hazardous material stored

onsite is to be less than 110 gallons unless preapproved by the Government. This information is included in the Station's Hazardous Material Tracking Program. To assist this effort, submit a list (including quantities) of hazardous materials to be brought to the safety station and copies of the corresponding Safety Data Sheets (SDSs). Submit this list to the Contracting Officer. Sign a Memorandum of Understanding (MOU) and comply with Station Instruction. Develop an Authorized User List (AUL) request form for each hazardous material item and update this list as additional materials are required. Barcode hazardous material items as specified in the MOU and Station Instruction. Include a plan addressing excess hazardous materials will be managed at the conclusion of each task order or at the end of the project.

- b. In accordance with Station regulations, substitute materials as necessary to reduce the generation of hazardous material and include a statement to that effect in the EPP.
- c. For major activities covering large acreage or steep slopes, submit a separate Land-Disturbing Activity Plan, as required, addressing erosion and sedimentation control in major land- clearing and grading operations.
- d. Provide a point-of-contact to address Cuban rock iguanas, Cuban boas, and other protected species that may be onsite during each phases of work associated with this Contract.

1.5.4 Southwest

Comply with the following state, regional, and local requirements.

1.5.4.1 Arizona

1.5.4.1.1 Regulatory Requirements for the Notice of Intent (NOI)

Submit a vicinity map and a NOI to the Arizona Department of Environmental Quality (ADEQ). ADEQ does not require a filing fee). If the construction project is scheduled to exceed one year, submit NAVFAC SW Legal Fee Letter to ADEQ - attach it to the NOI. Resident Officer in Charge of Construction (ROICC) or Facilities Engineering and Acquisition Division (FEAD) Contracting Officer reviews and signs NOI and NOT. If discharges to a unique or impaired water body are proposed, submit the SWPPP along with the NOI. See the General Permit for instructions. Submit NOT to ADEQ within 30 days after permit conditions have been met.

Arizona Pollutant Discharge Elimination System General Permit for Dischargers from Construction Activities to Water of the United States 2008, Permit No. AZG2013-001 expires June 3, 2025.

https://static.azdeq.gov/permits/azpdes/cgp_permit.pdf

1.5.4.2 California

1.5.4.2.1 Regulatory Requirements for the Notice of Intent

Submit a site map of the vicinity, NOI, and applicable filing fee (not to exceed \$700.00) to the State Water Resources Control Board (SERC). If the construction project is scheduled to exceed one year, submit NAVFAC SW Legal Fee Letter to SWRCB as an attachment the NOI. State of California

requires the NOI to be submitted 30 days prior to start of construction. The ROICC or FEAD Contracting Officer reviews and signs NOI.

Complete and submit the NOT to the local Regional Water Quality Control Board (RWQCB).

https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html

1.5.4.2.2 Stormwater Notice of Termination

Submittal of the NOT constitutes notice that the Government (and their Contractor) of the site identified on this form is no longer authorized to discharge storm water associated with construction activity by NPDES General Permit No. CAS000002. Submit the NOT to the appropriate Executive Officer of the RWQCB responsible for the area in which the facility is located. The ROICC or FEAD Contracting Officer reviews and signs the NOT.

1.5.4.2.3 Sampling and Analysis of Hazardous Waste

The analysis must be performed by a California certified laboratory.

1.5.4.3 Nevada

1.5.4.3.1 Regulatory Requirements for the Notice of Intent

Submit a vicinity map and NOI to the Nevada Division of Environmental Protection (NDEP). If the construction project is scheduled to exceed one year, submit NAVFAC SW Legal Fee Letter to NDEP - attach it to the NOI. ROICC or FEAD Contracting Officer reviews and signs the NOI.

Prepare and submit a complete NOT to the NDEP within 30 days after permit conditions have been met.

2002 Stormwater Nevada General Permit No. NRV10000-General Permit.

<https://ndep.nv.gov/water/water-pollution-control/permitting/stormwater-discharge-permits>

NDEP Best Management Practices Handbook:
<https://ndep.nv.gov/uploads/water-nonpoint-docs/NVBMPHandbook1994.pdf>

1.5.5 Pacific

Comply with the following state, regional and local requirements.

1.5.5.1 Control and Disposal of [Ionization Smoke Detectors] [Tritium Exit Signs]

1.5.5.1.1 Material Bagging

Remove existing [ionization smoke detectors] [and tritium exit signs,] and place like types, together (that is same manufacturer and model number) in a plastic bag. Label the bag with the following data:

Manufacturer:	Activity:
MODEL No.:	Contract No.:
Isotope and Quantity (if known):	

Animal Building

FJ25AB

1.5.5.1.2 Material Storage

Store plastic bags in 55 gallon covered drum(s). Do not seal the drum(s). Provide a label with a description of the contents and note on the label "TO BE DISPOSED OF BY RASO". Apply the label to the exterior surface of the cover and site of the drum(s). Provide a record copy of the label for each drum storage material inventory to the Contracting Officer, [the RASO at COMNAVREG Pearl Harbor,] and [_____].

1.5.5.1.3 Storage Site and Disposal

Deliver drums to [_____] [MCBH Bunker 709, Sumner Road] [PWC Pearl Harbor Bldg. [_____]] for storage and disposal of [ionization smoke detectors] [and] [tritium exit signs] [as directed by the Contracting Officer].

1.5.5.1.4 Storage and Disposal by Contractor

Store of [ionization smoke detectors] [and tritium exit signs] in accordance with federal, state, and local laws and regulations.

1.5.5.2 Hawaii

1.5.5.3 Guam

1.5.5.4 Japan

1.5.6 Europe

Comply with the following regional and local requirements.

1.5.6.1 Italy

- a. Naval Air Station (NAS) Naples
- b. Naval Air Station (NAS) Sigonella
- c. Aviano (NAVFAC EURAFCENT)

1.5.6.2 Spain

- a. Naval Station (NS) Rota

1.5.6.3 Greece

- a. Naval Support Activity (NSA) Souda Bay

1.6 QUALITY ASSURANCE

1.6.1 Preconstruction Survey and Protection of Features

This paragraph supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any onsite construction activities, perform a Preconstruction Survey of the project site with the Contracting Officer, and take photographs showing existing environmental conditions in and adjacent to the site. Submit a report for the record. Include in the report a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of

trees, shrubs and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. The Contractor and the Contracting Officer will sign this survey report upon mutual agreement regarding its accuracy and completeness. Protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference that their preservation may cause to the work under the Contract.

1.6.2 Regulatory Notifications

Provide regulatory notification requirements in accordance with federal, state and local regulations. In cases where the Government will also provide public notification (such as stormwater permitting), coordinate with the Contracting Officer. Submit copies of regulatory notifications to the Contracting Officer at least [_____] days prior to commencement of work activities. Typically, regulatory notifications must be provided for the following (this listing is not all-inclusive): demolition, renovation, NPDES defined site work, construction, removal or use of a permitted air emissions source, and remediation of controlled substances (asbestos, hazardous waste, lead paint).

1.6.3 Environmental Brief

Attend an environmental brief to be included in the preconstruction meeting. Provide the following information: types, quantities, and use of hazardous materials that will be brought onto the installation; and types and quantities of wastes/wastewater that may be generated during the Contract. Discuss the results of the Preconstruction Survey at this time.

Prior to initiating any work on site, meet with the Contracting Officer and installation Environmental Office to discuss the proposed Environmental Protection Plan (EPP) or equipment local requirement. Develop a mutual understanding relative to the details of environmental protection, including measures for protecting natural and cultural resources, required reports, required permits, permit requirements (such as mitigation measures), and other measures to be taken.

[1.6.4 Environmental Manager

Appoint in writing an Environmental Manager for the project site. The Environmental Manager is directly responsible for coordinating contractor compliance with federal, state, local, and installation requirements. The Environmental Manager must ensure compliance with Hazardous Waste Program requirements (including hazardous waste handling, storage, manifesting, and disposal); implement the EPP; ensure environmental permits are obtained, maintained, and closed out; ensure compliance with Stormwater Program requirements; ensure compliance with Hazardous Materials (storage, handling, and reporting) requirements; and coordinate any remediation of regulated substances (lead, asbestos, PCB transformers). This can be a collateral position; however, the person in this position must be trained to adequately accomplish the following duties: ensure waste segregation and storage compatibility requirements are met; inspect and manage Satellite Accumulation areas; ensure only authorized personnel add wastes to containers; ensure Contractor personnel are trained in 40 CFR requirements in accordance with their position requirements; coordinate removal of waste containers; and maintain the Environmental Records binder and required documentation, including environmental permits compliance and close-out. Submit Environmental Manager Qualifications to the Contracting Officer.

]1.6.5 Employee Training Records

Prepare and maintain Employee Training Records throughout the term of the contract meeting applicable 40 CFR requirements. Provide Employee Training Records in the Environmental Records Binder.[Ensure every employee completes a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures compliance with federal, state and local regulatory requirements for RCRA Large Quantity Generator. Provide a Position Description for each employee, by subcontractor, based on the Davis-Bacon Wage Rate designation or other equivalent method, evaluating the employee's association with hazardous and regulated wastes. This Position Description will include training requirements as defined in 40 CFR 265 for a Large Quantity Generator facility.] Submit these Assembled Employee Training Records to the Contracting Officer at the conclusion of the project, unless otherwise directed.

Train personnel to meet [EPA][state] requirements. Conduct environmental protection/pollution control meetings for personnel prior to commencing construction activities. Conduct additional meetings for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, waters of the United States, and endangered species and their habitat that are known to be in the area.[Provide copy of the Erosion and Sediment Control Inspector[Qualifications as defined by EPA][Certification as required by[state]].]

1.6.5.1 Pest Control Training

Trained personnel in pest control. Conduct a pest control meeting for personnel prior to commencing construction activities. Conduct additional meetings for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and pest infestation; familiarization with statutory and contractual pest control standards; installation and care of devices, and instruments, if required, for monitoring purposes to ensure adequate and continuous pest control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of waters of the United States, and endangered species and their habitat that are known to be in the area. Provide a Certificate of Competency for the personnel who will be conducting the pesticide application and management of pest control.

1.6.6 Non-Compliance Notifications

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with federal, state or local environmental laws or regulations, permits, and other elements of the Contractor's EPP. After receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. FAR 52.242-14 Suspension of Work provides that a suspension, delay, or interruption of work due to the fault or negligence of the Contractor allows for no adjustments to the contract for time extensions or equitable

adjustments. In addition to a suspension of work, the Contracting Officer may use additional authorities under the contract or law.

1.7 ENVIRONMENTAL PROTECTION PLAN

The purpose of the EPP is to present an overview of known or potential environmental issues that must be considered and addressed during construction. Incorporate construction related objectives and targets from the installation's EMS into the EPP. Include in the EPP measures for protecting natural and cultural resources, required reports, and other measures to be taken. Meet with the Contracting Officer or Contracting Officer Representative to discuss the EPP and develop a mutual understanding relative to the details for environmental protection including measures for protecting natural resources, required reports, and other measures to be taken. [Submit the EPP within [15] [] days after [Contractor award] [notice to proceed] and not less than [] [10] days before the [preconstruction] meeting.] [Submit the EPP not less than 60 calendar days before scheduled final site or building design approval.] Revise the EPP throughout the project to include any reporting requirements, changes in site conditions, or contract modifications that change the project scope of work in a way that could have an environmental impact. No requirement in this section will relieve the Contractor of any applicable federal, state, and local environmental protection laws and regulations. During Construction, identify, implement, and submit for approval any additional requirements to be included in the EPP. Maintain the current version onsite.

The EPP includes, but is not limited to, the following elements:

1.7.1 General Overview and Purpose

1.7.1.1 Descriptions

A brief description of each specific plan required by environmental permit or elsewhere in this Contract such as [stormwater pollution prevention plan,] [spill control plan,] [solid waste management plan,] [wastewater management plan,] [air pollution control plan,] [contaminant prevention plan,] [pesticide treatment plan,] [a historical, archaeological, cultural resources, biological resources and wetlands plan,] [traffic control plan] [Hazardous, Toxic and Radioactive Waste (HTRW) Plan] [Non-Hazardous Solid Waste Disposal Plan] [borrowing material plan] [].

1.7.1.2 Duties

The duties and level of authority assigned to the person(s) on the job site who oversee environmental compliance, such as who is responsible for adherence to the EPP, who is responsible for spill cleanup and training personnel on spill response procedures, who is responsible for manifesting hazardous waste to be removed from the site (if applicable), and who is responsible for training the Contractor's environmental protection personnel.

1.7.1.3 Procedures

A copy of any standard or project-specific operating procedures that will be used to effectively manage and protect the environment on the project site.

1.7.1.4 Communications

Communication and training procedures that will be used to convey environmental management requirements to Contractor employees and subcontractors.

1.7.1.5 Contact Information

Emergency contact information contact information (office phone number, cell phone number, and e-mail address).

1.7.2 General Site Information

1.7.2.1 Drawings

Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, jurisdictional wetlands, material storage areas, structures, sanitary facilities, storm drains and conveyances, and stockpiles of excess soil.

1.7.2.2 Work Area

Work area plan showing the proposed activity in each portion of the area and identify the areas of limited use or nonuse. Include measures for marking the limits of use areas, including methods for protection of features to be preserved within authorized work areas and methods to control runoff and to contain materials on site, and a traffic control plan.

Show where any fuels, hazardous substances, solvents, or lubricants will be stored. Provide a spill plan to address any releases of those materials.

1.7.2.3 Documentation

A letter signed by an officer of the firm appointing the Environmental Manager and stating that person is responsible for managing and implementing the Environmental Program as described in this contract. Include in this letter the Environmental Manager's authority to direct the removal and replacement of non-conforming work.

1.7.3 Management of Natural Resources

- a. Land resources
- b. Tree protection
- c. Replacement of damaged landscape features
- d. Temporary construction
- e. Stream crossings
- f. Fish and wildlife resources
- g. Wetland areas

1.7.4 Protection of Historical and Archaeological Resources

- a. Objectives

b. Methods

1.7.5 Stormwater Management and Control

a. Ground cover

b. Erodible soils

c. Temporary measures

(1) Structural Practices

(2) Temporary and permanent stabilization

d. Effective selection, implementation and maintenance of Best Management Practices (BMPs).

e. Stormwater Pollution Prevention Plan (SWPPP).

f. Construction Plan and Storm Water Pollution Prevention Plan.

(1) All projects must comply with the State of Indiana's NPDES General Permit for storm water run-off associated with construction activity, as described in 327 IAC 15-5. The Construction Plan must meet all requirements listed in 327 IAC 15-5-6.5, including, but not limited to: project narrative and supporting documents; vicinity map depicting the project site location; existing project site layout map that indicates structures, waterways, soil maps, vegetation, adjacent land-use, and topography; final project site layout map; a grading plan indicating locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil material; a drainage plan; and a Storm Water Pollution Prevention Plan. The Storm Water Pollution Prevention Plan must include all items listed in 327 IAC 15-5-7 including, but not limited to, the following: description of temporary and permanent storm water quality measures; temporary stabilization plans; permanent stabilization plans; construction sequencing describing the relationship between implementation of storm water quality measures and stages of construction, including a schedule of these activities; self-monitoring program; description of potential pollutant sources associated with construction activities; and material handling and storage.

(2) If land disturbing activities are greater than or equal to one acre, it is the responsibility of the Contractor to have the Construction Plan, which includes the Storm Water Pollution Prevention Plan, reviewed and approved by the applicable reviewing agency. The State of Indiana designates different reviewing agencies for different counties in the state. Commonly, the reviewing agency is the local Soil and Water Conservation District (SWCD) or Department of Natural Resources Division of Soil Conservation. Information on approving agencies can be obtained from the Indiana Department of Environmental Management. The reviewing agency has up to 28 calendar days from the date of submittal to review the Construction Plan. The Environmental Protection Plan must include documentation of the reviewing

agency's approval of the Construction Plan, or the Contractor may submit, in the instance that the reviewing agency has exceeded the 28 calendar day review period, documentation that the reviewing agency has exceeded the review period. If notice of a deficient plan is received, the plans must be revised to satisfy the deficiencies in accordance with 327 IAC 15-5-6 and resubmitted to the reviewing agency, at which time the 28 calendar-day review period starts over.

- (3) The Government will review the Environmental Protection Plan, including the Construction and Storm Water Pollution Prevention Plans and then will submit the Notice of Intent (NOI), along with the proof of public notice and permit fee, to the Indiana Department of Environmental Management and the appropriate reviewing agency after the plan has been approved. The Contractor will be notified of the submission date for the NOI. No land disturbing activity may take place until 48 hours after submission of the NOI. Approval of the Contractor's plan will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures.
 - (4) The Government will provide copies of the NOI, and all other Government correspondence with IDEM, to the Contractor. The Contractor must post the information required in 327 IAC 15-5-7 (b)(6) in a publicly accessible location near the main entrance of the project site. The location will be jointly agreed to by the Contractor and the Government during the Pre-Construction Conference. The Contractor must take all actions necessary to keep the NOI and correspondence protected from the weather so that it remains legible. If, in the judgment of the Contracting Officer's Representative, the documents degrade to the point of being illegible, the Contractor must replace the documents with fresh copies and remedy the problems that caused the degradation.
- g. Spill Control Plan must include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. The plan must meet the requirements of 327 IAC 2-6.1. This plan must include as a minimum:
- (1) The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual must immediately notify the Contracting Officer and the local fire department or emergency response agency in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan must contain a list of the required reporting channels and telephone numbers.
 - (2) The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.
 - (3) Training requirements for Contractor's personnel and any subcontractors, and methods of accomplishing the training.
 - (4) A list of materials and equipment to be immediately available at

the job site, tailored to cleanup work of the potential hazard(s) identified.

- (5) The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.
- (6) The methods and procedures to be used for expeditious contaminant cleanup.

The EPP must include a Stormwater Pollution Prevention Plan (SWPPP). The Government will review the EPP, including the Stormwater Pollution Prevention Plan, and then will submit the Notice of Intent (NOI) to the Illinois Environmental Protection Agency after the plan has been approved. No construction will take place before the submission of the NOI; approval of the NPDES permit requires 30 calendar days after the submission of the NOI. The Contractor may NOT begin earthmoving activities until 30 calendar days after the submission of the NOI. Approval of the Contractor's plan by the Government will not relieve the Contractor of his responsibility for control of pollutants and other environmental protection measures. Address all comments to the SWPPP generated by the Illinois Environmental Protection Agency within seven calendar days of receipt of comments. Certify, in writing, that all recommended changes have been made to the SWPPP, and must submit certification to the Contracting Officer's Representative (COR). Post, in a visible location accessible for public viewing, the IEPA response letter, to be provided by the Government, and ILR10 at the project site.

- a. A Stormwater Pollution Prevention Plan which identifies the type and location of the erosion and sediment controls to be provided. The plan must meet the requirements of the Illinois NPDES Permit No. ILR10 (included at the end of this section). The management practices, controls, and other provisions contained in the plan must be as protective as the requirements in the Illinois Urban Manual, IUM. The contents of the plan must address all items listed in Part IV of the permit, including but not limited to:

- (1) Site description, controls, maintenance, inspections, and non-stormwater discharges.
- (2) A map of the final site conditions.
- (3) A site construction plan that includes the locations and dimensions of land disturbing activities, locations of soil stockpiles, locations and dimensions of erosion control measures, and a schedule with the start and finish dates of each land disturbing activity, including the installation of erosion control measures. Provisions and a schedule for maintenance of the erosion control measures during construction must also be included in the plan.
- (4) Name and qualifications of the person(s) responsible for inspecting the site in accordance with the requirements given in ILR10.
- (5) A copy of the blank inspection checklist that will be used during ILR10 site inspections.

- (6) The plan must contain the certification statement contained in Part IV(F) of the NPDES Permit No. ILR10.

1.7.6 Protection of the Environment from Waste Derived from Contractor Operations

Control and disposal of solid and sanitary waste.

Control and disposal of hazardous waste.

This item consist of the management procedures for hazardous waste to be generated. The elements of those procedures will coincide with the Installation Hazardous Waste Management Plan when within an installation. The Contracting Officer will provide a copy of the Installation Hazardous Waste Management Plan as applicable.

As a minimum, include the following:

- a. List of the types of hazardous wastes expected to be generated
- b. Procedures to ensure a written waste determination is made for appropriate wastes that are to be generated
- c. Sampling/analysis plan, including laboratory method(s) that will be used for waste determinations and copies of relevant laboratory certifications
- d. Methods and proposed locations for hazardous waste accumulation/storage (that is, in tanks or containers)
- e. Management procedures for storage, labeling, transportation, and disposal of waste (treatment of waste is not allowed unless specifically noted)
- f. Management procedures and regulatory documentation ensuring disposal of hazardous waste complies with Land Disposal Restrictions (40 CFR 268)
- g. Management procedures for recyclable hazardous materials such as lead-acid batteries, used oil, and similar
- h. Used oil management procedures in accordance with 40 CFR 279; Hazardous waste minimization procedures
- i. Plans for the disposal of hazardous waste by permitted facilities; and Procedures to be employed to ensure required employee training records are maintained.

1.7.7 Prevention of Releases to the Environment

Procedures to prevent releases to the environment

Notifications in the event of a release to the environment

1.7.8 Regulatory Notification and Permits

List what notifications and permit applications must be made. Some permits require up to 180 days to obtain. Demonstrate that those permits have been obtained or applied for by including copies of applicable environmental

permits. The EPP will not be approved until the permits have been obtained.

1.7.9 Clean Air Act Compliance

1.7.9.1 Environmental Protection Plan

An Air Pollution Control Plan detailing provisions to assure that dust, debris, materials, trash, do not become airborne and travel off the project site. The air pollution control plan must include a dust control plan. Air pollution control must comply with s. NR 415, Wis. Adm. Code.

1.7.9.2 Haul Route

Submit truck and material haul routes along with a Dirt and Dust Control Plan for controlling dirt, debris, and dust on Installation roadways. As a minimum, identify in the plan the subcontractor and equipment for cleaning along the haul route and measures to reduce dirt, dust, and debris from roadways.

1.7.9.3 Pollution Generating Equipment

Identify air pollution generating equipment or processes that may require federal, state, or local permits under the Clean Air Act. Determine requirements based on any current installation permits and the impacts of the project. Provide a list of all fixed or mobile equipment, machinery or operations that could generate air emissions during the project to the Installation Environmental Office (Air Program Manager). Ensure required permits are obtained prior to installing and operating applicable equipment/processes.

1.7.9.4 Stationary Internal Combustion Engines

Identify portable and stationary internal combustion engines that will be supplied, used or serviced. Comply with 40 CFR 60 Subpart IIII, 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ, and local regulations as applicable. At minimum, include the make, model, serial number, manufacture date, size (engine brake horsepower), and EPA emission certification status of each engine. Maintain applicable records and log hours of operation and fuel use. Logs must include reasons for operation and delineate between maintenance/testing, emergency, and non-emergency operation.

1.7.9.5 Refrigerants

Identify management practices to ensure that heating, ventilation, and air conditioning (HVAC) work involving refrigerants complies with 40 CFR 82 requirements. Technicians must be certified, maintain copies of certification on site, use certified equipment and log work that requires the addition or removal of refrigerant. Any refrigerant reclaimed is the property of the Government, coordinate with the Installation Environmental Office to determine the appropriate turn in location.

1.7.9.6 Air Pollution-engineering Processes

Identify planned air pollution-generating processes and management control measures (including, but not limited to, spray painting, abrasive blasting, demolition, material handling, fugitive dust, and fugitive emissions). Log hours of operations and track quantities of materials used.

1.7.9.7 Monitoring

For the protection of public health, monitor and control contaminant emissions to the air from Hazardous, Toxic, and Radioactive Waste remedial action area sources to minimize short-term risks that might be posed to the community during implementation of the remedial alternative in accordance with the following.

- a. Perimeter Air Contaminant of Concern [____].
- b. Time Averaged Perimeter Action Levels [____].

Concentration	[____]
Time	[____]

- c. Perimeter Sampling/Monitoring Location[s] [____].
- d. Monitoring Instruments/Sampling and Analysis Methods [____].
- e. Staffing [____].

1.7.9.8 Compliant Materials

Provide the Government a list of SDSs for all hazardous materials proposed for use on site. Materials must be compliant with all Clean Air Act regulations for emissions including solvent and volatile organic compound contents, and applicable National Emission Standards for Hazardous Air Pollutants requirements. The Government may alter or limit use of specific materials as needed to meet installation permit requirements for emissions.

1.8 LICENSES AND PERMITS

Obtain licenses and permits required for the construction of the project and in accordance with FAR 52.236-7 Permits and Responsibilities. Notify the Government of all equipment that may require permits or special approvals that the Contractor plans to use on site. This paragraph supplements the Contractor's responsibility under FAR 52.236-7 Permits and Responsibilities.

[a. The following permits have been obtained by the Government:

[(1) [____]

] [(2) [____]

] [(3) [____]

]]

[b. The following permits will be obtained by the Government:

[(1) [____]

] [(2) [____]

] [(3) [____]

]]1.9 ENVIRONMENTAL RECORDS BINDER

Maintain on-site a separate three-ring Environmental Records Binder and submit at the completion of the project. Make separate parts within the binder that correspond to each submittal listed under paragraph CLOSEOUT SUBMITTALS in this section.

1.10 PESTICIDE DELIVERY, STORAGE, AND HANDLING

1.10.1 Delivery and Storage

Deliver pesticides to the site in the original, unopened containers bearing legible labels indicating the EPA registration number and the manufacturer's registered uses. Store pesticides according to manufacturer's instructions and under lock and key when unattended.

1.10.2 Handling Requirements

Formulate, treat with, and dispose of pesticides and associated containers in accordance with label directions and use the clothing and personal protective equipment specified on the labeling for use during each phases of the application. Furnish SDSs for pesticide products.

1.11 SOLID WASTE MANAGEMENT PERMIT

Provide the Contracting Officer with written notification of the quantity of anticipated solid waste or debris that is anticipated or estimated to be generated by construction. Include in the report the locations where various types of waste will be disposed or recycled. Include letters of acceptance from the receiving location or as applicable; submit one copy of the receiving location state and local Solid Waste Management Permit or license showing such agency's approval of the disposal plan before transporting wastes off Government property.

1.11.1 Monthly Solid Waste Disposal Report

Monthly, submit a solid waste disposal report to the Contracting Officer. For each waste, the report will state the classification (using the definitions provided in this section), amount, location, and name of the business receiving the solid waste.

1.12 FACILITY HAZARDOUS WASTE GENERATOR STATUS

[_____] is designated as a[Large Quantity Generator][Small Quantity Generator][Conditionally Exempt-Small Quantity Generator]. Meet the regulatory requirements of this generator designation for any work conducted within the boundaries of this Installation. Comply with provisions of federal, state, and local regulatory requirements applicable to this generator status regarding training and storage, handling, and disposal of construction derived wastes.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

Minimize interference with, disturbance to, and damage to fish, wildlife, and plants, including their habitats. Prior to the commencement of activities, consult with the Installation Environmental Office as applicable, regarding rare species or sensitive habitats that need to be protected. The protection of rare, threatened, and endangered animal and plant species identified, including their habitats, is the Contractor's responsibility. [The following species are known and could be affected within the construction area: [_____] .]

Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work that is consistent with the requirements of the Installation Environmental Office or as otherwise specified. Confine construction activities to within the limits of the work indicated or specified.

3.1.1 Flow Ways

Do not alter water flows or otherwise significantly disturb the native habitat adjacent to the project and critical to the survival of fish and wildlife, except as specified and permitted.

3.1.2 Vegetation

Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without the Contracting Officer's permission. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by the Contracting Officer. Where such use of attached ropes, cables, or guys is authorized, the Contractor is responsible for any resultant damage.

Protect existing trees that are to remain to ensure they are not injured, bruised, defaced, or otherwise damaged by construction operations. Remove displaced rocks from uncleared areas. Coordinate with the Contracting Officer and Installation Environmental Office to determine appropriate action for trees and other landscape features scarred or damaged by equipment operations.

3.1.3 Streams

Stream crossings must allow movement of materials or equipment without violating water pollution control standards of the federal, state, and local governments. Construction of stream crossing structures must be in compliance with all required permits including, but not limited to, Clean Water Act Section 404, and Section 401 Water Quality.

The Contracting Officer's approval and appropriate permits are required before any equipment will be permitted to ford live streams. In areas where frequent crossings are required, install temporary culverts or bridges. Obtain Contracting Officer's approval prior to installation. Remove temporary culverts or bridges upon completion of work, and repair the area to its original condition unless otherwise required by the Contracting Officer.

3.2 STORMWATER

Do not discharge stormwater from construction sites to the sanitary sewer. If the water is noted or suspected of being contaminated, it may only be released to the storm drain system if the discharge is specifically permitted. Obtain authorization in advance from the Installation Environmental Office for any release of contaminated water.

[3.2.1 Construction General Permit

Provide a Construction General Permit as required by 40 CFR 122.26 or [EPA][the State of [____]] General Permit. Under the terms and conditions of the permit, install, inspect, maintain BMPs, prepare stormwater erosion and sediment control inspection reports, and submit SWPPP inspection reports. Maintain construction operations and management in compliance with the terms and conditions of the general permit for stormwater discharges from construction activities.

3.2.1.1 Stormwater Pollution Prevention Plan

Submit a project-specific Stormwater Pollution Prevention Plan (SWPPP) to the Contracting Officer for approval, [within 30 days of Contract Award and] prior to the commencement of work. The SWPPP must meet the requirements of 40 CFR 122.26 and [the EPA General Permit][the [____] State General Permit] for stormwater discharges from construction sites.

Include the following:

- a. Comply with terms of the [EPA][state] general permit for stormwater discharges from construction activities. Prepare SWPPP in accordance with [state][EPA] requirements. Use [state][EPA guide Developing your Stormwater Pollution Prevention Plan located at <https://www.epa.gov/npdes/developing-stormwater-pollution-prevention-plan-swppp> to prepare the SWPPP.]
- b. Select applicable BMPs from EPA Fact Sheets located at <https://www.epa.gov/npdes/national-menu-best-management-practices-bmps-stormwater#constr> or in accordance with applicable state or local requirements.
- c. Include a completed copy of the Notice of Intent, BMP Inspection Report Template, and Stormwater Notice of Termination, except for the effective date.
- [d. Comply with local additional requirements.

]3.2.1.2 Stormwater Notice of Intent for Construction Activities

[Prepare and submit the Notice of Intent for NPDES coverage under the general permit for construction activities to the Contracting Officer for review.

] [Prepare and submit the Notice of Intent for NPDES coverage under the general permit for construction activities to the Contracting Officer for review and approval.

] [Prepare and submit a Notice of Intent as a co-permittee to the Contracting Officer, for review and approval.

-] Submit the approved NOI and appropriate permit fees onto the appropriate federal or state agency for approval. No land disturbing activities may commence without permit coverage. Maintain an approved copy of the SWPPP at the onsite construction office, and continually update as regulations require, reflecting current site conditions.

Comply with additional state and local requirements.

3.2.1.3 Inspection Reports

Submit "Inspection Reports" to the Contracting Officer in accordance with [EPA] [the State of [____]] Construction General Permit. [Provide Inspection Reports in accordance with local requirements.]

3.2.1.4 Stormwater Pollution Prevention Plan Compliance Notebook

Create and maintain a three ring binder of documents that demonstrate compliance with the Construction General Permit. Include a copy of the permit Notice of Intent, proof of permit fee payment, SWPPP and SWPPP update amendments, inspection reports and related corrective action records, copies of correspondence with the [EPA] [the [____]] State Permitting Agency], and a copy of the permit Notice of Termination in the binder. At project completion, the notebook becomes property of the Government. Provide the compliance notebook to the Contracting Officer.

3.2.1.5 Stormwater Notice of Termination for Construction Activities

Submit a Notice of Termination to the Contracting Officer for approval once construction is complete and final stabilization has been achieved on all portions of the site for which the permittee is responsible. Once approved, submit the Notice of Termination to the appropriate state or federal agency. [Prepare as-built topographic survey information required by the permitting agency for certification of the stormwater management system, and provide to the Contracting Officer.]

] 3.2.2 Erosion and Sediment Control Measures

Provide erosion and sediment control measures in accordance with state and local laws and regulations. Preserve vegetation to the maximum extent practicable.

The Contractor's best management practices must also be in accordance with the State of Illinois National Pollutant Discharge Elimination System (NPDES) Storm Water Pollution Prevention requirements. Any temporary measures must be removed after the area has been stabilized.

The Contractor will be responsible for providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations. The erosion and sediment controls selected and maintained by the Contractor must be such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. The Contractor must construct or install temporary and permanent erosion and sediment control best management practices (BMPs). BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences, construction of terraces, interceptor channels, sediment traps, inlet and outfall protection,

diversion channels, and sedimentation basins. The Contractor's best management practices must also be in accordance with the State of Indiana National Pollutant Discharge Elimination System (NPDES) Storm Water Pollution Prevention requirements. Any temporary measures must be removed after the area has been stabilized.

The Contractor will be responsible for providing erosion and sediment control measures in accordance with Federal, State, and local laws and regulations. The erosion and sediment controls selected and maintained by the Contractor must be such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. The Contractor must construct or install temporary and permanent erosion and sediment control best management practices (BMPs). BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences, construction of terraces, interceptor channels, sediment traps, inlet and outfall protection, diversion channels, and sedimentation basins. The Contractor's best management practices must also be in accordance with the State of Wisconsin National Pollutant Discharge Elimination System (NPDES) Storm Water Pollution Prevention requirements. Any temporary measures must be removed after the area has been stabilized.

Erosion control inspection reports may be compiled as part of a stormwater pollution prevention plan inspection reports.

[3.2.2.1 Erosion Control

Prevent erosion by[mulching,][Compost Blankets,][Geotextiles,][temporary slope drains,][____]. Stabilize slopes by[chemical stabilization,][sodding,][seeding,][____] or such combination of these methods necessary for effective erosion control. Use of hay bales is prohibited.

[Provide seeding in accordance with Section 32 92 19 SEEDING.

][3.2.2.2 Sediment Control Practices

Implement sediment control practices to divert flows from exposed soils, temporarily store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Implement sediment control practices prior to soil disturbance and prior to creating areas with concentrated flow, during the construction process to minimize erosion and sediment laden runoff. Include the following devices:[silt fence,][temporary diversion dikes,][storm drain inlet protection,][____,][Location and details of installation and construction are indicated on the drawings].

]3.2.3 Work Area Limits

Mark the areas that need not be disturbed under this Contract prior to commencing construction activities. Mark or fence isolated areas within the general work area that are not to be disturbed. Protect monuments and markers before construction operations commence. Where construction operations are to be conducted during darkness, all markers must be visible in the dark. Personnel must be knowledgeable of the purpose for marking and protecting particular objects.

3.2.4 Contractor Facilities and Work Areas

Place field offices, staging areas, stockpile storage, and temporary buildings in areas designated on the drawings or as directed by the Contracting Officer. Move or relocate the Contractor facilities only when approved by the Government. Provide erosion and sediment controls for onsite borrow and spoil areas to prevent sediment from entering nearby waters. Control temporary excavation and embankments for plant or work areas to protect adjacent areas.

3.2.5 Municipal Separate Storm Sewer System (MS4) Management

Comply with the Installation's MS4 permit requirements.[Comply with local requirements.]

3.3 SURFACE AND GROUNDWATER

3.3.1 Cofferdams, Diversions, and Dewatering

Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure must be constantly controlled to maintain compliance with existing state water quality standards and designated uses of the surface water body. Comply with[the State of [_____] water quality standards and anti-degradation provisions] [and] [the Clean Water Act Section 404, Nation Wide Permit No. [_____]]. Do not discharge excavation ground water to the sanitary sewer, storm drains, or to surface waters without prior specific authorization in writing from the Installation Environmental Office or Contracting Officer. Discharge of hazardous substances will not be permitted under any circumstances. Use sediment control BMPs to prevent construction site runoff from directly entering any storm drain or surface waters.

The Contractors diversions and dewatering operations must comply with the state of Illinois water quality standards and anti-degradation provisions, Section 404 of the Clean Water Act, and the Section 401 Water Quality Certification for this project.

If the construction dewatering is noted or suspected of being contaminated, it may only be released to the storm drain system if the discharge is specifically permitted. Obtain authorization for any contaminated groundwater release in advance from the Installation Environmental Officer and the federal or state authority, as applicable. Discharge of hazardous substances will not be permitted under any circumstances.

3.3.2 Waters of the United States

Do not enter, disturb, destroy, or allow discharge of contaminants into waters of the United States[.] [except as authorized herein. The protection of waters of the United States shown on the drawings in accordance with paragraph LICENSES AND PERMITS is the Contractor's responsibility. Authorization to enter specific waters of the United States identified does not relieve the Contractor from any obligation to protect other waters of the United States within, adjacent to, or in the vicinity of the construction site and associated boundaries.]

3.3.3 Stream Crossings

Comply with the State of Illinois water quality standards and

anti-degradation provisions, Section 404 of the Clean Water Act, and the Section 401 Water Quality Certification for construction of stream crossing for this project.

3.4 PROTECTION OF CULTURAL RESOURCES

3.4.1 Archaeological Resources

[Existing archaeological resources within the work area are shown on the drawings. Protect these resources and be responsible for their preservation during the life of the Contract.]If, during excavation or other construction activities, any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, activities that may damage or alter such resources will be suspended. Resources covered by this paragraph include, but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. Cease all activities that may result in impact to or the destruction of these resources. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources. The Government retains ownership and control over archaeological resources.

[3.4.2 Historical Resources

Existing historical resources within the work area are shown on the drawings. Protect these resources and be responsible for their preservation during the life of the Contract.

] 3.5 AIR RESOURCES

Equipment operation, activities, or processes will be in accordance with 40 CFR 64 and state air emission and performance laws and standards.

3.5.1 Preconstruction Air Permits

Notify the Air Program Manager, through the Contracting Officer, at least 6 months prior to bringing equipment, assembled or unassembled, onto the Installation, so that air permits can be secured. Necessary permitting time must be considered in regard to construction activities. Clean Air Act (CAA) permits must be obtained prior to bringing equipment, assembled or unassembled, onto the Installation.

[Permits will be provided by the Government.] [Confirm that these permits have been obtained.]

3.5.2 Oil or Dual-fuel Boilers and Furnaces

Provide product data and details for new, replacement, or relocated fuel fired boilers, heaters, or furnaces to the Installation Environmental Office (Air Program Manager) through the Contracting Officer. Data to be reported include: equipment purpose (water heater, building heat, process), manufacturer, model number, serial number, fuel type (oil type, gas type) size (MMBTU heat input). Provide in accordance with paragraph PRECONSTRUCTION AIR PERMITS.

3.5.3 Burning

[Burning is prohibited on the Government premises.] [Burning is allowed on Government premises[; confine fires to a closed vessel that is guarded and under constant surveillance until contents have burned out or have been extinguished]. [Burning must completely reduce the materials to ashes.]]

3.5.4 Class I [and II]ODS Prohibition

Class I [and II]ODS are Government property and must be returned to the Government for appropriate management. Coordinate with the Installation Environmental Office to determine the appropriate location for turn in of all reclaimed refrigerant.

3.5.5 Venting of Refrigerant

Accidental venting of a refrigerant is a release and must be reported immediately to the Contracting Officer. Intentional venting of refrigerants (including most Non-ODS substitute refrigerants) is prohibited per 40 CFR 82.

3.5.6 EPA Certification Requirements

Heating and air conditioning technicians must be certified through an EPA-approved program. Maintain copies of certifications at the employees' places of business; technicians must carry certification wallet cards, as provided by environmental law.

3.5.7 Dust Control

Keep dust down at all times, including during nonworking periods.[Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations.] Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning nonparticulate debris such as steel reinforcing bars. Only wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Do not unnecessarily shake bags of cement, concrete mortar, or plaster. Since these products contain Crystalline Silica, comply with the applicable OSHA standard, 29 CFR 1910.1053 or 29 CFR 1926.1153 for controlling exposure to Crystalline Silica Dust.

3.5.7.1 Particulates

Dust particles, aerosols and gaseous by-products from construction activities, and processing and preparation of materials (such as from asphaltic batch plants) must be controlled at all times, including weekends, holidays, and hours when work is not in progress. Maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates that would exceed 40 CFR 50, state, and local air pollution standards or that would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators, or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp. Provide sufficient, competent equipment available to accomplish these tasks. Perform particulate control as the work proceeds and whenever a particulate

nuisance or hazard occurs. Comply with state and local visibility regulations.

3.5.7.2 Abrasive Blasting

Blasting operations cannot be performed without prior approval of the Installation Air Program Manager. The use of silica sand is prohibited in sandblasting.

Provide tarpaulin drop cloths and windscreens to enclose abrasive blasting operations to confine and collect dust, abrasive agent, paint chips, and other debris. [Perform work involving removal of hazardous material in accordance with 29 CFR 1910.]

3.5.8 Odors

Control odors from construction activities. The odors must be in compliance with state regulations and local ordinances and may not constitute a health hazard.

Odors must be controlled at all times. The odors must not cause a health hazard and must be in compliance with State of Indiana regulations and ordinances.

Odors must be controlled at all times. The odors must not cause a health hazard and must be in compliance with State of Wisconsin regulations and local ordinances.

3.6 WASTE MINIMIZATION

Minimize the use of hazardous materials and the generation of waste. Include procedures for pollution prevention/ hazardous waste minimization in the Hazardous Waste Management Section of the EPP. Obtain a copy of the installation's Pollution Prevention/Hazardous Waste Minimization Plan for reference material when preparing this part of the EPP. If no written plan exists, obtain information by contacting the Contracting Officer. Describe the anticipated types of the hazardous materials to be used in the construction when requesting information.

3.6.1 Salvage, Reuse and Recycle

Identify anticipated materials and waste for salvage, reuse, and recycling. Describe actions to promote material reuse, resale or recycling. To the extent practicable, all scrap metal must be sent for reuse or recycling and will not be disposed of in a landfill.

Include the name, physical address, and telephone number of the hauler, if transported by a franchised solid waste hauler. Include the destination and, unless exempted, provide a copy of the state or local permit (cover) or license for recycling.

3.6.2 Nonhazardous Solid Waste Diversion Report

Maintain an inventory of nonhazardous solid waste diversion and disposal of construction and demolition debris. Submit a report to [_____] through the Contracting Officer on the first working day after each fiscal year quarter, starting the first quarter that nonhazardous solid waste has been

generated. Include the following in the report:

Construction and Demolition (C&D) Debris Disposed	[_____] [cubic yards] [tons], [cubic meters] as appropriate
C&D Debris Recycled	[_____] [cubic yards] [tons], [cubic meters] as appropriate
C&D Debris Composted	[_____] [cubic yards] [tons], [cubic meters] as appropriate
Total C&D Debris Generated	[_____] [cubic yards] [tons], [cubic meters] as appropriate
Waste Sent to Waste-To-Energy Incineration Plant (This amount should not be included in the recycled amount)	[_____] [cubic yards] [tons], [cubic meters] as appropriate

3.7 WASTE MANAGEMENT AND DISPOSAL

3.7.1 Waste Determination Documentation

Complete a Waste Determination form (provided at the pre-construction conference) for Contractor-derived wastes to be generated. All potentially hazardous solid waste streams that are not subject to a specific exclusion or exemption from the hazardous waste regulations (e.g., scrap metal, domestic sewage) or subject to special rules, (lead-acid batteries and precious metals) must be characterized in accordance with the requirements of 40 CFR 262.11 or corresponding applicable state or local regulations. Base waste determination on user knowledge of the processes and materials used, and analytical data when necessary. Consult with the Installation environmental staff for guidance on specific requirements. Attach support documentation to the Waste Determination form. As a minimum, provide a Waste Determination form for the following waste (this listing is not exhaustive): oil- and latex -based painting and caulking products, solvents, adhesives, aerosols, petroleum products, and containers of the original materials.

[3.7.1.1 Sampling and Analysis of Waste

3.7.1.1.1 Waste Sampling

Sample waste in accordance with EPA SW-846. Clearly mark each sampled drum or container with the Contractor's identification number, and cross reference to the chemical analysis performed.

3.7.1.1.2 Laboratory Analysis

Follow the analytical procedure and methods in accordance with the 40 CFR 261. Provide analytical results and reports performed to the Contracting Officer. Coordinate all activities with Installation Hazardous Waste Manager.

3.7.1.1.3 Analysis Type

Identify hazardous waste by analyzing for the following characteristics: [ignitability,] [corrosivity,] [reactivity,] [toxicity based on TCLP results,] [_____] .

]3.7.2 Solid Waste Management

3.7.2.1 Project Solid Waste Disposal Documentation Report

Provide copies of the waste handling facilities' weight tickets, receipts, bills of sale, and other sales documentation. In lieu of sales documentation, a statement indicating the disposal location for the solid waste that is signed by an employee authorized to legally obligate or bind the firm may be submitted. The sales documentation[Contractor certification] must include the receiver's tax identification number and business, EPA or state registration number, along with the receiver's delivery and business addresses and telephone numbers. For each solid waste retained for the Contractor's own use, submit the information previously described in this paragraph on the solid waste disposal report. Prices paid or received do not have to be reported to the Contracting Officer unless required by other provisions or specifications of this Contract or public law.

3.7.2.2 Control and Management of Solid Wastes

Pick up solid wastes, and place in covered containers that are regularly emptied. Do not prepare or cook food on the project site. Prevent contamination of the site or other areas when handling and disposing of wastes. At project completion, leave the areas clean. Employ segregation measures so that no hazardous or toxic waste will become co-mingled with non-hazardous solid waste.[Transport solid waste off Government property and dispose of it in compliance with 40 CFR 260, state, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill is the minimum acceptable offsite solid waste disposal option. Verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate.][Haul waste materials to the Government landfill site[shown on the drawings][designated by the Contracting Officer].][Comply with site procedures.][Segregate and separate treated wood components disposed at a lined landfill approved to accept this waste in accordance with local and state regulations] Solid waste disposal offsite must comply with most stringent local, state, and federal requirements, including 40 CFR 241, 40 CFR 243, and 40 CFR 258.

Manage hazardous material used in construction, including but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, and used rags, in accordance with 49 CFR 173.

3.7.3 Control and Management of Hazardous Waste

Do not dispose of hazardous waste on Government property. Do not discharge any waste to a sanitary sewer, storm drain, or to surface waters or conduct waste treatment or disposal on Government property without written approval of the Contracting Officer and Installation Hazardous Waste Manager.

3.7.3.1 Hazardous Waste/Debris Management

Identify construction activities that will generate hazardous waste or debris. Provide a documented waste determination for resultant waste streams. Identify, label, handle, store, and dispose of hazardous waste or debris in accordance with federal, state, and local regulations, including 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, and 40 CFR 268.

Manage hazardous waste in accordance with the approved Hazardous Waste Management Section of the EPP. Store hazardous wastes in approved containers in accordance with 49 CFR 173 and 49 CFR 178. Hazardous waste generated within the confines of Government facilities is identified as being generated by the Government. Prior to removal of any hazardous waste from Government property, hazardous waste manifests must be signed by personnel from the Installation Environmental Office. Do not bring hazardous waste onto Government property. Provide the Contracting Officer with a copy of waste determination documentation for any solid waste streams that have any potential to be hazardous waste or contain any chemical constituents listed in 40 CFR 372-SUBPART D.

3.7.3.2 Waste Storage/Satellite Accumulation/90 Day Storage Areas

Accumulate hazardous waste at satellite accumulation points and in compliance with 40 CFR 262 and applicable state or local regulations. Individual waste streams will be limited to 55 gallons of accumulation (or one quart for acutely hazardous wastes). If the Contractor expects to generate hazardous waste at a rate and quantity that makes satellite accumulation impractical, the Contractor may request a temporary 90-day or 180-day, as appropriate, accumulation point be established. Submit a request in writing to the Contracting Officer and provide the following information (Attach Site Plan to the Request):

Contract Number	[_____]
Contractor	[_____]
Haz/Waste or Regulated Waste POC	[_____]
Phone Number	[_____]
Type of Waste	[_____]
Source of Waste	[_____]
Emergency POC	[_____]
Phone Number	[_____]
Location of the Site	[_____]

Attach a Waste Determination form for the expected waste streams. Allow 10 working days for processing this request. Additional compliance requirements (e.g., training and contingency planning) that may be required are the responsibility of the Contractor. Barricade the designated area where waste is being stored and post a sign identifying as follows:

"DANGER - UNAUTHORIZED PERSONNEL KEEP OUT"

3.7.3.3 Hazardous Waste Disposal

[3.7.3.3.1 Responsibilities for Contractor's Disposal

Provide hazardous waste manifest to the Installations Environmental Office for review, approval, and signature prior to shipping waste off Government property.

3.7.3.3.1.1 Services

Provide service necessary for the final treatment or disposal of the

hazardous material or waste in accordance with 40 CFR 260 - 40 CFR 279, local, and state, laws and regulations, and the terms and conditions of the Contract within 60 days after the materials have been generated. These services include necessary personnel, labor, transportation, packaging, detailed analysis (if required for disposal or transportation, include manifesting or complete waste profile sheets, equipment, and compile documentation).

3.7.3.3.1.2 Samples

Obtain a representative sample of the material generated for each job done to provide waste stream determination.

3.7.3.3.1.3 Analysis

Analyze each sample taken and provide analytical results to the Contracting Officer. See paragraph WASTE DETERMINATION DOCUMENTATION.

3.7.3.3.1.4 Labeling

During waste accumulation label all containers in accordance with 40 CFR 262. Prior to offering a waste for off-site transport, determine the Department of Transportation's (DOT's) proper shipping names for waste in accordance with 49 CFR 172 (each container requiring disposal) and demonstrate to the Contracting Officer how this determination is developed and supported by the sampling and analysis requirements contained herein. Label all containers of hazardous waste with the words "Hazardous Waste" or other words to describe the contents of the container in accordance with 40 CFR 262 and applicable state or local regulations.

] 3.7.3.3.2 Contractor Disposal Turn-In Requirements

Hazardous waste generated must be disposed of in accordance with the following conditions to meet installation requirements:

- a. Drums must be compatible with waste contents and drums must meet DOT requirements for 49 CFR 173 for transportation of materials.
- b. Band drums to wooden pallets.
- c. No more than three 55 gallon drums or two 85 gallon over packs are to be banded to a pallet.
- d. Band using 1-1/4 inch minimum band on upper third of drum.
- e. Provide label in accordance with 49 CFR 172.101.
- f. Leave 3 to 5 inches of empty space above volume of material.

] 3.7.3.4 Universal Waste Management

Manage the following categories of universal waste in accordance with federal, state, and local requirements and installation instructions:

- a. Batteries as described in 40 CFR 273.2
- b. Lamps as described in 40 CFR 273.5
- c. Mercury-containing equipment as described in 40 CFR 273.4

- d. Aerosol cans as described in 40 CFR 273.6
- e. Pesticides as described in 40 CFR 273.3
- e. Installation specific

Mercury is prohibited in the construction of this facility, unless specified otherwise, and with the exception of mercury vapor lamps and fluorescent lamps. Dumping of mercury-containing materials and devices such as mercury vapor lamps, fluorescent lamps, and mercury switches, in rubbish containers is prohibited. Remove without breaking, pack to prevent breakage, and transport out of the activity in an unbroken condition for disposal as directed.

3.7.3.5 Electronics End-of-Life Management

Recycle or dispose of electronics waste, including, but not limited to, used electronic devices such computers, monitors, hard-copy devices, televisions, mobile devices, in accordance with 40 CFR 260-262, state, and local requirements, and installation instructions.

3.7.3.6 Disposal Documentation for Hazardous and Regulated Waste

Contact the Contracting Officer [or designated representative]for the facility RCRA identification number that is to be used on each manifest.

[Submit a copy of the applicable EPA and or state permit(s), manifest(s), or license(s) for transportation, treatment, storage, and disposal of hazardous and regulated waste by permitted facilities. Hazardous or toxic waste manifests must be reviewed, signed, and approved by the Contracting Officer before the Contractor may ship waste. To obtain specific disposal instructions, coordinate with the Installation Environmental Office. Refer to location special requirements for the Installation Point of Contact information.

]3.7.4 Releases/Spills of Oil and Hazardous Substances

3.7.4.1 Response and Notifications

Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, and other substances regulated in accordance with 40 CFR 300. Maintain spill cleanup equipment and materials at the work site. In the event of a spill, take prompt, effective action to stop, contain, curtail, or otherwise limit the amount, duration, and severity of the spill/release. In the event of any releases of oil and hazardous substances, chemicals, or gases; immediately (within 15 minutes) notify the Installation Fire Department, the Installation Command Duty Officer, the Installation Environmental Office, the Contracting Officer[and the state or local authority].

Submit verbal and written notifications as required by the federal (40 CFR 300.125 and 40 CFR 355), state, local regulations and instructions. Provide copies of the written notification and documentation that a verbal notification was made within 20 days. Spill response must be in accordance with 40 CFR 300 and applicable state and local regulations. Contain and clean up these spills without cost to the Government.

3.7.4.2 Clean Up

Clean up hazardous and non-hazardous waste spills. Reimburse the Government for costs incurred including sample analysis materials, clothing, equipment, and labor if the Government will initiate its own spill cleanup procedures, for Contractor- responsible spills, when: Spill cleanup procedures have not begun within one hour of spill discovery/occurrence; or, in the Government's judgment, spill cleanup is inadequate and the spill remains a threat to human health or the environment.

3.7.5 Mercury Materials

Immediately report to the Environmental Office and the Contracting Officer instances of breakage or mercury spillage. Clean mercury spill area to the satisfaction of the Contracting Officer.

Do not recycle a mercury spill cleanup; manage it as a hazardous waste for disposal.

3.7.6 Wastewater

3.7.6.1 Disposal of Wastewater

Disposal of wastewater must be as specified below.

3.7.6.1.1 Treatment

Do not allow wastewater from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, and forms to enter water ways or to be discharged prior to being treated to remove pollutants. Dispose of the construction- related waste water[off-Government property in accordance with 40 CFR 403, state, regional, and local laws and regulations.][by collecting and placing it in a retention pond where suspended material can be settled out or the water can evaporate to separate pollutants from the water. The site for the retention pond must be coordinated and approved with the Contracting Officer. The residue left in the pond prior to completion of the project must be removed, tested, and disposed of off-Government property in accordance with federal, state, and local laws and regulations. Backfill the area to the original grade, top-soiled, and seeded or sodded.[Test the water in the retention pond for [_____] and have the results reviewed and approved by the Contracting Officer prior to being discharged or disposed of off- Government property].]

3.7.6.1.2 Surface Discharge

For discharge of ground water, [obtain a state or federal permit specific for pumping and discharging ground water prior to surface discharging.][Surface discharge in accordance with federal, state, and local laws and regulations.][Surface discharge in accordance with the requirements of the NPDES or state STORMWATER DISCHARGES FROM CONSTRUCTION SITES permit.]

3.7.6.1.3 Land Application

Water generated from the flushing of lines after[disinfection or disinfection in conjunction with hydrostatic testing][hydrostatic testing] must be[land- applied in accordance with federal, state, and local laws and regulations for land application][discharged into the sanitary sewer

with prior approval and notification to the Wastewater Treatment Plant's Operator].

3.8 HAZARDOUS MATERIAL MANAGEMENT

Include hazardous material control procedures in the Safety Plan, in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS. Address procedures and proper handling of hazardous materials, including the appropriate transportation requirements. Do not bring hazardous material onto Government property that does not directly relate to requirements for the performance of this contract. Submit an SDS and estimated quantities to be used for each hazardous material to the Contracting Officer prior to bringing the material on the installation. Typical materials requiring SDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, and petroleum products. Use hazardous materials in a manner that minimizes the amount of hazardous waste generated. Containers of hazardous materials must have National Fire Protection Association labels or their equivalent. Certify that hazardous materials removed from the site are hazardous materials and do not meet the definition of hazardous waste, in accordance with 40 CFR 261 and state[and installation] requirements.

3.8.1 Contractor Hazardous Material Inventory Log

Submit the "Contractor Hazardous Material Inventory Log" (found at: <https://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/forms-graphics-tables>), which provides information required by (EPCRA Sections 312 and 313) along with corresponding SDS, to the Contracting Officer at the start and at the end of construction (30 days from final acceptance), and update no later than January 31 of each calendar year during the life of the contract. Keep copies of the SDSs for hazardous materials onsite. At the end of the project, provide the Contracting Officer with copies of the SDSs, and the maximum quantity of each material that was present at the site at any one time, the dates the material was present, the amount of each material that was used during the project, and how the material was used.

The Contracting Officer may request documentation for any spills or releases, environmental reports, or off-site transfers.

3.9 PREVIOUSLY USED EQUIPMENT

Clean previously used construction equipment prior to bringing it onto the project site. Equipment must be free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the U.S. Department of Agriculture jurisdictional office for additional cleaning requirements.

[3.10 CONTROL AND MANAGEMENT OF ASBESTOS-CONTAINING MATERIAL (ACM)

Manage and dispose of asbestos- containing waste in accordance with all applicable federal, state, and local (or Host Nation) requirements. Refer to Section 02 82 00 ASBESTOS REMEDIATION. Manifest asbestos-containing waste and provide the manifest to the Contracting Officer. Notifications to the regulatory authorities and Installation Air Program Manager are required before starting any asbestos work.

] [3.11 CONTROL AND MANAGEMENT OF LEAD-BASED PAINT (LBP)

Manage and dispose of lead-contaminated waste in accordance with 40 CFR 745 and Section 02 83 00 LEAD REMEDIATION. Manifest any lead-contaminated waste and provide the manifest to the Contracting Officer.

] [3.12 CONTROL AND MANAGEMENT OF POLYCHLORINATED BIPHENYLS (PCBs)

Manage and dispose of PCB-contaminated waste in accordance with 40 CFR 761 and Section 02 84 33 REMOVAL AND DISPOSAL OF POLYCHLORINATED BIPHENYLS (PCBs).

] [3.13 CONTROL AND MANAGEMENT OF LIGHTING BALLAST AND LAMPS CONTAINING PCBs

Manage and dispose of contaminated waste in accordance with 40 CFR 761.[Refer to Section 02 84 16 HANDLING OF LIGHTING BALLASTS AND LAMPS CONTAINING PCBs AND MERCURY.]

] [3.14 MILITARY MUNITIONS

In the event military munitions, as defined in 40 CFR 260, are discovered or uncovered, immediately stop work in that area and immediately inform the Contracting Officer.

] 3.15 PETROLEUM, OIL, LUBRICANT (POL) STORAGE AND FUELING

POL products include flammable or combustible liquids, such as gasoline, diesel, lubricating oil, used engine oil, hydraulic oil, mineral oil, and cooking oil. Store POL products and fuel equipment and motor vehicles in a manner that affords the maximum protection against spills into the environment. Manage and store POL products in accordance with EPA 40 CFR 112, and other federal, state, regional, and local laws and regulations. Use secondary containments, dikes, curbs, and other barriers, to prevent POL products from spilling and entering the ground, storm or sewer drains, stormwater ditches or canals, or navigable waters of the United States. Describe in the EPP (see paragraph ENVIRONMENTAL PROTECTION PLAN) how POL tanks and containers must be stored, managed, and inspected and what protections must be provided.[Storage of oil, including fuel, on the project site is not allowed. Fuel must be brought to the project site each day that work is performed.][Storage of fuel on the project site must be in accordance with EPA, state, and local laws and regulations and paragraph OIL STORAGE INCLUDING FUEL TANKS.]

3.15.1 Used Oil Management

Manage used oil generated on site in accordance with 40 CFR 279. Determine if any used oil generated while onsite exhibits a characteristic of hazardous waste. Used oil containing 1,000 parts per million of solvents is considered a hazardous waste and disposed of at the Contractor's expense. Used oil mixed with a hazardous waste is also considered a hazardous waste. Dispose in accordance with paragraph HAZARDOUS WASTE DISPOSAL.

3.15.2 Oil Storage Including Fuel Tanks

Provide secondary containment and overfill protection for oil storage tanks. A berm used to provide secondary containment must be of sufficient size and strength to contain the contents of the tanks plus 5 inches freeboard for precipitation. Construct the berm to be impervious to oil

for 72 hours that no discharge will permeate, drain, infiltrate, or otherwise escape before cleanup occurs. Use drip pans during oil transfer operations; adequate absorbent material must be onsite to clean up any spills and prevent releases to the environment. Cover tanks and drip pans during inclement weather. Provide procedures and equipment to prevent overfilling of tanks. If tanks and containers with an aggregate aboveground capacity greater than 1320 gallons will be used onsite (only containers with a capacity of 55 gallons or greater are counted), provide and implement a Spill Prevention Control and Countermeasure (SPCC) plan meeting the requirements of 40 CFR 112. Do not bring underground storage tanks to the installation for Contractor use during a project. Submit the SPCC plan to the Contracting Officer for approval.

Monitor and remove any rainwater that accumulates in open containment dikes or berms. Inspect the accumulated rainwater prior to draining from a containment dike to the environment, to determine there is no oil sheen present.

3.16 INADVERTENT DISCOVERY OF PETROLEUM-CONTAMINATED SOIL OR HAZARDOUS WASTES

If petroleum-contaminated soil, or suspected hazardous waste is found during construction that was not identified in the Contract documents, immediately notify the Contracting Officer. Do not disturb this material until authorized by the Contracting Officer.

3.17 PEST MANAGEMENT

In order to minimize impacts to existing fauna and flora, coordinate with the Installation Pest Management Coordinator (IPMC) or Project Pesticide Coordinator (PPC), through the Contracting Officer, at the earliest possible time prior to pesticide application. Discuss integrated pest management strategies including prevention of invasive species as applicable with the [IPMC] [PPC] and receive concurrence from the [IPMC] [PPC] through the Contracting Officer prior to the application of any pesticide associated with these specifications. Provide Installation Project Office Pest Management personnel the opportunity to be present at meetings concerning treatment measures for pest or disease control and during application of the pesticide. [For termiticide requirements, see [Section 31 31 16.13 CHEMICAL TERMITE CONTROL] [Section 31 31 16.19 TERMITE CONTROL BARRIERS]] The use and management of pesticides are regulated under 40 CFR 152 - 186.

3.17.1 Application

Apply pesticides using a state-certified pesticide applicator in accordance with EPA label restrictions and recommendation. The certified applicator must wear clothing and personal protective equipment as specified on the pesticide label. The Contracting Officer will designate locations for water used in formulating. Do not allow the equipment to overflow. Inspect equipment for leaks, clogging, wear, or damage and repair prior to application of pesticide.

3.17.2 Pesticide Treatment Plan

Include and update a pesticide treatment plan, as information becomes available. Include in the plan the sequence of treatment, dates, times, locations, pesticide trade name, EPA registration numbers, authorized uses, chemical composition, formulation, original and applied concentration,

application rates of active ingredient (that is, pounds of active ingredient applied), equipment used for application and calibration of equipment. Comply with 40 CFR 152-189, state, regional, and local pest management record-keeping and reporting requirements as well as any additional Installation Project Office specific requirements in conformance with [DA AR 200-1 Chapter 5, Pest Management, Section 5-4 "Program requirements"] for data required to be reported to the Installation.

3.18 CHLORDANE

Evaluate excess soils and concrete foundation debris generated during the demolition of housing units or other wooden structures for the presence of chlordane or other pesticides prior to reuse or final disposal.

3.19 SOUND INTRUSION

Make the maximum use of low-noise emission products, as certified by the EPA. Blasting or use of explosives are not permitted without written permission from the Contracting Officer, and then only during the designated times. Confine pile-driving operations to the period between [_____] [8 a.m.] and [_____] [4 p.m.], [_____] [Monday through Friday], exclusive of holidays, unless otherwise specified.

Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with the provisions of the State of [_____] rules.

Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with the provisions of the State of Illinois rules given in 35 IAC 900-901.

3.20 POST CONSTRUCTION CLEANUP

Clean up areas used for construction in accordance with Contract Clause: "Cleaning Up". Unless otherwise instructed in writing by the Contracting Officer, remove traces of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. Grade parking area and similar temporarily used areas to conform with surrounding contours.

3.21 NORTHWEST (Washington and Oregon)

3.21.1 Protection of Natural Resources

[Only native species for the local area are permitted for use.

] [Implement landscaping and construction operations in a manner that prevents the spread of invasive species (for example, scotch broom, knotweed, butterfly bush).] [Damaged trees must be appraised. Reimburse the Government for the lost tree value based on current rates at the time the damages occurred.]

3.21.1.1 Erosion and Sediment Control Measures

Polyacrylamide (PAM) must NOT be used as a BMP for erosion control.

Erosion control BMPs must be selected for the site to meet the requirements

of the WSDE SMM.

[Use of straw or hay bales is prohibited.

]

[If straw is used as an erosion control BMP, it must be certified weed free.

] 3.21.1.2 Erosion and Sediment Control Inspection Reports

The following clarifications and requirements supplement paragraph EROSION AND SEDIMENT CONTROL INSPECTION REPORTS.

3.21.1.2.1 Stormwater Notice of Intent for Construction Activities and Storm Water Pollution Prevention Plan

Prepare a SWPPP in accordance with the requirements outlined in 77 FR 12286, the Construction General Permit and the latest version of the Stormwater Management Manual for Western Washington. The SWPPP must be completed and approved prior to submitting the NOI.

3.21.1.2.2 Stormwater NOI

Upon Government approval of the SWPPP, submit a draft NOI for the Construction General Permit to the Government for approval prior to EPA submittal. The NOI must be approved by EPA prior to commencing construction activities. Note that EPA imposes a mandatory wait of 14 days after receiving the NOI. Only electronic submittals to EPA are acceptable. The EPA website for completing an electronic NOI is: <https://www.epa.gov/npdes/submitting-notice-intent-noi-notice-termination-not-or-low-erosivity-waiver-lew-under>.

3.21.1.2.3 Public Notice

Post a notice near the main entrance of the construction site with a copy of the NOI, Contractor name, name and phone number of a local contact person (Construction Manager's office), brief description of the project, and the location of the SWPPP.

3.21.1.2.4 Stormwater NOT

Upon completion of construction, submit the NOT to the Government for approval prior to submitting to the NOT to the EPA of coverage under the Construction General Permit. Refer to electronic NOI webpage for electronic submission of the NOT.

3.21.1.2.5 Stormwater Inspection Reports for General Permit

Submit Erosion and Sediment Control Inspection Reports for the project site either weekly or every 14 calendar days and within 24 hours of a storm event that produces 0.25 inch of rain or greater. Meet all reporting and certification requirements described in Section 4.1.7 of the Construction General Permit.

] 3.21.1.3 Water Resources

[For Project work near streams, lakes, wetlands, or other waterways, maintain buffers as follows according to the Washington State Wetland Rating System established in WAC-222-30-021:

Wetland Buffer Width

Category of Wetland	Buffer Width
Category I	200 feet
Category II	100 feet
Category III	50 feet
Category IV	30 feet

Riparian Zone Buffer Widths

Category of Water Body	Buffer Width
Contains habitat for salmonids, game fish, and other anadromous fish	150 feet
Does not contain fish habitat	50 feet

]

[Employ mandatory Bremerton Naval Complex BMPs under the facility's NPDES permit. If the applicable BMPs are not effective in preventing the discharge of pollutants, then select and employ additional BMPs.

] [3.21.1.4 Stormwater Drainage and Construction Dewatering

Perform dewatering of excavation sites as specified in the Groundwater/Stormwater Flow Chart. Coordinate requirements with Section 31 00 00 EARTHWORK.

Submit a Storm Drain and Sanitary Sewer Discharge Approval form to obtain approval before discharging uncontaminated water into storm drain.

] 3.21.1.5 Groundwater

Construct, maintain, and decommission any wells and wellheads associated with, or impacted by, the project in accordance with Washington State Standards for Construction and Maintenance of Wells (WAC-173-160).

[3.21.1.6 Merchantable Timber

Contact the Contracting Officer prior to site disturbance to request a timber appraisal by a Navy Forester. Delineate the limits of clearing on the ground in a manner that the boundary can be easily identified during timber appraisal. Once delineation is complete, notify the Contracting Officer and allow [30][_____] days for timber appraisal.

Merchantable forest products such as timber and firewood must be appraised and payment received by the Government prior to disturbance or removal, in accordance with COMNAVREGNWINST 11015.1, Forest Product Sales and Permit Program. Purchase, through the Navy Forestry program, merchantable forest products at a neutrally determined rate. Timber value and related expenses are not reimbursable under any circumstance. Federal timber may not be exported and timber excise tax is the responsibility of the purchaser.

] [3.21.2 Historical and Archaeological Resources

Excavation is in an area of [high] [moderate] archaeological potential.

] [3.21.3 Concrete Operations

[Sawcutting and rinse water must be collected and managed as waste unless the following conditions exist: Water can seep into permeable ground if the quantity is less than 100 gallons per day, is more than 50 feet away from a storm drain, open ditch, or receiving water, and the ground is a future pour site and is not subject to surface water runoff. For collected waste, allow sawcutting water to let solids settle. Check the pH by the end of the shift in which the water was collected. For water with a pH less than 11, immediately decant the water and discharge to the sanitary sewer as specified on the [Waste Information Specification] [Waste Information Sheet]. For water with a pH of greater than 11, manage as a dangerous waste.

] [3.21.3.1 Washing of Concrete Truck at [NBK Bremerton] [Everett] [Whidbey Island]

Concrete trucks are prohibited from being washed on Base unless there is an area at the project site that is going to be a future pour site (for example, a foundation) and the location is not subject to surface water runoff and is more than 50 feet away from a storm drain, open ditch, or receiving water.

] [3.21.3.2 Washing of Concrete Truck at [Indian Island] [NBK Bangor] [NBK Keyport]

Concrete trucks are prohibited from being washed on station. without approval from Base Environmental Office. Submit proposed Wash Procedure within the HMW and Stormwater Plan for Government review and approval. In no case must a wash area be subject to surface water runoff and be less than 50 feet away from a storm drain, open ditch, or receiving water.

Washout stations that are not future pour sites must have an impermeable barrier to prevent infiltration of the concrete wash water. Activities must follow requirements of the NPDES General Permit for Stormwater Discharges from Construction Activities.

]] [3.21.4 Control and Management of Solid Waste at Whidbey Island

Do not dispose of solid waste on Island County nor use the solid waste transfer facilities on Island County. Do not contact County officials. Complete the Solid Waste Tracking Sheet (SWTS). Complete the SWTS in accordance with the instructions on the back of the form. Submit a SWTS for each load of solid waste. The SWTS requires the weight of solid waste. If scales are not available, calculate the weight based on the formula provided in Monthly Project Waste Summary Report (for example, for refuse, 3 cubic yards multiplied by 250 = 750 pounds).

] [3.21.5 Control and Management of Solid Waste at NBK Bremerton

Complete a serialized Solid Waste Tracking Sheet (SWTS) for each off site shipment of solid waste (except sanitary sewage), recyclable materials, and non-dangerous recyclable waste. Do not use SWTS for asbestos, PCBs, or dangerous waste. Ensure the transporter has the SWTS before leaving the base. Hand-off exchange is preferred. When a face-to-face hand-off is not

possible, the following procedure is required:

- a. Firmly affix a clear (no color), waterproof envelope to the front left corner of the accumulation container (a zipper sealed baggie duct-taped to the box is acceptable). At the end of the shift prior to pick-up time, inspect the box, complete the applicable portion of the SWTS, and place it in a waterproof envelope.
- b. The transporter removes the SWTS from the envelope, signs on the appropriate line, and provides it to the receiver for signature at the disposal site. The receiver completes their portion of the SWTS and returns it to the Contractor.
- c. When no SWTS is in the envelope, the waste must not be transported for disposal.

] [3.21.6 Wastewater Discharge [NBK Bremerton] [Everett] [Whidbey Island]

Submit Waste Determination Documentation for each unique type of wastewater.

[3.21.6.1 Discharge at NBK Bremerton

Notify the Contracting Officer for wastewater discharges to the sanitary sewer in quantities greater than 1,000 gallons per day or 1,000 gallons for the entire project, and allow 10 working days to obtain discharge approval from the City of Bremerton via the Contracting Officer. If discharge is less than 1,000 gallons per day or per project, then complete the Waste Determination Documentation specifying disposition to sanitary sewer completes the approval process.

] [3.21.6.2 Discharge at Everett

Conduct work in compliance with processed waste water permit, City of Everett Permit No. 7722-14. Provide sampling and analysis of waste water effluent prior to discharge to sanitary system. Effluents must meet and not exceed permit limits for metals, fats, oils, and grease, as well as pH, biological oxygen demand and total suspended solids. Contact the Waste Water Operations Project Manager, via the Contracting Officer, for specific analytical requirements prior to discharge.

] [3.21.6.3 Hydrotest Water Discharge at NBK Bremerton

Waste Determination Documentation is not required to discharge water from new, clean piping system to the sanitary system at a flow rate less than [100] [_____] gallons per minute and [3000] [_____] gallons per day. Notify the Contracting Officer 10 working days prior to discharge to the sanitary system to obtain approval for greater flowrates. Clean, uncontaminated, hydrotest water may also be discharged to the storm drain. Submit a Storm Drain/Sanitary Sewer Discharge Approval form to obtain approval before discharging.

] [3.21.7 Control and Disposal of Landfill-Controlled Waste

Store landfill controlled waste under cover in a manner that minimizes contact with process water or storm water. Keep covered and secured except when adding waste or taking samples. Store in containers or in the following manner:

- a. Underlay the waste with a continuous impervious sheet of plastic with a

thickness sufficient to contain the waste with a minimum thickness of 10 mils. Thicker or reinforced plastic, or other measures, to protect the integrity of the plastic underlayment may be required if there is danger that the plastic will be punctured or torn during accumulation. Weld, heat seal, or continuously tape (on both sides) seams. Protect the plastic from perforation during loading and handling operations.

- b. Install a berm around the pile so that the landfill-controlled waste remains in the designated area. Straw or hay bales are prohibited. The edges of the underlayment must be laid over the top of the berm and secured to prevent water from running under the pile.
- c. Install an impervious continuous sheet of plastic, 10 mils minimum thickness, over the pile and over the outside of the berm so that rainwater is directed away from the landfill controlled waste inside the berm. Weld, heat seal, or continuously tape (on both sides) seams.
- d. Secure the top cover to ensure that wind will not balloon the cover or blow it aside leaving the pile exposed to weather.
- [e. Place a label on stockpiled soil containers or top cover that identifies the waste or soil as "Soil, Non-hazardous Pending Sampling."
-] [f. Disposal of Landfill Controlled Waste:

Submit a Landfill Disposal Form as required by the receiving landfill prior to removal of solid waste off Government property. The Landfill Disposal Form may have different titles, depending upon the landfill (for example, Waste Disposal Application, Contaminated Soil Waste Information Sheet, and Industrial Waste Information Sheet). The Government will co-sign forms.

] 3.21.8 Waste Determination Documentation Northwest

- [Comply with the requirements of FC 3-810-10N, including building survey and analytical services required to identify existing materials that may represent health risks, and to properly demolish, designate, and dispose of materials during site improvements.
-] [The [Estimated Waste Table] [Encountered Waste Summary], attached, provides a summary table of anticipated encountered waste along with the corresponding probable waste designation. This table may not be inclusive of waste that could be encountered. This table does not require such waste to be disposed rather than recycled or reused. This table is intended to provide a bid basis. These estimated designations are subject to change upon receipt of the completed Waste Determination Documentation. Any segregation, addition, or mixing of identified waste invalidates these estimated designations. Where such action increases the quantity of dangerous waste, such waste must be disposed at the Contractor's expense.
-] Waste Determination Documentation must consist of the base-specific waste form and related documentation prepared by the Contractor and submitted to the Government for the purpose of Government designation of waste. Examples of related documentation include SDS, sampling and analysis plans, analytical information, and description of waste or process that generate waste. No waste must be transported off site without completed Waste Determination Documentation. Follow instructions provided on completed Waste Determination Documentation forms.

[3.21.8.1 Waste Information Specification Form for NBK Bangor

For waste produced during the project, provide a completed "Side One" of Naval Base Kitsap at Bangor form, via the Contracting Officer. Return the Waste Information Specification form to the Naval Base Kitsap Environmental Division, via the Contracting Officer. Follow the Originator Disposal instructions provided on "Side Two" of the Waste Information Specification form.

] [3.21.8.2 Waste Information Sheet Form for Everett

Not less than 15 working days before removal of waste to locations off Government property, submit a Waste Information Sheet for each unique process that potentially generates recyclable material, solid waste (except garbage), dangerous waste, sewage, sediment, asbestos, PCB, stormwater, and wastewater generated onsite.

] [3.21.8.3 Waste Information Sheet Form for NBK Bremerton

Within one working day after waste stream has been produced, submit a Waste Information Sheet for each waste (except sanitary waste) generated on site for designation by the Government. Submit a [Waste Information Specification] [Waste Information Sheet] for each waste stream anticipated to be produced to the maximum extent possible for pre-designation of waste. The Government will complete Section II and Section III of the Waste Information Sheet.

] [3.21.8.4 Waste Generation Record for [Indian Island] [NBK Keyport] [Whidbey Island]

Not less than [15] [20] [_____] working days before removal of waste to locations off Government property, submit a Waste Generation Record (WGR) for each unique process that potentially generates recyclable material, solid waste (except garbage), dangerous waste, sewage, sediment, asbestos, PCB, stormwater, and wastewater generated on site.

[The Government will complete the portion entitled "ENVIRONMENTAL USE ONLY BELOW THIS LINE."

]] [3.21.8.5 Control of Waste Without Documented Waste Determination

Collect waste for which the Waste Determination Documentation has not been completed; label "waste awaiting designation" or "WAD" to indicate that analysis is pending. Accumulate and manage in an area that meets the minimum criteria for satellite accumulation in accordance with WAC-173-303 and the Contract specifications[, except for the time and quantity limitations].

Submit Waste Determination Documentation for each undesignated waste type within one day of generation. Do not transport waste offsite prior to designation by the Government.

] 3.21.8.6 Laboratory Analysis

[When analytical information is necessary to designate waste, the Government will sample and test waste in accordance with WAC-173-303 and EPA SW-846.] [When, at the sole discretion of the Government, laboratory analytical information is necessary to designate waste, provide sampling

and analysis services in accordance with WAC-173-303 and EPA SW-846.]

Submit analytical results and reports to the Contracting Officer as part of the Waste Determination Documentation.

3.21.9 Contractor Hazardous Material Inventory Log

In addition to the materials (for example, paints, lacquers, thinners, adhesives, sealants, cleaners) required in the Contractor Hazardous Material Inventory Log, include the following materials:

- a. If performing abrasive blasting operations, denote blast grit usage, blast nozzle throughput in tons, and blasting unit efficiency.
- b. If performing welding, denote welding rod usage and welding rod type (for example, aluminum, carbon steel).

[Use local form, PSNS 5090/132 CHMI for this purpose.

] 3.21.10 Hazardous Materials Prohibition

Products prohibited by the Government, which will not be approved for use, include but are not limited to: leads, chromiums, mercury, phenols, trichloroethylene, chlorofluorocarbons, halons, PCBs, asbestos, silica sand (for use as blasting agent), Class I ODS as defined and identified herein, radioactive materials or instruments capable of producing ionizing radiation, and chemicals listed in 40 CFR 355.50, Appendix A. This prohibition prevails over any other provision, specification, drawings, or referenced documents. The Contracting Officer may consider exceptions to the use of any of the above excluded materials upon written request by the Contractor, and with Base Environmental Office approval.

] 3.21.11 Solid Waste Management Report

The Solid Waste Management Report is[not required][known locally as the Contractor's Monthly Project Waste Summary Report][known locally as the Refuse and Recycle Quantity Form][and attached].

] 3.21.12 Fuel Tanks

Provide and implement a SPCC plan if tanks and containers of oil will have an aggregate aboveground capacity greater than 1,320 gallons (only containers with a capacity of 55 gallons or greater are counted). Do not bring underground storage tanks to this installation for Contractor use during a project.

3.21.13 Releases and Spills of Oil and Hazardous Substances

In the event of an reportable release immediately notify the [PSNS & IMF and NBK Bremerton Regional Dispatch Center, station phone 911, or (360) 476-3333 on outside lines or cellular phones] [NAS Whidbey Fire Department at (360) 257-3333] [NBK Regional Dispatch Center, station phone 911, or (360) 396-4444] [Regional Dispatch Center, station phone 911, or (360) 396-4444] [Everett Central Monitoring Dispatch Center at (425) 304-3333, NAVSTA Everett phone 911] [Hospital Communication Center at phone 4444 within the Hospital or (360) 475-4444] [FISC Puget Sound, Fuel Department Operator In Charge (OIC) at (360) 476-2135, ext. 232 for oil spills] [Port Hadlock Detachment Central Monitoring Dispatch Center at (360) 396-5333], then notify the Contracting Officer.

[Notify the Base Environmental Office[at: (360) 396-5353, (360) 396-5394, or (360)396-5221].

]

[The Government will respond to emergency spills. Follow incident commander verbal instructions. Notify the Base Environmental Office of spills, and reportable and non-reportable releases.

]3.21.14 Control and Management of Hazardous Waste

The following clarifications and requirements supplement paragraph CONTROL AND MANAGEMENT OF HAZARDOUS WASTE.

3.21.14.1 Facility Hazardous Waste Generator Status

[[Naval Base Kitsap, Bremerton] [PSNS & IMF] [Naval Base Kitsap, Bangor] [Naval Station (NAVSTA), Everett] [Naval Magazine, Indian Island, WA (NAVMAGII)] [Naval Undersea Warfare Center (NUWC), Keyport] [Naval Hospital (NAVHOSP), Bremerton] [Naval Air Station, Whidbey Island (NASWI)] is a fully regulated Large Quantity Generator.

] [FISC Puget Sound, Manchester Fuel Department is a fully regulated medium quantity generator.

]3.21.14.2 Hazardous Waste Management

[Containers and labels will be supplied by the Government. Notify the Contracting Officer 14 calendar days in advance for request of bulk containers. Submit Waste Determination Documentation including an estimated quantity of dangerous waste and the number of containers. Accumulate in an approved satellite or 90-day accumulation area meeting the requirements set forth in WAC-173-303[and the Keyport "Hazardous Waste Site Manager/Alternate (Waste Generator)" training module]. Contact the Contracting Officer no more than 45 calendar days from the start date for 90-day accumulation areas to arrange for transport. Accumulate bulk dangerous waste in a 90-day area. Turn in non-bulk dangerous waste from a 90-day area within 45 days of the start date.

] [Collect and dispose of dangerous waste in accordance with WAC-173-303. Identify dangerous waste generated within the confines of the station by the use of the station's EPA generator ID number. Submit a Dangerous Waste Profile for each unique type of dangerous waste[not less than [45] [20] days from scheduled removal from Government property]. Profiles are to be completed and signed by an EPA-permitted TSDF. The Government will approve and co-sign profiles. Approval of each dangerous waste profile must be complete before manifesting. Accumulate in an approved satellite or 90-day accumulation area meeting the requirements set forth in WAC-173-303. Waste Determination Documentation must be submitted and dangerous waste must be designated before removal from Government property. Submit a copy of the applicable EPA and state permit(s), manifest(s), Land Disposal Restriction (LDR) forms, and license(s) for transportation, treatment, storage, and disposal of hazardous and regulated waste by permitted facilities. Dangerous waste manifests must be reviewed, signed, and approved by the Government before the Contractor may ship waste. To obtain specific disposal instructions, coordinate with the Activity environmental office. Labels will be supplied by the Government.

] [3.21.14.3 Contractor-Generated Hazardous Waste

Identify and turn in dangerous Contractor-Generated Hazardous Waste to the Government as encountered waste. Follow all encountered waste procedures in paragraph ENCOUNTERED WASTE below.

] [3.21.14.4 Encountered Waste

Identify, minimize, segregate, contain, package, label and turn in dangerous and industrial encountered waste to the Government in accordance with the approved Environmental Protection Plan. Contractor-generated dangerous or industrial waste must be disposed of by the Government at Contractor's expense. On base disposal of Contractor generated waste is prohibited.

Follow originator disposal instructions provided in NAVBASEKITSAPINST 5090.3 (Series) and on side 2 of the [Waste Information Specification] [Waste Information Sheet]. Package according to 49 CFR specifications and attach a completed SUBASE Bangor Originator Label when instructed. Properly stage and transfer encountered waste to a Government-approved accumulation area within 7 miles of the project site. Transportation to the Government site must be within 72 hours of generation. Provide the Project Number on Crew/Code line of the Originator Label. Turning in encountered waste to the Government, in accordance with [Waste Information Specification] [Waste Information Sheet] instructions, is not considered disposal.

] [3.21.14.5 Certificate of Final Disposal (CFD)

Within 10 working days after final disposal of dangerous waste, submit the CFD to the Contracting Officer. Final disposal means disposal of dangerous waste and any residues from the treatment of the waste prior to disposal. The CFD includes, at a minimum the following:

- a. Waste Profile Sheet Number, Government Manifest Number, and Shipment Date
- b. Unit of Measure
- c. Quantity of Disposal
- d. Waste that required land disposal, including effluents from treatment systems.
- e. Disposal facility's (Facilities') EPA ID number, name, location, and phone. In addition, include the name, address, phone number, and EPA ID number of each TSDF the waste was taken to for any intermediate steps for final disposal.
- f. Disposal Method
- g. Date of Final Disposal
- h. Signature of the person responsible for adequate and appropriate disposition of the waste

Animal Building

FJ25AB

] [3.21.14.6 Regulated Waste Storage, Satellite Accumulation, and 90-Day Storage Areas

[Accumulate waste in the Contractor's satellite accumulation area or the Government's 90-Day accumulation area. Contractor-operated 90-Day accumulation areas are prohibited at Naval Hospital, Bremerton.

] [Prior to generating waste, submit an accumulation area registration form, known locally as Contractor Request for 45/90-Day Hazardous Waste Accumulation Certification/Recertification or Contractor Request for Hazardous Waste Satellite Accumulation Area (SAA) Registration.

90-Day areas are known locally as 45/90 day areas and such waste must be manifested prior to 45 days. Satellite accumulation over-water, such as on piers and dry docks, is not authorized unless waste is accumulated with secondary containment and is attended by a trained person. 90-Day areas will not be authorized in dry docks, on piers, or on an over-water site. Submit to the Contracting Officer once every 7 calendar days an Accumulation Area Inspection Record meeting the requirements set forth in WAC-173-303. Closure of 90-day areas require inspection and approval by the Government.

] [Submit the Hazardous Waste Accumulation Area Registration Form as instructed in the "Hazardous Waste Site Manager/Alternate (Waste Generator)" training module. Attach Site Plan to the Request. Attach Waste Determination Documentation.

]] [3.21.14.7 Vacuum Cleaners

Container ID labeling requirements apply to vacuums used onsite. Vacuum cleaners must be empty when they arrive at the BNC, and emptied into approved containers in accordance this section. If a vacuum cleaner cannot be emptied at the end of the shift, it must be managed as a hazardous waste container and stored in a registered satellite accumulation area. Hazardous waste container labeling and storage requirements of this section apply to vacuum cleaners used for pickup and storage of hazardous waste.

] 3.21.14.8 Class I and Class II ODS Prohibition

Turn over to the Government Class I ODS reclaimed as part of this Contract, upon the completion of the work covered by this Contract.

3.21.15 Noise

Conduct work in full compliance with WAC-173-60.

[3.21.16 Drinking Water

[3.21.16.1 Project Report

[Submit a Project Report, in accordance with WAC-246-290-110(2).] [This project includes work on a potable water[treatment,][storage,][and][distribution] system that is regulated by WAC-246-290.][The design specifications have been reviewed and approved by the Washington State Department of Health.][The design specifications conform to the activity's approved Water System Plan.][Do not use any materials of construction or construction practices that deviate from the approved water system design.]

] [3.21.16.2 Public Works Department Permit

Obtain permit from the Public Works Department prior to any connections or changes to the potable drinking water system, or access to fire hydrants. Do not access any part of the potable water system (including fire hydrants) without obtaining a connection permit from the Government. Connections or work pertaining to the potable water system as part of the Contract must be in accordance with the instructions specified in the connection permit and in compliance with state and federal regulations. Submit an Inspection Report to the Government for acceptance. Include the most recent annual calibration inspection report for the test assembly to be used.

] [3.21.16.3 Project Completion Report

Within 15 days after completion of an approved water system project, submit a Project Completion Report in accordance with WAC-246-290-120(5). The report must be signed by a Washington State-registered professional engineer. This report is required for new construction on exterior building potable water system components. Any significant changes from the approved water system design must receive prior approval of the Contracting Officer and written approval from the Department of Health in accordance with WAC-246-290-120 prior to use.

] [3.21.16.4 Disinfection of Water System Components

Disinfect water system in accordance with paragraph DISINFECTION in Section 33 11 00 WATER UTILITY DISTRIBUTION PIPING.

]] [3.21.17 Contractor's Operation and Maintenance (O&M) Plan

Prior to using the types of air contaminant-generating equipment defined in [PSCAA Regulation] [ORCAA Regulation] [NWCAA Regulation], develop and submit a Contractor's Operation and Maintenance (O & M) Plan. Maintain the O & M Plan and any associated records on site for the duration of the project. Be prepared to provide these records for review, within 30 minutes, when requested by regulatory agencies or the Contracting Officer. The O&M Plan must contain at a minimum the following elements:

- a. Maintain equipment in good working order. Follow manufacturer's O & M recommendations, at a minimum.
- b. Maintain records of any repairs made, including records of preventive maintenance and chemicals used, including SDSs.
- c. Inspect periodically, including, but not limited to, evidence of fugitive emissions. If fugitive emissions are found, determine whether reasonable precautions are being taken to minimize such emissions. List requirements to repair the equipment or shut down operations, when reasonable precautions are not being taken to minimize fugitive emissions or unreasonable odors.
- d. Ensure deficiencies are promptly repaired. Secure operation of such equipment if immediate repairs are not feasible.
- e. List any requirements noted under "Conditions" on the Order of Approval for the equipment.
- f. Generate records that list any actions (for example, inspections,

maintenance, shut down) that have been taken or completed, including the location, date, time, and name of person(s) completing the actions. Records may be maintained in the form of a logbook. Submit Operation and Maintenance Records at Contract completion.

- g. Maintain records of operating permit(s) and related permit compliance records.

]3.21.18 Emission Standards

Opacity from Contractor equipment and operations must be in compliance with [PSCAA Regulation I, Section 9.03] [_____] including but not limited to Visual Emissions (Opacity), Odor, Fugitive Dust, Spray Coating, Crushing, and Maintenance of Equipment.

3.21.18.1 Volatile Organic Compound Emission Control

Do not leave containers of paint, epoxy, or solvent open to the atmosphere unless they are being used. Secure containers at the end of each shift. Do not use evaporation as a means of minimizing or disposing of hazardous waste.

3.22 SOUTHEAST

3.22.1 Florida

[3.22.1.1 Laboratory Analysis

Test soil and groundwater that will be disposed under this Contract in accordance with the paragraph LABORATORY ANALYSIS.

]3.22.1.2 Waste Storage/Satellite Accumulation

For Hazardous Waste accumulation areas, submit weekly hazardous waste inspection logs to the Station Hazardous Waste Manager via the Contracting Officer and maintain compliance with 40 CFR 265.16 personnel training requirements. Ensure containers are kept closed (except when adding or removing waste) and that containers remain in good condition and are properly labeled by PWC Jacksonville or the Station. Store Regulated waste for up to 190 day.

3.22.1.3 Control and Management of Hazardous Waste

3.22.1.3.1 Universal Waste

Dispose of lead-acid batteries that are not damaged or leaking at the NAS Jacksonville MWR Recycling Center or at a state-approved battery-recycling facility. For lead-acid batteries that are leaking or have cracked casings, dispose of the battery by calling PWC Jacksonville for disposal. Collect and segregate alkaline batteries, non-alkaline batteries, lithium batteries, metal hydride batteries, and nickel-cadmium batteries by type for turn-in to the activity for disposal or recycling.

3.22.1.3.2 Mercury Containing Materials

Prior to starting work, remove bulbs, thermostats, switches, and other components that contain mercury. Upon removal, place items containing mercury in DOT approved containers, label, and turn over to the activity for disposal or recycling. For projects at NAS Jacksonville, fluorescent

bulbs are to be turned in to Self-Help for recycling. For projects at Naval Aviation Depot and Naval Hospital Jacksonville, turn in fluorescent bulbs in to the appropriate environmental office as directed by the Contracting Officer. Bulbs must be boxed, stenciled with the words "spent mercury-containing devices for recycling", and marked with the date of accumulation.

3.22.1.3.3 Aerosol Cans Management and Disposal

Do not dispose of aerosol cans as solid waste or construction and demolition debris. Collect aerosol cans and segregate from other waste in a suitable container on site. Label the container "aerosol cans for recycling" and turn it in to the General HM Locker at Building 102.

3.22.1.3.4 Disposal of Regulated Waste

In accordance with Station requirements, accumulate regulated waste in DOT-approved containers. Ensure containers remain closed except when adding or removing waste and they are marked with the appropriate Non-hazardous Waste Label, which will be provided by PWC Jacksonville or the Station. Air-drying any containers to render them empty is prohibited. Dispose of regulated waste, except for asbestos and petroleum-contaminated waste, through PWC Jacksonville and do not take them off Station. Pay disposal costs in accordance with PWC Jacksonville's published rates.

3.22.1.3.5 Disposal of Petroleum Contaminated Waste

Provide the completed Non-hazardous Waste Manifest for offsite disposal of petroleum-contaminated waste to the Contracting Officer within 7 days of disposal.

3.22.1.4 Dumpsters

Equip dumpsters with a secure cover and paint the standard installation color. Keep dumpster covers closed, except when being loaded with trash and debris. Locate dumpsters behind the construction fence or out of the public view. Empty site dumpsters at least once a week, or as needed to keep the site free of debris and trash. If necessary, provide 55 gallon trash containers painted the darker installation color to collect debris in the construction site area. Locate the trash containers behind the construction fence or out of the public view. Empty trash containers at least once a day. For large demolitions, large dumpsters without lids are acceptable, but should not have debris higher than the sides before emptying.

3.22.2 Cuba

3.22.2.1 Fish and Wildlife Resources

Ensure compliance, including off-duty hours with 1710.10. Ensure employees comply with prohibitions on feeding and raising indigenous wildlife and feral animals during working and non-working hours. Specifically, direct or indirect feeding of iguanas resulting in the domestication or semi-domestication of these animals is strictly prohibited. Further, direct or indirect feeding of feral chickens, cats, dogs, goats, or other feral domestic animals is strictly prohibited. Prohibitions of this section apply to living and working areas. Recognizing that many foreign national personnel use chickens as livestock, request provisions from the

Contracting Officer to allow employees to raise chickens as livestock, if necessary. Accompany any such request with a Livestock Management Plan addressing construction and maintenance of pens to confine the animals, provisions for feeding and watering the animals, pen and surrounding area sanitation, limits on numbers of animals to be raised, and a point-of-contact for livestock management responsibility. Under no circumstances will livestock be permitted to roam or be otherwise free range.

3.22.2.2 Protection of Erodible Soils

Use endemic or regionally native and drought and heat-tolerant grass species as specified by the Contracting Officer.

3.22.2.3 Control and Management of Solid Waste

Dispose of solid waste generated at locations as directed by the Contracting Officer. Solid waste disposal service is available from other on-Station Contractors on a cost-reimbursable basis. Refer to Section 01 14 00 WORK RESTRICTIONS, for more information.

3.22.2.3.1 Disposal of Solid Waste and Debris

Dispose of solid waste, debris, and metal containers in accordance with the requirements specified herein.

3.22.2.3.1.1 Base Sanitary Landfill and Concrete Areas

Only authorized solid waste approved for deposit by the landfill attendant or equipment operator may be dumped at a designated area in the Windward Landfill. Prepare a Landfill Access Pass in accordance with 5090.4. Deposit demolition material such as grading or excavated materials at the designated area, provided such material does not contain segregated metals, as directed by Landfill Attendant. Landfill hours of operation are Monday through Saturday, 7:30 A.M. to 11:00 A.M., and 12:30 P.M. to 4:00 P.M.

3.22.2.3.2 Disposal of Rubbish and Debris

Haul rubbish and debris to the Government landfill (Windward Landfill) in accordance with 5090.4, an approved Landfill Access Pass must be presented prior to entry into the landfill.

3.22.2.3.2.1 Permitted Material in Landfill

A Landfill Access Pass must be obtained prior to transporting asbestos-containing materials to the Asbestos Landfill in accordance with 5090.4. The Landfill Access Pass must be approved by Hazardous Waste Facility personnel (Bldg. 850). Materials that may be deposited in the landfill include the following:

CATEGORY	CONSTRUCTION DEBRIS DISPOSAL - BASE SANITARY LANDFILL EXAMPLE/GENERAL INFORMATION FOR DEPOSIT IN THE LANDFILL
Mixed Debris	The following materials may be placed in the landfill in a location designated by the landfill operator. These items may be mixed together.
	Gypsum board panels, plaster, glass (broken).
	Non-asbestos insulation- (bag fiberglass and mineral wool).
	Packing paper, Styrofoam, and pasteboard boxes.
	Painted wood such as doors, windows, siding, and trim.
	Plastic and fiberglass such as pipe, electrical boxes, cover plates, and similar.
	Ceramic and vinyl flooring or tile, ceiling tile.
Shingles	Non-asbestos roofing materials such as shingles built-up and single roofing.
Masonry and Concrete	Deliver concrete, block, brick, mortar to the landfill separate from any other items, and place in a location designated by the landfill operator.
Non-recyclable Wall Pallets	Deliver concrete, block, brick, mortar to the landfill separate from any other items, and place in a location designated by the landfill operator.
Treated Lumber	Deliver treated wood, and such as piling and power poles, to the landfill separated from any other items and place in locations as designated by the Landfill Operator.
Fiberglass Tanks	Clean tanks before delivery to landfill. 208 liter55 Gallons or less are turned in at recycling.

CATEGORY	CONSTRUCTION DEBRIS DISPOSAL - BASE SANITARY LANDFILL EXAMPLE/GENERAL INFORMATION FOR DEPOSIT IN THE LANDFILL
Asphalt Pavement	Deliver to Windward Landfill.
Construction Debris	Separate each category of construction debris at the construction site and deliver separately to the landfill. Place each category of construction debris in the landfill at a location designated by the Landfill Operator.
Asbestos	Place in designated area of the landfill. Transport asbestos-containing materials in covered vehicles, wetted, double bagged, and properly marked and documented. Obtain a Landfill Access Pass at the Hazardous Waste Facility after the load has been inspected.
Lead Based Paint and Materials	Dispose of building components and materials removed that have lead-based paint (LBP) at the construction waste cell at the Landfill. Prior to disposal, test a sample of these components for lead. Dispose of abatement waste, such as blast material, paint chips, paint stripper scrapings, and similar, where the LBP has been removed from a substrate in approved drums and deliver material to the Hazardous Waste Facility, Building 850, properly marked and documented for proper analysis and potential disposal in the United States at Contractor expense.

3.22.2.3.2.2 Metals Disposal

Metals will not be accepted at the landfill site. Dispose of metal construction debris by obtaining a landfill pass at the Recycling Center, Bldg. 1751. Recycling Center personnel will inspect metals and instruct the driver to go to the landfill where the load will be weighed. If material is not recyclable, a Landfill Access Pass will be issued in accordance with 5090.4. Remove metals from each category before delivery to the landfill, including tanks (for example: remove hardware from doors and windows). Aluminum, brass, copper, lead, other metal, electrical wiring, cable (cut in 3 foot or less sections) must be taken to the Recycling Center.

3.22.2.4 Sewage

Dispose of sewage through connection to a station sanitary sewage system or

the Lizard Island treatment pump station as directed by the Contracting Officer. Where such a system is not available, use chemical toilets or comparable effective units and periodically empty waste into a pump station designated by the Contracting Officer.

3.22.2.5 Control and Disposal of Hazardous Waste

Disposal of hazardous waste at the Windward Landfill and Concrete Fill Area is prohibited.

3.22.2.5.1 Hazardous Waste Generation

Handle generated hazardous waste in accordance with the DOD 4715.05 and 5090.1.

3.22.2.5.2 Hazardous Waste Disposal

Dispose of hazardous waste in accordance with federal and station regulations, especially 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, the DOD 4715.05 and 5090.1. Do not bring hazardous waste onto the Station. In accordance with 5090.1 turn in hazardous waste for disposal to the Hazardous Waste Facility (Bldg. 850). Obtain containers for hazardous waste or oily waste from Hazardous Waste Facility. Containerize the waste. Waste in containers must meet DOT shipping container requirements in accordance with 49 CFR 178. Package the containers in accordance with 49 CFR 171 for waste. Knowingly mismanaging or disposing of hazardous waste are grounds for immediate debarment and administrative action.

3.22.2.5.3 Hazardous Waste Accumulation

Accumulate and manage hazardous waste in accordance with federal and station regulations, 40 CFR 261, 40 CFR 262, DOD 4715.05, 5090.1, and revisions. Properly identify, package, and label hazardous waste in accordance with 49 CFR 172 and 5090.1 and turn it in for disposal to the Hazardous Waste Facility (Bldg. 850). Obtain containers for hazardous waste and used oil from the Hazardous Waste Facility. Containerize and transport the waste to the Hazardous Waste Facility. If hazardous materials are mismanaged so they become hazardous waste, or if a hazardous waste is not managed properly and costs more for disposal because of contamination, the Contractors' Special Deposit Account will be charged for sampling, analysis, and disposal rates as specified or identified. Itemized statements will be provided to the Contractor via the Contracting Officer.

3.22.2.5.3.1 Site Storage

In accordance with 5090.1, store hazardous waste near the point of generation up to a total quantity of one quart of acutely hazardous waste or 55 gallons of hazardous waste. Move any volume exceeding these quantities to an approved Hazardous Waste Storage area (from the approved EPP) within 3 days. Prior to generating hazardous waste, contact the Hazardous Waste Facility for labeling requirements for the accumulation of hazardous waste. Accumulate hazardous waste (no longer than 90 days) in containers in accordance with 49 CFR 178 and Station instructions. Identify hazardous waste in accordance with 40 CFR 261, 40 CFR 262, and Station instructions. Ensure hazardous waste is properly labeled and segregated. Every effort must be made to ensure used oil is not contaminated. Used oil generated must be containerized and delivered to the Hazardous Waste Facility (Bldg.

850) for disposal.

3.22.2.5.3.2 Turn-In

Hazardous waste must be turned into the Hazardous Waste Facility for shipment or disposal off Station. At the conclusion of the project, turn in all unused hazardous materials to the Consolidated Hazardous Material Reutilization and Inventory Management Program for reuse. Exceptions to this will be hold back of minor amounts for possible warranty work. Properly dispose of waste generated from a project at the conclusion of each task order or project.

3.22.2.5.4 Spills of Oil and Hazardous Materials

Package, transport, and dispose of contaminated material, equipment, and clothing generated during the spill cleanup procedures, which must be at no additional cost to the Government in accordance with 5090.1 and 5090.7. Provide SDSs to the Contracting Officer to ensure material is properly identified for disposal, or reimburse the Government for analytical data (to include labor and costs of analysis) should data be required to properly identify the waste. Transport packaged waste to the Hazardous Waste Facility (Bldg. 850).

Complete the spill report provided in 5090.7 and submit it to the Contracting Officer within 24 hours of spill occurrence. Contractor's special deposit account will be charged for disposal of spilled material and associated waste.

3.22.2.5.5 Oily and Hazardous Substances

Limit the storage of fuels, lubricants, solvents, paints, and hazardous substances to a total of less than 275 gallons onsite unless preapproved by the Government.

3.22.2.5.6 Lead-Acid Batteries

Dispose of lead-acid batteries that are not damaged or leaking at the Base Recycling Center. For lead-acid batteries that are leaking or have cracked casings, dispose of battery at the Hazardous Waste Facility (Bldg. 850).

3.22.2.5.7 Mercury Controls

Prior to starting work, remove thermostats, switches, and other components that contain mercury. Prior to removal, obtain proper containers from the Hazardous Waste Facility (Bldg. 850).

3.22.2.5.8 Petroleum Products

Dispose of petroleum products and oily water at the Hazardous Waste Facility (Bldg. 850).

3.22.2.5.9 Class I and Class II Ozone Depleting Substances (ODS)

Transfer ODS and other refrigerants to DOT-approved recovery cylinders. Properly label and deliver to the Hazardous Waste Facility (Bldg. 850) at the conclusion of the Task Order or project. Do not mix different refrigerants in the same cylinder.

Certified technicians must perform refrigerant work using EPA-approved

recovery equipment. Releases of ODS or refrigerants to the atmosphere is strictly prohibited.

3.22.2.5.10 Vegetation

Remove trees and other landscape features scarred or damaged by equipment operations, and replace with equivalent, undamaged trees and landscape features. Obtain Contracting Officer's approval before replacement. Replace trees on a one-to-one basis. Use Regionally native plants as specified by the station Integrated Natural Resources Management Plan (INRMP) as replacement landscape features.

3.22.2.5.11 Contract Completion and Close-Out

At project completion, remove any hazardous material brought onto the Station. Account for the quantity of hazardous material brought to the station, the quantity used or expended during job, and the leftover quantity that (1) may have additional useful life as a hazardous material and must be removed by the Contractor, or (2) may be a hazardous waste, which must then be removed as specified herein. The sale of any hazardous material to other Contractors (or Base entity) must be specifically approved in writing by the Contracting Officer prior to the sale.

Laydown areas, vehicle storage and repair facilities, and similar that were Contractor operated and controlled must be returned to a condition similar to the time of the contract award. This includes the removal of break shacks, kitchens, gardens, and similar.

-- End of Section --

SECTION 01 57 24.03 44

STORM WATER POLLUTION PREVENTION PLAN (Louisiana)

PART 1 GENERAL

NOTES FOR DESIGNER OF DESIGN-BID BUILD CONTRACTOR: *Edit this section to provide guideline for Storm Water Pollution Prevention requirements for design-bid-build project that has total disturbed area of one (1) or more acre. The edited section will direct construction contractor to submit a pre-construction and operation specific SWPPP.*

NOTES FOR DESIGNER OF DESIGN-BUILD CONTRACTOR: *Prepare pre-construction operation specific SWPPP to be implemented at the job site by a designated and qualified representative.*

1.1 REFERENCES

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

CODE OF FEDERAL REGULATIONS (CFR)

40 CFR 110	Protection of Environment: Subchapter D--WATER PROGRAMS, Discharge of Oil
40 CFR 112	Oil Pollution Prevention

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. When providing a resubmittal to address USACE review comments, the Contractor shall include annotated comment responses along with the resubmitted SWPPP (in its entirety). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Storm Water Pollution Prevention Plan (SWPPP or SWP3);G

The construction Contractor site specific SWPPP shall prevent erosion, sediment loss from the construction site, and erosion down gradient of the developed property. To the maximum extent possible, the SWPPP shall (a) limit the area of disturbance to minimize soil loss and prevent the discharge of water quality impaired water from the construction site and (b) incorporate staged stabilization measures as work progresses throughout the duration of the project. The Contractor shall use the current

forms (e.g., NOI, NOT, NOC, etc.) required by the LPDES General Permit for Stormwater Discharges From Construction Activities. Additionally, the Contractor shall maintain compliance with the Construction General Permit at all times (even when the Construction General Permit is revised by the issuing agency).

The following summarizes some of the requirements that need to be implemented into the SWPPP as required by the LPDES General Permit.

(1) The SWPPP shall comprise of three (3) major parts:
(a) narrative,
(b) drawings depicting structural and non-structural best management practices (BMPs), and
(c) permit required documentation (attachments and worksheets) for record-keeping.

(2) The Contractor site specific SWPPP shall consider the phasing of project tasks with the timing of BMPs and construction activities. Additionally, the Contractor site specific SWPPP shall consider the diversion of storm water run-on onto the disturbed portions of the project site, including limiting the area of exposed soil, and retention of sediments from escaping the exposed portion of the site.

(3) The contract drawings depict recommended or suggested BMP types and locations. Any additional BMPs or modifications to the BMPs throughout the project need to be depicted on the drawings included in the SWPPP as well as the text within the SWPPP.

(4) During construction (after USACE approval of construction operation SWPPP), SWPPP or BMP revision is required when site conditions change and when situations arise that may cause potential permit non-compliance. The SWPPP or BMP revision shall be initiated when requested by the Contracting Officer Representative (COR) or as deemed necessary following an inspection conducted by the Contractor designated inspector.

(5) The NOI (when required by the applicable LPDES general permit) shall be separately submitted to all required parties by the construction Contractor and the USACE as co-operators of the construction site.

(6) The Contractor shall sign the Certification of SWPPP, the delegation letter of signatory authorization, the NOI, and the Notice of Termination (NOT) as required by the LPDES General Permit.

(7) The SWPPP must contain a list of regulated materials and construction materials and products, their location, and methods of containment for each product.

(8) The SWPPP must contain a list of wastes, their location, and method of containment.

(9) The SWPPP shall implement procedures that prevent post construction erosion from occurring. Some examples include the use of Scour Stop or equal as velocity dissipators or the placement of composite fiber turf reinforcement mats at down gradient channels.

(10) The following shall be depicted in the SWPPP drawings.

(a) Location of batch plant (if applicable) and drainage features

The following summarizes some of what is needed to be implemented into the SWPPP as required by the USACE.

(1) The SWPPP drawings shall be prepared on site grading plans. The drawings shall include four phases or stages of Best Management Practices (BMP) structures layout:

- (a) initial BMP layout at site prior to clearing and grubbing,
- (b) interim BMP layout during grading activities,
- (c) temporary stabilization method and locations, and
- (d) final stabilization method and locations of application.

Notes on timing controls and activities shall be described on the SWPPP drawings.

(2) The SWPPP shall be prepared by a registered professional engineer, a Certified Professional in Erosion and Sediment Control (CPESC), or a licensed landscape architect who has experience with the applicable construction storm water permit as well as the use of sediment and erosion control best management practices (BMPs).

(3) The Contractor designated inspector and any person responsible for maintaining SWPPP compliance with the applicable storm water permit and permit required activities shall attend training on storm water erosion and sediment control compliance/inspections provided by the EPA, state, or vendors (e.g., www.ieca.org, www.teex.org, www.stormwatercenter.org, etc.). The inspector shall provide training certificates from accredited vendors confirming course completion. Documented experience that deals with maintaining compliance with the applicable Construction Storm Water Permit may be substituted for the above mentioned training. Documented experience must be attached to the SWPPP.

(4) The person responsible for maintaining the SWPPP shall provide briefing on the approved Construction Operation SWPPP to all on-site workers.

(5) The SWPPP shall not be submitted to the USACE unless it has been verified to meet the requirements of the applicable state Construction Storm Water Permit. Prior to submitting the Notice of Intent (NOI) (if required per the applicable state Construction Storm Water permit) to all required parties, the construction operation SWPPP shall be approved by the USACE.

(6) The SWPPP must contain the Safety Data Sheets (SDS) for each material on-site or provide a reference in the SWPPP on where the sheets can be found at the project site.

(7) The SWPPP must contain a list and identify the location and method of containment for each type of waste that is to be recycled during the project.

(8) The following shall be depicted on the SWPPP drawings.

(a) A statement that verifies an emergency spill clean-up kit and spill containment device is at fuel transfer points at all times.

(b) A statement that verifies fuel tanks or fueling trucks have overfill protection devices.

(c) Construction details for all BMPs used on the construction site (e.g., BMPs for the fuel storage areas, concrete wash-out pit, borrow area, batch plant, stabilized construction access, etc.)

(9) Include a copy of this Section.

SD-11 Closeout Submittal

Notice of Termination; G; RPEC

If a NOI has been submitted, a copy of the original Notice of Termination (NOT) shall be submitted to the regulatory agency and to all required parties. Prior to submittal of the NOT, Contractor shall inspect the finished site with the Contracting Officer Representative (COR) and obtain photographs to prove establishment of final soil stabilization and removal of BMP controls. A copy of NOT and photographs shall be provided to RPEC through the COR. The construction Contractor shall retain all documents pertaining to Construction Storm Water Permit for at least three (3) years after NOT submittal.

1.3 SUMMARY

The Contractor shall verify that the most current forms (e.g., NOI, NOC, NOT, etc.) are submitted with the SWPPP.

The Contractor shall not commence soil disturbance until approval of the site specific SWPPP is obtained from the USACE along with the USACE SWPPP certification, and USACE NOI (if applicable). Additionally, all required waiting periods as described in the LPDES General Permit must also be met before soil disturbing activities may begin.

There is no separate payment for work required in this Section.

1.3.1 Site Operators, Responsibilities, and Shared SWPPP

Both the U.S. Army Corps of Engineers (USACE) and the construction Contractor meet the definitions as operators for the construction activities and operate under a shared SWPPP that addresses the requirements of the LPDES General Permit.

1.4 PROJECT IDENTIFICATION

PROJECT TITLE: [_____]

LOCATION: [_____] , Louisiana

1.5 PROJECT DESCRIPTION

NOTES: Provide a brief description of project site and associated construction activities (i.e. clearing and grubbing; grading; concrete and asphalt pavement; fencing; landscaping; describe project location; necessary site work and utility service lines; and demolition, recycling and disposal of regulated substances, etc.). Reference Civil Design Analysis and drawings for site info. Identify the total project area (acres) for the proposed construction and the existing demolition sites (reference NPDES General Permit for definition on total disturbed site). The total disturbed area includes

number of acres where construction activities will occur, construction right-of-way, off-site material storage area, overburden and stockpiles of dirt, borrow area, spoil area, and laydown area. Construction support facilities are to be determined by the construction Contractor.

The scope of this project includes construction of new [____], [storm sewer,] [sanitary sewer,] [[____],] [parking lots,] [access drives,] [sidewalks,] [lighting,] [security fence,] [communication system,] and[[____],]. [In addition, this project shall include demolition of [____] at [____].] The total project area of the new construction site includes [off-site material storage,] [overburden and stockpiled material,] [borrow areas,] is roughly [____] acres. [The total project area of the remote demolition site is roughly [____] acres]. The total disturbed area [including the new construction and remote demolition sites] in this contract is roughly [____].

1.6 BID OPTIONS AND PROJECT PHASING

There are [no] Bid Options for this project. [They are:

[____]

[____]]

[Project Phasing Activities include:

[____]

[____]]

1.7 STANDARD INDUSTRIAL CLASSIFICATION (SIC)

NOTES: SIC codes are obtained from the Standard Industrial Classification Manual published by Office of Management and Budget (OMB). For construction activity permit, the primary and sometimes the secondary codes will be for the construction activity. The second through the fourth codes will generally relate to the ultimate use of the project. Use one (1) to maximum of four (4) codes as needed to adequately describe the project.

[1521 General Contractors - Single Family Houses]

[1522 - General Contractors - Residential Buildings, other than

Animal Building

FJ25AB

Single Family (i.e., barracks)]

[1541 - General Contractors -Industrial Buildings and Warehouses]

[1542 - General Contractors - Non-Residential Building, other than Industrial Buildings and Warehouses (i.e., administrative buildings)]

[1611 - Highways and Street Construction, Except Elevated Highways]

[1623 - Water, Sewer, Pipeline, and Communications and Power Line Construction]

[1629 - Heavy Construction, Not Elsewhere Classified (i.e., athletic fields, cofferdams, dikes, boat docks, railroads, reservoirs, water or sewage treatment plant)]

[1771 - Concrete Work (includes asphalt; i.e., access drives and parking lots, culvert construction)]

[1794 - Excavation Work (include trenching and earth moving)]

[4581 - Airports, Flying Fields, and Airport Terminal Services]

[7033 - Recreational Vehicle Parks and Campsites]

[7538 - General Automotive Repair Shops]

[7699 - Repair Shops and Related Services, Not Elsewhere Classified (i.e., military equipment repair, machinery cleaning)]

[7999 - Amusement and Recreation Services, Not Elsewhere Classified (i.e., beaches, fishing piers, picnic grounds)]

[8062- General Medical and Surgical Hospitals]

[9711 - National Security (a general category for military facilities)]

1.8 LOCATION

NOTES:*Provide a narrative of the project location, including street names or easily recognized landmarks. As a minimum, include the following: (1) project site street name and boundary streets, (2) latitude and longitude of the project center to the nearest 15 seconds, or (3) quarter, section, township, and range in which the project is located. Describe all disturbed areas, and off-site support functions and locations for proposed facilities and remote demolition sites.*

The new facility project site is within the city boundary of [City name] and is in [COUNTY name]. The project site is bounded by [name all adjacent streets]. The new facility project center is located approximately at [__] degrees [__] minutes [__] seconds latitude, [__] degrees [__] minutes [__] seconds longitude. The physical address for the new facility is [__]. The demolition site is bounded by [__]. [The demolition site project center is approximately at [__] latitude and [__] longitude. The physical address

of the demolition site is [____].] [The project borrow and material disposal area is within the project boundary.] [The project borrow area is off-site at LAT [____] and LONG [____]. The project disposal area is off-site at LAT [____] and [____] LONG.]

1.9 RECEIVING WATERS

NOTES: *Identify the body of water that receives site runoff. If it is a tributary to a major river, identify both the tributary and the river. If runoff is collected by a storm drainage system, identify the operator of the system (i.e., the name of the military installation or municipality, the creek adjacent or on site, MS4, the ultimate receiving water body, etc.)*

The storm runoff from the new facility site flows [direction] [into new storm drain] [by sheet flow], then flows [direction] to [name of Creek] ultimately to [name of River] [name of Basin]. [The storm runoff from the demolition site flows [direction] [to storm drain] [by sheet flow], then flows [direction] to [____].]

PART 2 SITE DESCRIPTION

2.1 EXISTING CONDITIONS

NOTES: *Describe current site conditions. Include information on drainage patterns and runoff coefficients. Also discuss the design storm frequencies used for runoff volume calculations. If the site is located adjacent to an existing industrial facility or in a community greater than 100,000 people, records of storm water quality near your site may be available. Include storm water quality records for the site (if it is available).*

The site generally slopes from [north] [northwest] [northeast] [west] [east] [southwest] [southeast] [____] to [north] [northwest] [northeast] [west] [east] [southwest] [southeast] [____] with an average slope of [____] percent. There are currently [no] [an existing] underground storm drainage facilities near the new facility site. Estimated existing runoff coefficients vary from [____] to [____]. Ten-year storm frequency and [____] minutes duration with [____] inches per hour intensity was used for the design of the storm drainage system. [There are currently [no] [an existing] underground storm drainage facilities at the demolition site. The demolition site generally slopes from [east] [south] to [north] [west] with an average slope of [] percent.]

2.2 FINAL CONDITIONS

NOTES: *Describe site conditions and drainage upon completion of construction activities. Include estimates of future runoff coefficients. Describe features of the storm water system and storm water management (i.e., erosion control and velocity dissipation devices).*

Grades at the new facility site will not change significantly and is roughly about [_____] percent from [north] [northwest] [northeast] [_____] to [_____] . Completed facility site drainage will flow [into a new underground drainage system] [by sheet flow] . The grades surrounding the building is approximately [_____] percent grade. The new project site will have a [building,] [access roads,] [service drives,] [_____] , [landscaping] [and turfing] . Estimated future runoff coefficients vary from [_____] to [_____] .

2.3 CONSTRUCTION ACTIVITIES

The Contractor shall establish storm water BMP control structures prior to conducting site disturbing activities. The Contractor shall maintain temporary and permanent site stabilization at each portion of site.

The Contractor shall maintain a record of the START date of major construction site activities (i.e., clearing and grubbing, grading, trenching and excavation, dirt moving, etc.), the STOP date when construction activities cease on a portion of the site, and the START date of stabilization measures (such as sod, seeding with native seed, vegetative buffer strips, erosion control compost, turf reinforcement mat, SCOUR STOP, etc.). See SECTION 01 57 25.00 44 SWPP PLAN INSPECTION AND MAINTENANCE REPORT FORM for an example of a grading and stabilization log sheet.

2.4 SOILS DATA

The SWPPP narrative shall provide soils information of the proposed construction site. Possible sources of information are project soil reports, USDA soil survey data, and other published sources. Information can be found at <http://websoilsurvey.nrcs.usda.gov/>.

2.5 STORM WATER POLLUTION PREVENTION DRAWINGS

Each SWPPP drawing shall have a specific sheet number and title.

The following describes the items that need to be identified in the drawings of the SWPPP as required by the LPDES General Permit.

- (a) Direction(s) of stormwater flow and approximate slopes anticipated after grading activities;
- (b) Areas of soil disturbance and areas that will not be disturbed (or a statement that all areas of the site will be disturbed unless otherwise noted);
- (c) Locations of major structural and nonstructural BMPs identified in the SWPPP;
- (d) Locations where stabilization practices are expected to occur;
- (e) Locations of off-site material, waste, borrow or equipment storage areas;
- (f) Locations of all waters of the United States (including wetlands);

- (g) Locations where stormwater discharges to a surface water; and
- (h) Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.
- (i) A general location map.

The following describes the items that need to be identified in the drawings of the SWPPP as required by the USACE.

(a) Existing site features and BMPs -- name of receiving waters (e.g., lake, stream, creek, river, unnamed tributary of named receiving stream, etc.), project site storm water discharge locations, existing storm grates, outfall protection devices, and BMPs.

(b) Interim grading site drainage features and BMPs -- slopes with rough grading, limit of soil disturbance area, outline of areas not to be disturbed (e.g., vegetative buffer zones, cultural resources, wetlands, and areas of environmental concern), new storm grates, new drainage outfalls, and BMPs.

(c) Areas to receive temporary stabilization. Methods of stabilization shall be identified along with the applicable specification for the stabilization (e.g., native seed mix at a certain application rate in lbs/sq-ft, etc.).

(d) Areas to receive final stabilization. Methods of stabilization shall be identified along with the applicable specification for the stabilization (e.g., native seed mix at a certain application rate in lbs/sq-ft).

(e) On-site and off-site material borrow areas, clean dirt disposal areas, and BMPs. Stabilized access roads, construction support activities and laydown areas (equipment, staging, parking, and storage areas) along with the BMPs.

(f) Concrete or asphalt batch plant and BMP (if applicable).

(g) BMP construction details for all erosion control and stabilization and sediment control BMPs (e.g., BMPs for the fuel storage areas, concrete wash-out pit, borrow area, batch plant, stabilized construction access, seeding type, silt fence, etc.)

(h) EROSION AND SEDIMENT CONTROL PLAN I (demolition site)

(i) EROSION AND SEDIMENT CONTROL PLAN II (existing site conditions depicting run-on flow diversion BMPs and run-off BMPs)

(j) EROSION AND SEDIMENT CONTROL PLAN III (interim site grading conditions depicting run-off BMP, swales BMP, storm grates BMP, and temporary stabilization areas & method specification)

(k) EROSION AND SEDIMENT CONTROL PLAN IV (complete site grading conditions depicting run-off BMPs, swales BMPs, storm grates BMPs, and final stabilization areas and method specification)

(l) Notes on timing of controls of activities

PART 3 BEST MANAGEMENT PRACTICES (BMPs)-EROSION AND SEDIMENT CONTROLS

3.1 TEMPORARY STABILIZATION

Stabilization measures shall be in conformance with LPDES General Permit Part IV.D.2.a(2) and Part III.D.2.a(2) for large and small construction activities, respectively.

The Contractor shall provide all necessary labor, services, equipment, materials (e.g., fertilizer) to obtain, transport, apply, and maintain the temporary stabilized area until final stabilization is performed.

Some examples of acceptable methods for temporary stabilization include water sprinkling with environmental sustainable soil binders (e.g., products produced by Soilworks, LLC, DirtGlue Enterprises, SoilLok, or similar) or anchored straw mulching (typically applied at 2 tons per acre). The construction SWPPP may specify other forms of temporary stabilization methods that are industry accepted and are applicable for the project site conditions.

3.2 PERMANENT STABILIZATION

Stabilization measures shall be in conformance with LPDES General Permit Part IV.D.2.a(2) and Part III.D.2.a(2) for large and small construction activities, respectively.

The Contractor designated inspector shall inspect the site with the USACE COR to ensure final stabilization is established. Final stabilization is defined as described in the LPDES General Permit. If final stabilization is unsatisfactory, additional measures shall be required by the USACE COR. If applicable, additional seeding shall be performed after temporary removal of the erosion control blankets and subsequent replacement of blankets after such activities are completed. If applicable, the Contractor's SWPPP shall specify the native seed mix species and application rate (lbs/sq-ft). Some examples of acceptable methods for permanent stabilization includes sodding, pavement, and rock blankets.

3.3 SEDIMENT BASIN

NOTE: See LPDES General Permit Part IV.D.2.a(3) and Part III.D.2.a(3) for large and small construction activities, respectively.

The NPDES Storm Water Discharge General Permit requires a temporary sediment basin for sites where 10 acres or more are disturbed at one time. [If the disturbed site drains to a common location, a sediment pond or trap shall be constructed as initial grading activity. The pond shall be prepared by the site designer and it shall include layout and construction details.] [The runoff from the site does not drain to a common collection point; therefore, a temporary sediment basin is not required.] [A series of smaller sediment basins are constructed to provide for temporary sediment control is depicted on the grading plan.] [A series of smaller sediment basins are not attainable, therefore effective sediment controls (i.e. vegetative strips and silt fences) are established on all the down slope areas of the disturbed site perimeter to control sediment in runoff.] [A construction sediment basin is not attainable because ____] [Temporary sediment pond receives final grade as a permanent sediment pond to manage storm runoff at the finished site.] [A temporary sediment basin is not required because construction activities at each portion of the disturbed

site is less than 10 acres.] The following elements are required if a sediment pond is constructed as an initial site activity: The slopes of sediment pond shall be stabilized with an effective form of temporary/permanent stabilization (as applicable). The storm water shall be allowed to settle after each rainfall event before dewatering in accordance with the applicable Construction General Permit.

3.4 STRUCTURAL CONTROLS

See SECTION 01 57 23 TEMPORARY STORM WATER POLLUTION CONTROL.

3.5 NON-STRUCTURAL CONTROLS

The Contractor (and the subcontractors) shall be responsible for eliminating pollutants in storm runoff from the project site. The Contractor (and subcontractors) shall be responsible for utilizing non-structural BMPs to minimize storm water pollution. Some examples of non-structural BMP include:

- Construction Practices
- Material Management
- Waste Management
- Vehicle and Equipment Management
- Employee and Subcontractor Training
- Storm Water Pollution Prevention Plan Maintenance

3.5.1 Construction Practices

Dewatering Operations: The Contractor (and subcontractor) shall prevent discharge of sediment by methods of sediment control, containment, and disposal. In project areas suspected of potential toxic or petroleum products contamination, the water shall be tested to determine method of disposal.

Paving Operations: The Contractor (and subcontractor) shall avoid discharge of pollutants to storm drains by avoiding asphalt and concrete paving in wet weather or anticipation of such event, storing material in covered containers, covering and berming storage areas, establish control structures, cover on-site storm grates, and worker and subcontractor training.

Structure Construction and Painting: The Contractor (and subcontractor) shall prevent pollutants in storm runoff by covering, or berming material storage areas, keeping job site clean and orderly, using safer alternate products, stabilizing adjacent disturbed areas, storing material in secondary containment, protecting on-site storm drains, establish control structures, and perform worker and subcontractor training.

USACE Requirements

Stockpiles: Material shall have a storm water perimeter control devices established at a minimum distance of 10 feet from the toe of the stockpile. Materials excavated from utility trenching shall be protected from up gradient storm run-on.

3.5.2 Material Management

Material Delivery and Storage Practice: The Contractor (and subcontractor) shall prevent or reduce discharge of pollutants to storm water by

minimizing the on-site storage of hazardous and toxic (HT) materials, storing HT in clearly labeled, corrosion-resistant containers with secondary containment at designated areas approved by the COR, conducting frequent inspection, keeping current inventory of construction materials on site and training of workers and subcontractor.

Material Use and Inventory: Common on-site materials are pesticides and herbicides, fertilizers, detergents, concrete material, petroleum-based products, fertilizers, tar, asphalt, steel reinforcing bars, other hazardous chemicals such as acid, lime, solvents, curing compounds, sealants, paints, glues, fertilizers, etc. The Contractor (and subcontractor) shall use less hazardous, alternate or environmental friendly material, if available. The Contractor shall have

- (1) a list of construction materials used on site,
- (2) a list of materials and associated potential pollutants, and
- (3) method of storage and containment in the Contractor operation specific SWPPP.

Spill Prevention and Control: The Contractor (and subcontractor) shall store HT material in covered containers and inside a fenced area, have the temporary fuel storage tank bermed or contained to meet applicable Fire Code, place readily accessible spill clean-up materials, have protocol for immediate work stoppage, notification, clean-up, labeling, storage and packaging, transportation, disposal, record-keeping, closure activities, and provide training to workers and subcontractor for response to spills.

3.5.3 Waste Management

Non-Construction Wastes: The Contractor must minimize pollutant discharges from areas other than construction (including stormwater discharges from dedicated asphalt plants and dedicated concrete plants).

Construction and Waste Materials: The Contractor must: 1. Prevent the discharge of solid materials, including building materials, to waters of the United States, except as authorized by a permit issued under section 404 of the CWA; 2. Minimize exposure of construction and waste materials to stormwater, and the occurrence of spills, through the use of storage practices, prevention and response practices, and other controls; 3. Prevent litter, construction debris, and construction chemicals (e.g., diesel fuel, hydraulic fluids, and other petroleum products) that could be exposed to stormwater from becoming a pollutant source in stormwater discharges.

Solid Waste Materials: Trash and uncontaminated construction debris shall be placed in appropriate covered waste containers. Waste containers shall be emptied regularly and shall not be allowed to overflow. The disposal area of excavated material from project construction shall not be utilized for waste disposal. Routine janitorial service shall be provided for all construction buildings and surrounding grounds. No construction waste materials, including concrete, shall be buried or otherwise disposed of on-site. The Contractor shall brief all on site personnel on good house-keeping and waste minimization.

Solid Waste: Solid waste materials (e.g., grout, mortar or uncontaminated debris) shall be placed in covered containers. Trees and shrubs from site clearing shall be shredded and used as mulching material after site stabilization. Packaging materials such as wood, plastic, and paper shall be recycled to the maximum extent possible and not disposed of in a

landfill. It is a requirement to perform recycling (see SECTION 01 74 19). The Contractor shall designate waste containers for segregating waste (municipal, metal, aluminum, plastic, wood pallet, packaging, glass, etc.) Dry paint cans shall be recycled. The Contractor shall designate waste disposal area, have a routine janitorial service for all structures and surrounding grounds, and have a routine schedule to service waste containers. The disposal area of excavated material from project construction shall not be utilized for solid or refuse waste disposal. Personnel on the job site shall be briefed on minimizing disposal to landfill by waste segregation and recycling.

Hazardous and Toxic Waste: All excess on-site material such as paints, solvents, petroleum products (e.g., fuel, oil, and grease, etc.), herbicides, pesticides, acids for cleaning masonry, concrete curing compounds, sealants, paint strippers, wastes from oil-based paint, and glues can become HT waste. Containers of excess material shall be labeled and managed according to the labels and as recommended by the product manufacturers. If there are no instruction provided, the Contractor shall turn in contained waste to the installation DRMO, the local household hazardous waste drop-off, or recycling program.

NOTE: DELETE IF REGULATED MATERIAL ABATEMENT IS NOT APPLICABLE TO THE PROJECT.

Demolition: Buildings to be demolished under this Contract shall require removal of the following regulated materials: [mercury fluorescent lights], [PCB or TCB/DEPH ballasts], [items containing ozone depleting chemicals], [mercury bulb thermostats], [items containing lead-based paint or pipe joints], [asbestos-containing building material], and [items containing CFC] [_____]. [Asbestos-containing materials shall be handled and disposed of in accordance with Section 02 82 14.00 10 ASBESTOS HAZARD CONTROL ACTIVITIES prior to building demolition.] [Lead hazard control activities shall be performed in accordance with Section [02 83 19.00 10 LEAD BASED PAINT HAZARD ABATEMENT, TARGET HOUSING & CHILD OCCUPIED FACILITIES] [02 82 16.00 20 ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS] [02 83 13.00 20 LEAD IN CONSTRUCTION.]] [Regulated materials other than [asbestos] [or] [lead] shall be removed and managed in accordance with Section 02 84 00.00 44 REMOVAL, RECYCLING, AND DISPOSAL OF REGULATED MATERIAL.]

Contaminated Soil: If suspicious of soil contamination during soil moving activities, the Contractor (and subcontractor) shall stop work, notify COR, and establish containment to prevent soil transport or runoff from that location. For removal of contaminated soil, a WORK PLAN shall be prepared for COR approval prior to handling and management of the material. The WORK PLAN shall at least include the following: containment, sampling & analyses, notification to regulatory agencies, transportation, worker safety, training & environmental monitoring, disposal, and documentation and record-keeping.

Construction and Concrete Waste: Construction waste or surplus materials, demolition building debris, scrap metal, rubber, plastic, glass, concrete, and masonry products shall be segregated and recycled to minimize landfill disposal. No construction waste shall be buried or disposed of on-site. Concrete waste shall be controlled and minimized by appropriate storage methods for dry and wet materials, and control the amount of concrete and cement mixed on site. Sweepings from exposed aggregate concrete shall be collected and returned to aggregate stockpile and they shall not be washed into streets or storm drains. Concrete wastewater from wash pit is not

permitted to discharge as storm runoff. See SECTION 01 57 23 TEMPORARY STORM WATER POLLUTION CONTROL for additional concrete wash-out requirements. After project completion, the Contractor shall contain wastewater, clean the basin, test and dispose of wastewater and sediment in accordance with applicable regulations and to the satisfaction of the USACE COR. The Contractor is responsible for all fees, levies, and disposal cost and shall provide a treatment facility signed delivery ticket.

Sanitary/Septic Waste: On-site sanitary facilities shall be established at a convenient location. Facility location, design, maintenance, and waste collection practices shall be approved by COR and are in accordance with local regulations. The Contractor (and subcontractor) shall have a routine schedule for waste pump out by a licensed hauler. Septic waste treatment system shall have a pre-construction permit from the local health regulating agency and have contract service with a licensed company. Temporary sanitary facilities discharging to sanitary sewer system shall be approved by the operator of the system and properly connected to avoid illicit discharges. Wastewater from water-based paint shall not be discharged as sanitary waste.

Building Exterior Cleaning or High-pressure Wash: Storm drains shall be protected by approved storm water control device. Wash onto dirt area, spade in, settle solids in pit, collect (mop up) and discharge to sanitary sewer (with approval from sewer operator). If the exterior paint contains lead exceeding the levels stated in the Consumer Safety Standard, mercury or mildewcide, the wash water shall be collected and disposed of as regulated material that will require sampling data for disposal to permitted facility.

Street/Pavement Cleaning: Water used for this activity shall be minimized and sediment basin shall be used to contain wastewater. At completion of construction, the silt shall be removed and disposed of in accordance with applicable regulations, and water from the basin shall be pumped to a sanitary sewer with written approval from the COR.

Dechlorination of Wastewater from Disinfection of New Drinking Water System: Reference SECTION 33 11 00 WATER DISTRIBUTION.

Care of Storm Water from Excavated Areas: Storm water trapped in excavated areas shall be lifted or pumped into a temporary bermed sediment basin or equal measure(s) for sediments removal. The filtered water shall runoff as sheet flow from the sediment removal area. The sediment removal area shall have the maximum separation distance possible from the site drainage outfall.

3.5.4 Dust Control

See SECTION 01 56 00.00 44 DUST CONTROL.

3.5.5 Vehicle and Equipment Management

Off-site Vehicle Tracking: The Contractor is required to keep vehicles from tracking soils from the project, borrow, and disposal sites. Temporary parking area(s) to be used 30 calendar days or more for the Contractor's equipment or personal vehicles shall be paved with temporary asphalt. The temporary parking areas shall be removed by the Contractor upon project completion and restored to the satisfaction of the COR.

Vehicle and Equipment Cleaning: Washing shall be performed off site at a

commercial washing facility that has an oil/water separator as pre-treatment before connection to municipal sewer system. No vehicle washing is allowed on site, unless washing involves the rinsing of a concrete truck and wastewater is trapped in a washout pit with secondary containment.

Vehicle and Equipment Fueling: Fueling shall be off-site unless a written approval is obtained. If fueling on-site is approved, it shall be at least 150 feet from drainage courses.

The Contractor shall provide a construction detail to depict best management practices for fuel storage and fuel transfer/dispensing areas.

Fueling operations shall avoid topping of fuel tank, and avoid mobile fueling of mobile construction equipment. Fueling locations shall use impervious secondary containment (i.e., a liquid-tight berm and an impermeable liner). The containment capacity of the bermed area shall provide at least 110 percent (%) of the stored fluid.

It is necessary to have a clean-up kit and containment bloom (or absorbent material) available at all times for immediate clean-up during fueling. No petroleum fuel, oil or lubricants or products tanks are allowed on-site unless is pre-approved in writing. Emergency cut-off valve and or overfill protection device is required on fuel transfer equipment. The temporary fuel containers placed on-site shall meet the industrial standard, labeled and stored in accordance with applicable Federal, state, and local Fire codes.

In case of spill of hazardous, toxic, and radiological waste (HTRW), the Contractor shall stop work, contain spill, notify the COR and Safety Office, and execute spill control per the SPILL CONTROL PLAN as required in specification SECTION 01 57 20.00 10 ENVIRONMENTAL PROTECTION . Spill control, response, notification, clean-up, restoration, reporting, record-keeping, etc. shall be in accordance with 40 CFR 110 and 40 CFR 112, other applicable Federal, state, and local regulations, and to the satisfaction of the COR.

Vehicle and Equipment Maintenance: Outdoor vehicle or equipment maintenance is a significant potential source of storm water pollution. Activities often include engine repair, changing fluids, etc. Such activities shall be prohibited at the job site. The construction Contractor shall verify proofs on routine maintenance of construction equipment and vehicles before bringing them to the job site.

Vehicle and Equipment Parking: Vehicle or equipment shall be regularly inspected for leaks and schedule routine maintenance to reduce the potential for leaks. If leaks are observed at the job site, such vehicle or equipment shall be repaired immediately or removed from the site.

3.5.6 Employee and Subcontractor Training

The Contractor is responsible for providing training for all workers (including the subcontractor) on the job site. The objectives in training are to provide a clear concept of activities or problems that generate pollutants to storm water, identify solutions (BMPs), promote ownership of the problems and solutions, and integrate feedback into training and BMP implementation. A certificate to verify completion of training shall be signed by all trained personnel and retained in the SWPPP.

3.5.7 Storm Water Pollution Prevention Plan Maintenance

The USACE approved SWPPP shall be readily available to inspector either from the USACE or regulatory agency. The USACE approved BMPs and SWPPP shall be revised at no cost by the construction Contractor when there are changes in site conditions, sequence of construction and operation, when sediments escape from the job site, or as dictated by the results of inspections. The BMPs and SWPPP shall be updated by the construction Contractor upon request of the USACE COR.

PART 4 STORM WATER MANAGEMENT AND PERMANENT CONTROLS

NOTE: The number and headings of these subsections will vary significantly from project to project. Use as many subsections as necessary to adequately describe erosion and sediment controls for the completed project site. While designing the site layout and grading plans, the design engineer should include features that will limit erosion and control sedimentation once project construction has been completed. Permanent structures may include curbs and gutters, storm drains, drainage ditches, culverts, pavement slopes, etc. Indicate storm frequencies and durations used for design purposes. Subsections may include, but are not limited to: RUNOFF COMPUTATIONS, STORM DRAINAGE SYSTEM, VEGETATIVE BUFFER STRIPS, DRAINAGE SWALES AND DITCHES, DRAINAGE CULVERTS and all measures discussed in SECTION 01 57 23 STORM WATER POLLUTION PREVENTION MEASURES.

All sites for new construction and demolition shall be separately addressed. Units of measure used shall match the construction project.

The SWPPP designer shall determine if there are concerns associated with the discharges from sources other than storm water. The SWPPP designer shall consult with the construction Contractor to determine concrete washout pit capacity at the job site to provide total containment of concrete detention and the designed storm event.

4.1 RUNOFF COMPUTATIONS

The storm drainage design is based on a [10] []-year storm frequency and [10] []-minutes duration with [] inch per hour rainfall intensity.

4.2 SURFACE DISCHARGE QUALITY

The wastewater from concrete washing activity is prohibited from discharging as surface runoff. See Part 3.6.5 of SECTION 01 57 20.00 10 ENVIRONMENTAL PROTECTION.

4.3 PERMANENT EROSION CONTROL STRUCTURES AND STORM WATER TREATMENT UNIT

Permanent drainage structures, including [concrete curbs and gutters,] [storm drainage system,] [concrete pavement,] [asphalt pavement,] [drainage swale,] [drainage ditch,] [turfing,] [vegetative strip,] [concrete culvert,] [pipe culvert,] will provide erosion control at the project site.

[Storm water treatment unit shall has a stainless steel expanded screen opening of at least 4700 microns (4.7 mm or 0.185 inches) to remove sediment.]

4.4 OUTLET PROTECTION OR OUTFALL VELOCITY DISSIPATION DEVICES

NOTE: *Identify velocity dissipation or outlet protection device to provide non-erosive flow conditions at the point of surface drainage discharge. New construction and demolition sites shall be addressed separately.*

The outlet protection or outfall dissipation device shall provide non-erosive flow conditions at the point of surface water discharge to the ditch or swale and downstream of the outfall or channel. [The proposed storm drain shall be discharged into [[flow channel][x-inches diameter storm drain pipe].] The outfall impact locations are protected by [e.g., SCOUR STOP or equal]. The drainage channels are protected by [e.g., seeding on prepared soil surface with ECC and overlay with composite turf reinforcement mats][composite turf reinforcement mats overlay on solid sod].

PART 5 TIMING OF CONTROLS AND ACTIVITIES

NOTE: Discuss the sequence of major construction activities and how the related pollution prevention measures will be implemented. Identify situations which are critical to successful construction and pollution prevention, but will not limit the Contractor's ability to determine construction phasing schedule. NOTES of Timing of Controls and Activities specific for each project shall be depicted on SWPPP drawings.

The general Contractor shall discuss timing (sequence) of controls and construction activities to minimize soil loss from exposed areas in the construction operation SWPPP.

The following list provides a general example of the Timing of Controls and Activities.

- Minimize area of disturbance,
- Preserve existing vegetation at the downgradient portion of the site, do not disturb ground cover until it is necessary to proceed with field work,
- Install stabilized construction access,
- Install BMPs at contractor staging, stockpiles, storage, parking, borrow areas, and stockpiles (on-site and off-site locations), concrete washout pit, fuel storage/transfer area, etc.,
- Install BMP at existing storm grates (e.g., curb inlets surface inlets, manholes, catch basins, etc.),
- Install flow diversion dike and stabilize. Construct sediment trap at the downgradient end of the dike,
- Track weather and protect exposed areas with erosion control measures before anticipated storms arrive.
- Construct outfall, install BMPs at initial impact location, and stabilize flow channel prior to clearing upper watershed,

- Stage construction to the maximum extent possible by disturbing, protecting, and then stabilizing one side of river bank before disturbing the opposite side,
- Stabilize flow channel,
- Clear site for sediment pond (if applicable) and utilize sediment pond skimmer to control overflow,
- Stabilize pond slopes,
- Develop run-on BMP devices and protect loose soil areas,
- Start grading up gradient of site and stabilize disturbed areas,
- Avoid disturbing down slope areas of site until up-gradient disturbed areas are stabilized,
- Delay construction of infiltration measures until the end of project when drainage areas are stabilized,
- Install BMP protections at new storm grates (e.g., curb inlets surface inlets, manholes, catch basins, etc.),
- Protect excavated materials by installing BMP perimeter controls to protect materials from run-on and run-off
- Stabilize stockpiles and install BMPs at least 10 feet from the toe of the material,
- Backfill utility trenches in a timely manner to minimize erosion and soil loss,
- Monitor weather reports to schedule paving (asphalt or concrete), concrete saw cutting, foundation work, dust control, seeding or any activities that will impact run-off,
- Inspect and maintain BMP control structures,
- Evaluate BMP and revise BMP when site conditions or activities change. Maintain Construction General Permit and USACE required field records and training logs,
- Monitor discharge from concrete batch plant (if applicable),
- Maintain stabilized areas until final project acceptance (i.e., watering, fertilize, mow, additional seeding, etc.),
- Verify final stabilization of disturbed areas with COR representative. See definition in PART 2.3,
- Remove sediment and BMP control structures once disturbed areas are permanently stabilized and accepted by COR. Obtain photographs of site to prove establishment of stabilization and removal of all BMP controls,
- File the Contractor NOT. Provide a copy of NOT through COR to RPEC.

PART 6 COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

NOTE: Army Regulation 200-1 requires that all Department of Defense installations and Contractors to comply with Federal environmental protection statutes, which includes a provision to observe State, and local environmental regulations.

The SWP3 shall identify the document prepared for compliance with the National Environmental Policy Act (NEPA) of 1969, as amended. It shall discuss impact on endangered and threatened species and their (critical) habitats, archeological, cultural and historical resources and properties, wetlands, floodplains, environmental contamination and compliance issue, water resources, ecological resource, land use, noise, air quality. The installation environmental office is responsible to prepare the NEPA document at the project pre-design stage. The Contractor shall request name NEPA compliance document (Record of Environmental Consideration, Environmental Impact Statement, Environmental Assessment), date of signature for findings (Record of Decision or Findings of No Significant Impact), and include information to PART 7.

In compliance with the Clean Water Act, Section 402, a construction site of 0.4 hectare (1 acre) in size, or larger, is required to obtain a National Pollutant Discharge Elimination System (NPDES) from EPA NPDES General Permit for Storm Water Discharges from Construction Activities.

Section 404 of the Clean Water Act (CWA) stipulates discharge of dredge and fill material with jurisdictional Waters of the United States. The civil engineer and environmental planner shall evaluate the proposed site compliance with CWA Section 404. For The proposed site shall be reviewed if it crosses drainage water ways or watersheds (dry creeks and streams could be Waters of U.S.) that are contributing to the Waters of United States. The review process sometimes involved wetland delineation to identify existing national permit coverage or issuance of a Clean Water Act Section 404 Permit. The permit or a permit coverage verification memorandum could require compensatory mitigation. The compensatory mitigation shall become the initial part of construction activity. The construction Contractor shall not start soil disturbing activities until the required compensatory mitigation is implemented or the soil disturbing activities are covered under existing national permit.

The civil engineer and environmental planner shall evaluate the proposed site compliance with Clean Water Act, Section 10, the Rivers & Harbor Act of 1899.

Section 401 of the Clean Water Act stipulates the on-site sewerage discharge. If an on-site sewerage system is required, the Contractor shall prepare drawings and mark-up specifications, obtain a pre-construction permit from the state, regional Environmental Quality Office, or County Health Department. The Contractor shall contact installation Environmental Office for application of on-site sewerage system pre-construction permit.

The Contractor shall resolve all permit compliance issues prior to disturbing soil.

In compliance with the National Environmental Policy Act of 1969, as amended, the [Environmental Assessment] [Environmental Impact Statement] entitled [_____] dated [_____] has been prepared and the memorandum was signed on [_____] [Record of Environmental Consideration (REC) dated [_____] has been prepared for this proposed action.] [The [EA] {EIS} [REC] indicates the proposed action is [_____] [The proposed action has [_____] impact on endangered and threatened species and their critical habitats.] [The attached letter dated [_____] with US Fish and Wildlife Service has determined the following protection measures:[_____] [The proposed action has [_____] impact on cultural and historical properties, the memorandum dated [_____] from SHPO verified this resolution.] [The proposed action has [_____] impact on noise.] [The proposed project site [_____] encroaches upon floodplains and wetlands.] [The proposed action [_____] impact air quality.] [The proposed site has [_____] environmental compliance issues and an environmental baseline study (EBS) was prepared on [_____] The EBS indicated that [_____] [This facility will have an on-site sewerage treatment system and the Contractor shall obtain a pre-construction permit prior to start work.] [The Contractor shall not start field work until [the Clean Water Act Section 10] [and] [Section 404] issues are resolved and a permit is issued or the construction activity is covered under a nationwide permit and a verification memorandum, dated [_____] is completed by the the Permit Section, Regulatory Branch, US Army Corps of Engineers.] [In compliance with the Clean Water Act permit issued on [_____] the Contractor shall furnished work as required for the compensatory mitigation as stipulated by the permit.] In compliance with Clean Water Act, Section 402, the Contractor and the subcontractor shall conform with all applicable NPDES General Permit stipulations to discharge storm water during construction. [The Contractor shall furnish water well development certification in accordance with state and local regulations]. In addition, the Contractor (including the subcontractor) shall comply with the Government approved Contractor's operation specific Storm Water Pollution Prevention Plan, BMP, and contract requirements as stated in this section.

The Contractor (and the subcontractor shall comply with all applicable Federal, state, and local hazardous, toxic, radiological (HTR) waste, municipal waste, sanitary and septic waste disposal regulations.

PART 7 MAINTENANCE AND INSPECTION PROCEDURES AND QUALIFICATION OF DESIGNATED INSPECTOR

The Contractor shall designate an inspector on site to ensure Storm Water Permit compliance and perform SWPPP quality control. All BMPs and control structures shall be inspected according to the requirements of Part IV.D.4 and Part III.D.4 of the LPDES General Permit for large and small construction activities, respectively. The inspector shall inspect adjacent areas daily for direct clean-up of waste materials, debris, and fugitive sediment that are blown or washed off-site.

All protective measures used and identified in the SWPPP must have maintenance performed in conformance with Parts IV.D.3 and III.D.3 of the LPDES General Permit for large and small construction activities, respectively.

The designated SWPPP inspector is responsible for maintaining the SWPPP throughout the term of permit coverage in accordance with the LPDES General Permit. All deficiencies shall be corrected and recorded. An example of a form to record this information can be found in SECTION 01 57 25.00 44

SWPPP PLAN INSPECTION AND MAINTENANCE REPORT FORM.

A copy of each inspection report form shall also be provided to the COR.

PART 8 PROHIBITION ON NON-STORM WATER DISCHARGES

In accordance with the Part III.A.3 and Part II.A.3 of the LPDES General Permit for large and small construction activity, respectively, non-storm water discharges are prohibited during construction of the project, except for the non-storm water discharges listed below. The following list of non-storm water discharges from active construction sites are allowed and is developed based on the above guideline.

1. Discharges from fire-fighting activities;
2. Fire hydrant flushings;
3. Waters used to wash vehicles where detergents are not used;
4. Water used to control dust in accordance with Part IV.D.2.c(2) and III.D.2.c(2) of the large and small construction general permits, respectively;
5. Potable water including uncontaminated water line flushings;
6. Routine external building wash down that does not use detergents;
7. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;
8. Uncontaminated air conditioning or compressor condensate;
9. Uncontaminated ground water or spring water;
10. Foundation or footing drains where flows are not contaminated with process materials such as solvents;
11. Uncontaminated excavation dewatering (large construction activity);
12. Landscape irrigation (large construction activity);
13. Landscape irrigation;
14. Uncontaminated ground water infiltration (large activity).

PART 9 CONTRACTOR COMPLIANCE AND CERTIFICATION

The construction Contractor shall use this Section as guidance on how to prepare a construction SWPPP that includes narrative, drawings (see PART 2.5 in this section), and required worksheets. Prior to submitting the NOI(if required to be prepared per the applicable state Construction Storm Water General Permit)to the regulatory agency and all other required parties, the Contractor shall submit the operation and field specific SWPPP with a prepared and signed NOI attached for USACE review and approval.

The construction Contractor and sub-contractor shall each prepare a SWPPP CERTIFICATION. The SWPPP CERTIFICATION assures responsibility and compliance with the permitted discharges of storm water during construction. As such, the SWPPP submitted for USACE review and approval shall have a SWPPP CERTIFICATION prepared and signed by the appropriate approval authority. The USACE sharing the approved SWPPP shall prepare a SWPPP CERTIFICATION. All SWPPP certifications shall be included and retained in the SWPPP.

9.1 CONSTRUCTION SWPPP GUIDELINES

An adequate construction SWPPP includes a narrative, drawings, and required worksheets.

The narrative is a written statement to explain and justify the pollution prevention decisions made for a particular project. The narrative shall contain concise information about existing site conditions, construction

phasing, BMP practices, construction schedule, and the performance the BMPs are expected to achieve, and actions to be taken if the performance goals are not achieved, and other pertinent items that may not be contained on the drawings.

The narrative shall identify all operators (see PART 1.3 in this Section).

The site grading plans provide a baseline to assist in the preparation of the SWPPP drawings. The drawings shall layout various BMP types, locations, and methods of stabilization in accordance with Part IV.D.1 and III.D.1 of the LPDES General Permit for large and small construction activity, respectively, and Part 2.5 of this Section.

The SWPPP shall also address the following.

- Describe the location, size, and characteristics of any wetlands, streams, or lakes that are adjacent or in close proximity to the site, and/or will receive discharges from disturbed areas of the project. Also delineate areas with high erosion potential including steep slopes.
- List Threatened and Endangered Species and Critical Habitats.
- List Cultural and Historical Resources.
- Clean Water Act Section 404 Memo or Permit Stipulations
- Septic System Permit
- Water well Permit
- Identify if concrete/asphalt plant is at site

(A batch plant may require coverage of an industrial operation permit)

- Spill Prevention and Control Measures per state or EPA and local requirements
- Spill Response

If available, submitting by electronic means is the most efficient process for filing an NOI, and therefore recommended. However, the physical address for NOI submission and payment can be found on the NOI form.

9.1.1.1 On-Site Construction Document, Signage, And Record-Keeping

A copy of each of the following shall be maintained in the USACE approved SWPPP in accordance with the LPDES General Permit.

- Contractor NOI,
- Contractor Certification of SWPPP,
- Contractor Signatory Delegation Letter,
- Contractor BMP Inspection and Maintenance Report,
- Qualification documents (e.g., training certificates) for Contractor personnel that maintain any part of the SWPPP,
- Contractor log for recording Major Construction Activities and Subsequent Stabilization Practices,
- Contractor log for describing construction materials stored on-site, their potential pollutants, and method of containment,

- Contractor log for describing waste materials stored on-site and method of storage,
- Contractor NOT (once the project is complete and the NOT is submitted),
- Contractor Concrete or Asphalt Batch Plant sampling records (if batch plant operation is being conducted),
- USACE Certification of SWPPP,
- USACE NOI,
- Contractor and the USACE storm water discharge permits after receipt from the regulatory agency.

NOTE: A copy of each of the following shall be maintained in accordance with USACE requirements.

- Contractor NOT (append a blank form in the SWPPP to be completed once project is finished and approved by the USACE COR),
- Contractor's anticipated construction timeline schedule (that includes anticipated dates for soil disturbance),
- Contractor SWPPP Revision Log,
- The SWPPP shall contain label tabs or similar to clearly identify each item/section of the SWPPP,
- The SWPPP shall be retained at the project site at all times,
- A spill response action guide,
- Contractor SWPPP/BMP training log,
- Certification or Notification for a Drinking Water Well and/or Septic Sanitary Sewer System (if applicable).

The Contractor shall post the required items per the applicable LPDES General Permit near the main entrance of each construction access point.

All records pertaining to the Storm Water Permit for discharging water associated with construction site activities shall be maintained, by the construction Contractor, for a minimum of three (3) years from the date specified in Part V.A and Part IV.A of the LPDES General Permit for large and small construction activity, respectively.

9.1.2 Storm Water Discharge General Permit Fees And Fines For Non-Compliance

The Contractor shall be responsible for the initial Contractor storm water discharge permit NOI fee and any subsequent annual permit fees during construction (if required per the applicable state Construction Storm Water General Permit). In addition, if a batch plant is on-site, the Contractor is responsible to obtain samples of surface water discharged at the batch

plant. A water sample for water quality analysis shall be analyzed by a state accredited laboratory and data shall be submitted to the regulatory agency for the batch plant operation as required by applicable permit regulations.

Any fines levied by regulatory agency regarding non-compliance with LPDES General Permit shall be the Contractor's responsibility.

9.1.3 Regulatory Inspector Visits

If the regulatory agency inspector visits the job site, the workers shall notify the Contractor Designated Storm Water Inspector immediately. The Contractor's Designated Inspector shall contact the USACE COR immediately and both of them shall accompany the regulatory agency inspector to walk the construction site. The Contractor's Designated Inspector shall brief workers daily on the BMP and the SWPPP, logistics of a regulatory agency inspector site visit, and avoid having an unattended regulatory agency inspector on the job site. The Designated Inspector shall assign a responsible person in his/her absence to oversight the logistic of regulatory agency inspector site visit.

9.2 NOTICE OF TERMINATION (NOT)/COMPLETION REPORT

Notice of Termination (NOT) is applicable for construction activities that submit an NOI. A Small Construction Activity Completion Report (SCACR) is required for small construction activities. If applicable, the regulatory agency will automatically send the annual storm water permit payment notice if a NOT is not received in the data base before a set date each year. The Contractor is responsible to pay any annual fee on a construction storm water discharge permit.

At establishment of final stabilization, the Contractor shall have USACE COR approve the project's final stabilization as well as remove sediment and BMP sediment controls, obtain pictures of the permanently stabilized site and removal of BMP controls, and written approval from USACE COR. The Contractor shall prepare a NOT and submit his/her own NOT to the appropriate regulatory agency and any other applicable contacts (i.e., MS4s, cities identified in the SWPPP, etc.). The Contractor shall provide two (2) copies of the filed NOT and site photos to the USACE COR. The COR shall retain a copy of the NOT as project closure documentation and forward the other copy of NOT and photos to CESWF-RPEC.

For all other construction activities (i.e., ones that do not require a filing of an NOT), the Contractor shall file the proper documentation to the regulatory agency and any other applicable contact (i.e., MS4s, cities identified in the SWPPP, etc.) as described in the LPDES General Permit. A copy of this document submittal shall be provided to the USACE COR. The COR shall retain a copy of the documents sent to the regulatory agency and other applicable contacts as project closure documentation and forward a copy of all the documents and photos to CESWF-RPEC.

The Contractor is responsible for fines due to non-compliance with closure documentation for the construction activity storm water discharge permit.

9.3 NOTIFICATION TO MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

Not applicable.

NPDES Industrial Storm Water Worksheet (Construction)

National Database Information		General	
Inspection Type		Inspector Name	
NPDES ID Number		Telephone	
Inspection Date		Entry Time	
Inspector Type (circle one)	EPA State EPA Oversight	Exit Time	
Facility Type (circle one)	Commercial /Industrial Residential Municipal	Signature	

Facility Location Information				
Name/Location/ Mailing Address				
GPS Coordinates	Latitude		Longitude	
Receiving Water(s)				
Disturbed Area		Start Date		Stop Date

Contact Information		
	Name(s)	Telephone
Name(s) and Role(s) of All Parties Meeting the Definition of Operator		
Facility Contact		
Authorized Official(s)		

Site Information: (circle all that apply)							
Nature of Project	Residential	Commercial/Industrial	Roadway	Private	Federal	State/Municipal	Other
Construction Stage	Clearing/Grubbing	Rough Grading	Infrastructure	Building Const.	Final Grading	Final Stabilization	

Basic Permit Information			Basic SWPPP Information		
Permit Coverage <i>ESO Element 3 & 4</i>	Y	N	SWPPP Prepared & Available <i>ESO Element 5 & 30</i>	Y	N
Permit Type	General	Individual	SWPPP Contents Satisfactory <i>ESO Elements 5 - 31</i>	Y	N
Permit notice/sign visibly posted including: copy of NOI, contact name & phone number, location of SWPPP <i>ESO Element 41</i>	Y	N	SWPPP Implementation Satisfactory <i>ESO Elements 32 - 48</i>	Y	N
NOI Date			SWPPP Date		
If applicable, is waiver certification & approval on file?	Y	N	Intentionally left blank		

NPDES Industrial Storm Water Worksheet (Construction)

SWPPP Review (can be completed in office)			
<u>General</u>	Notes:		
Is there a SWPPP? <i>ESO Element 5</i>	Y	N	
SWPPP completed prior to NOI submission? <i>ESO Element 6</i>	Y	N	
Copy of permit language? <i>ESO Element 25</i>	Y	N	
Is SWPPP consistent with state/tribal/local regulations and permits? <i>ESO Element 26</i>	Y	N	
SWPPP updated to incorporate changes to State, Tribal, Local erosion plans? <i>ESO Element 27</i>	Y	N	
Have copies of inspection reports/all other documentation been retained as part of the SWPPP for 3 years from date permit coverage expires? <i>ESO Element 28</i>	Y	N	
Is a copy of the SWPPP on site or made available? <i>ESO Element 30</i>	Y	N	
Did all "operators" sign/certify the SWPPP? <i>ESO Element 31</i>	Y	N	
<u>Site Description</u>	Notes:		
SWPPP identifies potential sources of pollution? <i>ESO Element 7</i>	Y	N	
SWPPP identifies all operators and their areas of control? <i>ESO Element 8</i>	Y	N	
Is there a site description? <i>ESO Element 9</i>	Y	N	
Nature/sequence of construction activity? <i>ESO Element 9A - 9B</i>	Y	N	
Total area of site and total area to be disturbed? <i>ESO Element 9C</i>	Y	N	
Is there a general location map? <i>ESO Element 9D</i>	Y	N	
Is there a site map? <i>ESO Element 9E</i>	Y	N	

NPDES Industrial Storm Water Worksheet (Construction)

Site Description (cont'd)			Notes:
Drainage patterns/outfalls on site map? <i>ESO Element 9F</i>	Y	N	
Area of soil disturbance on site map? <i>ESO Element 9F</i>	Y	N	
Location of major structural controls on site map? <i>ESO Element 9F</i>	Y	N	
Location of storm water discharges to a surface water on site map? <i>ESO Element 9F</i>	Y	N	
Location of materials or equipment storage on site map (on-site or off-site)? <i>ESO Element 9F</i>	Y	N	
Location/description industrial activities? <i>ESO Element 9G</i>	Y	N	
Name of Receiving water(s) or MS4 listed?	Y	N	<i>Note: Indicate whether receiving water is 303(d) listed.</i>
Does the SWPPP include dates of major grading activities, temporary/permanent construction cessation, and initiation of stabilization practices? <i>ESO Element 14</i>	Y	N	
Endangered Species Documentation? <i>ESO Element 23</i>	Y	N	
Controls to Reduce Pollutants			Notes:
Does the SWPPP include a description of all pollution control measures (BMPs) that will be implemented to control pollutants in storm water discharges, including sequence and which operator responsible for implementation? <i>ESO Element 10 A - C</i>	Y	N	
Does the SWPPP include a description of interim and permanent <i>stabilization practices</i> (e.g., seeding, mulching, riprap for the site)? <i>ESO Element 11; 12</i>	Y	N	

NPDES Industrial Storm Water Worksheet (Construction)

Controls to Reduce Pollutants (cont'd)			Notes:
Does the SWPPP identify the contractor(s) and timing by which <i>stabilization practices</i> will be implemented? <i>ESO Element 13</i>	Y	N	
Does the SWPPP include a description of <i>structural practices</i> (e.g., vehicle track-out, silt fences, sediment traps, storm drain inlet protection) for the site? <i>ESO Element 15</i>	Y	N	
Does the SWPPP identify the contractor(s) and timing by which <i>structural practices</i> will be implemented? <i>ESO Element 10B - 10C</i>	Y	N	
Does the SWPPP identify storm water management measures to address storm water runoff once the construction is completed (e.g., retention ponds, velocity dissipation controls)? <i>ESO Element 16</i>	Y	N	
Does SWPPP describe measures to prevent discharge of dredge/fill materials to waters of the U.S.? Does site have 404 permit? <i>ESO Element 17</i>	Y	N	
Does SWPPP describe measures to minimize off-site vehicle tracking and generation of dust? <i>ESO Element 18</i>	Y	N	
Does SWPPP describe controls for pollutants from storage of construction or waste materials? <i>ESO Element 19</i>	Y	N	
Does the SWPPP describe controls for pollutants from non-construction activities? <i>ESO Element 20</i>	Y	N	
Does SWPPP identify allowable non-storm water discharges? <i>ESO Element 21</i>	Y	N	
Does SWPPP ensure implementation of pollution prevention measures for non-storm water discharges? <i>ESO Element 22</i>	Y	N	
Is SWPPP revised when BMPs added/modified within 7 days after inspection reveals problems? <i>ESO Element 29</i>	Y	N	

NPDES Industrial Storm Water Worksheet (Construction)

Inspections		Notes:	
Inspections performed once every 7 days, or every 14 days within 24 hours of a rain event greater 0.5"? <i>ESO Element 32</i>	Y	N	
Inspections performed by qualified personnel? <i>ESO Element 33</i>	Y	N	
All disturbed areas and/or used for storage and exposed to rain inspected? <i>ESO Element 34</i>	Y	N	
All pollution control measures inspected to ensure proper operation? <i>ESO Element 35</i>	Y	N	
All discharge locations inspected if accessible, or if not accessible, are nearby downstream locations inspected? <i>ESO Element 36; 37</i>	Y	N	
Entrance/exit inspected for off-site tracking? <i>ESO Element 38</i>	Y	N	
Inspection report contain all required items and certified? <i>ESO Element 39; 40</i>	Y	N	
Notes on SWPPP Review			
Site Description:			

NPDES Industrial Storm Water Worksheet (Construction)

SWPPP Implementation *(complete in field)*

Stabilization Practices

**List and describe
stabilization
practices**

ESO Element 43, 48

(e.g., seeding, mulching, geotextiles, sod stabilization)

**Are stabilization
measures initiated
no more than 14
days after temporary
or permanent
construction
cessation?**

ESO Element 46

(e.g., indicate "yes" or "no"; if "yes", how long without stabilization measures?)

NPDES Industrial Storm Water Worksheet (Construction)

<u>Structural Practices</u>	
List and describe structural controls <i>ESO Element 42, 43, 47</i>	<i>(e.g., silt fences, hay bales, storm drain inlet protection, sedimentation pond, rip rap, check dam, diversion structure, off-site vehicle track-out)</i>
<u>Non-Structural Practices</u>	
Street Cleaning <i>ESO Element 44</i>	<i>(e.g., describe measures taken to remove offsite accumulation of sediment)</i>
Good Housekeeping & Waste Disposal Practices <i>ESO Element 45</i>	<i>(e.g., describe measures taken to prevent litter and debris from becoming a pollutant source)</i>

NPDES Industrial Storm Water Worksheet (Construction)

<u>Non-Structural Practices (cont'd)</u>	
Equipment Wash/ Maintenance Area <i>ESO Elements 43</i>	<i>(provide brief description)</i>
Concrete Washout Areas <i>ESO Elements 43</i>	<i>(provide brief description)</i>
<u>Miscellaneous</u>	
Evidence of Sediment Deposition to Surface Waters <i>*ESO Eligibility - if "yes," site not eligible for ESO</i>	<i>(e.g., significant turbidity observed in a receiving water body)</i>
Pollution prevention measures for non- storm water discharges? <i>*ESO Eligibility - If evidence of non-allowable non-storm water discharges, site not eligible for ESO</i>	<i>(provide brief description and determine whether/if non-storm water discharges allowable)</i>

NPDES Industrial Storm Water Worksheet (Construction)**Miscellaneous (cont'd)**

**Has implementation
of
additional/modified
BMPs been
completed before
next anticipated
storm event?**
ESO Element 43.C.1

(provide brief description)

Notes on SWPPP Implementation

NPDES Industrial Storm Water Worksheet (Construction)

Photograph Log	
1.	
*Insert additional rows as needed	

SECTION 01 57 25.00 44

SWPP PLAN INSPECTION AND MAINTENANCE REPORT FORM

PART 1 GENERAL

The form identified below provides a baseline for an inspection report form that can be used while conducting SWPP Plan site inspections. Inspection reports must be prepared and documented in accordance with the applicable Construction Storm Water Permit (i.e., Part III.F.7 of the Texas TXR150000 Construction General Permit, Part IV.D.4 of the Louisiana LAR100000 Construction General Permit, Part III.D of the Louisiana LAR200000 Construction General Permit, and Part 4 of the NPDES General Permit for Storm Discharges from Construction Activities). The form provided below may not be applicable to all states and therefore needs to be verified by the Contractor that it is in compliance with the applicable construction general permit.

1.1 SWPP PLAN INSPECTION REPORT FORM

The following inspection is being performed in compliance with the applicable state's General Permit or the EPA NPDES permit, whichever is applicable, relating to discharges from construction activities (for the State of Texas it is Section F.8 of the TCEQ General Permit No. TXR150000; for the State of Louisiana it is LPDES Permit # LAR 100000 (LARGE construction activity) or LPDES Permit # 200000 (SMALL construction activity)).

STORM WATER PERMIT #: _____
PROJECT NAME: _____
PURPOSE OF INSPECTION: _____
INSPECTOR: _____ DATE: _____
_____ DAYS SINCE LAST RAINFALL ON: _____
AMOUNT OF LAST RAINFALL: _____ INCHES
() ONSITE RAIN GAGE () METEOROLOGICAL TOWER AT: _____
IS A CONSTRUCTION SITE NOTICE POSTED: _____
IF YES, LOCATION: _____
IS PERMIT ATTACHED TO PLAN: _____
IS PLAN CERTIFIED IN ACCORDANCE WITH REGULATIONS: _____

Animal Building

FJ25AB

STABILIZATION CONTROL SECTION

For each area of the construction project, use this chart to track the dates of soil disturbing activity, identify stabilization measures, and monitor their effectiveness. Discharge locations should be inspected to check the effectiveness of these erosion control measures.

AREA	DATE LAST DISTURBED	DATE OF NEXT DISTURBANCE	STABILIZED (Y/N/TEMP)	STABILIZED WITH	CONDITION, COMMENTS
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS / STABILIZATION REQUIRED (if appropriate): _____

STRUCTURAL CONTROLS SECTION

Use this table to document the effectiveness of each structural control, such as silt fences, berms, riprap, etc. Copy this sheet as required. Discharge locations should be inspected to check the effectiveness of these erosion control measures. See the Installation's Storm Water/Surface Water Pollution Prevention Best Management Practices Guidance Document for correct installation/maintenance methods.

TYPE	LOCATION	INSTALLED CORRECTLY?	EVIDENCE OF EROSION?	MAINTENANCE REQUIRED
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

COMMENTS: _____

MATERIAL STORAGE AREAS

EVIDENCE OR POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM: _____

OTHER COMMENTS: _____

NON STORM WATER AND NON STRUCTURAL BMP CONTROLS

The following non-storm water discharges from active construction sites are allowed.

- discharges from fire fighting activities,
- uncontaminated fire hydrants flushing,
- water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where detergents and soaps are not used and where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local, state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust,
- uncontaminated water used for dust control,
- potable water sources including waterline flushings (excluding discharges of hypochlorinated water, unless the water is first dechlorinated and discharge are not expected to adversely affect aquatic life),
- uncontaminated air conditioning condensate,
- uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents,
- and lawn watering and similar irrigation

PROHIBIT DISCHARGING NEW WATER LINE DISINFECTION WASTEWATER AND CONCRETE WASHOUT PIT WASTEWATER. NEUTRALIZE CHLORINE RESIDUAL IN DISINFECTION WASTEWATER TO 4 PPM PER AWWA C651 AND METERED TO SANITARY SEWER OR DISCHARGE TO SEDIMENT POND. EVAPORATE WASHOUT PIT AND RECYCLE CONCRETE.

LOCATIONS WHERE VEHICLES ENTER OR EXIT SITE

EVIDENCE OF OFFSITE SEDIMENT TRACKING: _____

METHOD TO CORRECT _____

DATE COMPLETE _____

OFFSITE DISCHARGES

EVIDENCE OF SEDIMENT OR OTHER POLLUTANTS LEAVING SITE: () YES () NO

IF YES, LOCATION: _____

METHOD TO CORRECT _____

DATE COMPLETE _____

Animal Building

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STORM WATER POLLUTION PREVENTION PLAN REVISION

If this inspection has revealed any issues that require an update to the SWPP Plan, include them here.

CHANGES REQUIRED TO THE SWPP PLAN (if appropriate): _____

REASONS FOR CHANGES (if appropriate): _____

LIST ANY ADDITIONAL LOCATIONS WHERE BMPs ARE NEEDED: _____

LIST ANY INCIDENTS OF NONCOMPLIANCE WITH SWPP PLAN AND NECESSARY MODIFICATIONS TO SWPP PLAN: _____

IS FACILITY IN COMPLIANCE WITH SWPP PLAN AND PERMIT? _____

If yes, this inspection must be properly signed and certified that the facility is in compliance.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____ Name	_____ Signature	_____ Title	_____ Date

-- End of Section --

SECTION 01 58 00

PROJECT IDENTIFICATION

PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EP 310-1-6a (2006; 2019 Change 2) Project Operation --
Sign Standards Manual, VOL 1

EP 310-1-6b (2006) Sign Standards Manual, VOL 2,
Appendices

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Preliminary One Line Drawings Of Project Rendering; G,

Sign Legend Orders; G,

SD-04 Samples

1.3 PROJECT IDENTIFICATION SIGN

1.3.1 Construction Project Signs

Furnish the construction project sign package, maintain the signs during construction, and remove the signs from the job site upon completion of the project. The construction project sign package consists of two signs: one for project identification and the other to show the on-the-job safety performance of the contractor. Ensure that the package conforms to the requirements of EP 310-1-6a and EP 310-1-6b, specifically Section 16. Submit the sign legend orders as described in Section 16 of EP 310-1-6a before erecting the signs.

Utilize the Example Graphic of Signage with Dimensions for MILCON Project and follow USACE policy provided in Engineering Pamphlet (EP) 310-1-6a, Sign Standards Manual, VOL 1 for guidelines on fabricating, locating, and mounting construction project signs

(https://www.publications.usace.army.mil/Portals/76/Users/182/86/2486/EP_310-1-6a%20change%202.pdf).

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PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.1 REFERENCES

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

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 273	Standards for Universal Waste Management
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
49 CFR 178	Specifications for Packagings

1.2 DEFINITIONS

1.2.1 Co-mingle

The practice of placing unrelated materials together in a single container, usually for benefits of convenience and speed.

1.2.2 Construction Waste

Waste generated by construction activities, such as scrap materials, damaged or spoiled materials, temporary and expendable construction materials, and other waste generated by the workforce during construction activities.

1.2.3 Demolition Debris/Waste

Waste generated from demolition activities, including minor incidental demolition waste materials generated as a result of Intentional dismantling of all or portions of a building, to include clearing of building contents that have been destroyed or damaged.

1.2.4 Disposal

Depositing waste in a solid waste disposal facility, usually a managed landfill or incinerator, regulated in the US under the Resource Conservation and Recovery Act (RCRA).

1.2.5 Diversion

The practice of diverting waste from disposal in a landfill or incinerator, by means of eliminating or minimizing waste, or reuse of materials.

1.2.6 Final Construction Waste Diversion Report

A written assertion by a material recovery facility operator identifying constituent materials diverted from disposal, usually including summary

tabulations of materials, weight in short-ton.

1.2.7 Recycling

The series of activities, including collection, separation, and processing, by which products or other materials are diverted from the solid waste stream for use in the form of raw materials in the manufacture of new products sold or distributed in commerce, or the reuse of such materials as substitutes for goods made of virgin materials, other than fuel.

1.2.8 Reuse

The use of a product or materials again for the same purpose, in its original form or with little enhancement or change.

1.2.9 Salvage

Usable, salable items derived from buildings undergoing demolition or deconstruction, parts from vehicles, machinery, other equipment, or other components.

1.2.10 Source Separation

The practice of administering and implementing a management strategy to identify and segregate unrelated waste at the first opportunity.

1.3 CONSTRUCTION WASTE (INCLUDES DEMOLITION DEBRIS/WASTE)

Divert a minimum of 60 percent by weight of the project construction waste and demolition debris/waste from the landfill or incinerator. Follow applicable industry standards in the management of waste. Apply sound environmental principles in the management of waste. (1) Practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction waste and demolition debris/waste from landfills and incinerators and to facilitate the recycling or reuse of excess construction materials.

1.4 CONSTRUCTION WASTE MANAGEMENT

Implement a Construction Waste Management Program for the project. Take a pro-active, responsible role in the management of construction waste, recycling process, disposal of demolition debris/waste, and require all subcontractors, vendors, and suppliers to participate in the Construction Waste Management Program. Establish a process for clear tracking, and documentation of construction waste and demolition debris/waste.

1.4.1 Implementation of Construction Waste Management Program

Develop and document how the Construction Waste Management Program will be implemented in a Construction Waste Management Plan. Submit a Construction Waste Management Plan to the Contracting Officer for approval. Construction waste and demolition debris/waste materials include un-used construction materials not incorporated in the final work, as well as demolition debris/waste materials from demolition activities or deconstruction activities. In the management of waste, consider the availability of viable markets, the condition of materials, the ability to provide material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates.

1.4.2 Oversight

The Quality Control Manager, as specified in Section 01 45 00 QUALITY CONTROL, is responsible for overseeing and documenting results from executing the Construction Waste Management Plan for the project.

1.4.3 Special Programs

Implement special programs involving rebates or similar incentives related to recycling of construction waste and demolition debris/waste materials. Retain revenue or savings from salvaged or recycling, unless otherwise directed. Ensure firms and facilities used for recycling, reuse, and disposal are permitted for the intended use to the extent required by federal, state, and local regulations.

1.4.4 Special Instructions

Provide on-site instruction of appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the projects. Designation of single source separating or commingling will be clearly marked on the containers.

1.4.5 Waste Streams

Delineate waste streams and characterization, including estimated material types and quantities of waste, in the Construction Waste Management Plan. Manage all waste streams associated with the project. Typical waste streams are listed below. Include additional waste streams not listed:

- a. Land Clearing Debris
- b. Asphalt
- c. Masonry and CMU
- d. Concrete
- e. Metals (Includes, but is not limited to, banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, bronze.)
- f. Wood (nails and staples allowed)
- g. Glass
- h. Paper
- i. Plastics (PET, HDPE, PVC, LDPE, PP, PS, Other)
- j. Gypsum
- k. Non-hazardous paint and paint cans
- l. Carpet
- m. Ceiling Tiles
- n. Insulation

o. Beverage Containers

1.5 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Waste Management Plan; G,

SD-06 Test Reports

Monthly Reporting

Quarterly Reports

Annual Report

SD-11 Closeout Submittals

Final Construction Waste Diversion Report; S

1.6 MEETINGS

Conduct Construction Waste Management meetings. After award of the Contract and prior to commencement of work, schedule and conduct a meeting with the Contracting Officer to discuss the proposed Construction Waste Management Plan and to develop a mutual understanding relative to the management of the Construction Waste Management Program and how waste diversion requirements will be met.

The requirements of this meeting may be fulfilled during the coordination and mutual Understanding meeting outlined in Section 01 45 00 QUALITY CONTROL. At a minimum, discuss and document waste management goals at following meetings:

- a. Preconstruction meeting.
- b. Regular Quality Control meetings.
- c. Work safety meeting (if applicable).

1.7 CONSTRUCTION WASTE MANAGEMENT PLAN

Submit Construction Waste Management Plan within 15 days after notice to proceed. Revise and resubmit Construction Waste Management Plan as necessary, in order for construction to begin..

An approved Construction Waste Management Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting project cumulative waste diversion requirement. Ensure all subcontractors receive a copy of the approved Construction Waste Management Plan. The plan demonstrates how to meet the project waste

diversion requirement. Also, include the following in the plan:

- a. Identify the names of individuals responsible for waste management and waste management tracking, along with roles and responsibilities on the project.
- b. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.
- c. Description of the regular meetings to be held to address waste management.
- d. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site and equipment to be used for processing, sorting, and temporary storage of materials.
- e. Name of landfill and incinerator to be used.
- f. Identification of local and regional re-use programs, including non-profit organizations such as schools, local housing agencies, and organization that accept used materials such as material exchange networks and resale stores. Include the name, location, phone number for each re-use facility identified, and provide a copy of the permit or license for each facility.
- g. List of specific materials, by type and quantity, that will be salvaged for resale, salvaged and reused on the current project, salvaged and stored for reuse on a future project, or recycled. Identify the recycling facilities by name, address, and phone number.
- h. Identification of materials that cannot be recycled or reused with an explanation or justification, to be approved by the Contracting Officer.
- i. Description of the means by which materials identified in item (g) above will be protected from contamination.
- j. Description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site).
- k. Copy of training plan for subcontractors and other services to prevent contamination by co-mingling materials identified for diversion and waste materials.
- l. Identification of at least 5 construction or demolition material streams for diversion.
- m. Detailed plan and distribution of waste diversion between buildings, when project is a part of a campus.
- n. Facilities or subcontractors offering construction waste transport on-site or off-site must ensure that proper shipping orders, bill of lading, manifests, or other shipping documents containing waste diversion information meets requirements of 40 CFR 273 Universal Waste Management, 49 CFR 173 Shippers - General Requirements for Shipments and Packagings, and 49 CFR 178 Specifications for Packaging.

Individuals signing manifests or other shipping documents should meet the minimum training requirements.

- o. List each supplier who deliver construction materials, in bulk, or package products in returnable containers or returnable packaging, or have take-back programs. List each program and the applicable material to actively monitor and track to assist in meeting waste diversion requirements on the project.
- p. Identify local jurisdiction requirements for waste management. Include local requirements and points of contact.

Distribute copies of the waste management plan to each subcontractor, Quality Control Manager , and the Contracting Officer.

1.8 RECORDS (DOCUMENTATION)

1.8.1 General

Maintain records to document the types and quantities of waste generated and diverted through re-use, recycling and sale to third parties; through disposal to a landfill or incinerator facility. Provide explanations for materials not recycled, reused or sold. Collect and retain manifests, weight tickets, sales receipts, and invoices specifically identifying diverted project waste materials or disposed materials.

1.8.2 Accumulated

Maintain a running record of materials generated and diverted from landfill disposal, including accumulated diversion rates for the project. Make records available to the Contracting Officer during construction or incidental demolition activities. Provide a copy of the diversion records to the Contracting Officer upon completion of the construction, incidental demolitions or minor deconstruction activities.

1.9 REPORTS

1.9.1 General

Maintain current construction waste diversion information on site for periodic inspection by the Contracting Officer. Include in the annual reports and final reports: the project name, contract information, information for waste generated, diverted and disposed of for the current reporting period and show cumulative totals for the project. Reports must identify quantities of waste by type and disposal method. Also include in each report, supporting documentation to include manifests, weigh tickets, receipts, and invoices specifically identifying the project and waste material type and weighted sum.

1.9.2 Annual Reporting

Provide a cumulative construction waste diversion report annually. Submit annual report not later than 30 calendar days after the preceding fourth quarter has ended.

1.10 FINAL CONSTRUCTION WASTE DIVERSION REPORT

A Final Construction Waste Diversion Report is required at the end of the project. Provide Final Construction Waste Diversion Report 60 days prior to the final acceptance of the facility by the Contracting Officer.

1.11 COLLECTION

Collect, store, protect, and handle reusable and recyclable materials at the site in a manner which prevents contamination, and provides protection from the elements to preserve their usefulness and monetary value. Provide receptacles and storage areas designated specifically for recyclable and reusable materials and label them clearly and appropriately to prevent contamination from other waste materials. Keep receptacles or storage areas neat and clean.

Train subcontractors and other service providers to either separate waste streams or use the co-mingling method as described in the Construction Waste Management Plan. Handle hazardous waste and hazardous materials in accordance with applicable regulations and coordinate with Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS. Separate materials by one of the following methods described herein:

1.11.1 Source Separation Method

Separate waste products and materials that are recyclable from trash and sort as described below into appropriately marked separate containers and then transport to the respective recycling facility for further processing. Deliver materials in accordance with recycling or reuse facility requirements (e.g., free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process). Separate materials into the category types as defined in the Construction Waste Management Plan.

1.11.2 Other Methods

Other methods proposed by the Contractor may be used when approved by the Contracting Officer.

1.12 DISPOSAL

Control accumulation of waste materials and trash. Recycle or dispose of collected materials off-site at intervals approved by the Contracting Officer and in compliance with waste management procedures as described in the waste management plan. Except as otherwise specified in other sections of the specifications, dispose of in accordance with the following:

1.12.1 Reuse

Give first consideration to reusing construction and demolition materials as a disposition strategy. Recover for reuse materials, products, and components as described in the approved Construction Waste Management Plan. Coordinate with the Contracting Officer to identify onsite reuse opportunities or material sales or donation available through Government resale or donation programs. Sale of recovered materials is not allowed on the Installation. Consider the use of surplus industrial supply broker services, who match entities with reusable or repurpose industrial materials with entities with need of such materials.

1.12.2 Recycle

Recycle non-hazardous construction and demolition/debris materials that are not suitable for reuse. Track rejection of contaminated recyclable materials by the recycling facility. Rejected recyclables materials will not be counted as a percentage of diversion calculation. Recycle all fluorescent lamps, HID lamps, mercury (Hg) -containing thermostats and ampoules, and PCBs-containing ballasts and electrical components as directed by the Contracting Officer. Do not crush lamps on site as this creates a hazardous waste stream with additional handling requirements.

1.12.3 Compost

Consider composting on site if a reasonable amount of compostable materials will be available and a utilization of compostable material can be determined and appropriately planned for. Compostable materials include plant materials, sawdust and certain food scraps. Composting as a strategy must be explicitly addressed in the Construction Waste Management Plan submitted for approval to ensure it is feasible.

1.12.4 Waste

Dispose by landfill or incineration only those waste materials with no practical use, economic benefit, or recycling opportunity.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used. -- End of Section --

SECTION 01 78 00

CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 1110-1-2909	(2012) Engineering and Design -- Geospatial Data and Systems
ERDC/ITL SR-23-1	(2024) A/E/C Graphics Standard, Release 2.2
ERDC/ITL TR-19-7	(2019) A/E/C CAD Standard - Release 6.1

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-300-08	(2023) Criteria for Transfer and Acceptance of DoD Real Property

1.2 DEFINITIONS

1.2.1 As-Built Drawings

As-built drawings are the marked-up drawings, maintained by the Contractor on-site, that depict actual conditions and deviations from the Contract Documents. These deviations and additions may result from coordination required by, but not limited to: contract modifications; official responses to submitted Requests for Information (RFI's); direction from the Contracting Officer; design that is the responsibility of the Contractor, and differing site conditions. Maintain the as-builts throughout construction as red-lined PDF files. These files serve as the basis for the creation of the record drawings.

1.2.2 Record Drawings

The record drawings are the final compilation of actual conditions reflected in the as-built drawings.

Produce the record drawings from the Record Model(s) and do not include annotations indicating revisions.

1.2.3 Record Model

A model reflecting approved changes during construction including red-lines, requests for information (RFI's), and contract modifications. Include updated construction phase facility/site data for components.

1.2.4 Advanced Modeling

A subset of geospatial technologies as defined in EM 1110-1-2909 to include

Building Information Modeling (BIM), Civil Information Modeling (CIM), Geographic Information Systems (GIS), and Computer-Aided Design (CAD). Advanced modeling is comprised of models and drawings that form a digital representation of the project, or part thereof, that are comprised of model elements with facility data.

1.2.5 USACE CAD/BIM Technology Center

The USACE CAD/BIM Technology Center hosts all standard content for USACE. This content can be accessed through the CAD/BIM Technology Center website, <https://cadbimcenter.erdc.dren.mil/>.

1.3 SOURCE DRAWING FILES

Request the full set of electronic drawings, in the source format, for Record Drawing preparation, after award and at least 30 days prior to required use.

1.3.1 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction drawings and data for the referenced project. Any other use or reuse is at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim and waives to the fullest extent permitted by law, any claim or cause of action of any nature against the Government, its agents or sub consultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic CAD drawing files are not construction documents. Differences may exist between the CAD files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic CAD files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished Source drawing files, the signed and sealed construction documents govern. The Contractor is responsible for determining if any conflict exists. Use of these Source Drawing files does not relieve the Contractor of duty to fully comply with the contract documents, including and without limitation, the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic source drawing files for use in producing construction drawings and data related to this contract, remove all previous indicia of ownership (seals, logos, signatures, initials and dates).

1.4 RECORD DRAWINGS

The Government will provide pdf and or program files at the preconstruction conference that contains one set of "as-designed" electronic CAD files in the specified software and format revised to reflect all amendments and the final contract PDF drawings. The CAD files are provided to enable preparation of as-built or as-constructed drawings. If discrepancies exist between the CAD files and the contract PDF drawings, correct the CAD files

to show the contract PDF drawings.

1.4.1 Variation with Contract Drawings

The electronic files provided are not part of the contract documents. If there is any discrepancy between the electronic files and the contract drawings, the contract drawings govern. The Government has no responsibility to modify any GFM due to changes in the design that occur after award.

Evaluate the content and quality of the GFM upon receipt. If major discrepancies or omissions occur in the GFM, notify the Contracting Officer and indicate the nature of such variations.

1.4.2 Definition

Project Record documents are a record of the construction as installed and completed by the Contractor. They are a record of all deviations, modifications, or changes from task order set of drawings (the accepted 100% design drawings) and other documents, however minor, which were incorporated in the work. They include all the information shown on the task order set of drawings, any Contractor-original drawings, all additional work not appearing on the task order drawings, and all changes which are made after final inspection of the task order work.

1.4.3 Contractor-Original Record Drawings

Contractor-original record drawings are those drawings drawn by the Contractor, after acceptance of the 100% design documents and the start of construction, to further explain the Contract documents such as subcontractor submittals for fire protection/detection, communication, and other systems, and accepted Contractor's solutions to problems. Submit these drawings as full-size reproducible sheets and CADD files. CADD files shall conform to the Working CADD file requirements specified in paragraph "Final Record Drawings."

1.4.4 Data Loss, Corruption, and Error

Transfer of GFM files may result in corrupted files resulting in data loss and errors. Use of GFM files at own risk. Verify data integrity upon receipt and request a replacement if necessary. Make any adjustment in file structure, format, or software version as needed to make GFM compatible with computer systems and/or software to meet the requirements of the contract.

1.5 PROJECT RECORD DOCUMENTS

1.5.1 Preliminary Record Drawings

The Contractor shall mark up both a reproducible set and a set of prints to show as-built conditions. These two sets, hereafter called preliminary record drawings, or singly, reproducibles or prints, shall be kept current and available on the jobsite at all times, except as noted below. For drawings contained within the Specifications, the Contractor shall mark up copies of these drawings to show as-built conditions; these copies will be considered the preliminary record drawings and shall be kept current and available on the jobsite at all times, except as noted below. Assign a member of the Contractor's Quality Control Organization to be responsible for the maintenance and currency of the preliminary record

drawings. This assignment and any reassignment of duties concerning the maintenance of the record drawings shall be promptly reported to the Contracting Officer's representative for approval. All changes from the task order drawings which are made in the work or additional information which might be uncovered in the course of construction, including uncharted utilities, shall be accurately and neatly recorded as they occur by means of details and notes. Clearly identify all changes and/or required additions to the preliminary record drawings in a contrasting color and which is compatible with reproduction of the preliminary record drawings. Update preliminary record drawings by Friday of each week. During periods when the reproducibles are being copied and are therefore not available at the jobsite, continue posting all required data to the prints. Minimize the time that the reproducibles are away from the jobsite and update them with all as-built data immediately upon their return. The preliminary record drawings will be jointly inspected for accuracy and completeness by the Contracting Officer's representative and the assigned representative of the Contractor's Quality Control Organization prior to submission of each monthly pay estimate. See paragraph, "Withholding for Preliminary Record Drawings." The record drawings shall show the following information, but not be limited thereto:

a. The location and description of utility lines or other installation of any kind or description known to or found to exist within the construction area. The location of exterior utilities includes actual measured horizontal distances from utilities to permanent facilities/features. These measurements shall be within an accuracy range of 6 inches and shall be shown at sufficient points to permit easy location of utilities for future maintenance purposes. Show measurements for all change of direction points and all surface or underground components such as valves, manholes, drop inlets, cleanouts, meter, etc. Indicate the general depth range of each underground utility line (i.e., 3 to 4 feet in depth). The description of exterior utilities includes the actual quantity, size, and material of utility lines.

b. The location and size of all uncharted existing utilities encountered.

c. The location and dimensions of any changes within the building or structure.

d. Correct grade or alinement of roads, structures or utilities if any changes were made from task order drawings.

e. Correct elevations if changes were made in site grading.

f. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

g. The topography and grades of all drainage installed or affected as a part of the project construction.

h. Options

Where task order drawings or specifications allow options, only the option selected for construction shall be shown on the record drawings.

i. Blue Line or Black Line Prints

Blue-line or black-line prints shall be full size. All blue or black line prints shall exhibit good readable print with clear, sharp, dark lines, and shall not be smeared, faded, double imaged, or have torn or ragged edges.

j. Prefinal Inspection For Each Item of Work

As part of the prefinal inspection for each item of work, the current updated preliminary marked-up record drawings and as-built CADD drawing files will be reviewed. They shall comply with this specification prior to scheduling the final inspection, and/or prior to substantial completion of the item of work.

k. Preliminary Record Drawing Final Submittal

Prior to scheduling the red zone meeting and the final acceptance inspection of the last or only bid schedule item of work, the updated preliminary marked-up record drawings and the updated as-built CADD drawing files shall be completed and delivered to the Contracting Officer's Representative for review and acceptance. If upon review, the drawings and files are found to contain errors and/or omissions, they will be returned to the Contractor for corrections. Failure of the Contractor to make timely delivery of the preliminary record drawings and files on any or all items of work will be cause for the Government to delay substantial completion and to withhold the amount indicated in paragraph "Withholding for Preliminary Record Drawings," in accordance with the terms and conditions of the contract.

l. Withholding for Preliminary Record Drawings

Failure by the Contractor to maintain current and satisfactory preliminary record drawings in accordance with these requirements will result in withholding from progress payments 10 percent of the progress payment amount until such time as the record drawings are brought into compliance. This withheld amount will be indicated on monthly payment estimates until the Contractor has fulfilled these contract requirements.

m. Final Inspection

For each interim item of work, furnish a copy of the preliminary record drawings for that item, which the Contractor has reproduced from the approved preliminary record drawing reproduces, to the Contracting Officer's representative at the time of final inspection for that item. At the time of final inspection on the last or only item of work, the Contractor shall deliver a copy of the complete set of the approved preliminary record drawings to the Contracting Officer's Representative.

1.5.1.1 Final Record Drawings

Not used.

1.5.1.2 Final Record Drawings

When a task order requires the drawings' CADD files to be updated, and upon approval of the preliminary record drawings, the Contracting Officer will return the approved preliminary record drawing prints back to the Contractor. The Contractor will then modify the CADD files as may be necessary to correctly show all the features of the project as it was

constructed by bringing the contract set into agreement with the preliminary record drawings, including adding additional drawings and CADD files as may be necessary. The Contractor shall furnish the as-built drawings in the same file format specified in Paragraph 2.1. The Working CADD files and non-graphical digital data shall conform to the Fort POLK Requirements specified in Section 01 35 12.00 44 SPECIAL PROJECT PROCEDURES FOR FORT POLK. These CADD files are part of the permanent records of this project and the Contractor shall be responsible for the protection and safety thereof until returned to the Contracting Officer. Drawings, tracings, or CADD files damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at the Contractor's expense. CADD files will be audited by the Contracting Officer and for accuracy and conformance to the above specified drafting and CADD standards.

a. Drafting

Only personnel proficient in the preparation of engineering drawings and CADD shall be employed to modify the original contract drawings, prepare additional new drawings, and modify the CADD files. Additions and corrections to the contract drawings shall be neat, clean, and legible and shall match the adjacent existing line work and/or lettering being annotated in type, density, size and style. All modifications, CADD information, and new drawings shall conform to applicable requirements specified in the paragraph "CADD Standards." The Contractor shall ensure that all delivered CADD digital files and data (e.g., sheet files, model files, cell/block libraries) are compatible with the Government's target CADD system and operating system, and adhere to the standards and requirements specified. The term "compatible" means that data is in native digital format i.e., .dgn (MicroStation) or .dwg (AutoCAD). It is the responsibility of the Contractor to ensure this level of compatibility.

b. CADD Standards

CADD Standards are specified in Section and Section 01 35 12.00 44 SPECIAL PROJECT PROCEDURES FOR FORT POLK.

The Contractor shall submit a written request for approval of any deviations from the Government's established CADD standards. Deviations will not be permitted unless prior written approval of such deviations has been received from the Government.

c. Final Revisions

When final revisions have been completed, place the words "REVISED RECORD DRAWING," in letters at least 3/16 inch high, and the date of completion in the revision block above the latest existing revision notation on each drawing CADD file.

d. Border Sheets

The border sheet to be used for any new record drawings shall be the same as used on the original drawings.

f. Copies of the Final Record Drawings

Blue line or black line prints shall be full size. All blue or black line prints shall exhibit good readable print with clear, sharp, dark lines, and shall not be smeared, faded, double imaged, or have torn or ragged edges.

g. Submittal Requirements

The Contractor shall submit to the Contracting Officer the final record drawings, consisting of two sets of full-size black line prints and three CD's or DVD's of corrected electronic (CADD and .pdf) files; verification that the electronic (CADD and .pdf) files have been loaded and work on the designated computer systems and are error- and virus-free; the approved preliminary drawings; and all required reproduced items. The corrected.pdf files shall be compiled into sets so that the files can be viewed and printed by the Adobe PDF reader; sets shall be bookmarked by sheet number and title. All electronic CADD files will become the property of the Government.

1.5.1.3 Post-Record Drawing Work

In event the Contractor accomplishes additional work which changes the as-built conditions of the facility after submission of the record drawings, the Contractor shall furnish revised and/or additional drawings (electronic (CADD and .pdf) files), as required to depict as-built conditions. Incorporate revised and additional files into the completed sets of contract record electronic (CADD and .pdf) files. The requirements for these additional drawings and files, will be the same as for the record drawings included in the original submission.

1.5.1.4 Payment for Final Record Drawings

If there is no cost-loaded schedule activity for final record drawings, the Government will withhold the amount of \$35,000, or 1% of the present construction value up to \$200,000, whichever is the greater, until the final as-built drawing submittal has been approved by the Government.

1.6 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Preliminary Record Drawings

Final Record Drawings

SD-03 Product Data

Warranty Management Plan

Warranty Tags

Spare Parts Data

warranty report

video

Red Zone Meeting

SD-08 Manufacturer's Instructions

Posted Instructions

SD-10 Operation and Maintenance Data

Operation and Maintenance Manuals; G,

SD-11 Closeout Submittals

As-Built Drawings; G,

Record Drawings; G,

Record Model; G,

As-Built Record of Equipment and Materials

Warranted Equipment and Materials

Final Approved Shop Drawings; G,

Certification of EPA Designated Items; G,

Certification Of USDA Designated Items; G,

Interim DD FORM 1354; G,

High Performance and Sustainable Building (HPSB) Checklist; G

List Of Installed Building Equipment Items For DD Form 1354

Checklist For Form Dd1354

1.7 SPARE PARTS DATA

Submit two copies of the Spare Parts Data list.

- a. Indicate manufacturer's name, part number, and stock level required for test and balance, pre-commissioning, maintenance and repair activities. List those items that may be standard to the normal maintenance of the system.
- b. At acceptance of commissioning, ensure the required stock level is supplied as indicated in subparagraph a, for maintenance and repair activities through the facilities warranty period. Provision of spare parts does not relieve the Contractor of responsibilities listed under the contract guarantee provisions.
- c. Supply any extra items of each part for spare parts inventory. Provision of spare parts does not relieve the Contractor of responsibilities listed under the contract guarantee provisions.

1.8 QUALITY CONTROL

Additions and corrections to the contract drawings must be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols must conform to ERDC/ITL TR-19-7.

1.9 WARRANTY MANAGEMENT

1.9.1 Warranty Management Plan

Develop a warranty management plan which contains information relevant to FAR 52.246-21 Warranty of Construction in Section 00 72 00 CONTRACT CLAUSES. At least 30 days before the planned pre-warranty conference, submit one set of the warranty management plan. Include within the warranty management plan all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan narrative must contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below must include due date and whether item has been submitted or was accomplished. Submit warranty information, made available during the construction phase, to the Contracting Officer for approval prior to each monthly pay estimate. Assemble approved information in a binder and turn over to the Government upon acceptance of the work. The construction warranty period must begin on the date of project acceptance and continue for the full product warranty period. Conduct a joint 4 month and 9-month warranty inspection, measured from time of acceptance; with the Contractor, Contracting Officer and the Customer Representative. The warranty management plan must include, but is not limited to, the following:

- a. Roles and responsibilities of personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subcontractors, manufacturers or suppliers involved.
- b. For each warranty, the name, address, telephone number, and e-mail of each of the guarantor's representatives nearest to the project location.
- c. A list and status of delivery of Certificates of Warranty for extended warranty items, including roofs, HVAC balancing, pumps, motors, transformers, and for commissioned systems, such as fire protection and alarm systems, sprinkler systems, and lightning protection systems.
- d. Warranted Equipment and Materials list for each warranted equipment, item, feature of construction or system indicating:
 - (1) Name of item.
 - (2) Model and serial numbers.
 - (3) Location where installed.
 - (4) Name and phone numbers of manufacturers or suppliers.
 - (5) Names, addresses and telephone numbers of sources of spare parts.
 - (6) Warranties and terms of warranty. Include one-year overall warranty of construction, including the starting date of warranty of construction. Items which have warranties longer than one year must be indicated with separate warranty expiration dates.
 - (7) Cross-reference to warranty certificates as applicable.
 - (8) Starting point and duration of warranty period.
 - (9) Summary of maintenance procedures required to continue the warranty in force.

- (10) Cross-reference to specific pertinent Operation and Maintenance manuals.
 - (11) Organization, names and phone numbers of persons to call for warranty service.
 - (12) Typical response time and repair time expected for various warranted equipment.
- e. The plans for attendance at the 4- and 9- month post-construction warranty inspections conducted by the Government.
 - f. Procedure and status of tagging of equipment covered by warranties longer than one year.
 - g. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty or safety reasons.

1.9.2 Performance Bond

The Performance Bond must remain effective throughout the construction and warranty period .

- a. In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others, and after completion of the work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.
- b. In the event sufficient funds are not available to cover the construction warranty work performed by the Government at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.
- c. Following oral or written notification of required construction warranty repair work, respond in a timely manner. Written verification will follow oral instructions. Failure to respond will be cause for the Contracting Officer to proceed against the Contractor.

1.9.3 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. At this meeting, establish and review communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty. In connection with these requirements and at the time of the Contractor's quality control completion inspection, furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contact must be located within the local service area of the warranted construction, be continuously available, and be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

1.9.4 Contractor's Response to Construction Warranty Service Requirements

Following oral or written notification by the Contracting Officer, respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the three categories of priorities listed below. Submit a report on any warranty item that has been repaired during the warranty period. Include within the report the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within the timeframe specified, the Government will perform the work and back charge the construction warranty payment item established.

- a. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.
- b. Second Priority Code 2. Perform onsite inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.
- c. Third Priority Code 3. All other work to be initiated within 3 work days and work continuously to completion or relief.
- d. The "Construction Warranty Service Priority List" is as follows:

Code 1-Life Safety Systems

- (1) Fire suppression systems.
- (2) Fire alarm system(s) in place in the building.

Code 1-Air Conditioning Systems

- (1) Recreational support.
- (2) Air conditioning leak in part of building, if causing damage.
- (3) Air conditioning system not cooling properly.

Code 1-Doors

- (1) Overhead doors not operational, causing a security, fire, or safety problem.
- (2) Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors

- (1) Overhead doors not operational.
- (2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical

- (1) Power failure (entire area or any building operational after 1600 hours).
- (2) Security lights
- (3) Smoke detectors

Code 2-Electrical

- (1) Power failure (no power to a room or part of building).
- (2) Receptacle and lights (in a room or part of building).

Code 3-Electrical

Street lights.

Code 1-Gas

Animal Building

FJ25AB

- (1) Leaks and breaks.
- (2) No gas to family housing unit or cantonment area.

Code 1-Heat

- (1) Area power failure affecting heat.
- (2) Heater in unit not working.

Code 2-Kitchen Equipment

- (1) Dishwasher not operating properly.
- (2) All other equipment hampering preparation of a meal.

Code 1-Plumbing

- (1) Hot water heater failure.
- (2) Leaking water supply pipes.

Code 2-Plumbing

- (1) Flush valves not operating properly.
- (2) Fixture drain, supply line to commode, or any water pipe leaking.
- (3) Commode leaking at base.

Code 3 -Plumbing

Leaky faucets.

Code 3-Interior

- (1) Floors damaged.
- (2) Paint chipping or peeling.
- (3) Casework.

Code 1-Roof Leaks

Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks

Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

Code 2-Water (Exterior)

No water to facility.

Code 2-Water (Hot)

No hot water in portion of building listed.

Code 3-All other work not listed above.

Code 1-Building Automation and Control Systems

- (1) Systems and equipment not working properly
- (2) Equipment or software malfunction

1.9.5 Warranty Tags

At the time of installation, tag each warranted item with a durable, oil and water-resistant tag approved by the Contracting Officer. Attach each tag with a copper wire and spray with a silicone waterproof coating. Also, submit two record copies of the warranty tags showing the layout and design. The date of acceptance and the QC signature must remain blank until the project is accepted by the Contracting Officer. Show the following information on the tag.

Type of product/material	
Model number	
Serial number	
Contract number	
Warranty period from/to	
Inspector's signature	
Construction Contractor	
Address	
Telephone number	
Warranty contact	
Address	
Telephone number	
Warranty response time priority code	
WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.	

PART 2 PRODUCTS

2.1 RECORD DRAWINGS

Prepare the CAD drawing files in MicroStation V8 format compatible with a Windows 10 operating system.

2.1.1 Additional Drawings

If additional drawings are required, prepare them using the specified electronic file format applying ERDC/ITL TR-19-7 and ERDC/ITL SR-23-1. The title block and drawing border to be used for any new final record drawings must be identical to that used on the contract drawings.

2.1.1.1 Sheet Numbers and File Names

If a sheet needs to be added between two sequential sheets, append a Supplemental Drawing Designator in accordance with ERDC/ITL TR-19-7 Adding a drawing sheet, and ERDC/ITL SR-23-1 Adding or deleting drawing sheets and index sheet procedures.

2.2 ADVANCED MODELING PACKAGE

For each Advanced Modeling Package submittal for both the Interim Record Model Package and the Final Record Model Package, submit in accordance with ERDC/ITL TR-19-7 and in accordance with Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) and also provide the following items:

- a. Advanced Modeling PxP: Provide an electronic copy of the most current approved version of the project Advanced Modeling PxP.
- b. Electronic Files: Provide an electronic list (.txt file or similar), of all submitted electronic files including a description, directory, and file name for each file submitted. Identify which files have been produced from the Model and Facility Data. For all sheet files, include a list of the sheet titles and sheet numbers.
- c. Advanced Modeling Submittal Checklist: Complete the USACE BIM/CIM Advanced Modeling Submittal Checklist and include with each submittal. Download the Checklist from the USACE CAD/BIM Technology Center website.
- d. Advanced Modeling Files: Provide all native Advanced Modeling files associated with the production of the contract drawings and associated as-modeled drawings. Update and maintain in compliance with the Advanced Modeling formatting, content requirement, and standards in Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) , in order to yield a complete and coordinated document package.
- e. Quality Control (QC) Reports: Provide electronic PDFs of all QC reports and checklist utilized to ensure full compliance with the contract requirements and standards.

2.3 CERTIFICATION OF EPA DESIGNATED ITEMS

Submit the Certification of EPA Designated Items as required by FAR 52.223-9 Estimate of Percentage of Recovered Material Content for EPA Designated Items and FAR 52-223-17 Affirmative Procurement of EPA designated items in Service and Construction Contracts. Include on the certification form the following information: project name, project number, Contractor name, license number, Contractor address, and certification. The certification will read as follows and be signed and dated by the Contractor. "I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current EPA standards for recycled/recovered materials content. The following exemptions may apply to the non-procurement of recycled/recovered content materials:

- a. The product does not meet appropriate performance standards;
- b. The product is not available within a reasonable time frame;
- c. The product is not available competitively (from two or more sources);
- d. The product is only available at an unreasonable price (compared with a comparable non-recycled content product)."

Record each product used in the project that has a requirement or option of containing recycled content noting total price, total value of post-industrial recycled content, total value of post-consumer recycled content, exemptions (a, b, c, or d, as indicated), and comments. Recycled

content values may be determined by weight or volume percent, but must be consistent throughout.

2.4 CERTIFICATION OF USDA DESIGNATED ITEMS

Submit the Certification of USDA Designated Items as required by FAR 52-223-1 Bio-based Product Certifications and FAR 52.223-2 Affirmative Procurement of Biobased Products Under Service and Construction Contracts. Include on the certification form the following information: project name, project number, Contractor name, license number, Contractor address, and certification. The certification will read as follows and be signed and dated by the Contractor. "I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current USDA standards for biobased materials content. The following exemptions may apply to the non-procurement of biobased content materials:

- a. The product does not meet appropriate performance standards;
- b. The product is not available within a reasonable time frame;
- c. The product is not available competitively (from two or more sources);
- d. The product is only available at an unreasonable price (compared with a comparable bio-based content product)."

Record each product used in the project that has a requirement or option of containing biobased content in accordance with SECTION 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING, noting total price, total value of post-industrial recycled content, total value of post-consumer recycled content, total value of biobased content, exemptions (a, b, c, or d, as indicated), and comments. Biobased content values may be determined by weight or volume percent, but must be consistent throughout.

2.5 PDF AS-BUILT FILES

Provide electronic PDF "plots" of all contract drawings sheets associated with the as-built drawing submittal. Compile and organize the PDF set to match the contract drawings. Bookmark and label the pages of the PDF file in accordance with Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD).

2.6 REDLINES AND MARKUPS

Provide PDFs of the current working redlines and/or markups complying with the as-builts drawing and markup requirements contained in this specification.

2.7 AS-BUILT OR ADVANCED MODELING RE-SUBMISSION REQUIREMENTS

If elements of an as-built submittal or advanced modeling package are rejected, provide the following for each re-submission, in addition to any information required in Section 01 33 00 SUBMITTAL PROCEDURES:

- a. Re-submit all components required under paragraph As-Builts or Advanced Modeling Package, including a new Advanced Modeling Submittal Checklist and updated content in response to Government comments.
- b. Provide a copy of all Government review comments.

- c. Provide a disposition/response to each Government review comment for a back-check of the re-submission deliverable.

PART 3 EXECUTION

3.1 AS-BUILT DRAWINGS

Provide and maintain two black line print copies of the PDF contract drawings for As-Built Drawings. Maintain the as-builts throughout construction as red-lined hard copies on site or red-lined PDF files. Submit As-Built Drawings 30 days prior to final inspection and acceptance of the facility by the Contracting Officer.

3.1.1 Markup Guidelines

Make comments and markup the drawings complete without reference to letters, memos, or materials that are not part of the As-Built drawing. Show what was changed, how it was changed, where item(s) were relocated and change related details. These working as-built markup prints must be neat, legible and accurate as follows:

- a. Use base colors of red, green, and blue. Color code for changes as follows:
 - (1) Special (Blue) - Items requiring special information, coordination, or special detailing or detailing notes.
 - (2) Deletions (Red) - Over-strike deleted graphic items (lines), lettering in notes and leaders.
 - (3) Additions (Green) - Added items, lettering in notes and leaders.
- b. Provide a legend if colors other than the "base" colors of red, green, and blue are used.
- c. Add and denote any additional equipment or material facilities, service lines, incorporated under As-Built Revisions if not already shown in legend.
- d. Use frequent written explanations on markup drawings to describe changes. Do not totally rely on graphic means to convey the revision.
- e. Use legible lettering and precise and clear digital values when marking prints. Clarify ambiguities concerning the nature and application of change involved.
- f. Wherever a revision is made, also make changes to related section views, details, legend, profiles, plans and elevation views, schedules, notes and call out designations, and mark accordingly to avoid conflicting data on all other sheets.
- g. For deletions, cross out all features, data and captions that relate to that revision.
- h. For changes on small-scale drawings and in restricted areas, provide large-scale inserts, with leaders to the applicable location.
- i. Indicate one of the following when attaching a print or sketch to a markup print:

- 1) Add an entire drawing to contract drawings.
 - 2) Change the contract drawing to show changes on the drawing.
 - 3) Provided for reference only to further detail the initial design.
- j. Incorporate all shop and fabrication drawings into the markup drawings.
- 3.1.2 As-Built Drawings Content

Revise red-lined PDF files in accordance with ERDC/ITL SR-23-1 and ERDC/ITL TR-19-7. Keep these working as-built markup drawings current on a weekly basis and at least one set available on the jobsite at all times. Changes from the contract drawings which are made during construction or additional information which might be uncovered in the course of construction must be accurately and neatly recorded as they occur by means of details and notes. Submit the working as-built markup drawings for approval prior to submission of each monthly pay estimate. For failure to maintain the working and final record drawings as specified herein, the Contracting Officer will withhold 10 percent of the monthly progress payment until approval of updated drawings. Show on the as-built drawings, but not limited to, the following information:

- a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, show by offset dimensions to two permanently fixed surface features the end of each run including each change in direction on the record drawings. Locate valves, splice boxes and similar appurtenances by dimensioning along the utility run from a reference point. Also record the average depth below the surface of each run.
- b. The location and dimensions of any changes within the building structure.
- c. Layout and schematic drawings of electrical circuits and piping.
- d. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.
- e. Changes in details of design or additional information obtained from working drawings specified to be prepared or furnished by the Contractor; including but not limited to shop drawings, fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment, and foundations.
- f. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.
- g. Changes or Revisions which result from the final inspection.
- h. Where contract drawings or specifications present options, show only the option selected for construction on the working as-built markup drawings.
- i. If borrow material for this project is from sources on Government

property, or if Government property is used as a spoil area, furnish a contour map of the final borrow pit/spoil area elevations.

- j. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.
- k. Changes in location of equipment and architectural features.
- l. Modifications.
- m. Actual location of anchors, construction and control joints, etc., in concrete.
- n. Unusual or uncharted obstructions that are encountered in the contract work area during construction.
- o. Location, extent, thickness, and size of stone protection particularly where it will be normally submerged by water.

3.2 RECORD DRAWING FILES

If additional drawings are required, prepare them using the specified electronic file format applying ERDC/ITL TR-19-7 and ERDC/ITL SR-23-1. The title block and drawing border to be used for any new final record drawings must be identical to that used on the contract drawings. Accomplish additions and corrections to the contract drawings using CAD files. Provide all program files and hardware necessary to prepare final PDF record drawings. The Contracting Officer will review final PDF record drawings for accuracy and return them to the Contractor for required corrections, changes, additions, and deletions.

3.2.1 Rename the CAD Drawing files

Rename the CAD Drawing files using the contract number as the Project Code field, (e.g., W91238-15-C-10A-102.DGN) as instructed in the Pre-Construction conference. Use only those renamed files for the Marked-up changes. Make all changes on the layer/level as the original item.

- a. MicroStation files (DGN), enter all as-built delta changes and notations on:
 - Level #63
 - Level/Layer Name contains: ANNO-REVS
 - Level/Layer Description: Revisions
- b. When final revisions have been completed, show the wording "RECORD DRAWING AS-BUILTS" followed by the name of the Contractor in letters at least 3/16 inch high on the cover sheet drawing. Date RECORD DRAWING AS-BUILTS" drawing revisions in the revision block.
- c. Within 10 days after Government approval of all of the working record drawings for a phase of work, prepare the final CAD record drawings for that phase of work and submit PDF drawing files and two sets of prints for review and approval. The Government will promptly return one set of prints annotated with any necessary corrections. Within 10 days revise the CAD files accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within 10 days of substantial completion of all phases of work, submit the final record drawing package for the entire project. Submit one

set of electronic CAD files, and one set of the approved working record PDF and or program files with two sets of prints. The CAD files must be complete in all details and identical in form and function to the CAD drawing files supplied by the Government. Prepare MicroStation files for transmittal using the Packager (Archive). Make any transactions or adjustments necessary to accomplish this. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CAD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit final record PDF drawing files, CAD files and marked prints as specified will be cause for withholding any payment due under this contract. Approval and acceptance of final record drawings must be accomplished before final payment is made.

3.3 RECORD DRAWINGS

Prepare final record drawings after the completion of each definable phase of work as listed in the Contractor Quality Control Plan (such as Foundations, Utilities, or Structural Steel as appropriate for the project). Transfer the changes from the approved working as-built markup drawings to the original electronic CAD drawing files. Modify the as-built CAD drawing files to correctly show the features of the project as-built by bringing the working CAD drawing set into agreement with approved working as-built markup drawings, and adding such additional drawings as may be necessary. Refer to ERDC/ITL SR-23-1. Jointly review the working as-built markup drawings with printouts from working as-built CAD drawing PDF files for accuracy and completeness. Monthly review of working as-built CAD drawing PDF file printouts must cover all sheets revised since the previous review. These PDF drawing files are part of the permanent records of this project. Any drawings damaged or lost must be satisfactorily replaced at no expense to the Government.

Drawing revisions (include within change order price the cost to change working and final record drawings to reflect revisions) and compliance with the following procedures.

- a. Follow directions in the revision for posting descriptive changes.
- b. The revision delta size must be 5/16 inch unless the area where the delta is to be placed is crowded. Use a smaller size delta for crowded areas.
- c. Place a revision delta at the location of each deletion.
- d. For new details or sections which are added to a drawing, place a revision delta by the detail or section title.
- e. For minor changes, place a revision delta by the area changed on the drawing (each location).
- f. For major changes to a drawing, place a revision delta by the title of the affected plan, section, or detail at each location.
- g. For changes to schedules or drawings, place a revision delta either by the schedule heading or by the change in the schedule.

3.3.1 Final Record Drawing Package

Submit the final record PDF and CAD drawings package for the entire project within 20 days of substantial completion of all phases of work. Submit one set of ANSI D size PDF and CAD files, two sets of ANSI D size prints and one set of the approved working record drawings. The package must be complete in all details and identical in form and function to the contract drawing files supplied by the Government.

3.4 FINAL APPROVED SHOP DRAWINGS

Submit final approved project shop drawings 30 days after transfer of the completed facility.

3.5 AS-BUILT RECORD OF EQUIPMENT AND MATERIALS

Furnish one copy of preliminary record of equipment and materials used on the project 15 days prior to final inspection. This preliminary submittal will be reviewed and returned 2 days after final inspection with Government comments. Submit Two sets of final record of equipment and materials 10 days after final inspection. Key the designations to the related area depicted on the contract drawings. List the following data:

RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA				
Description	Specification Section	Manufacturer and Catalog, Model, and Serial Number	Composition and Size	Where Used

3.6 OPERATION AND MAINTENANCE MANUALS

Provide project operation and maintenance manuals as specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA. Provide two electronic copies of the Operation and Maintenance Manual files and one hard copy of the Operation and Maintenance Manuals. Submit to the Contracting Officer for approval 30 calendar days prior to final inspection and acceptance of the facility by the Contracting Officer. Update and resubmit files for final approval at final acceptance of the facility by the Contracting Officer.

The Contractor shall be responsible for the preparation, coordination, execution and submittal of all Equipment Operating, Maintenance, and Repair manuals (O & M Manuals), including spare parts lists (**with the names and PHONE NUMBERS of local suppliers**), special tools, inventories of equipment manuals, and maintenance instructions, and shall conduct all training for operating and service personnel. Operation and maintenance manuals shall cover all system installations provided in this Contract and shall be in sufficient detail to facilitate normal maintenance and troubleshooting by persons with minimum experience with the installed equipment.

3.6.1 Submittal Requirements

All of the above listed items required in the technical specifications

shall be fully developed and submitted to the Contracting Officer not less than 120 calendar days prior to the scheduled final acceptance inspection date of a task order and prior to scheduling training for operating and service personnel. The Contractor shall coordinate the content of each instruction period required in the technical specifications with the Contracting Officer's Representative prior to the actual start of the training period.

3.6.1.1 Field Training

Field Training is a requirement for substantial completion. The Contractor shall conduct a training course for the operating staff for each particular system. The training is to be conducted during hours of normal working time and shall start after the system is functionally complete. The field instructions shall cover all of the items contained in the Equipment Operating, Maintenance and Repair Manuals. The training will include both classroom and "hands-on" training. The Contractor shall submit a lesson plan outlining the information to be discussed during training periods. This lesson plan will be submitted 90 days before contract completion and approved before the field training occurs. Training shall be recorded on video DVD and shall be furnished to the Government within ten (10) days following training. The taping shall include the entire session(s). The original video(s) or DVD's shall be labeled and turned over to the Contracting Officer. The video cameras and DVD's utilized by the Contractor shall be of a quality to enable clear and understandable playbacks of the recorded events. Training shall be documented by the Contractor and a list of attendees shall be furnished to the Government.

3.6.1.2 Draft O & M Manuals

On those systems where complete and comprehensive operation and maintenance manuals cannot be fully developed until the system(s) is (are) checked, tested, and/or balanced, and the checking, testing, and/or balancing has not been done when submittals are required, a proposed draft of those system manual(s) shall be submitted. The covers of draft O & M Manuals shall be labeled "DRAFT" in large (not less than font size 24), legible, printed letters. Submit fully developed O & M Manuals for approval after the systems have been checked, tested, and/or balanced but prior to the scheduled final acceptance inspection date.

3.6.1.3 Commencement of Warranty of Construction

Failure to submit all specified O & M manuals, spare parts listings, spare parts, special tools, inventories of installed property, and training video in a timely manner will be considered as delaying substantial completion of the work. Commencement of warranty under the Contract Clause WARRANTY OF CONSTRUCTION will not occur until all these items are delivered and approved by the Contracting Officer, but not earlier than the date of final acceptance of the work by the Government. When the O & M Manuals with drafts are approved they will not constitute a reason for delaying the start of the warranty period.

3.6.2 Government Possession of Work

The Government may take possession of any completed or partially completed work as provided for under Contract Clause entitled "USE AND POSSESSION PRIOR TO COMPLETION." If the installed equipment and/or systems thereto, have not been accepted by the Government due to the Contractor's failure to submit the above specified items, the Contractor shall operate and maintain

such plant or system at no additional cost to the Government until such time that the specified items have been received, approved and any subsequent testing, check-out and/or training has been completed.

3.6.3 Payment for O&M Manuals

If there is no cost-loaded schedule activity for O&M manuals, the Government will withhold the amount of \$20,000, or 1% of the present construction value up to \$200,000, whichever is the greater. No payment will be made until submittal and approval of all O&M manuals are complete.

3.6.4 Preparation And Submission Of Operation And Maintenance Manuals

This paragraph establishes general requirements for the preparation and submission of equipment operating, maintenance, and repair manuals as called for in the various sections of the specifications. Specific instruction(s) relating to a particular system or piece of equipment shall be incorporated into the manuals in accordance with the applicable technical specification. See Section 01 78 23 OPERATION AND MAINTENANCE DATA for additional information concerning the Operation and Maintenance data packages required by the technical sections.

3.6.4.1 General Requirements

Furnish one permanent electronic copy of the final Equipment Operating, Maintenance, and Repair Manuals on CD-ROM disk. Documents on the CD-ROM disk drive shall be in portable document format (.pdf); all printed and graphic documents, drawings, and illustrations shall be legible and bookmarked.

3.6.4.2 Equipment Operating, Maintenance, and Repair Manuals

a. General

Provide separate manuals for each utility system as defined hereinafter. Provide the number of copies of the manuals specified specified above or in the applicable technical section. Include in the manuals, in separate sections, the following information for each item of equipment. These requirements may be supplemented by additional requirements specified in the technical sections:

(1) Performance sheets and graphs showing capacity data, efficiencies, electrical characteristics, pressure drops, and flow rates. Marked-up catalogs or catalog pages do not satisfy this requirement. Performance information shall be presented as concisely as possible and contain only data pertaining to equipment actually installed.

(2) Catalog cuts showing application information.

(3) Installation information showing minimum acceptable requirements.

(4) Operation and maintenance requirements. Include adequate illustrative material to identify and locate operating controls, indicating devices and locations of areas or items requiring maintenance.

(a) Describe, in detail, starting and stopping procedures for components, adjustments required to obtain optimum equipment performance, and corrective actions for malfunctions.

(b) Describe in the maintenance instructions the nature and frequency of routine maintenance and procedures to be followed. Indicate any special tools, materials, and test equipment that may be required.

(5) Repair information including diagrams and schematics, guidance for diagnosing problems, and detailed instructions for making repairs. Provide troubleshooting information that includes a statement of the indication or symptom of trouble and the sequential instructions necessary. Include test hookups to determine the cause, special tools and test equipment, and methods for returning the equipment to operating conditions. Information may be in chart form or in tabular format with appropriate headings.

(6) Parts lists with names and addresses of closest parts supply agencies, the current unit prices, and the sources of supply. Include spare parts data for each different item of materials and equipment specified.

(7) Names and addresses of local manufacturers representatives.

b. Facility Heating Systems

Provide information for the following equipment: Boilers, water treatment, chemical feed pumps and tanks, converters, heat exchangers, pumps, unit heaters, fin-tube radiation, air handling units (both heating only and heating and cooling), and valves (associated with heating systems).

c. Air-Conditioning Systems

Provide information on chillers, packaged air-conditioning equipment, towers, water treatment, chemical feed pumps and tanks, air-cooled condensers, pumps, compressors, air handling units, and valves (associated with air-conditioning systems).

d. Temperature Control and HVAC Distribution Systems

(1) Provide the information described for the following equipment:

Valves, fans, air handling units, pumps, boilers, converters, and heat exchangers, chillers, water cooled condensers, cooling towers, and fin-tube radiation.

(2) Provide all information described for the following equipment:

Control air compressors, control components (sensors, controllers, adapters, and actuators), and flow measuring equipment.

e. Central Heating Plants

Provide the information described for the following equipment: Boilers, converters, heat exchangers, pumps, fans, steam traps, pollution control equipment, chemical feed equipment, control systems, fuel handling equipment, de-aerators, tanks (flash, expansion, return water, etc.), water softeners, and valves.

f. District Heating Distribution Systems

Provide the information described for the following equipment: Valves,

fans, pumps, converters and heat exchangers, steam traps, tanks (expansion, flash, etc.) and piping systems.

g. Exterior Electrical Systems

Information shall be provided on the following equipment: Power transformers, relays, reclosers, breakers, and capacitor bank controls.

h. Interior Electrical Systems

Information shall be provided on the following equipment: Relays, motor control centers, switchgear, solid state circuit breakers, motor controller, and EPS lighting systems, control systems (wire diagrams and troubleshooting flow chart), and special grounding systems.

i. Energy Management and Control System

The maintenance manual shall include descriptions of maintenance for all equipment, including inspection, periodic preventative maintenance, fault diagnosis, and repair or replacement of defective components.

j. Domestic Water Systems

The identified information shall be provided on the following equipment: Tanks, unit process equipment, pumps, motors, control and monitoring instrumentation, laboratory test equipment, chemical feeders, valves, switching gear, and automatic controls.

k. Wastewater Treatment Systems

The identified information shall be provided on the following equipment: Tanks, unit process equipment, pumps, motors, control and monitoring instrumentation, laboratory test equipment, chemical feeders, valves, scrapers, skimmers, comminutors, blowers, switching gear, and automatic controls.

l. Fire Protection Systems

Information shall be provided on the following equipment: Alarm valves, manual valves, regulators, foam and gas storage tanks, piping materials, sprinkler heads, nozzles, pumps, and pump drivers.

m. Fire Detection Systems

The maintenance manual shall include description of maintenance for all equipment, including inspection, periodic preventive maintenance, fault diagnosis, and repair or replacement of defective components.

n. Plumbing Systems

Information shall be provided on the following equipment: Water heaters, valves, pressure regulators, backflow preventors, piping materials, and plumbing fixtures.

o. Liquid Fuels Systems

Information shall be provided on the following equipment: Tanks, automatic valves, manual valves, filter separators, pumps, mechanical loading arms, nozzles, meters, electronic controls, electrical switch gear, and fluidic

controls.

p. Cathodic Protection Systems

Information shall be provided on the following material and equipment: Rectifiers, meters, anodes, anode backfill, anode lead wire, insulation material and wire size, automatic controls (if any), rheostats, switches, fuses and circuit breakers, type and size of rectifying elements, type of oil in oil-immersed rectifiers, and rating of shunts.

q. Generator Installations

Information shall be provided on the following equipment: Generator sets, automatic transfer panels, governors, exciters, regulators, starting systems, switchgear, and protective devices.

r. Miscellaneous Systems

Information shall be provided on the following: Communication and ADP systems, security and intrusion alarm, elevators, material handling, active solar, photovoltaic, and other similar type special systems not otherwise specified.

3.6.5 RED ZONE MEETING

Approximately 60 days before the anticipated final inspection and acceptance of the facility by the Contracting Officer, or at 80% construction progress completion, whichever occurs first, the Contractor's Supervisor and Quality Control Manager and the Government's project delivery team will conduct what is known as the Red Zone Meeting to discuss the close-out process, to schedule the events and review responsibilities for actions necessary to produce a timely physical, as well as fiscal, project close-out. The Red Zone meeting derives its name from the football term used to describe the team effort to move the ball the last 20 yards into the end zone. The close-out of a construction project sometimes can be equally as hard and most definitely requires the whole team's efforts. The ACO will chair the meeting. Exhibit One is a generic meeting checklist.

3.7 CLEANUP

Leave premises "broom clean." Clean interior and exterior glass surfaces exposed to view; remove temporary labels, stains and foreign substances; polish transparent and glossy surfaces; vacuum carpeted and soft surfaces. Clean equipment and fixtures to a sanitary condition. Clean or Replace filters of operating equipment. Clean debris from roofs, gutters, downspouts and drainage systems. Sweep paved areas and rake clean landscaped areas. Remove waste and surplus materials, rubbish and construction facilities from the site..

3.8 REAL PROPERTY RECORD

DD Form 1354, TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY, is the formal document that the Corps of Engineers uses to transfer project ownership to the installation. In accordance with Section 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) requirements for this form, complete the Excel files "Contractor Template for DD1354 .xls" and "Contractor Template for Appendix D.xls" and submit with the interim final design(s). These Excel forms, completed examples, and a list of the

category codes are included in the solicitation files. TThe DD Form 1354 and appendix D documents identify project design information to support additional Real Property records and installation life safety requirements. Break the data down by applicable Category Codes necessary for the Government to use in updating the DD Form 1354 data in RMS. Expand list as applicable. The required data includes:

- (1) A description of the item
- (2) The applicable Category Code
- (3) The quantity and unit of measure
- (4) The item's contract cost to the Government

During project construction, the Contractor is responsible for keeping the DD1354 data current by updating the approved Excel spreadsheet submitted during design with any new and/or changed construction data caused by field changes. This assistance will be necessary whenever a construction modification is issued and/or the Contractor elects to modify the original design. The updated Excel spreadsheet shall be provided at the Red Zone meeting. Data shall be provided to the Contracting Officer Representative.

Refer to UFC 1-300-08 for instruction on completing the DD Form 1354. For information purposes, a blank DD Form 1354 (fill-able) in ADOBE (PDF) may be obtained at the following web site:

<http://www.dtic.mil/whs/directives/infomgt/forms/eforms/dd1354.pdf>

Submit the completed Checklist for Form DD1354 of Installed Building Equipment items. Attach this list to the updated DD Form 1354.

3.8.1 Interim DD FORM 1354

Near the completion of Project, but a minimum of 60 days prior to final acceptance of the work, complete and submit an accounting of all installed property with Interim DD FORM 1354. Include any additional assets, improvements, and alterations from the Draft DD FORM 1354.

3.8.2 Completed DD FORM 1354

For convenience, a blank fillable PDF DD FORM 1354 may be obtained at the following link:

www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd1354.pdf

Submit the completed List of Installed Building Equipment items for DD FORM 1354. Attach this list to the updated DD FORM 1354.

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3.9 EXHIBIT 1

SAMPLE**Red Zone Meeting Checklist**

Date: _____

Contract No.: _____

Description / Location: _____

Contractor: _____

Contracting Officer: _____

Action	Completion	Milestone
Inspections _____		
Fire _____		
Safety _____		
Pre-final _____		
Mechanical Test & Balance _____		
Commissioning _____		
Landscaping Complete _____		
Beneficial Occupancy Date (BOD) _____		
Furniture Installation _____		
Comm Installation _____		
As-Built Contract Drawings _____		
Provide all O&M manuals, tools, shop drawings, spare parts, etc. provided to customer _____		
Provide Warranty documents to Customer _____		
Contract completion _____		
Final Inspection _____		
User move-in _____		
DD Form 1354, Transfer of Real Property completed & signed _____		
Ribbon cutting _____		
DD Form 2626 - Final CPARS _____		
Final Payment Completed _____		
Release of Claims (see Exhibit 2) _____		
Return of Unobligated Funds _____		
Move Project from CIP to General Ledger _____		
Financial completion _____		

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3.10 3.3 EXHIBIT 2

FINAL PAYMENT RELEASE

The undersigned as the Contractor under Contract No. W9126G-__-__-__ dated _____ between the United States of America and said Contractor, for _____ located at _____ in accordance with paragraph (____) of Contract Clause _____, PAYMENTS TO CONTRACTOR, of said Contract, hereby releases the United States, its officers, agents, and employees from any and all claims relating to or arising by virtue of said Contract, or any modification or change thereto, except with respect to those claims, if any, listed below:

(Identify claim or if none, write in "none.")

Executed this ____ day of _____ 20__

(Contractor's name in CAPS)

By _____

Title _____

-- End of Section --

SECTION 01 78 23

OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS (ASHRAE)

ASHRAE GUIDELINE 1.4 (2019) Preparing Systems Manuals for
Facilities

ASTM INTERNATIONAL (ASTM)

ASTM E1971 (2024) Standard Guide for Stewardship for
the Cleaning of Commercial and
Institutional Buildings

ASTM E2166 (2016; R 2023) Standard Practice for
Organizing and Managing Building Data

U.S. DEPARTMENT OF DEFENSE (DOD)

FC 1-300-09N (2024) Navy and Marine Corps Design

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-10 Operation and Maintenance Data

Facility Data Workbook; G,

Training Plan; G,

Training Outline; G,

Training Content; G,

Operation And Maintenance Manual, Progress Submittal; G,

Operation And Maintenance Manual, Prefinal Submittal; G,

Operation And Maintenance Manual, Final Submittal; G,

SD-11 Closeout Submittals

Training Video Recording; G,
Validation of Training Completion; G,
Training Plan; G,
Record Drawings And Utility Systems; G,

1.3 MEETINGS

To assure that Operation and Maintenance Manual and Facility Data Workbook requirements are being met through the duration of the project, organize the following meetings and discuss the subsequent topics:

1.3.1 Post-Award Kickoff Meeting

At a minimum, discuss the following:

- a. The requirement for Operation and Maintenance Manuals and Facility Data deliverables under this contract including coordination meetings
- b. Processes and method of gathering Facility Data information during construction
- c. Primary roles and responsibilities associated with the development and delivery of the Operation and Maintenance Manuals and Facility Data deliverables, and
- d. Identify and agree upon a date and attendance list for the meetings described below:

1.3.2 Operation and Maintenance Manual and Facility Data Workbook Coordination Meeting

Facilitate a meeting after the Post-Award Kickoff Meeting prior to the submission of the Operation and Maintenance Manual Progress Submittal. Meeting attendance must include the Contractor's Operation and Maintenance Manual and Facility Data Workbook Preparer, Designer of Record (DOR), Quality Control Manager, the Government's Design Manager (DM), Contracting Officer's Representative, and Government's facility data reviewer. Include any Mechanical, Electrical, and Fire Protection Sub-Contractors.

The purpose of this meeting is to reach a mutual understanding of the scope of work concerning the contract requirements for Operation and Maintenance Manual and coordinate the efforts necessary by both the Government and Contractor to ensure an accurate collection, preparation and timely Government review of Operation and Maintenance Manual.

1.3.3 Submittal Coordination Meeting

Facilitate a meeting following submission and Government review of each design or progress submittal of the Operation and Maintenance Manual and Facility Data Workbook.

- a. Include personnel from the Coordination meeting and any additional personnel identified.
- b. The purpose of this meeting is to demonstrate ongoing compliance with

the requirements identified in this specification. Discuss Government review comments and unresolved items preventing completion and Government approval of the Operation and Maintenance Manuals and Facility Data Workbook (FDW).

- c. The applicable deliverables, along with Government remarks associated with review of these submittals serve as the primary guide and agenda for this meeting.

1.4 FACILITY DATA WORKBOOK

Develop an editable, electronic spreadsheet based on the equipment in the Operation and Maintenance Manuals that contains the information required to start a preventive maintenance program.

1.5 OPERATION AND MAINTENANCE MANUAL MEDIA

Assemble Operation and Maintenance Manual into an electronically bookmarked file using the most current version of Adobe Acrobat or similar software capable of producing PDF file format. Provide compact disks (CD) or data digital versatile disk (DVD) as appropriate, so that each one contains operation, maintenance and record files, project record documents, and training videos. Include a complete bookmarked operation and maintenance directory.

1.5.1 CD or DVD Label and Disk Holder or Case

Provide the following information on the disk label and disk holder or case:

- a. Building Number
- b. Project Title
- c. Activity and Location
- d. Construction Contract Number
- e. Prepared For: (Contracting Agency)
- f. Prepared By: (Name, title, phone number and email address)
- g. Include the disk content on the disk label
- h. Date
- i. Virus scanning program used

1.6 O&M MANUAL CONTENT

Organize the bookmarked Operation and Maintenance Manual into the following Parts in accordance with ASHRAE GUIDELINE 1.4, and as modified and detailed below. Word template for O&M Manual is available at:
<https://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-78-23>.

1.6.1 Part 1: Executive Summary

Provide a summary of the information found in the O&M manual including the purpose of the manual and a description of the manual's organization.

1.6.2 Part 2: Facility Design and Construction

1.6.2.1 General Facility and Systems Description

Provide an overview of the intent for design and use of the facility. Provide a PDF of the Record Drawings prepared in accordance with FC 1-300-09N and 01 78 00 CLOSEOUT SUBMITTALS and bookmarked using the sheet title and sheet number. Include uncluttered 11 by 17 inches floor plans with room numbers, type or function of space, and overall facility dimensions on the floor plans. Do not include items such as construction instructions, references, or frame numbers.

Detail the overall dimensions of the facility, number of floors, foundation type, expected number of occupants, and facility Category Code list and generally describe all the facility systems and any special building features (for example, HVAC Controls, Sprinkler Systems, Cranes, Elevators, and Generators). Include photographs marked up and labeled to show key operating components and the overall facility appearance.

1.6.2.2 Basis of Design

Provide a copy of the contract Basis of Design.

1.6.2.3 Contract Documents, RFP, Amendments, and Modifications

Provide the contract construction documents complete, to include specifications, drawings, Request for Proposal, amendments, and modifications.

1.6.2.4 Room Inventory of Real Property and Finishes

Provide a list of installed equipment furnished under this contract. Include all information usually listed on manufacturer's name plate. Include, as applicable, the following information for each piece of equipment installed: description of item, all dimensions, location by room number, model number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty. Real property includes, but is not limited to, floor coverings, wall surfaces, ceiling surfaces, windows, roofing, HVAC filters, plumbing fixtures, and lighting fixtures. Submit the final list 30 days after transfer of the completed facility.

1.6.3 Part 3: Facilities, Systems, and Assemblies Information

1.6.3.1 Organization

Bookmark information in this section using the current version of ASTM E2166 Uniformat II, UFGS numbers, and document type as outlined in the example below. Bookmark/tab each item to the third level for easy navigation of the manual.

Example as shown in Table below:

PARTS AND SUBPART NUMBERING
3.1 B20 EXTERIOR CLOSURE (System)

PARTS AND SUBPART NUMBERING	
3.1.1.1	B2030 EXTERIOR DOORS (Subsystem)
3.1.1.1.1	B2030110 GLAZED DOORS (Component)
3.1.1.1.1.1	Applicable specifications List in UFGS Format
3.1.1.1.1.2	Manufacturer's Operations and Maintenance Data
3.1.1.1.1.3	Approved Submittal
3.1.1.1.1.4	Coordination/Shop Drawings
3.1.1.1.1.5	Sequence of Operation for Operating Equipment
3.1.1.1.1.6	Testing Equipment Information and Performance Data
3.1.1.1.1.7	Routine Maintenance Requirements
3.1.1.1.1.8	Repair Procedures
3.1.1.1.1.9	Emergency Procedures & Locations of Applicable
3.1.1.1.1.10	Warranties
3.1.1.1.1.11	Record Drawings and Utility Systems
3.1.1.1.1.12	Contractor / Supplies Listing and Contact Information

1.6.3.2 Related Specifications

Reference each specification related to the subsystem in this section and locate the actual specification section in Part 2 of the O&M Manual. List specifications in table format as shown in the below example.

UFGS Number	Specification Title	Page Spec Begins in Part 2

1.6.3.3 Manufacturer's Operations and Maintenance Data

Provide a copy of all manufacturer specifications and cutsheets. Provide text-searchable, high-quality document files from the manufacturer's online or electronic documentation. Color documents are preferred. Provide documents specific to the product(s) installed under this Contract. Provide identification and coverage for the parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Provide Uniformat II Level 3 identification for D20, D30, D40 installed equipment. When possible, do not submit document files containing multiple product catalogs from the same manufacturer, or product data from multiple manufacturers in the same files. Provide documents directly from the manufacturer whenever possible. Do not provide scanned copies of hardcopy documents. Provide identification and coverage for the parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such

as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing must show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Group the parts shown in the listings by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master part catalog.

1.6.3.4 Approved Submittals and Certificates

Provide a copy of all submittals documented with the required approval as applicable for each UFGS specification listed in the table outlined in applicable specifications. Include copies of SD-07 Certificates submittals documented with the required approval, SD-08 Manufacturer's Instructions submittals documented with the required approval, and SD-10 Operation and Maintenance Data submittals documents with the required approval.

1.6.3.5 Approved Coordination/Shop Drawings

Drawings, diagrams, and schedules specifically prepared to illustrate some portion of the work. Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project. Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

1.6.4 Sequence of Operation for Operating Equipment

Provide record one-line diagrams for each floor, delineating mechanical equipment location within the building. Provide specific instructions, procedures, and illustrations for the following phases of operation for the installed model and features of each system:

1.6.4.1 Safety Precautions and Hazards

List personnel hazards and equipment or product safety precautions for operating conditions. List all residual hazards identified in the Activity Hazard Analysis provided under Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS. Provide recommended safeguards for each identified hazard. Specify if any certifications or licenses are required to operate the equipment.

1.6.4.2 Operator Prestart

Provide procedures required to install, set up, and prepare each system for use.

1.6.4.3 Startup, Shutdown, and Post-Shutdown Procedures

Provide narrative description for Startup, Shutdown and Post-shutdown operating procedures including the control sequence for each procedure.

1.6.4.4 Normal Operations

Provide Control Diagrams with data to explain operation and control of systems and specific equipment. Provide narrative description of Normal Operating Procedures.

1.6.4.5 Emergency Operations

Provide Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment. Provide Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of utility systems including required valve positions, valve locations and zones or portions of systems controlled.

1.6.4.6 Operator Service Requirements

Provide instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gauge readings.

1.6.4.7 Environmental Conditions

Provide a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each product, component, or system. Describe conditions under which the item equipment should not be allowed to run.

1.6.4.8 Operating Log

Provide forms, sample logs, and instructions for maintaining necessary operating records.

1.6.4.9 Additional Requirements for Equipment Control Systems

Provide Data Package 5 and the following for all control systems:

- a. Provide a narrative description on how to perform and apply functions, features, modes, and other operations, including unoccupied operation, seasonal changeover, manual operation, and alarms. Include detailed technical manual for programming and customizing control loops and algorithms.
- b. Submit complete controls equipment schedules, full as-built sequence of operations, wiring and logic diagrams, Input/Output Tables, equipment schedules, copies of checkout tests and calibrations performed by the Contractor (not Cx tests), and all associates information.
- c. Full points list. Provide a listing of rooms with the following information for each room:
 - (1) Floor
 - (2) Room number
 - (3) Room name
 - (4) Air handler unit ID

- (5) Reference drawing number
- (6) Air terminal unit tag ID
- (7) Heating or cooling valve tag ID
- (8) Minimum cfm
- (9) Maximum cfm
- d. Full print out of all schedules and set points after testing and acceptance of the system.
- e. Full as-built print out of software program.
- f. Marking of system sensors and thermostats on the as-built floor plan and mechanical drawings with their control system designations.

1.6.4.10 Testing Equipment Information and Performance Data

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components. Provide final set points.

Include completed prefunctional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms. Provide final set points.

1.6.5 Routine Maintenance Requirements

1.6.5.1 Preventive Maintenance Plan, Schedule, and Procedures

Provide manufacturer's schedule for routine preventive maintenance, inspections, condition monitoring (predictive tests) and adjustments required to ensure proper and economical operation and to minimize repairs. Provide instructions stating when the systems should be retested. Provide manufacturer's projection of preventive maintenance work-hours on a daily, weekly, monthly, and annual basis including requirements by type of activity. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

- a. Define the anticipated time required to perform each test (work-hours), test apparatus, number of personnel identified by responsibility, and a testing validation procedure permitting the record operation capability requirements within the schedule. Provide a remarks column for the testing validation procedure referencing operating limits of time, pressure, temperature, volume, voltage, current, acceleration, velocity, alignment, calibration, adjustments, cleaning, or special system notes. Delineate procedures for preventive maintenance, inspection, adjustment, lubrication, and cleaning necessary to minimize repairs.
- b. Repair requirements must inform operators how to check out, troubleshoot, repair, and replace components of the system. Include electrical and mechanical schematics and diagrams and diagnostic techniques necessary to enable operation and troubleshooting of the system after acceptance.

1.6.5.2 Lubrication Data

Include the following preventive maintenance lubrication data, in addition to instructions for lubrication required under paragraph OPERATOR SERVICE REQUIREMENTS:

- a. A table showing recommended lubricants for specific temperature ranges and applications.
- b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities. Provide procedural instructions for Oil Sampling for all equipment.
- c. A Lubrication Schedule showing service interval frequency.

1.6.6 Repair Procedures

Provide instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards. Provide manufacturer's recommended procedures and instructions for correcting problems and making repairs for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials. Specify if any certifications or licenses are required to repair the equipment.

1.6.6.1 Troubleshooting Guides and Diagnostic Techniques

Provide step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement.

1.6.6.2 Wiring Diagrams and Control Diagrams

Provide point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and control work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.

1.6.6.3 Removal and Replacement Instructions

Provide step-by-step procedures and a list of required specialty tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings, and adjustments required. Use a combination of text and illustrations.

1.6.6.4 Repair Work-Hours

Provide manufacturer's projection of repair work-hours including requirements by type of craft. Identify, and tabulate separately, repair that requires the equipment manufacturer to complete or to participate.

1.6.6.5 Warranty Information

List and explain the various warranties and clearly identify the servicing

and technical precautions prescribed by the manufacturers or contract documents in order to keep warranties in force. Identify if replacement of a subassembly, attachment or accessory requires the entire assembly to be replaced. Include warranty information for primary components of the system. Provide copies of warranties required by Section 01 78 00 CLOSEOUT SUBMITTALS.

1.6.6.6 Extended Warranty Information

List all warranties for products, equipment, components, and sub-components whose duration exceeds one year. For each warranty listed, indicate the applicable specification section, duration, start date, end date, and the point of contact for warranty fulfillment. Also, list or reference the specific operation and maintenance procedures that must be performed to keep the warranty valid. Provide copies of warranties required by Section 01 78 00 CLOSEOUT SUBMITTALS.

1.6.6.7 Record Drawings and Utility Systems

The record drawings are the final compilation of actual conditions reflected in the as-built drawings. Provide record drawings as outlined in 01 78 00 CLOSEOUT SUBMITTALS.

Using Record Source Drawings, show and document details of the actual installation of the utility systems, annotate and highlight the Operation and Maintenance information. Provide the following drawings at a large enough scale to differentiate designated isolation units from surrounding valves and switches.

1.6.6.8 Personnel Training Requirements

Provide information available from the manufacturers that is needed for use in training designated personnel to properly operate and maintain the equipment and systems.

1.6.6.9 Contractor / Supplier Listing and Contact Information

Provide a list that includes the name, address, telephone number, email and website of the General Contractor and each Subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization that can provide replacements most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

1.6.7 Part 4: Facility Operations

1.6.7.1 Completed Facility Operating Plan

Provide a plan that documents those procedures for the operation of systems and assemblies in the facility. The systems that should be included in the Operating Plan include, but are not limited to:

- a. Electrical systems and equipment
- b. Mechanical systems and equipment
- c. Fire Protection systems and equipment

- d. Control Systems and equipment
- e. Architectural and Structural systems, fixtures, structures, and equipment
- f. Vertical transportation such as elevators and escalators

1.6.7.2 Testing Equipment and Special Tool Information

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components. Provide final set points.

1.6.7.3 Testing and Performance Data

Include completed prefunctional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms. Provide final set points.

1.6.7.4 Approved Field Test Reports and Manufacturer's Field Reports

Compile and provide approved Field Test Reports (SD-06) and Manufacturer's Field Reports (SD-09) submittals.

1.6.7.5 Maintenance Plans, Procedures, Checklists, Records, and Spare Parts Inventory

1.6.7.5.1 Maintenance Schedules

Include recommended maintenance schedules for systems and equipment.

1.6.7.5.2 Ongoing Commissioning Operational and Maintenance Record Keeping

Include ongoing commissioning and optimization procedures and documentation to monitor and improve the performance of facility systems.

1.6.7.5.3 Janitorial and Cleaning Plans and Procedures

Include a copy of facility cleaning and janitorial plan with procedures and intended chemicals and equipment.

Provide environmentally friendly cleaning recommendations in accordance with ASTM E1971.

1.6.7.6 Utility Record Drawings

1.6.7.6.1 Utility Schematic Diagrams

Provide a one-line schematic diagram for each utility system such as power, water, wastewater, and gas/fuel. Schematic diagram must show from the point where the utility line is connected to the mainline up to the 5-foot connection point to the facility. Indicate location or area designation for route of transmission or distribution lines; locations of duct banks, manholes/handholes or poles; isolation units such as valves and switches; and utility facilities such as pump stations, lift stations, and substations.

1.6.7.6.2 Enlarged Connection and Cutoff Plans

Provide enlarged floor plans and provide information between the 5-foot utilities connection point and where utilities connect to facility distribution. Enlarge floor plans/elevations of the rooms where the utility enters the building and indicate on these plans the locations of the main interiors and exterior connection and cutoff points for the utilities. Also enlarge floor plans/elevations of the rooms where equipment is located. Include enough information to enable someone unfamiliar with the facility to locate the connection and cutoff points. Indicate designations such as room number, panel number, circuit breaker, or valve number of each utility and equipment connection and cutoff point, and what that connection and cutoff point controls.

1.6.7.6.2.1 Description of Utility Metering and Monitoring Systems

Provide in narrative format a description of the utility metering and monitoring systems. Include locations, function, and related systems.

1.6.7.6.2.2 Procedures for Tracking Utility Use and Reporting

Procedures for usage reporting and tracking in support of establishing and monitoring utility budgets and costs, and in developing annual energy reports.

1.6.7.6.2.3 One-Line Diagrams and Meter Location of System

Provide one-line diagrams and design drawings that highlight meter locations on the site.

1.6.7.6.3 Spare Parts and Supply Lists

Provide lists of spare parts and supplies required for repair to ensure continued service or operation without unreasonable delays. Special consideration is required for facilities at remote locations. List spare parts and supplies that have a long lead-time to obtain.

1.6.8 Part 5: Training

Provide a copy of training plans used for each type of equipment along with training materials used, arranged in specification sequence. Provide a copy of training records, sign-in sheets, and agendas. Include training and documentation on the updating and continued use of the O&M Manual.

1.6.9 Part 6: Cx Project Report and TAB Report

Provide the final Cx Plan and complete Cx reports with evaluation and testing forms and records for each building system. Include relevant commissioned system assemblies test reports including installers checklists of assemblies. Provide all Cx Progress Reports, issues and resolutions logs with resolution or status of each item, and a list of any open items and seasonal or additional testing required.

1.6.10 Part 7: Regulatory Requirements

Provide information describing regulatory and policies compliance requirements or provide a reference to where it is stored.

1.6.11 Part 8: Permits

Provide information requiring frequently asked questions and associated answers or provide a reference to where it is stored.

1.6.12 Part 9: Operations and Maintenance Manual Approval

Provide a signed document stating that the project O&M Manual has been reviewed and confirming agreement with the approach it presents. Include contact information for the signer for coordination of any future changes.

1.7 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES

Provide the O&M data packages specified in individual technical sections , or if not specified in the individual technical sections, in accordance with the package usage definition.. O&M Data Packages are one of the components of the O&M Manual. The information required in each type of data package follows:

Package Usage Definition: Use Data Package 1 for architectural items requiring simple but specific maintenance and replacement; for example, acoustical ceiling, floor tile or carpeting system.

1.7.1 Package Quality

Documents must be fully legible. Operation and Maintenance data must be consistent with the manufacturer's standard brochures, schematics, printed instructions, general operating procedures, and safety precautions.

1.7.2 Data Package 1

- a. Safety precautions and hazards
- b. Cleaning recommendations
- c. Maintenance and repair procedures
- d. Warranty information
- e. Extended warranty information
- f. Contractor information
- g. Spare parts and supply list

1.7.3 Data Package 2

Package Usage Definition: Use Data Package 2 for an item that is less simple than required for Data Package 1; for example, an item having a motor and some sequence of operation such as a refrigerated drinking fountain.

- a. Safety precautions and hazards
- b. Normal operations
- c. Environmental conditions
- d. Lubrication data

- e. Preventive maintenance plan, schedule, and procedures
- f. Cleaning recommendations
- g. Maintenance and repair procedures
- h. Removal and replacement instructions
- i. Spare parts and supply list
- j. Parts identification
- k. Warranty information
- l. Extended warranty information
- m. Contractor information

1.7.4 Data Package 3

Package Usage Definition: Use Data Package 3 for a complex piece of equipment, having a specific troubleshooting sequence, but one which does not require an operator on watch; for example, HVAC temperature controls.

- a. Safety precautions and hazards
- b. Operator prestart
- c. Startup, shutdown, and post-shutdown procedures
- d. Normal operations
- e. Emergency operations
- f. Environmental conditions
- g. Operating log
- h. Lubrication data
- i. Preventive maintenance plan, schedule, and procedures
- j. Cleaning recommendations
- k. Troubleshooting guides and diagnostic techniques
- l. Wiring diagrams and control diagrams
- m. Maintenance and repair procedures
- n. Removal and replacement instructions
- o. Spare parts and supply list
- p. Product submittal data
- q. O&M submittal data

- r. Parts identification
- s. Warranty information
- t. Extended warranty information
- u. Testing equipment and special tool information
- v. Testing and performance data
- w. Contractor information
- x. Field test reports

1.7.5 Data Package 4

Package Usage Definition: Use Data Package 4 for an extremely complex piece of equipment, having an extensive sequence of operation, a complex troubleshooting sequence and one requiring frequent operator attention; at least for start-up and shut-down. Examples of this case would be small boilers and small diesel generator sets.

- a. Safety precautions and hazards
- b. Operator prestart
- c. Startup, shutdown, and post-shutdown procedures
- d. Normal operations
- e. Emergency operations
- f. Operator service requirements
- g. Environmental conditions
- h. Operating log
- i. Lubrication data
- j. Preventive maintenance plan, schedule, and procedures
- k. Cleaning recommendations
- l. Troubleshooting guides and diagnostic techniques
- m. Wiring diagrams and control diagrams
- n. Repair procedures
- o. Removal and replacement instructions
- p. Spare parts and supply list
- q. Repair work-hours
- r. Product submittal data

- s. O&M submittal data
- t. Parts identification
- u. Warranty information
- v. Extended warranty information
- w. Personnel training requirements
- x. Testing equipment and special tool information
- y. Testing and performance data
- z. Contractor information
- aa. Field test reports

1.7.6 Data Package 5

Package Usage Definition: Use Data Package 5 for electrical equipment, components, or systems on which, wiring and control diagrams are needed for operation, maintenance, or repair. Examples of this case are 400 Hz frequency converters, annunciator panels, and cathodic protection systems.

- a. Safety precautions and hazards
- b. Operator prestart
- c. Start-up, shutdown, and post-shutdown procedures
- d. Normal operations
- e. Environmental conditions
- f. Preventive maintenance plan, schedule, and procedures
- g. Troubleshooting guides and diagnostic techniques
- h. Wiring and control diagrams
- i. Maintenance and repair procedures
- j. Removal and replacement instructions
- k. Spare parts and supply list
- l. Product submittal data
- m. Manufacturer's instructions
- n. O&M submittal data
- o. Parts identification
- p. Testing equipment and special tool information
- q. Warranty information

- r. Extended warranty information
- s. Testing and performance data
- t. Contractor information
- u. Field test reports
- v. Additional requirements for HVAC control systems

1.7.7 Changes to Submittals

Provide manufacturer-originated changes or revisions to submitted data if a component of an item is so affected subsequent to acceptance of the O&M Data. Submit changes, additions, or revisions required by the Contracting Officer for final acceptance of submitted data within 30 calendar days of the notification of this change requirement.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 TRAINING

Prior to acceptance of the facility by the Contracting Officer, provide comprehensive training for the systems and equipment specified in the technical specifications. The training must be targeted for the building maintenance personnel, and applicable building occupants. Instructors must be well-versed in the particular systems that they are presenting. Address aspects of the Operation and Maintenance Manual submitted in accordance with Section 01 78 00 CLOSEOUT SUBMITTALS. Training must include classroom or field lectures based on the system operating requirements. The location of classroom training requires approval by the Contracting Officer.

3.1.1 Training Plan

Submit a written training plan to the Contracting Officer for approval at least 60 calendar days prior to the scheduled training. Training plan must be approved by the Quality Control Manager (QC) prior to forwarding to the Contracting Officer. Also, coordinate the training schedule with the Contracting Officer and QC. Include within the plan the following elements:

- a. Equipment included in training
- b. Intended audience
- c. Location of training
- d. Dates of training
- e. Objectives
- f. Outline of the information to be presented and subjects covered including description
- g. Start and finish times and duration of training on each subject

- h. Methods (e.g. classroom lecture, video, site walk-through, actual operational demonstrations, written handouts)
- i. Instructor names and instructor qualifications for each subject
- j. List of texts and other materials to be furnished by the Contractor that are required to support training
- k. Description of proposed software to be used for video recording of training sessions.

3.1.2 Training Content

The core of this training must be based on manufacturer's recommendations and the operation and maintenance information. The QC is responsible for overseeing and approving the content and adequacy of the training. Spend 95 percent of the instruction time during the presentation on the OPERATION AND MAINTENANCE DATA. Include the following for each system training presentation:

- a. Start-up, normal operation, shutdown, unoccupied operation, seasonal changeover, manual operation, controls set-up and programming, troubleshooting, and alarms.
- b. Relevant health and safety issues.
- c. Discussion of how the feature or system is environmentally responsive. Advise adjustments and optimizing methods for energy conservation.
- d. Design intent.
- e. Use of O&M Manual Files.
- f. Review of control drawings and schematics.
- g. Interactions with other systems.
- h. Special maintenance and replacement sources.
- i. Tenant interaction issues.

3.1.3 Training Outline

Provide the Operation and Maintenance Manual Files (Bookmarked PDF) and a written course outline listing the major and minor topics to be discussed by the instructor on each day of the course to each trainee in the course. Provide the course outline 14 calendar days prior to the training.

3.1.4 Training Video Recording

Record classroom training session(s) on video. Provide to the Contracting Officer two copies of the training session(s) in DVD video recording format. Capture within the recording, in video and audio, the instructors' training presentations including question and answer periods with the attendees. The recording camera(s) must be attended by a person during the recording sessions to assure proper size of exhibits and projections during the recording are visible and readable when viewed as training.

3.1.5 Unresolved Questions from Attendees

If, at the end of the training course, there are questions from attendees that remain unresolved, the instructor must send the answers, in writing, to the Contracting Officer for transmittal to the attendees, and the training video must be modified to include the appropriate clarifications.

3.1.6 Validation of Training Completion

Ensure that each attendee at each training session signs a class roster daily to confirm Government participation in the training. At the completion of training, submit a signed validation letter that includes a sample record of training for reporting what systems were included in the training, who provided the training, when and where the training was performed, and copies of the signed class rosters. Provide two copies of the validation to the Contracting Officer, and one copy to the Operation and Maintenance Manual Preparer for inclusion into the Manual's documentation.

3.1.7 Quality Control Coordination

Coordinate this training with the QC in accordance with Section 01 45 00 QUALITY CONTROL.

3.2 SUBMITTAL SCHEDULING

3.2.1 Operation and Maintenance Manual, Progress Submittal

Submit the Progress submittal when construction is approximately 50 percent complete, to the Contracting Officer for approval. Provide Operation and Maintenance Manual Files (Bookmarked PDF). Include the elements and portions of system construction completed up to this point. The purpose of this submittal is to verify progress is in accordance with contract requirements as discussed during the Operation and Maintenance Manual Coordination Meeting.

3.2.2 Operation and Maintenance Manual, Prefinal Submittal

Submit the 100 percent submittal of the Operation and Maintenance Prefinal Submittal to the Contracting Officer for approval within 60 calendar days of the before the anticipated final inspection and acceptance of the facility by the Contracting Officer. This submittal must provide a complete, working document that can be used to operate and maintain the facility. Any portion of the submittal that is incomplete or inaccurate requires the entire submittal to be returned for correction. Any discrepancies discovered during the Government's review of Operation and Maintenance Progress submittal must be corrected prior to the Prefinal submission. The Prefinal Submittal must include Operation and Maintenance Manual Files (Bookmarked PDF).

3.2.3 Operation and Maintenance Manual, Final Submittal

Submit completed Operation and Maintenance Manual Files (Bookmarked PDF). The Final submittal is due at the anticipated final inspection and acceptance of the facility by the Contracting Officer. Any discrepancies

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discovered during the Government's review of the Prefinal submittal, including the Field Verification, must be corrected prior to the Final submission.

-- End of Section --

SECTION 01 78 24.00 10

FACILITY DATA REQUIREMENTS

PART 1 GENERAL

This specification requires the collection, organization, and turnover of electronic Facility Data for specific assets designed and constructed as part of this contract. Provide a Facility Document Set (FDS) and Facility Data Workbook (FDW) as defined in this specification. See Sections 01 33 00 SUBMITTAL PROCEDURES, 01 78 00 CLOSEOUT SUBMITTALS, 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) for additional Facility Data delivery requirements.

1.1 DEFINITIONS AND ABBREVIATIONS

1.1.1 Assets

Assets are specific items of property or equipment.

1.1.2 Attributes

Attributes are individual pieces of Facility Data that describe facilities and their associated assets.

1.1.3 Facility Data

Information defined and collected in the Facility Data Workbook (FDW) and Facility Document Set (FDS).

1.1.4 Facility Document Set (FDS)

An electronically compiled and organized document containing the supporting documents and data used to populate the Facility Data Workbook during its respective phase of development.

- a. For design-based deliverables, the FDS contains the "Design Complete" or "Issued for Construction" (IFC) design drawings, specifications, and design analysis.

1.1.5 Facility Data Workbook (FDW)

A pre-formatted spreadsheet template used to compile Asset, Attribute, Facility, and Space Data that the Government wishes to manage via electronic means. The FDW also contains all requirements associated with proper collection, organization, and turnover of the Facility Data.

1.1.6 Facility Data Project Execution Plan (FDPxP)

A document that describes the clear and organized plan for the collection, organization, and turnover of the Facility Data deliverables required by this specification.

1.2 UNITS OF MEASURE

Provide Facility Data deliverables utilizing the units of measure required by 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD).

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Facility Data Project Execution Plan(FDPxP)

SD-05 Design Data

Facility Data Workbook, Design; G,

Facility Document Set, Design; G,

SD-10 Operation and Maintenance Data

Facility Data Workbook, Construction Progress; G,

Facility Document Set, Construction Progress; G,

SD-11 Closeout Submittals

Facility Data Workbook, Construction Final; G,

Facility Document Set, Construction Final; G,

1.4 QUALITY CONTROL

1.4.1 Facility Data Project Execution Plan (FDPxP)

Provide the Government with a plan for the collection, organization, and turnover of the Facility Data deliverables to the Government. The Contractor may consolidate BIM PxP requirements defined in 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD) and FDPxP requirements defined herein and integrate them into a single, consolidated BIM/Facility Data PxP for Government approval. At a minimum, include the following items in the FDPxP:

1.4.1.1 Front Matter

Provide a Cover Page, Table of Contents, and Executive Summary/Objectives.

1.4.1.2 Project Information

List the Project Owner, Project Name, Project Location and address, Contract Type, Project Description, Project/Contract Number, Project Milestones.

1.4.1.3 Submittal Schedule

Identify delivery schedule for all deliverables in compliance with the submission requirements identified in this specification.

1.4.1.4 Personnel

Identify key personnel involved in the development of the Facility Data deliverables including Contractor and Government personnel.

1.4.1.5 Facility Data Workbook(s)

Identify Facility and Space Data as applicable at time of FDPxP submission. Individually list every asset group from the FDW Requirements that will require Facility Data collection. No attribute data is required at this time. Identify asset groups from the FDW Requirements that are not required within the scope of this Contract. Document the version of FDW to be used through the duration of the project.

1.4.1.6 Facility Document Set(s)

Define structure and format of the submittal. Provide a comprehensive outline of the final FDS to be delivered. Organize the outline with headings, titles, and descriptions such that the Government may ascertain that working documents comply with the formatting requirements defined by this specification.

1.4.1.7 Protocols

Detailed procedures:

- a. Facility Data documentation/collection process.
- b. Facility Document Set production/development process.
- c. Collaboration procedures including strategy, meetings, communication, and subcontractor/consultant involvement.
- d. Quality Control, including site verification of FDW, as applicable.
- e. File and folder naming structure.
- f. Hardware and software being used for collection and organization of Facility Data. Identify type, format, and anticipated organization of digital storage media to be provided as part of required deliverables. Include means and methods for checking deliverables for malicious content.

1.4.2 Meetings

To assure that Facility Data requirements are being met through the duration of the project, organize the following meetings and discuss the subsequent topics:

1.4.2.1 Post-Award Kickoff Meeting

At a minimum, discuss the following:

- a. The requirement for Facility Data deliverables under this contract.
- b. Primary roles and responsibilities associated with the development and delivery of the Facility Data deliverables, and.
- c. Identify and agree upon a date and attendance list for the meetings

described below:

1.4.2.2 FDPxP Coordination Meeting

- a. Facilitate a meeting following submission and Government review of the FDPxP. Include the Facility Data Preparer(s), Designer of Record (DOR), Quality Control (QC) Manager, Government's Facility Data Proponent, Contracting Officer's Representative, and Directorate of Public Works (DPW) Facilities Management Specialist (FMS). Also include Government personnel required for obtaining security clearances and waivers for proper Facility Data collection in this meeting.
- b. The purpose of this meeting is to coordinate the efforts necessary by contract parties to ensure an accurate collection, preparation, quality control, and submittal of these deliverables.
- c. The FDPxP serves as the primary agenda for this meeting. At a minimum, discuss the following:
 - (1) Processes and methods of gathering facility data during construction. Discuss and obtain special permissions and waivers as necessary (such as photo waivers and data encryption);
 - (2) Contractor Quality Control practices and procedures;
 - (3) Corrective actions necessary for Government approval of FDPxP;
 - (4) Necessity for additional or recurring Facility Data Coordination Meetings outside of those required by this specification, as requested by the Contractor. Intent of these meetings would be to maintain regular contact between responsible parties of the Contractor and Government with regard to development of the facility data deliverables. Conduct status meetings with a frequency agreed upon at this meeting.

1.4.2.3 Submittal Coordination Meeting

- a. Facilitate a meeting following submission and Government review of each design or progress submittal of the Facility Data. Include the Facility Data Preparer(s), Designer of Record (DOR), Quality Control (QC) Manager, Government's Facility Data Proponent, Contracting Officer's Representative, and Directorate of Public Works (DPW) Facilities Management Specialist (FMS). Include Mechanical, Electrical, Plumbing, and Fire Protection subcontractors as applicable.
- b. The purpose of this meeting is to demonstrate ongoing compliance with the requirements identified in this specification.
- c. The applicable deliverables, along with Government remarks associated with review of these submittals serve as the primary guide and agenda for this meeting. At a minimum, discuss the following during this meeting:
 - (1) Review assets, applicable attributes, facility, and space data in FDW at time of submittal;
 - (2) Demonstrate Quality Control and site verification procedures, as applicable, by Contractor QC;

- (3) Review contents and organization of FDS at time of submittal;
- (4) Discuss Government review comments and unresolved items preventing completion and Government approval of the Facility Data Workbook and Facility Document Set.

1.4.3 Facility Turnover and Contract Closeout

Include the Facility Document Set, Construction Final as a deliverable in Facility Turnover and Contract Closeout procedures as defined in 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD).

1.4.4 Facility Data Workbook Quality Requirements

For each submittal, ensure that the information contained in the FDW(s) reflects the minimum content requirements defined in the PART 3 EXECUTION portion of this section. Ensure that information provided as part of the FDW(s) conforms to the standards described below:

- a. Compile FDW(s) using approved spreadsheet templates. Do not alter the formatting or organizational layout of the templates. For this Contract, templates are available for download from the USACE CAD/BIM Technology Center website, site information provided in the PART 2 PRODUCTS portion of this section.
- b. Instructions for the proper maintenance and completion of these FDWs are contained in the FDW Requirements contained within the FDW template.

1.4.5 Facility Document Set Quality Requirements

Ensure that information provided as part of each FDS conforms to the electronic and data formatting standards identified in 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD)

1.4.6 Facility Document Set Integrity Requirements

Ensure that information provided as part of each FDS conforms to the integrity standards identified below:

1.4.6.1 File Protection

Do not restrict data files, document files or photographic files from being printed, exported, modified or copied. Do not deliver files with restrictions such as expiration date and locks for access, viewing, archiving, or editing.

1.4.6.2 Manufacturer-Specific Documents

Provide text-searchable, vector-based document files from the manufacturer's online or electronic documentation. Color documents are preferred. Provide documents specific to the product(s) installed under this Contract. When possible, do not submit document files containing multiple product catalogs from the same manufacturer, or product data from multiple manufacturers in the same file. Provide documents directly from the manufacturer whenever possible. Do not provide scanned copies of hardcopy documents.

1.5 DELIVERY, STORAGE, AND HANDLING

Deliver facility data submittals in an organized and legible manner. Provide submittals adhering to the requirements of 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD).

1.5.1 Number of Copies

Provide three identical copies of disks for approval; for each submittal and each facility required. Provide on approved electronic media (one copy per disk or set of disks) as defined below. Provide submittal files on electronic storage media in compliance with the quality requirements identified in this specification.

1.5.2 Malicious Content

Scan all files for malicious viruses using a commercially available scanning program that is routinely updated to identify and remove current virus threats.

1.5.3 Storage Media

Provide facility data on disk-based (DVD-R/RW) media. Deviations from the required storage media must be approved by the Government. Select and apply technology used for electronic data transmission to ensure that the full Facility Data submittal for each facility is provided on one single disk, whenever possible. When separation of the submittal is required, first separate the FDS and the FDW onto separate media. Second, separate FDS into logical segments or components. Further divisions must be documented in the FDPxP and approved by the Government.

Provide Facility Data on disk-based (DVD-R/RW) media. Deviations from the required storage media must be approved by the Government. Select and apply technology used for electronic data transmission to ensure that the full Facility Data submittal for each facility is provided on one single disk, whenever possible. When separation of the submittal is required, first separate the FDS and the FDW onto separate media. Second, separate FDS into logical segments or components. Further divisions must be documented in the FDPxP and approved by the Government.

- a. Apply a label directly printed to storage media. Do not provide adhesive, paper-based labels. List the name of the facility, Project, Project location, Contract number, Designer of Record firm/Prime Contractor company's name, title of submission, and security classification (in accordance with the appropriate security classification labeling regulations) on the label. If multiple disks are provided, clearly document the contents of each disk on the label.
- b. Include the name and contact information of the individual who produced the final data disk to ensure that problems with the data or media can be easily resolved.
- c. When browsed on a computer, the disk must display the following folders and their associated content:
 - (1) Facility Data Workbook (containing 1 FDW per facility);
 - (2) Facility Document Set (containing 1 FDS per facility);
 - (3) FDPxP (containing 1 PxP per contract);
 - (4) Readme (Containing 1 TXT, PDF, or HTML file with general use

information, organizational instructions, and basic preparer contact information. Include all information included on the storage media label).

1.5.4 Encryption

Encrypt deliverable data as directed by Area Office Engineer. Document the encryption to be used in the FDPxP.

PART 2 PRODUCTS

2.1 FACILITY DATA WORKBOOK(S)

Provide one compiled FDW for each facility identified above. Complete all portions of each FDW including facility, space, asset, and attribute data in compliance with the FDW Requirements. Download the current FDW template (.xlsm format) from the USACE CAD/BIM Technology Center website at <https://cadbimcenter.erdcdren.mil>.

2.1.1 Spaces

Provide data for all applicable spaces in the facility. Minimum space definitions are as follows:

- a. Provide all rooms as defined in the design documents.
- b. If not otherwise defined, provide a minimum of one "roof" space in the FDW.
- c. If not otherwise defined, provide a minimum of one "site" space in the FDW.
- d. Provide all spaces not otherwise described, but necessary to accurately indicate the location of all FDW assets required by this specification.

2.1.2 Assets

- a. Compile an FDW that contains the maintainable and warrantable equipment (assets) associated with each facility. This includes assets in contract scope and within the project extents. See 01 78 00 CLOSEOUT SUBMITTALS for related requirements. Assets include, but are not limited to, those types described in the "Required Assets" portion of the FDW template, those assets listed in the table below, and additional assets defined in the FDPxP. Itemized FDW asset entries (instance-based). Entries indicative of multiple assets (type-based) are not allowed.

SUPPLEMENTAL ASSET LIST (INCLUDE IN ADDITION TO "REQUIRED ASSETS" LISTED IN FDW TEMPLATE)	
Asset	Description/Example
Fixtures, Furnishings, and Equipment	Furniture, systems furniture, appliances, and other significant items of equipment
Kitchen Equipment and Fixtures	Kitchen and foodservice equipment including but not limited to stoves, steamers, accessory hoods, cooking devices, refrigeration devices
Valves	All operable valves in facility including but limited to those installed in plumbing, HVAC, and fire protection systems.

UPPLEMENTAL ASSET LIST (INCLUDE IN ADDITION TO "REQUIRED ASSETS" LISTED IN FDW TEMPLATE)	
Tanks and Vaults	Items such as expansion tanks, septic tanks, oil-water separators, grease separators
Material Handling Equipment	Items such as cranes, conveyor belts, equipment lifts
DDC and EMCS Equipment	Panels and consoles associated with the facility automation and control systems integration.
All Inspectable Equipment	

Document assets applicable to the scope of this project in the FDPxP.

- b. Sub-component assets that are an integral and functional part of another component (e.g. An electric motor that serves as part of an air-handling unit) need not be duplicated or listed separately as its own asset.
- c. Definitions, descriptions, and formatting requirements for these assets can be found in the FDW Requirements contained within the FDW template.
- d. If an asset type is not included in the scope of the Project, no Facility Data (assets or attributes) are to be included in the FDW (even as a placeholder) for that asset type.

2.1.3 Attributes

- a. Populate each individual asset with all required attributes defined in the "Required Attributes" portion of the FDW template.
- b. Definitions, descriptions, and formatting requirements for these attributes can be found in the FDW Requirements contained within the FDW template.
- c. If an attribute is not applicable, populate that field with "N/A." Do not leave it blank.

2.2 FACILITY DOCUMENT SET

2.2.1 Organization

Organize the FDS in a hierarchical manner as follows. Use electronic bookmarks to create an easily navigable document. The first and primary hierarchical level must contain the following bookmarks:

2.2.1.1 Design Data Hierarchy

Under "Design Data," provide all Government-Approved "Design Complete" or "Issued for Construction" design documents as defined in 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD), including:

- a. Design Drawings - Provide the Government-Approved, "Design Complete" or

"Issued for Construction" design drawings.

- b. Design Specifications - Provide the Government-Approved, "Design Complete" or "Issued for Construction" design specifications.
- c. Design Analysis - Provide the "Design Complete" or "Issued for Construction" Government-Approved Design Analysis.

PART 3 EXECUTION

3.1 DESIGN SUBMITTALS

Submit the Facility Data Workbook and Facility Document Set design submittals together. Meet the following completeness and formatting requirements listed below:

- a. Provide Facility Data Workbook, Design submittals(s) when at "Design Complete" or "Issued for Construction" phase as defined by 01 33 16.00 10 DESIGN DATA (DESIGN AFTER AWARD). Populate the FDW with all data required for the design submittal, detailed in the FDW Requirements. Clearly identify assets or asset groups missing in the "variations" section of the ENG Form 4025 Transmittal Form provided with the submittal. See the FDW Requirements contained within the FDW template for a list of attributes to be completed for this submittal. Intent of this submittal is to populate the FDW with all design-based asset information prior to Project advertisement or construction.
- b. Submit individual FDW templates for each facility identified in the "FACILITIES" paragraph. While FDWs will not be complete at this phase, provide accurate and correctly formatted data according to the FDW Requirements.
- c. Submit Facility Document Set, Design submittal as defined in Part 2 of this specification.

3.2 FACILITY DATA WORKBOOK VERIFICATION

Verify the FDW through the quality control personnel and procedures as defined in the FDPxP. One-hundred percent accuracy of FDW information is required for Government acceptance of the Facility Data Workbook, Design submittal.

-- End of Section --

APPENDIX A

GEOTECHNICAL INFORMATION

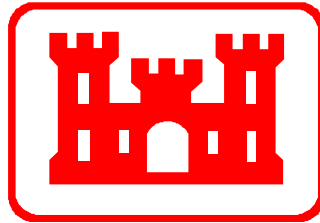
B4780 MWD Kennel Repairs
Fort Polk, LA

Solicitation _____

APPENDIX D: **EXISTING FACILITY** **GEOTECHNICAL REPORT**

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FORT POLK, LOUISIANA
MILITARY WORKING DOG FACILITY
FOUNDATION AND PAVEMENT DESIGN ANALYSIS



PREPARED BY
U.S. ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT
ENGINEERING AND CONSTRUCTION DIVISION
ENGINEERING SERVICES BRANCH
GEOTECHNICAL SECTION
CESWF-EC-DG

JUNE 2008

**FORT POLK, LOUISIANA
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FOUNDATION AND PAVEMENT DESIGN RECOMMENDATIONS

1. **General.** The purpose of this report is to provide foundation and pavement design recommendations for a new Military Working Dog Facility at Fort Polk, Louisiana. Details of the project are based largely on the Final Project Engineering Brochure, prepared by Merrick & Company, and dated 24 January 2008. However, it has come to the attention of this office that the project design is currently being revised. Changes between the design details available at the time of this report, as summarized below, and the revised design should be communicated to CESWF-EC-DG to determine if the foundation and pavement design recommendations presented herein require revision. As of 24 January 2008, the project included a 5,100 GSF Kennel building, a 2,050 GSF Administration building, and 400 GSF Storage building (as a bid option). The recent design revision now has the kennels adjoining the Administration building, with 12 individual kennels each on opposite sides of the Administration building. Based on information currently available, the Administration area will be completely enclosed, with the kennel areas open on the sides, with a column-supported roof extending over them from the Administration area. It is envisioned that all of these areas will be supported by the same foundation system. The Administration building will be a pre-engineered metal building, and include administrative areas, a multipurpose break room and kitchen, an examination and grooming room, a TDY bunk room, restrooms, showers, service areas, and storage areas, as well as food storage and food preparation areas for the military working dogs. The Storage building (a pre-engineered metal building) will house site maintenance items. New rigid pavement structures are anticipated to include concrete aprons in front of trash dumpster pads. New flexible pavement structures are anticipated to include a 28-vehicle privately-owned vehicle (POV) parking area and a 15-vehicle government-owned vehicle (GOV) parking area (to also include 3 dog trailer spaces). The new facility will also include an obedience course and exercise areas. Support features will include sidewalks, utilities, and landscaping.

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The proposed Military Working Dog Facility site is located in the southeastern part of the Fort Polk main cantonment area. Specifically, the project site is bounded to the northwest by Service Command Circle, to the northeast by Michigan Avenue, to the east and south by areas of dense foliage (consisting mostly of pine, elm, and cottonwood trees), and to the west by an existing access drive. The site was formerly occupied by a recreational (baseball) field. On-site demolition will include a small area of asphalt pavement in the western portion of the site (in the area of the new Kennel building), and limited clearing of existing foliage. There is considerable topographic relief across the site. The existing grade across the site ranges from approximate elevation 262.0 feet National Geodetic Vertical Datum (NGVD) to 281.0 feet (NGVD), generally sloping downgradient to the south and east. Based on information provided in the Final Project Engineering Brochure, finish floor elevations of 269.70 feet (NGVD) and 268.50 feet (NGVD) have been tentatively assigned for the Kennel and Administrative buildings, respectively. At the time of this report, the finish floor elevation for the Administrative building and kennels has been revised to 266.7 feet (NGVD). Based on these tentative finish floor elevations and available topographic information, approximately 2 feet of cut and 2 feet of fill will be required within the Administration/Kennels building footprint.

2. Subsurface Investigation. Thirteen (13) test holes were drilled at the Military Working Dog Facility site in March 2008 by Tetra Tech. Tetra Tech accomplished the geotechnical field investigation with a Mobile B-57 truck-mounted drill rig using a 6-inch (O.D.) solid stem continuous flight auger, a nominal 3-inch diameter shelly tube sampler, and a nominal 2-inch diameter split spoon sampler. The borings were advanced to total depths ranging from 10.0 feet to 30.0 feet below existing grade. Representative soil samples recovered from the borings were placed in containers and delivered to the laboratory of TEAM Consultants, Incorporated (Arlington, Texas) for testing. Results of the field investigation are presented on Sheet B101, Boring Locations, and Sheets B201 and B202, Logs of Borings (Appendix A).

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a. Groundwater Conditions. Groundwater was encountered at each of the thirteen boring locations during the field investigation. Tabulated below are the water levels reported at the time of the field investigation. It should be noted that groundwater conditions are relative to the time of drilling, annual precipitation, and drainage conditions at the site.

<u>Boring</u>	<u>Location</u>	<u>Static Level, feet</u>
8A2S-MWDF-1	Kennel Bldg.	4.0
8A2S-MWDF-2	Kennel Bldg.	4.0
8A2S-MWDF-3	Kennel Bldg.	4.0
<u>Boring</u>	<u>Location</u>	<u>Static Level, feet</u>
8A2S-MWDF-4	Administrative Bldg.	2.3
8A2S-MWDF-5	Administrative Bldg.	2.4
10A2S-MWDF-6	GOV Parking Area	7.0
10A2S-MWDF-7	GOV Parking Area	8.0
10A2S-MWDF-8	GOV Parking Area	6.2
10A2S-MWDF-9	GOV Parking Area	4.9
10A2S-MWDF-10	POV Parking Area	8.0
10A2S-MWDF-11	POV Parking Area	2.6
10A2S-MWDF-12	POV Parking Area	2.6
10A2S-MWDF-13	POV Parking Area	2.8

It should be noted that the highest groundwater levels were measured in the borings generally located at the lowest elevations, and the deepest groundwater levels were measured in the borings (10A2S-MWDF-6, 10A2S-MWDF-7, and 10A2S-MWDF-10) located at the highest elevations and adjacent to Service Command Circle.

b. Dynamic Cone Penetrometer Testing. Dynamic Cone Penetrometer (DCP) testing for pavement design considerations was performed in borings 10A2S-MWDF-6, 10A2S-MWDF-7, 10A2S-MWDF-8, 10A2S-MWDF-9, 10A2S-MWDF-10, 10A2S-MWDF-11, 10A2S-MWDF-12, and 10A2S-MWDF-13. DCP test results are discussed later in this report, and will be presented as Appendix D of the final report.

3. Subsurface Conditions.

a. General Geology. Fort Polk lies within the West Gulf Coastal Plain section of the Coastal Plain physiographic province. The coastal plain of Louisiana is characterized by a broad

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rolling landform extending from the foot of the Ouachita Mountains on the north to the Gulf of Mexico on the south. It has developed upon a sequence of sedimentary rock units which dip gently southward, resulting in successively younger formations cropping out towards the Gulf. Most of Fort Polk lies within the outcrop area of the Fleming Formation, a complex sequence of sands and clays of Miocene age. Fisk (1940) divided the Fleming Formation into six members, distinguished from each other as being predominantly clayey zones or sandy zones. Although not accepted for use by the U.S. Geological Survey, the members are correlatable throughout several parishes on electric logs and show up as sandy intervals separated by clayey intervals. From oldest to youngest the members are: Lena, Carnahan Bayou, Dough Hills, Williamson Creek, Castor Creek, and Blounts Creek. The predominantly sandy members contain the aquifers that supply groundwater to Fort Polk.

Deposits of Pleistocene age continuously overlie the Fleming Formation within the extreme southeastern portion of Fort Polk. Elsewhere on the military reservation, these deposits form terraces that parallel the major streams and occur as isolated remnants mantling interstream highs. These deposits are fluvial in nature and are generally coarser grained than the underlying Miocene deposits.

Sediments of recent age are confined to alluvial deposits in the larger stream valleys and as a thin veneer of residual soils developed upon primary materials.

South Fort Polk is situated upon the outcrop area of the Blounts Creek member. This member is a complex sequence of sands and clays. Sand beds make up 35 to 45 percent of the member (Rogers and Calandro, 1965). Numerous remnants of Pleistocene age occur upon the outcrop of the Blounts Creek. Residual soils developed upon the outcrop of the member are as complex and variable as the parent material from which it was derived.

b. Site Conditions. The proposed Military Working Dog Facility site is bounded to the northwest by Service Command Circle, to the northeast by Michigan Avenue, to the east and south

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by areas of dense foliage (consisting mostly of pine, elm, and cottonwood trees), and to the west by an existing access drive. The site was formerly occupied by a recreational (baseball) field. On-site demolition will include a small area of asphalt pavement in the western portion of the site (in the area of the new Administration/Kennels building), and limited clearing of existing foliage. There is considerable topographic relief across the site. Existing grade across the site ranges from approximate elevation 262.0 feet National Geodetic Vertical Datum (NGVD) to 281.0 feet (NGVD), generally sloping downgradient to the south and east.

Stratigraphically, the site is characterized by interbedded deposits of silty sand (SM), clayey sand (SC), poorly graded sand with silt (SP-SM), silty sand with clay (SM-SC), and high plasticity clay (CH). The clays are firm, while the sandy soils vary in relative density from very loose to medium dense. The sandy soils are predominantly composed of fine sand size particles, with a very small percentage of particles (typically less than 5 percent) in the gravel and coarse to medium sand size ranges. The sandy soils contain moderate to high amounts of fines (e.g., between approximately 20 and 50 percent) in the upper 5 to 10 feet; below this depth the percentage of fines decreases dramatically (to less than 10 percent at depths below 15 feet). The soils vary in color from yellow brown to brown to red to gray. Atterberg limit test results indicate that the CH clay seams have liquid limits ranging from 57 to 79 percent, plastic limits varying from 16 to 29 percent (with plasticity indices ranging from 41 to 50), and in situ moisture contents varying from 25 to 43 percent. Atterberg limits test results indicate that the sandy soils have liquid limits ranging from 17 to 41 percent, plastic limits varying from 14 to 21 percent (with plasticity indices ranging from 2 to 22 percent), and in situ moisture contents varying from approximately 13 and 32 percent. It should be noted that most of the SM and all of the SP-SM soil specimens subjected to Atterberg limits testing were determined to be non-plastic, and while non-plastic soils were identified at various depths throughout the total depth investigated, the trend toward non-plastic sandy soils appears to correlate with the decrease in fines content, described

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above. It should also be noted that the CH clay seam/stratum identified at a depth of between 20.0 feet and 30.0 feet in boring 8A2S-MWDF-4 was well below the water table; in situ moisture contents measured within this clay ranged from 14 to 26 percent above the plastic limit. Conversely, the in situ moisture contents measured within the CH clay seam identified at a depth of between 2.5 feet and 6.0 feet in boring 10A2S-MWDF-6 (above the water table at that location), ranged from 3 to 4 percent above the plastic limit.

Subsurface conditions representative of the project site are shown on the boring logs, Sheets B201 and B202 (Appendix A). The legend on the individual boring logs shows overburden materials as classified in the laboratory using procedures presented in ASTM D 2488. It should be noted that the actual interface between material types may be far more gradual or abrupt than represented; therefore, actual subsurface conditions in areas not sampled may differ from those predicted. The nature and extent of variations across the site may not become evident until construction commences, and the actual construction process may alter subsurface conditions as well. If variations become evident at the time of construction, CESWF-EC-DG should be contacted to determine if the recommendations presented in this report need to be reevaluated.

4. Testing.

a. Laboratory Testing. Representative soil samples recovered from the borings were subjected to laboratory testing for identification, moisture content, grain-size distribution, Atterberg limits, density, strength, and controlled expansion-consolidation. The accumulative test results are presented in Appendix C. Results of identification testing are shown on the individual boring logs, Sheets B201 and B202 (Appendix A). The visual descriptions and Unified Soil Classifications presented on the logs are based on test methods presented in ASTM D 2488. Descriptions of overburden materials were changed to correspond with the laboratory classification.

The laboratory test results are also presented graphically in Appendix B as follows:

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Plasticity characteristics are shown on Plate 1, Plasticity Chart. Moisture content values are shown with respect to depth on Plate 2. Atterberg limits test results are shown with respect to depth on Plate 3. Dry density values of representative undisturbed samples and their corresponding moisture contents are shown with respect to depth on Plate 4. Ultimate compressive strengths of the clayey soils are shown with respect to depth on Plate 5. Standard penetration testing results (N-values) are shown with respect to depth on Plate 6.

(1) Shear Strength Testing. Shear strength characteristics of the cohesive soils were analyzed in the laboratory using one-point unconsolidated-undrained triaxial compression testing, confining the specimens to overburden pressure and then loading to failure. The ultimate compressive strengths recorded are presented below and in Appendix C at the end of this report.

<u>Boring</u>	<u>Depth, ft</u>	<u>γ_d, pcf</u>	<u>Q_u, tsf</u>	<u>Material Type</u>
10A2S-MWDF-6	5.0	97.3	2.090	CH Clay Overburden
10A2S-MWDF-6	7.0	101.8	2.158	SC Clayey Sand Overburden

(2) Controlled Expansion-Consolidation Testing. Controlled expansion-consolidation (CEC) testing was performed on one specimen of high plasticity (CH) clay overburden and on one specimen of clayey sand (SC) overburden to determine the shrink-swell potential of these materials. Both specimens were collected within boring 10A2S-MWDF-6. The high plasticity clay specimen, collected at a depth of 5.0 feet, has a liquid limit of 72 percent, a plastic limit of 23 percent ($PI = 49$ percent), and a natural moisture content of approximately 27 percent. An expansion pressure (p_{exp}) of approximately 1.0 tsf was recorded during CEC testing on this CH clay specimen. Based on CEC test results, the CH clay specimen collected at a depth of 5.0 feet within boring 10A2S-MWDF-6 has a high to very high expansion potential ($C_s = 0.062$; $p_{exp}/p_0 = 3.2$) and a moderate potential for consolidation ($C_c = 0.195$). Controlled expansion-consolidation testing also was performed on a specimen of clayey sand (SC) collected at a depth of 7.0 feet within boring 10A2S-MWDF-6. This clayey sand specimen has a liquid limit of 41

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percent, a plastic limit of 19 percent ($PI = 22$ percent), and a natural moisture content of approximately 21 percent. An expansion pressure (p_{exp}) of approximately 0.5 tsf was recorded during CEC testing on this clayey sand specimen. Based on CEC test results, the clayey sand specimen collected at a depth of 7.0 feet within boring 10A2S-MWDF-6 has a low expansion potential ($C_s = 0.017$; $p_{exp}/p_0 = 1.2$) and a moderate potential for consolidation ($C_c = 0.136$). CEC test results are summarized below and are included in Appendix C at the end of this report.

<u>Boring</u>	<u>Depth, feet</u>	<u>LL</u>	<u>& PI</u>	<u>P_{exp}, tsf</u>	<u>P_{exp}/P_0</u>	<u>C_s</u>	<u>& C_c</u>	<u>Material Type</u>
10A2S-MWDF-6	5.0	72	49	1.0	3.2	0.062	0.195	CH Clay Overburden
10A2S-MWDF-6	7.0	41	22	0.5	1.2	0.017	0.136	Clayey Sand Overburden

b. Field Testing.

(1) Standard Penetration Testing. Standard penetration testing was performed in all thirteen borings. The standard penetration tests were conducted at approximately 2.5-foot intervals throughout all thirteen borings. A standard penetration test consists of driving a standard 1.5-inch (I.D.) diameter split-spoon sampler 18 inches into the soil using a 140-pound free-falling hammer dropped a distance of 30 inches. The number of blows required for each 6 inches of penetration is recorded. Penetration resistance (N) is defined as the sum of blows required to drive the second and third increments, or the final 12 inches. It should be noted that “refusal” is taken as a blow count of 50 or more per 6-inch increment.

Standard penetration testing is performed to evaluate the relative densities of the in situ soils for foundation design considerations. The results are used to calculate the shear strength of the in situ soils and settlements relative to given load conditions. Based on standard penetration testing performed at the Military Working Dog Facility site, the relative density of the in situ sandy soils consistently ranges from very loose to medium dense within approximately the upper

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26 feet, showing no increase with depth. Below 26 feet, the relative density of the in situ sandy soils increases slightly to medium dense (with firm clay seams).

(2) Dynamic Cone Penetrometer Testing. Dynamic Cone Penetrometer (DCP) testing was performed in borings 10A2S-MWDF-6, 10A2S-MWDF-7, 10A2S-MWDF-8, 10A2S-MWDF-9, 10A2S-MWDF-10, 10A2S-MWDF-11, 10A2S-MWDF-12, and 10A2S-MWDF-13 for pavement design considerations. A DCP consists of a steel rod with a steel cone attached to one end and a sliding single-mass hammer. For this project, the DCP test was performed by driving the steel cone into the soil using a 17.6-pound sliding hammer dropped from a height of 22.6 inches (574 millimeters). The number of blows required for each 0.4 inch (10-mm) or greater of penetration was recorded as the “penetration per blow set”; therefore, the more penetration achieved per blow indicates that a “weaker” soil layer was encountered. Typically, penetration measurements are taken to a depth of 39.4 inches (1000 millimeters) or when refusal is achieved. Refusal is defined as the point at which the cone cannot penetrate the soil more than 0.4 inches (10 millimeters). Presented below are the average in situ strength parameters derived from the DCP tests.

<u>Depth, in</u>	<u>CBR, %</u>	<u>k, pci</u>
0 – 6	4 – 28	111 – 300
6 – 12	3 – 26	98 – 276
>12	2 – 34	67 – 324

5. **Discussions.** The following discussions are provided in support of the foundation and pavement design recommendations made herein for the Military Working Dog Facility. These recommendations are based on the results of the geotechnical field investigation, as described on the logs of borings, the results of the in situ testing (standard penetration testing and dynamic cone penetrometer testing), subsurface information from nearby project sites, foundation and pavement design experience developed through previous projects at Fort Polk, the engineering criteria and

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references cited herein, and engineering judgment.

a. Soil Activity Considerations. The Military Working Dog Facility site is characterized by interbedded deposits of silty sand (SM), clayey sand (SC), poorly graded sand with silt (SP-SM), silty sand with clay (SM-SC), and high plasticity clay (CH). Standard penetration testing performed during the geotechnical field investigation indicates the relative density of the in situ sandy soils ranges from loose to medium dense (with medium stiff to firm clay seams) to at least approximately 26 feet below existing grade, and is medium dense (with firm clay seams) below that depth to the total depth investigated (30.0 feet). The sandy soils are predominantly composed of fine sand size particles, with a moderate to high percentage of fines (generally decreasing with depth at depths greater than 5 to 10 feet below existing grade. An active zone of 15.0 feet is assumed, based on the results of Atterberg limits and in situ moisture content testing, and engineering judgment. Atterberg limits test results indicate that the sandy soils have liquid limits ranging from 17 to 41 percent, plastic limits varying from 14 to 21 percent (with plasticity indices ranging from 2 to 22 percent), and in situ moisture contents varying from approximately 13 and 32 percent. Atterberg limit test results indicate that the CH clay seams have liquid limits ranging from 57 to 79 percent, plastic limits varying from 16 to 29 percent (with plasticity indices ranging from 41 to 50), and in situ moisture contents varying from 25 to 43 percent. It should be noted that most of the SM and all of the SP-SM soil specimens subjected to Atterberg limits testing were determined to be non-plastic, and while non-plastic soils were identified at various depths throughout the total depth investigated, the trend toward non-plastic sandy soils appears to correlate with the decrease in fines content, as previously described. Controlled expansion-consolidation (CEC) testing was performed on two specimens of cohesive overburden soil collected at the Military Working Dog Facility project site. Based on CEC testing, a CH clay overburden specimen collected at a depth of 5.0 feet within boring 10A2S-MWDF-6 is overconsolidated, having experienced a preconsolidation pressure of approximately 3.3 tsf. This

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high plasticity clay specimen is considered to have a high to very high expansion potential ($C_s = 0.062$; $p_{exp}/p_0 = 3.2$), and a moderate consolidation potential ($C_c = 0.195$). Controlled expansion-consolidation testing was also performed on a specimen of clayey sand (SC) overburden collected at a depth of 7.0 feet within boring 10A2S-MWDF-6. Based on CEC testing, the SC specimen is overconsolidated, having experienced a preconsolidation pressure of approximately 2.3 tsf. This clayey sand specimen is considered to have a low expansion potential ($C_s = 0.017$; $p_{exp}/p_0 = 1.2$), and a moderate consolidation potential ($C_c = 0.136$). Based on the results of CEC testing, standard penetration test results, and the relatively shallow groundwater levels observed in the test holes, it is anticipated that the in situ soils will be susceptible to both heave and consolidation when subjected to foundation loading conditions. Therefore, special foundation design, subsurface preparation, and fill placement requirements, as described herein, are necessary to ensure adequate foundation performance.

An expansive soils analysis using site samples was performed to quantify the response of the active overburden soils when subjected to increased load conditions during periods of seasonal moisture fluctuations. In the analysis, the active overburden soils are assumed to be in a saturated condition, an active zone of up to 15 feet is considered, and initially, surcharge loads (fill and building) were neglected. Based on these conditions, the heave potential of the overburden soils within the active zone was determined to be approximately 2.2 inches. Additional iterations were performed to determine the residual heave and settlement potentials when the overburden is surcharged with various amounts of fill in combination with a building load of 100 psf. The results are tabulated below. The column titled “R&R” represents the amount of active soils that will have to be removed and replaced with nonexpansive material to limit long-term volumetric changes to 1 inch or less.

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<u>Thickness of Fill, inches</u>	<u>Heave, in</u>	<u>Settlement, in</u>	<u>R&R, inches</u>
12	1.428	1.413	12
24	1.189	1.919	12
36	0.996	2.344	18
48	0.833	2.716	24
60	0.691	3.050	30

Results of the expansive soils analysis demonstrate the activity of the in situ clayey and sandy soils. This is compounded by the loose to very loose relative density of the overburden soils. Once built upon, these materials can experience significant volumetric changes when their in situ moisture environment is altered. To address this condition, parameters are provided in the following sections for removal of existing soils and replacement with compacted nonexpansive fill for shallow foundations and floor slabs placed on-grade. It should be noted that the amount of remove-and-replace recommended herein is based upon a maximum anticipated fill thickness not to exceed 5 feet for grading requirements. If the maximum required fill thickness for site grading under the building footprint(s) is greater than 5 feet, CESWF-EC-DG should be consulted for remove and replace requirements for any proposed fill thickness in excess of the 5 feet maximum assumed for the calculations above.

b. Foundation Design Considerations. A variety of foundation systems have been utilized with success at Fort Polk. Shallow foundation systems include spot and continuous spread footings, and reinforced concrete ribbed and flat mat slabs. Deep foundation systems include pre-cast reinforced concrete driven piles and reinforced concrete drilled and underreamed piers. Most of these foundation systems can be quickly eliminated from consideration for the current project based on the size, configuration, and anticipated loading conditions for the structures included in this project, and also upon consideration of the site-specific subsurface conditions. All of the facilities included in this project will be single-story structures with relatively light loading conditions anticipated. A deep foundation system will not be necessary to support these anticipated loads. Furthermore, the in situ soils exhibit no apparent increase in strength with

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depth; hence there is no bearing capacity advantage of a moderately deep foundation system of either driven piles or underreamed piers. The high groundwater levels and loose sandy soils would also increase the difficulty in constructing a drilled and underreamed pier foundation system. Lastly, it is anticipated that a shallow foundation system could be constructed more economically than a deep foundation system. Therefore, no further consideration will be given to a deep foundation.

In light of the comparatively low relative density of the in situ soils and the high groundwater levels identified during the geotechnical field investigation, the in situ soils can be expected to be susceptible to both total and differential settlements from shallow foundation loads. Thus a shallow foundation will need to act monolithically to ensure differential movements do not exceed tolerable limits. Based on this requirement, a spot and continuous spread footing foundation can be eliminated in favor of either a reinforced concrete ribbed or flat mat slab. It is anticipated that either a ribbed mat or a flat mat slab would offer excellent performance for the proposed facilities. A properly designed and constructed ribbed mat or flat mat slab will act monolithically, would be anticipated to be constructed above the groundwater level (particularly if built within a fill section), and also would be assigned an allowable bearing capacity that would minimize the potential for excessive total or differential settlements to occur. The structural designer should select the foundation system between these two (ribbed or flat mat slab) based on suitability for each individual structure, and, secondarily, on which foundation system would be able to provide the best performance for the greatest construction economy.

c. Pavement Design Considerations. The pavement designs presented in this report are based on criteria contained in *UFC 3-250-01FA*, *UFC 3-250-18FA*, and engineering judgment.

(1) Traffic Types and Conditions. Based on information provided in the Final Project Engineering Brochure, dated 24 January 2008, rigid pavement structures required for this project include concrete aprons in front of trash dumpster pads. Flexible pavement structures

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required include a 28-vehicle privately-owned vehicle (POV) parking area and a 15-vehicle government-owned vehicle (GOV) parking area (to also include 3 dog trailer spaces). Types of vehicles expected to occupy the pavements are light- to medium-duty passenger cars and trucks, light- to medium-duty military trucks, and trash trucks. Based on criteria contained in the aforementioned United Facilities Criteria, the following traffic conditions were assigned:

<u>Pavement Structure</u>	<u>Traffic Category</u>	<u>Street Class</u>	<u>Design Index</u>
POV/GOV Parking Areas	II	E	2
Apron (Trash)	IVA	F	4

(2) Pavement Design Parameters. California Bearing Ratio (CBR) and plate bearing tests were not conducted for this project. Instead, dynamic cone penetrometer (DCP) testing was conducted to evaluate the raw subgrade for pavement design considerations. The penetration resistance obtained from the DCP test is a measure of the soil's relative density, which in turn is used to derive "in situ" CBR and modulus of subgrade reaction values.

The average in situ CBR values measured within the upper 12 inches of soils tested at the Military Working Dog Facility site range from approximately 3 to 28 percent, and below this depth, CBR values range from 2 to 34 percent. Modulus of subgrade reaction values measured within the upper 12 inches of soils tested range from 98 to 300 pci, and below this depth, modulus of subgrade reaction values range from 67 to 324 pci. Laboratory CBR tests previously have been performed on similar subgrade materials collected at Fort Polk. The results indicate that CBR values between 3 and 4 can be expected for the sandy and clayey subgrade when compacted to 90 percent of maximum laboratory density. Previously conducted plate-bearing tests indicate the modulus of subgrade reaction for this material to range from 100 pci to 150 pci. Based on these considerations, and anticipating that large portions of the new pavement structures will be built on fill sections, design CBR and modulus of subgrade reaction values of 4 percent and 100 pci, respectively, were assigned to the raw subgrade when compacted to 90 percent of laboratory

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maximum density (ASTM D 1557). To ensure that these design CBR and modulus of subgrade reaction values are achieved, the upper 6 inches of raw subgrade materials directly underlying the base course layer(s), as specified herein, shall consist of satisfactory materials, *excluding* materials that classify as CH materials. If the upper 6 inches of raw subgrade directly underlying the base course layer(s) are CH materials, the upper 6 inches of these materials shall be removed and replaced with satisfactory materials (excluding CH materials), and compacted to the density specified for raw subgrade underlying pavements. The CBR value considered for the sand clay gravel base material is 50.

6. Recommendations. The following foundation and pavement design recommendations are based on the results of the field investigation, laboratory testing, and engineering studies.

a. Foundation Design Recommendations. Requirements for two optional shallow foundation systems, a reinforced concrete ribbed mat slab and a reinforced concrete flat mat slab, are provided in the following paragraphs. Criteria for Site Class D shall be utilized for foundation seismic design purposes, as presented in ***UFC 3-310-04 – Seismic Design for Buildings***.

(1) Foundation System. The proposed Military Working Dog facility should be supported on either a reinforced concrete ribbed mat slab or a flat mat slab foundation system. A ribbed mat slab consists of a grid of stiffening ribs cast monolithically with the floor slab. The monolithic nature of this system allows the foundation to span or cantilever areas where a loss of support may occur; thus potential differential settlements are spread over a large horizontal area by the ribs through soil-structure interaction. The mat slabs should be analyzed and designed for 1.0 inch of long-term differential movement. For this reason, interior ribs should be spaced no further than 15 feet center-to-center, and diagonal stiffener ribs should be placed at each corner of the mat slab. Design of the ribbed mat slab should meet the minimum requirements as presented in ***CESWD-ED-TS/G Criteria Letter, dated 29 January 1988 – Design Criteria for Ribbed Mat Foundations, SWDED-G Criteria Letter, dated 16 April 1987 – Criteria for Developing***

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Geotechnical Design Parameters for SWD Ribbed Mat Design Methodology, and the recommendations provided herein.

Interior and exterior beams should bottom a minimum of 24 inches below outside finished grade. An allowable bearing capacity of 2.0 ksf (net) should be used to size the beams. For this phase of design, it should be noted that (1) the structural load is supported solely on the beam and the beam intersections, (2) load transfer occurs over the effective beam width, and (3) the beam and soil remain in contact. Beam intersections should be widened at column locations to accommodate the above allowable bearing value for the anticipated load condition. The load used to size the beams should consist of full dead load plus that portion of the live load that acts more or less continuously, usually 50 percent.

The ribbed mat slab foundations should incorporate adequate stiffness such that the deformations do not exceed the structural tolerance of any elements in the foundation or superstructure. Analyses should consider a vertical separation of the foundation slab and beams from the subgrade of 1.0 inch at the outside of all perimeter beams, with loss of support beneath the foundation over a horizontal distance of not less than 4.5 feet. This loss of support condition corresponds to the **center lift mode**. Additionally, **edge lift analyses** should consider an edge moisture variation distance equal to 5.25 feet, and an edge lift heave of 1.0 inch should be used in the design of the ribbed mat slab. This edge lift heave corresponds to an applied structural pressure of 100 psf. For edge lift considerations, two additional combinations of pressure and swell are required. For an allowable bearing capacity of 2.0 ksf, an edge lift heave of 0.75-inch can be expected to occur. At an ultimate bearing capacity of 6.0 ksf, 0.5-inch of heave should be anticipated. It should be noted that these anticipated heave amounts are based on a minimum of 3.0 feet of compacted nonexpansive fill, as recommended in this report.

A modulus of subgrade reaction equal to 200 psi/inch should be used when analyzing the ribbed mat slabs to determine in-service deformations. This value, however, should be factored to

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account for width effects such that $k_{\text{design}}=k_1(B_{\text{eff}})$, where B_{eff} is the effective beam width in feet. Design of the ribbed mat slabs may use the *SWD-AEIM* sections as a minimum stiffness "first approximation".

A reinforced concrete flat mat foundation should have a uniform thickness of not less than 2.0 feet. The mat should be tapered as required to ensure the perimeter of the slab extends to a constant elevation and is at least 24 inches below outside finish grade. An allowable bearing pressure of 2.0 ksf (net) shall be used to design the flat mat slabs. The load used to size flat mat slabs should consist of the full dead load plus that portion of the live load that reacts continuously, usually 50 percent. Flat mat slabs also should incorporate adequate stiffness such that the deformations do not exceed the structural tolerances of any element of the foundations or superstructures. Flat mat slabs should be analyzed for stiffness using the same edge and center lift mode analysis parameters as provided in this report for ribbed mat slab foundations.

The mat slabs will, by design, be supported on-grade. A polyethylene vapor barrier (10-mil minimum thickness) and a minimum 6-inch capillary water barrier should be placed beneath the mat slab.

(a) Small Support-type Structures. Small support-type structures (<500 GSF, e.g., the Storage Building), can be supported on reinforced concrete slabs-on-grade with turned-down edge beams. The turned-down edge beam should extend a minimum of 12 inches below outside finished grade and can be sized for a safe bearing pressure of 2,000 psf (net). Subgrade preparation should consist of providing a minimum of 36 inches of compacted nonexpansive fill below the soil-supported slab.

(2) Subgrade Preparation Requirements. Subgrade preparation for the mat slab should ensure that a minimum of 2 feet of existing soil shall be removed and replaced with compacted nonexpansive fill. Furthermore, a minimum of 3 feet of compacted nonexpansive fill shall be placed below floor slabs placed on-grade (or base of the mat slab), regardless of the

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amount of cut or fill required for site grading. Any additional fill required to reach the final subgrade elevation below the building floor slabs (or base of the mat slab) should be nonexpansive material as well. These measures should limit the magnitude of predicted floor slab movement to approximately 1 inch or less. Nonexpansive fill should be placed in controlled lifts not exceeding 8 inches in loose thickness and compacted to not less than 92 percent of maximum laboratory density as determined in accordance with ASTM D 1557. The upper 6 inches of existing subgrade exposed after excavation operations, or cleared prior to fill placement should be scarified, moistened, manipulated, and recompact to the same density required for nonexpansive fill materials. Due to high the groundwater table, vibration compaction should not be allowed. Groundwater levels should be controlled in cut sections of the site by appropriate ditch construction and pumping to achieve required compaction levels of in place soils and fills.

(3) Below-Grade Structures. The following information is provided for the design of all below-grade structures, if applicable. An at-rest lateral earth pressure coefficient (k_o) of 0.7, an angle of internal friction (ϕ) of 28° , and a cohesion value (c) of 100 psf shall be used. The backfill material should be assumed to have a moist unit weight of 125 pcf and all backfill should be nonexpansive or select material. An active earth pressure coefficient (k_a) and a passive earth pressure coefficient (k_p) of 0.36 and 2.77, respectively, can be used for excavations for below-grade structures.

(4) Drainage. Proper drainage is an important design consideration to ensure satisfactory long-term foundation performance. Exterior grading adjacent to the completed buildings should be sloped away from the structures a minimum of 5 percent for the first 10 feet. Runoff from the roofs should be adequately discharged a sufficient distance away from foundation edges. In no case shall water be allowed to pond adjacent to or beneath the buildings, both during and after construction.

(5) Material Testing Requirements. Testing shall be the responsibility of the

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contractor to ensure that the subgrade, fill, and backfill materials are properly compacted. To this end, the following frequencies of testing shall be included in the contract as a minimum:

- In-place density of the subgrade, fills, and backfills shall be performed for every 2000 square feet per lift in accordance with ASTM D 1556 or ASTM D 2922.
- Optimum Moisture and Laboratory Maximum Density of nonexpansive fill and backfill shall be performed for every 500 cubic yards or when any change in material occurs.

(6) Foundation Material Definitions.

(a) Satisfactory Materials. Satisfactory materials include materials classified in ASTM D 2487 as GW, GM, GC, GP, SW, SP, SM, SC, CL, and CH and shall be free of trash, debris, roots or other organic matter, or stones larger than 3 inches in any dimension.

(b) Unsatisfactory Materials. Unsatisfactory materials include materials classified in ASTM D 2487 as Pt, OH, OL, ML, MH and any other materials not defined as satisfactory.

(c) Nonexpansive Soils. Nonexpansive soils for nonexpansive fill shall meet the requirements of the Louisiana Department of Transportation and Development Standard Specifications for Roads and Bridges for "Sand Clay Gravel", Part X, Section 1003.03(a). Satisfactory soils with a plasticity index of not less than 4 nor greater than 12 percent may be used as Nonexpansive soils.

(d) Select Soils. Select soils shall include all Satisfactory soils except CH materials. Select soils shall have a maximum liquid limit of 35 percent and a plasticity index of not less than 12 nor greater than 20 percent.

(e) Capillary Water Barrier. Capillary Water Barrier shall consist of clean, crushed, nonporous rock, crushed gravel, or uncrushed gravel. The maximum particle size shall be 1.5 inches and no more than 2 percent by weight shall pass the No. 4 sieve.

(f) Cohesionless and Cohesive Materials. Cohesionless materials include

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materials classified in ASTM D 2487 as GW, GP, SW, and SP. Cohesive materials include materials classified as GC, SC, ML, CL, MH, and CH. Materials classified as GM and SM will be identified as cohesionless only when the fines are nonplastic.

(g) Degree of Compaction. Degree of compaction is a percentage of the maximum density obtained by the test procedure presented in ASTM D 1557.

The above material definitions and subgrade preparation requirements should be presented in ***UFGS-31 00 00 EARTHWORK***.

b. Pavement Design Recommendations. The pavement section presented below is based on criteria contained in *UFC 3-250-01FA*, *UFC 3-250-18FA*, and engineering judgment.

(1) Rigid Pavement. The following pavement section is recommended for aprons for a minimum distance of 15 feet in front of trash dumpster pad(s). The rigid pavement design considers a modulus of subgrade reaction of 100 pci for the raw subgrade when compacted to 90 percent of laboratory maximum density and a concrete flexural strength of 600 psi at 28 days.

(a) Aprons in Front of Trash Dumpster Pads. The design is based on Category IVA Traffic and a Class F Street (Design Index = 4).

6" Portland Cement Concrete reinforced with No. 4 bars spaced 16 inches o.c.e.w.

6" Base Course (CBR=50) compacted to at least 95 percent of maximum laboratory density (ASTM D 1557)

6" Raw Subgrade compacted to at least 90 percent of maximum laboratory density (ASTM D 1557)

Reinforcement for odd-shaped slabs, joint design, joint spacing, and other details should be in accordance with the latest edition of the *SWD-AEIM* and *UFC 3-250-01FA*, where applicable. The reinforcement bars should be placed a minimum of 1.5 inches clear distance from the surface of the pavement.

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(2) Flexible Pavement. The following pavement sections are recommended for the privately-owned vehicle (POV) parking area and the government-owned vehicle (GOV) parking area. The flexible pavement designs consider a CBR value of 4 percent for the raw subgrade when compacted to 90 percent of laboratory maximum density.

(a) POV Parking Area. The design is based on Category II Traffic and a Class E Street (Design Index = 2).

1.5" Hot-Mix Surface Course

7" Base Course (CBR=50) compacted to at least 100 percent of maximum laboratory density (ASTM D 1557)

6" Base Course (CBR=50) compacted to at least 95 percent of maximum laboratory density (ASTM D 1557)

6" Raw Subgrade compacted to at least 90 percent of maximum laboratory density (ASTM D 1557)

(b) GOV Parking Area. The vehicle types and traffic patterns the GOV parking area will typically experience are anticipated to be equivalent to those for the POV parking area (i.e., Category II Traffic and a Class E Street (Design Index = 2)). However, access to the trash dumpster pad(s) will be through the GOV parking area. Based on this consideration, the pavement design is thickened moderately over the section used for the POV parking area.

2" Hot-Mix Surface Course

9" Base Course (CBR=50) compacted to at least 100 percent of maximum laboratory density (ASTM D 1557)

6" Base Course (CBR=50) compacted to at least 95 percent of maximum laboratory density (ASTM D 1557)

6" Raw Subgrade compacted to at least 90 percent of maximum laboratory density (ASTM D 1557)

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The following note should be incorporated as part of the pavement details shown on the contract drawings.

1. *"The moisture content shall be at least 1 percent above optimum during compaction of the raw subgrade."*

2. *"The upper 6 inches of raw subgrade materials directly underlying the base course layer(s) shall consist of satisfactory materials, excluding materials that classify as CH materials. If the upper 6 inches of raw subgrade directly underlying the base course layer(s) are CH materials, the upper 6 inches of these materials shall be removed and replaced with satisfactory materials (excluding CH materials), and compacted to the density specified for raw subgrade underlying pavements."*

(3) Pavement Material Definitions.

(a) High Stability Hot-Mix Surface Course. Aggregates and asphaltic materials shall conform to the requirements of the Louisiana Department of Transportation and Development Standard Specifications for Roads and Bridges for "Asphaltic Concrete Mixtures", Part V. Asphaltic material for the paving mixture should be asphaltic cement, viscosity grade AC-30 or PG-64-22. Edit guide specification **UFGS-32 12 16 HOT-MIX ASPHALT (HMA) FOR ROADS** to the above requirements.

(b) Prime Coat and Tack Coat. Asphaltic material for the prime coat shall be cut-back asphalt, grade MC-30, conforming to the requirements of Louisiana Department of Transportation and Development Standard Specifications for Roads and Bridges for "Asphaltic Materials", Part X, Section 1002. Prime coat should be applied to the surface of the base course. Asphaltic material for the tack coat shall be cut-back asphalt, grade RC-250, or emulsified asphalt, grade SS-1, conforming to the requirements of Louisiana Department of Transportation and Development Standard Specifications for Roads and Bridges for "Asphaltic Materials", Part X, Section 1002. Tack coat should be applied to all surfaces that contact new asphalt pavement. Edit guide specification **UFGS-32 12 10 BITUMINOUS TACK AND PRIME COATS** to the above requirements.

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(c) Portland Cement Concrete. The material shall conform to the requirements of **UFGS-32 13 14 CONCRETE PAVEMENTS FOR SMALL PROJECTS**. The maximum nominal size coarse aggregate shall be 1.5 inches, and the mixture shall be designed to attain a flexural strength of 600 psi at 28 days.

(d) Base Course. Aggregates shall conform to the requirements of **UFGS-32 11 23 AGGREGATE BASE COURSE**, and shall have a CBR value of 50 percent. The gradation for the material should conform to the requirements of the Louisiana Department of Transportation and Development Standard Specifications for Roads and Bridges for “Sand Clay Gravel:”, Part X, Section 1003.03(a).

(e) Raw Subgrade. The material shall conform to the requirements of **UFGS-31 00 00 EARTHWORK**.

(4) Vehicular Pavement Material Testing Requirements. Testing shall be the responsibility of the contractor to ensure that the subgrade, base course, hot-mix surface course, and Portland cement concrete are properly constructed. To this end, the following testing requirements shall be included in the contract specifications as a minimum:

- In-place density testing of the subgrade and base course shall be performed, at a minimum, every 600 square yards per lift in accordance with ASTM D 1556 and ASTM D 2922. ASTM D 1556 shall be used as a check at least once per lift for each 3,000 square yards of completed subgrade and base course.
- Before starting work, at least one sample of base course material shall be tested in accordance with ASTM C 136. After the initial test, a minimum of one sieve analysis (ASTM C 136 and ASTM D 422) shall be performed for each 1,000 tons of base course placed, with a minimum of one analysis performed for each day’s run until the course is completed. One liquid limit and plasticity index shall be performed for each sieve analysis per ASTM D 4318
- Wear tests shall be performed in accordance with ASTM C 131. A minimum of one test per base course material source shall be run.
- Thickness of the base course shall be measured for each 600 square yards of material placed. Compacted thickness of the base course shall be as presented in this report and the completed section shall be within 3/8-inch of the thickness presented.

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- Hot Bin gradations for the asphalt wearing course shall be tested in accordance with ASTM C 136 and ASTM C 117. A minimum of one test shall be conducted. Marshall specimens shall be taken in accordance with methods described in AI MS-2. At least two sets of specimens shall be taken. Asphalt extractions shall be performed in accordance with ASTM D 2172, Method A or B. At least one asphalt extraction shall be conducted. Field density tests shall be conducted in accordance with ASTM D 2950. One test shall be conducted for each 300 square yards of pavement placed. The mat density shall be 97.5 to 100.5 percent and the joint density shall be 95.5 to 100.5 percent of the density obtained from laboratory-compacted specimens. Thickness measurements shall be taken at a minimum of one measurement for each 1,000 square yards of pavement placed.
- The Job Mix Formula for the bituminous mixture shall be furnished to the Contraction Officer for approval. The formula will indicate the percentage of each stockpile and mineral filler, the percentage of each size aggregate, the percentage of bitumen, and the temperature of the completed mixture when discharged from the mixer. The Contractor shall file with the Contracting Officer certified delivery tickets for all aggregates and bituminous materials actually used in construction. The finished mixture shall be designed using procedures contained in AI MS-2 and the criteria shown below.

<u>Test Property</u>	<u>50 Blows</u>
Stability (minimum), lbs	500
Flow (maximum), 1/100-inch	8-18
Air Voids, percent	3% to 5%
Percent Voids in mineral aggregate	14
TSR, minimum percent	75

- The contractor shall be responsible for the development of the mixture proportion study for cementitious materials and chemical admixtures. The concrete mix design shall include a statement giving the maximum nominal coarse aggregate size and the proportions of all ingredients that will be used in the manufacture of concrete at least 60 days prior to commencing concrete operations. Trial design batches, mixture proportioning studies, and testing requirements shall be the responsibility of the Contractor. Strength requirements shall be based on flexural strength. Trial mixtures having proportions, slumps, and air content suitable for the work shall be based on methodology described in ACI 211.1, modified as necessary to accommodate flexural strength. The maximum water-cementitious material ratio is 0.45. Coarse and fine aggregates shall have a satisfactory service record of at least 5 years successful service in three paving projects, or if a new source is used, shall meet the requirements when tested for resistance to freezing and thawing. Coarse and fine aggregates not having a satisfactory demonstrable service record shall have a durability factor of 50 when subjected to freezing and thawing in concrete in accordance with COE CRD-C 114 (Test Method for Soundness of Aggregates by Freezing and Thawing of Concrete Specimens).

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- Smoothness measurements shall be taken in successive positions parallel to the pavement (flexible and rigid) centerline with a 12-foot straightedge. Measurements shall be taken perpendicular to the pavement (flexible and rigid) centerline at 15-foot intervals. Surface smoothness shall not exceed 3/8-inch.

References:

- UFC 3-220-03FA – Soils and Geology Procedures for Foundation Design of Buildings and Other Structures (Except Hydraulic Structures)
- UFC 3-220-07 – Foundations in Expansive Soils
- CESWD-ED-TS/G Criteria Letter, dated 29 January 1988 – Design Criteria for Ribbed Mat Foundations
- SWDED-G Criteria Letter, dated 16 April 1987 – Criteria for Developing Geotechnical Design Parameters for SWD Ribbed Mat Design Methodology
- UFC 3-250-01FA – Pavement Design for Roads, Streets, Walks, and Open Storage Areas
- UFC 3-250-18FA – General Provisions and Geometric Design For Roads, Streets, Walks, and Open Storage Areas
- Louisiana Department of Transportation and Development Standard Specifications for Roads and Bridges
- SWD-AEIM Architectural-Engineering Manual
- UFGS Guide Specifications For Construction

**FORT WORTH DISTRICT
JUNE 2008**

APPENDIX A

1

2

3

4

5

W9126G24R0124-0006

10A2S-MWDF-08

10A2S-MWDF-09

10A2S-MWDF-10

10A2S-MWDF-11

10A2S-MWDF-12

10A2S-MWDF-13

DRILLING LOG

SOUTHWESTERN

INSTALLATION

FORT WORTH

SHEET 1 OF 1 SHEETS

1. PROJECT

MILITARY WORKING DOG FACILITY

2. LOCATION (Coordinates or Station)

FORT POLK, LOUISIANA

3. DRILLING AGENCY

TETRA TECH, INC.

4. HOLE NO. (As shown on drawing title and file number)

10A2S-MWDF-08

10. SIZE AND TYPE OF BIT

MSL

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

MSL

12. MANUFACTURER'S DESIGNATION OF DRILL

MOBILE B-57

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN

DISTURBED 3 UNDISTURBED 0

14. TOTAL NUMBER CORE BOXES

0

15. ELEVATION GROUND WATER

262.4

16. DATE HOLE STARTED

20 MAR 08

17. ELEVATION TOP OF HOLE

267.6

18. TOTAL CORE RECOVERY FOR BORING

267.6

19. SIGNATURE OF INSPECTOR

MICHAEL K. BRANIM

20. MOISTURE CONTENT

21. LEGEND

22. CLASSIFICATION OF MATERIALS (Description)

23. CORE RECOVERY

24. BOX OR SAMPLE NO.

25. DRILLING

26. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)

27. 0.0' TO 1.0'

28. SAND - FINE, MOIST, TAN, SILTY.

29. 1.0' TO 7.5'

30. CLAY - HIGH PLASTIC, STIFF, MOIST, BROWN AND GRAY, SANDY.

31. 7.5' TO 10.0'

32. SAND - FINE, WET, BROWN TO RED.

33. 8-1

34. 0.0' TO 2.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND 2" O.D. SPLIT SPOONS.

35. 8-2

36. 2.0' TO 8.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND 3" SHELBY TUBE.

37. 8-3

38. 8.0' TO 10.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND 2" O.D. SPLIT SPOONS.

39. 8-4

40. SHELBY TUBES

41. 8-2, 2.0' TO 4.0'

42. 8-4, 4.0' TO 6.0'

43. 8-4, 6.0' TO 8.0'

44. STD. PENETRATION TESTS

45. START BLOW COUNT

46. 0.0' 2-2-2

47. 8.5' 2-4-5

48. NOTE:

49. JAR SAMPLE INTERVAL COINCIDES WITH STANDARD PENETRATION TEST INTERVALS.

50. WATER LEVEL

51. 24-HOUR CHECK = 5.2' B.G.S.

52. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE.

53. MAR 71

54. PROJECT

55. MILITARY WORKING DOG FACILITY

56. HOLE NO.

57. 10A2S-MWDF-08

DRILLING LOG

SOUTHWESTERN

INSTALLATION

FORT WORTH

SHEET 1 OF 1 SHEETS

1. PROJECT

MILITARY WORKING DOG FACILITY

2. LOCATION (Coordinates or Station)

FORT POLK, LOUISIANA

3. DRILLING AGENCY

TETRA TECH, INC.

4. HOLE NO. (As shown on drawing title and file number)

10A2S-MWDF-09

10. SIZE AND TYPE OF BIT

MSL

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

MSL

12. MANUFACTURER'S DESIGNATION OF DRILL

MOBILE B-57

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN

DISTURBED 5 UNDISTURBED 0

14. TOTAL NUMBER CORE BOXES

0

15. ELEVATION GROUND WATER

261.2

16. DATE HOLE STARTED

20 MAR 08

17. ELEVATION TOP OF HOLE

266.1

18. TOTAL CORE RECOVERY FOR BORING

266.1

19. SIGNATURE OF INSPECTOR

MICHAEL K. BRANIM

20. MOISTURE CONTENT

21. LEGEND

22. CLASSIFICATION OF MATERIALS (Description)

23. CORE RECOVERY

24. BOX OR SAMPLE NO.

25. DRILLING

26. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)

27. 0.0' TO 10.0'

28. SAND

29. 0.0' TO 2.5' - FINE, MOIST, BROWN, CLAYEY.

30. 2.5' TO 8.5' - FINE, MOIST TO WET, GRAY AND TAN, CLAYEY.

31. 8.5' TO 10.0' - FINE, WET, REDDISH BROWN, CLAYEY.

32. 9-1

33. 0.0' TO 10.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND 2" O.D. SPLIT SPOONS.

34. 9-2

35. STD. PENETRATION TESTS

36. START BLOW COUNT

37. 0.5' 4-4-4

38. 2.5' 2-4-7

39. 4.5' 2-4-6

40. 6.5' 2-3-3

41. 8.5' 1-2-2

42. NOTE:

43. JAR SAMPLE INTERVAL COINCIDES WITH STANDARD PENETRATION TEST INTERVALS.

44. WATER LEVEL

45. 24-HOUR CHECK = 4.9' B.G.S.

46. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE.

47. MAR 71

48. PROJECT

49. MILITARY WORKING DOG FACILITY

50. HOLE NO.

51. 10A2S-MWDF-09

DRILLING LOG

SOUTHWESTERN

INSTALLATION

FORT WORTH

SHEET 1 OF 1 SHEETS

1. PROJECT

MILITARY WORKING DOG FACILITY

2. LOCATION (Coordinates or Station)

FORT POLK, LOUISIANA

3. DRILLING AGENCY

TETRA TECH, INC.

4. HOLE NO. (As shown on drawing title and file number)

10A2S-MWDF-10

10. SIZE AND TYPE OF BIT

MSL

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

MSL

12. MANUFACTURER'S DESIGNATION OF DRILL

MOBILE B-57

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN

DISTURBED 5 UNDISTURBED 0

14. TOTAL NUMBER CORE BOXES

0

15. ELEVATION GROUND WATER

259.2

16. DATE HOLE STARTED

20 MAR 08

17. ELEVATION TOP OF HOLE

267.2

18. TOTAL CORE RECOVERY FOR BORING

267.2

19. SIGNATURE OF INSPECTOR

MICHAEL K. BRANIM

20. MOISTURE CONTENT

21. LEGEND

22. CLASSIFICATION OF MATERIALS (Description)

23. CORE RECOVERY

24. BOX OR SAMPLE NO.

25. DRILLING

26. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)

27. 0.0' TO 0.8'

28. PAVEMENT

29. 0.0' TO 0.25' - HMAC.

30. 0.25' TO 0.8' - SAND CLAY GRAVEL BASE.

31. 0.8' TO 10.0'

32. SAND

33. 0.8' TO 2.5' - FINE, MOIST, TAN, SILTY.

34. 2.5' TO 10.0' - FINE, MOIST TO WET, BROWN TO BROWN AND TAN, CLAYEY.

35. 10-1

36. 0.0' TO 10.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND 2" O.D. SPLIT SPOONS.

37. 10-2

38. STD. PENETRATION TESTS

39. START BLOW COUNT

40. 0.8' 6-4-4

41. 2.5' 2-2-3

42. 4.5' 3-3-4

43. 6.5' 3-4-5

44. 8.5' 3-5-6

45. NOTE:

46. JAR SAMPLE INTERVAL COINCIDES WITH STANDARD PENETRATION TEST INTERVALS.

47. WATER LEVEL

48. 24-HOUR CHECK = 8.0' B.G.S.

49. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE.

50. MAR 71

51. PROJECT

52. MILITARY WORKING DOG FACILITY

53. HOLE NO.

54. 10A2S-MWDF-10

DRILLING LOG

SOUTHWESTERN

INSTALLATION

FORT WORTH

SHEET 1 OF 1 SHEETS

1. PROJECT

MILITARY WORKING DOG FACILITY

2. LOCATION (Coordinates or Station)

FORT POLK, LOUISIANA

3. DRILLING AGENCY

TETRA TECH, INC.

4. HOLE NO. (As shown on drawing title and file number)

10A2S-MWDF-11

10. SIZE AND TYPE OF BIT

MSL

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

MSL

12. MANUFACTURER'S DESIGNATION OF DRILL

MOBILE B-57

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN

DISTURBED 4 UNDISTURBED 1

14. TOTAL NUMBER CORE BOXES

0

15. ELEVATION GROUND WATER

262.4

16. DATE HOLE STARTED

20 MAR 08

17. ELEVATION TOP OF HOLE

265.0

18. TOTAL CORE RECOVERY FOR BORING

265.0

19. SIGNATURE OF INSPECTOR

MICHAEL K. BRANIM

20. MOISTURE CONTENT

21. LEGEND

22. CLASSIFICATION OF MATERIALS (Description)

23. CORE RECOVERY

24. BOX OR SAMPLE NO.

25. DRILLING

26. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)

27. 0.0' TO 6.0'

28. SAND

29. 0.0' TO 1.0' - FINE, MOIST, TAN, SILTY.

30. 1.0' TO 6.0' - FINE, MOIST TO WET, BROWN TO BROWN AND TAN, CLAYEY.

31. 6.0' TO 8.5'

32. CLAY - MOIST, MEDIUM, BROWN TO TAN, SANDY.

33. 8.5' TO 6.0'

34. SAND - FINE, WET, BROWN AND TAN, SLIGHTLY CLAYEY.

35. 11-1

36. 0.0' TO 6.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND 2" O.D. SPLIT SPOONS.

37. 11-2

38. 6.0' TO 8.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND 3" SHELBY TUBE.

39. 11-3

36.0' TO 8.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND 3" SHELBY TUBE.

40. 11-4

8.0' TO 10.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND SPLIT SPOONS.

41. 11-5

11-4, 6.0' TO 8.0'

42. STD. PENETRATION TESTS

43. START BLOW COUNT

44. 0.5' 4-4-5

45. 2.5' 1-2-2

46. 4.5' 3-4-4

47. 8.5' 7-4-5

48. NOTE:

49. JAR SAMPLE INTERVAL COINCIDES WITH STANDARD PENETRATION TEST INTERVALS.

50. WATER LEVEL

51. 24-HOUR CHECK = 2.6' B.G.S.

52. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE.

53. MAR 71

54. PROJECT

55. MILITARY WORKING DOG FACILITY

56. HOLE NO.

57. 10A2S-MWDF-11

DRILLING LOG

SOUTHWESTERN

INSTALLATION

FORT WORTH

SHEET 1 OF 1 SHEETS

1. PROJECT

MILITARY WORKING DOG FACILITY

2. LOCATION (Coordinates or Station)

FORT POLK, LOUISIANA

3. DRILLING AGENCY

TETRA TECH, INC.

4. HOLE NO. (As shown on drawing title and file number)

10A2S-MWDF-12

10. SIZE AND TYPE OF BIT

MSL

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

MSL

12. MANUFACTURER'S DESIGNATION OF DRILL

MOBILE B-57

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN

DISTURBED 0 UNDISTURBED 0

14. TOTAL NUMBER CORE BOXES

0

15. ELEVATION GROUND WATER

262.1

16. DATE HOLE STARTED

20 MAR 08

17. ELEVATION TOP OF HOLE

264.7

18. TOTAL CORE RECOVERY FOR BORING

264.7

19. SIGNATURE OF INSPECTOR

MICHAEL K. BRANIM

20. MOISTURE CONTENT

21. LEGEND

22. CLASSIFICATION OF MATERIALS (Description)

23. CORE RECOVERY

24. BOX OR SAMPLE NO.

25. DRILLING

26. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)

27. 0.0' TO 10.0'

28. SAND

29. 0.0' TO 8.5' - FINE, MOIST TO WET, BROWN TO TAN AND GRAY, CLAYEY WITH SILT.

30. 8.5' TO 10.0' - FINE, WET, GRAY AND TAN, SILTY.

31. 12-1

32. 0.0' TO 10.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND 2" O.D. SPLIT SPOONS.

33. 12-2

34. STD. PENETRATION TESTS

35. START BLOW COUNT

36. 0.5' 4-4-4

37. 2.5' 2-2-1

38. 4.5' 1-1-2

39. 6.5' 2-1-2

40. 8.5' 1-1-1

41. NOTE:

42. JAR SAMPLE INTERVAL COINCIDES WITH STANDARD PENETRATION TEST INTERVALS.

43. WATER LEVEL

44. 24-HOUR CHECK = 2.6' B.G.S.

45. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE.

46. MAR 71

47. PROJECT

48. MILITARY WORKING DOG FACILITY

49. HOLE NO.

50. 10A2S-MWDF-12

DRILLING LOG

SOUTHWESTERN

INSTALLATION

FORT WORTH

SHEET 1 OF 1 SHEETS

1. PROJECT

MILITARY WORKING DOG FACILITY

2. LOCATION (Coordinates or Station)

FORT POLK, LOUISIANA

3. DRILLING AGENCY

TETRA TECH, INC.

4. HOLE NO. (As shown on drawing title and file number)

10A2S-MWDF-13

10. SIZE AND TYPE OF BIT

MSL

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

MSL

12. MANUFACTURER'S DESIGNATION OF DRILL

MOBILE B-57

13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN

DISTURBED 5 UNDISTURBED 0

14. TOTAL NUMBER CORE BOXES

0

15. ELEVATION GROUND WATER

261.8

16. DATE HOLE STARTED

20 MAR 08

17. ELEVATION TOP OF HOLE

264.6

18. TOTAL CORE RECOVERY FOR BORING

264.6

19. SIGNATURE OF INSPECTOR

MICHAEL K. BRANIM

20. MOISTURE CONTENT

21. LEGEND

22. CLASSIFICATION OF MATERIALS (Description)

23. CORE RECOVERY

24. BOX OR SAMPLE NO.

25. DRILLING

26. REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)

27. 0.0' TO 10.0'

28. SAND

29. 0.0' TO 1.5' - FINE, MOIST, TAN, SILTY.

30. 1.5' TO 8.0' - FINE, MOIST TO WET, TAN TO TAN AND GRAY, CLAYEY.

31. 8.0' TO 10.0' - FINE, WET, TAN AND BROWN.

32. 13-1

33. 0.0' TO 4.0' - 6" O.D. SOLID STEM CONTINUOUS FLIGHT AUGER AND 2" O.D. SPLIT SPOONS.

34. 13-2

35. STD. PENETRATION TESTS

36. START BLOW COUNT

37. 0.5' 4-10-7

38. 2.5' 1-1-1

39. 4.5' 2-3-4

40. 6.5' 5-6-14

41. 8.5' 3-2-2

42. 8.5' 2-9-9

43. NOTE:

44. JAR SAMPLE INTERVAL COINCIDES WITH STANDARD PENETRATION TEST INTERVALS.

45. WATER LEVEL

46. 24-HOUR CHECK = 2.8' B.G.S.

47. ENG FORM 1836 PREVIOUS EDITIONS ARE OBSOLETE.

48. MAR 71

49. PROJECT

50. MILITARY WORKING DOG FACILITY

51. HOLE NO.

52. 10A2S-MWDF-13

NOTES:

1. USE THIS SHEET FOR BORING LOGS ONLY.

2. MOISTURE CONTENT, WHERE SHOWN, IS EXPRESSED AS PERCENT DRY WEIGHT AT TIME OF LABORATORY CLASSIFICATION.

3. LEGEND SHOWS OVERBURDEN MATERIALS CLASSIFIED ACCORDING TO ASTM D 2487 AND ASTM D 2488.

4. DESCRIPTION OF OVERBURDEN MATERIALS CHANGED TO CORRESPOND WITH LABORATORY CLASSIFICATION AS NECESSARY.

5. ORIGINAL DRILLING LOGS AVAILABLE AT CORPS OF ENGINEERS OFFICES.

US Army Corps of Engineers

Fort Worth District

ENGINEERING/ CONSTRUCTION DIVISION

ENG. SERVICES BRANCH

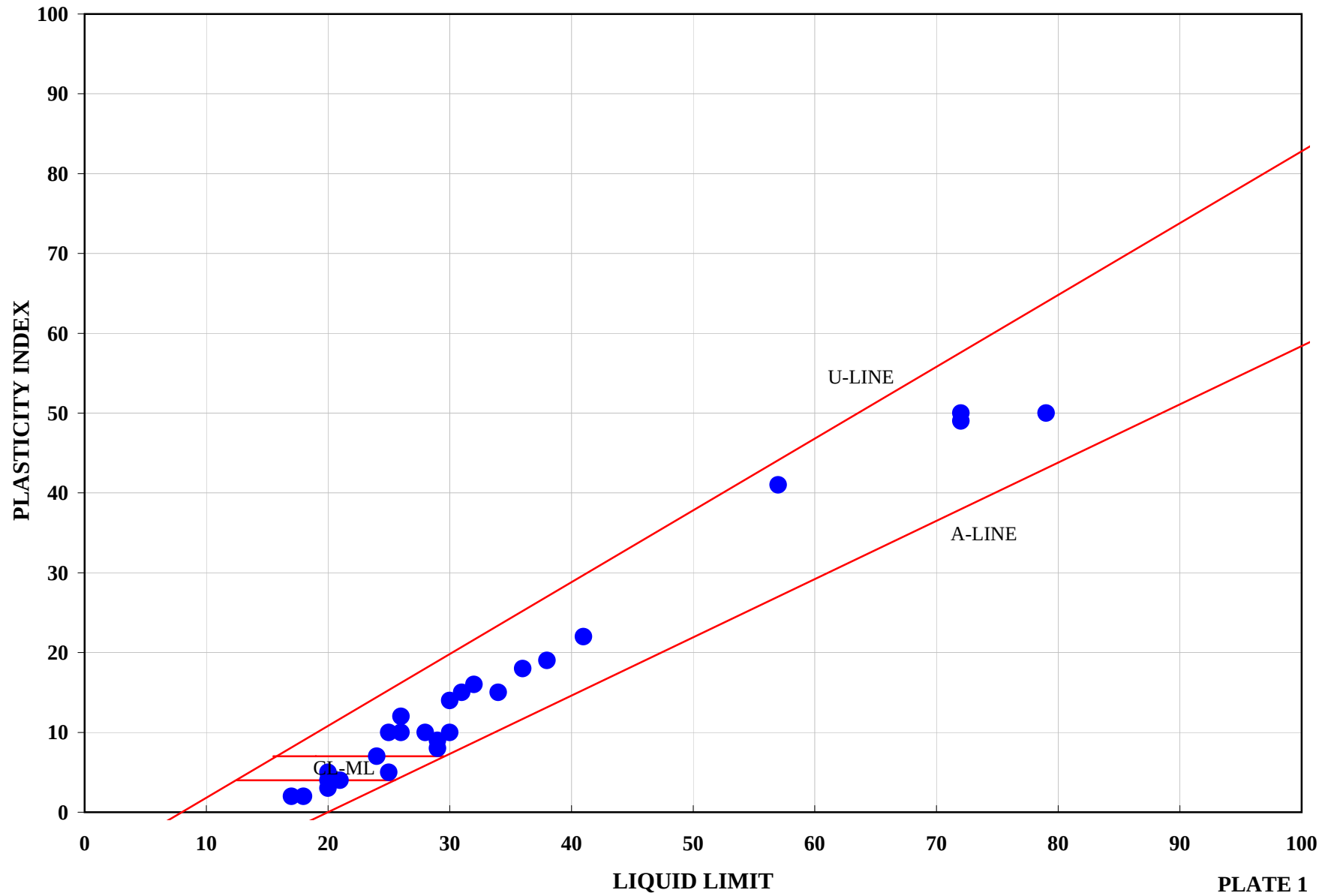
LOGS OF BORING 2 OF 2

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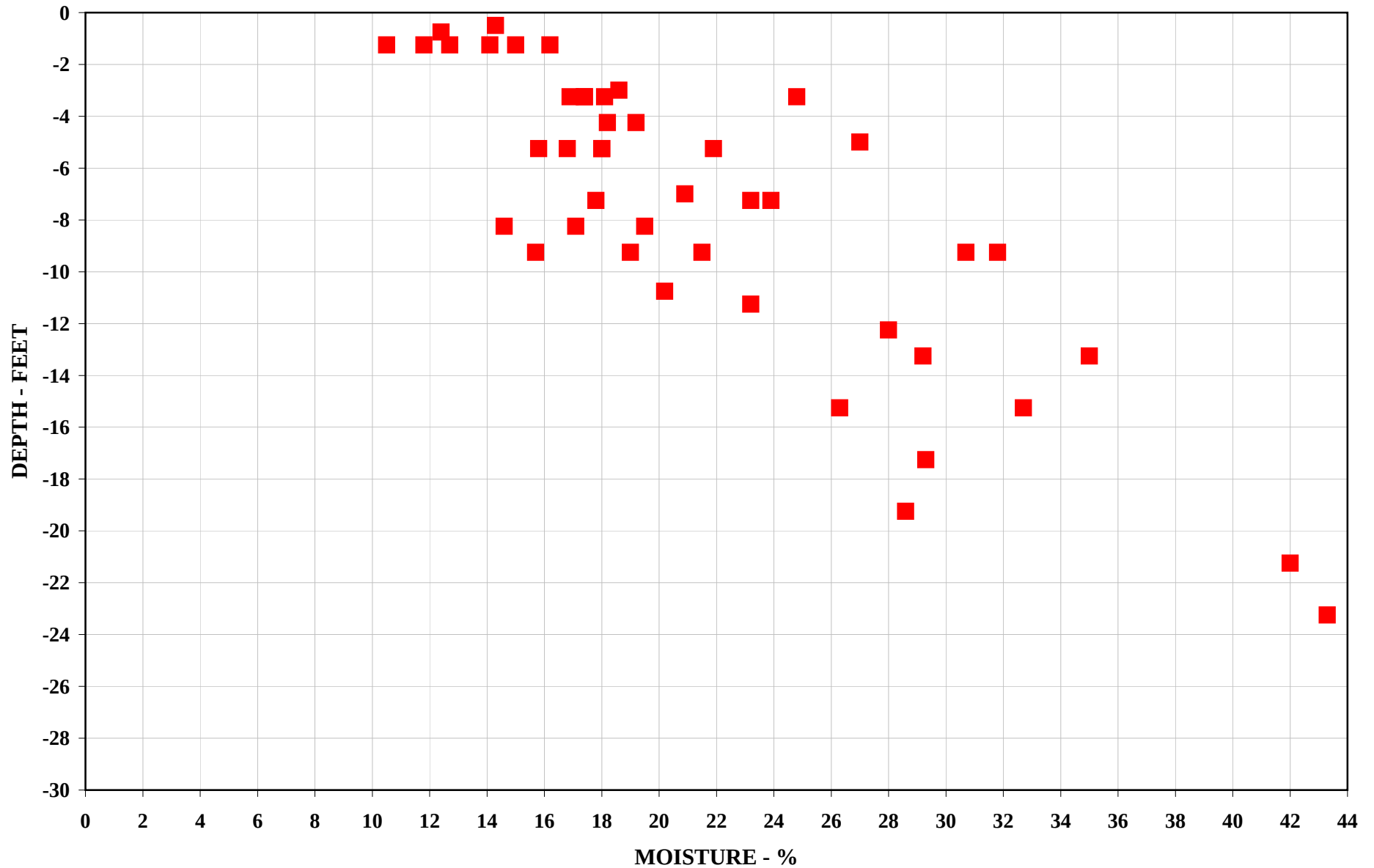
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APPENDIX B

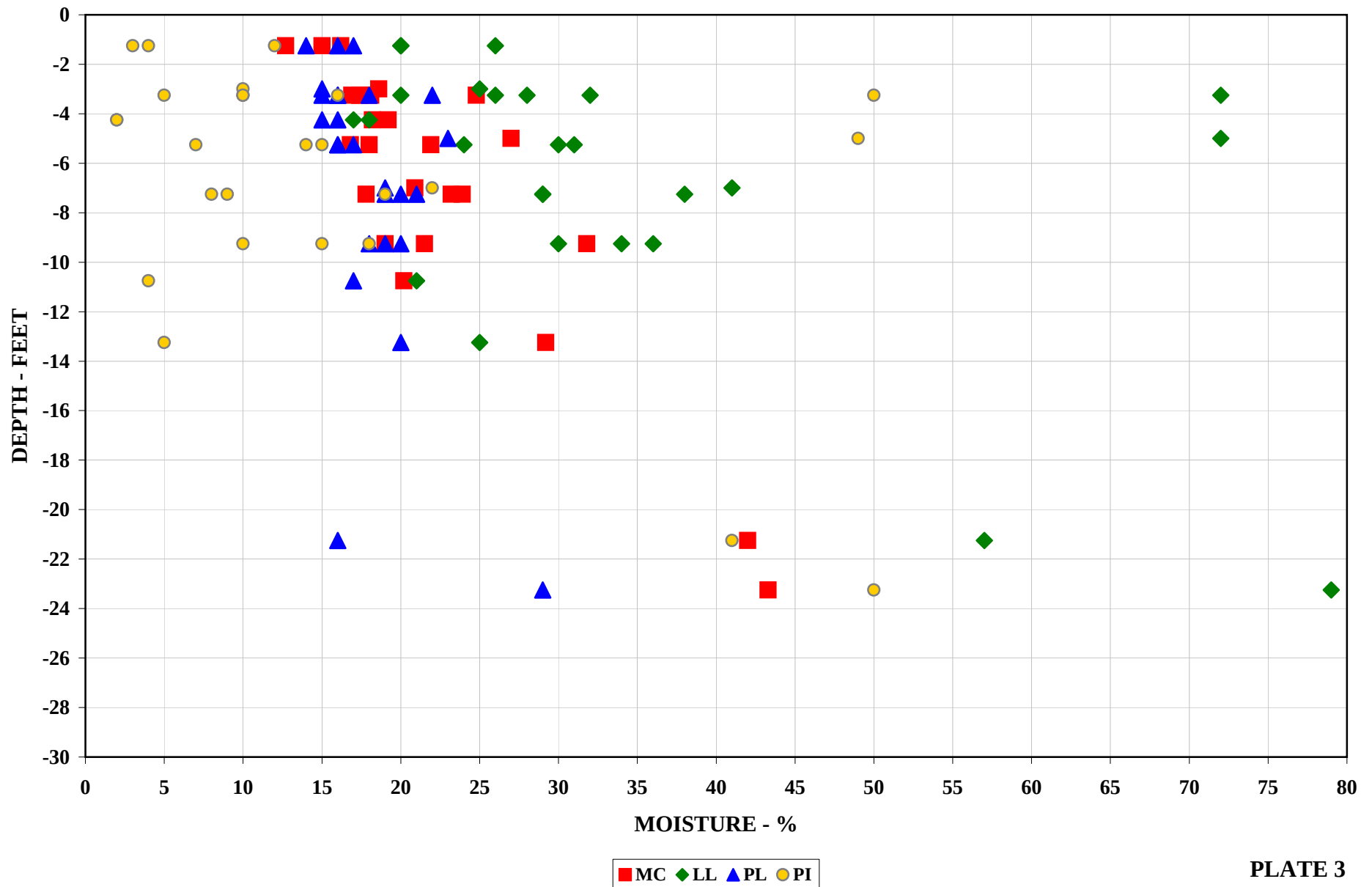
MILITARY WORKING DOG FACILITY PLASTICITY CHART



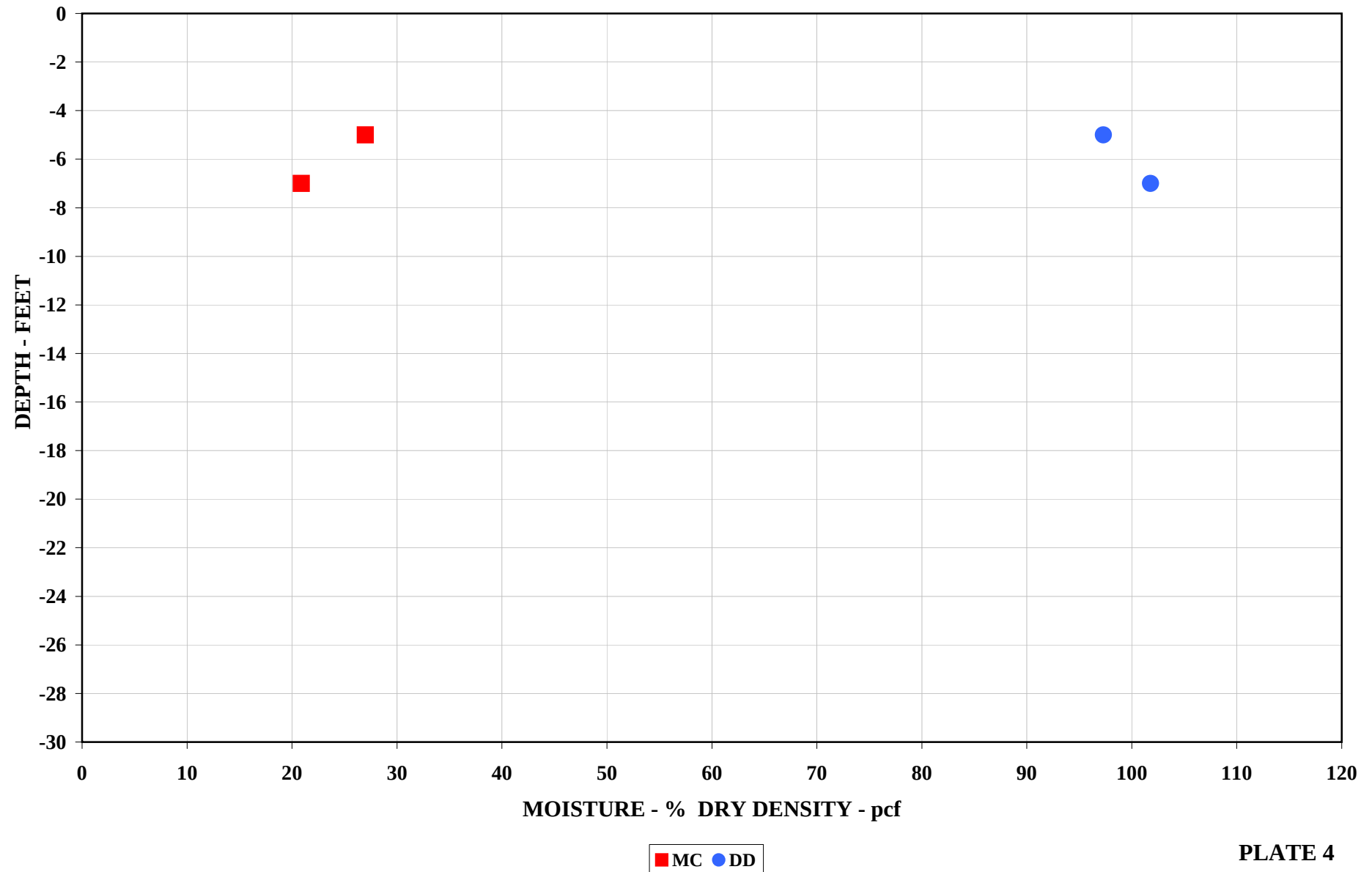
MILITARY WORKING DOG FACILITY MOISTURE CONTENT VS DEPTH



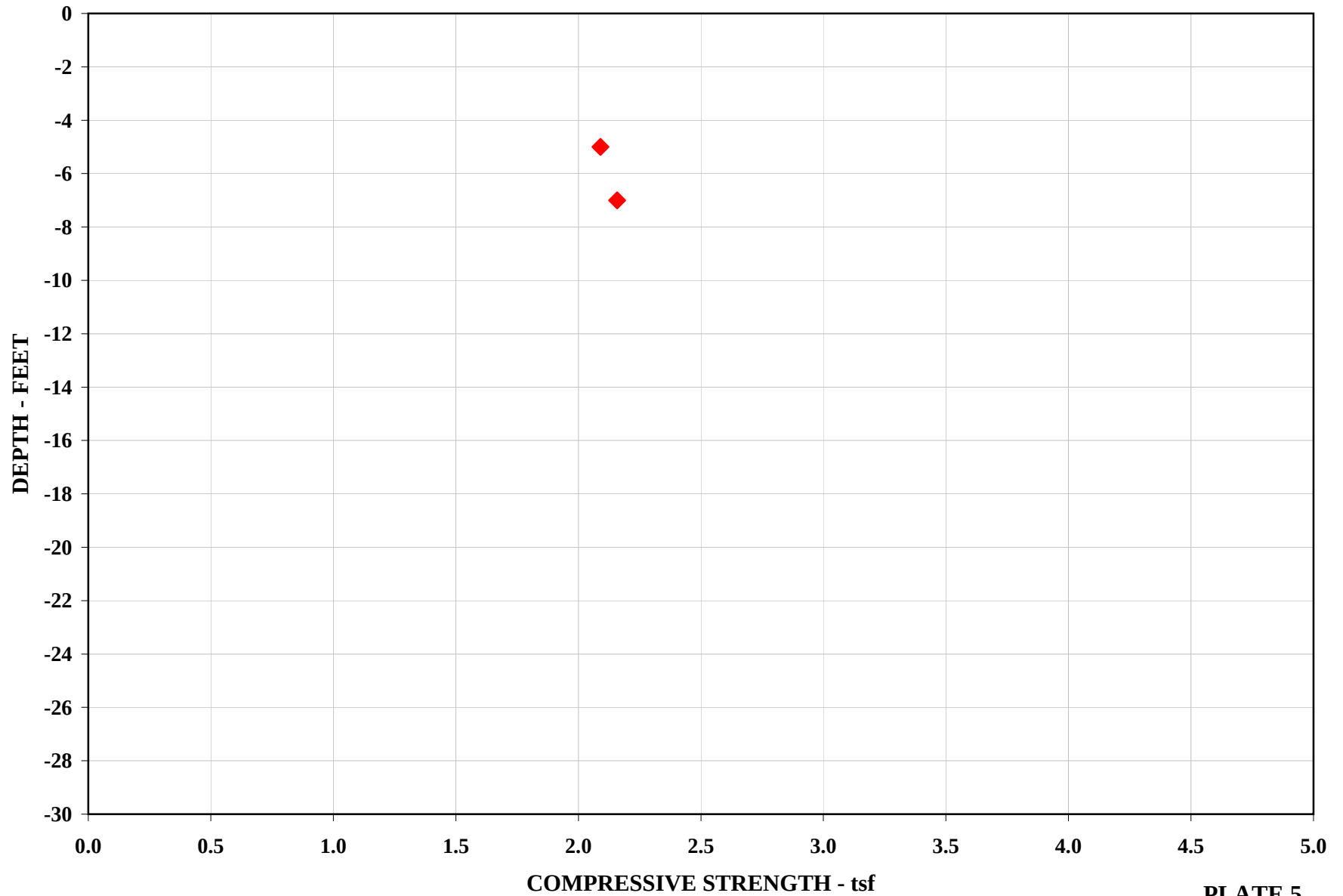
MILITARY WORKING DOG FACILITY ATTERBERG LIMITS VS DEPTH



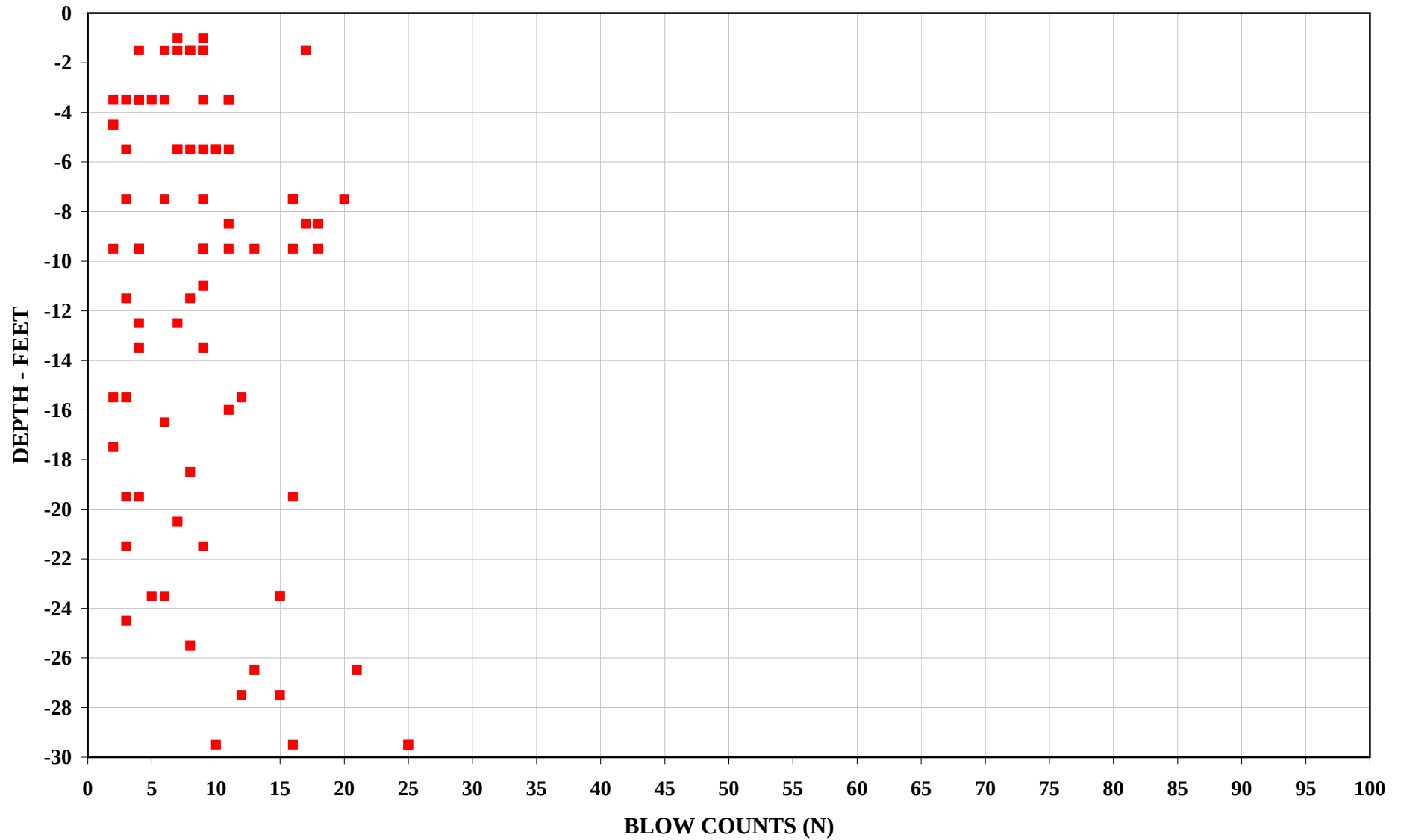
**MILITARY WORKING DOG FACILITY
MOISTURE CONTENT - DRY DENSITY VS DEPTH**



MILITARY WORKING DOG FACILITY ULTIMATE COMPRESSIVE STRENGTH VS DEPTH



**MILITARY WORKING DOG FACILITY
STANDARD PENETRATION TEST BLOW COUNTS VS DEPTH**



APPENDIX C

SUMMARY OF LABORATORY TEST RESULTS
**LABORATORY TESTING SERVICES
MILITARY WORKING DOG FACILITY
FORT POLK , LOUISIANA**

Boring No.	Sample No.	Sample Depth (ft.)	Visual Description & Unified Soil Classification (ASTM D-2488)		Percent Passing Sieve							
					#4	#10	#20	#40	#60	#80	#100	#200
8A2S-MWDF-01	1-1	0-1.5	Brown silty sand	SM	100.0	99.8	99.4	94.6	93.9	77.0	63.9	37.0
	1-2	2.5-4	Light brown clayey sand	SC	99.4	99.0	98.6	94.8	93.6	79.0	70.3	46.4
	1-3	4.5-6	Light brown clayey sand	SC	100.0	99.9	99.8	99.4	95.8	81.6	71.6	47.0
	1-4	6.5-8	Gray and tan clayey sand	SC	100.0	100.0	99.9	99.6	96.1	79.8	68.2	39.7
	1-5	8.5-10	Gray clayey sand	SC	100.0	100.0	99.9	99.7	96.4	66.5	47.7	27.1
8A2S-MWDF-02	2-1	0.5-2	Brown silty sand	SM	97.3	96.3	94.2	87.1	69.7	51.9	45.4	26.9
	2-2	3.5-5	Light brown and gray silty sand	SM	98.5	97.8	97.3	96.9	91.5	76.3	65.1	41.7
	2-3	7.5-9	Gray and tan silty sand	SM	100.0	100.0	99.8	99.0	93.4	74.1	59.3	33.8
	2-4	11.5-13	Gray and tan silty sand	SM	100.0	100.0	100.0	99.9	98.2	90.2	57.2	23.0
	2-5	14.5-16	Reddish brown and gray silty sand	SM	100.0	100.0	100.0	99.7	98.4	88.6	74.6	22.5
8A2S-MWDF-03	3-1	0.5-2	Brown silty sand	SM	100.0	99.6	98.8	96.8	88.6	69.9	58.7	30.0
	3-2	3.5-5	Brown and tan silty sand	SM	98.5	98.0	97.5	96.9	90.3	75.0	64.5	40.3
	3-3	7.5-9	Light gray silty sand	SM	100.0	100.0	99.9	99.1	89.4	65.0	53.3	27.4
8A2S-MWDF-04	4-1	0.5-2	Brown silty sand with clay	SC-SM	100.0	99.7	99.3	98.7	94.0	79.8	70.8	47.3
	4-2	2.5-4	Light brown and tan silty sand with clay	SC-SM	100.0	99.9	99.5	98.7	94.0	80.1	70.6	45.4
	4-3	4.5-6	Gray silty sand	SM	100.0	100.0	99.9	99.1	93.1	74.6	61.1	34.3
	4-4	8.5-10	Gray and tan silty sand	SM	100.0	100.0	100.0	99.5	93.6	76.8	65.3	38.8
	4-5	10.5-12	Gray and tan silty sand	SM	100.0	100.0	100.0	99.9	96.5	67.6	46.1	20.9
	4-6	12.5-14	Reddish brown silty sand	SM	100.0	100.0	99.2	94.4	64.0	40.5	35.5	29.0
	4-7	14.5-16	Reddish brown sand with silt	SP-SM	100.0	100.0	100.0	98.8	61.9	28.2	21.4	10.6
	4-8	16.5-18	Reddish brown sand with silt	SP-SM	100.0	100.0	100.0	98.5	55.1	23.9	17.8	9.6
	4-9	18.5-20	Reddish brown sand with silt	SP-SM	100.0	100.0	100.0	98.8	56.8	18.8	14.2	8.7
	4-10	20.5-22	Reddish brown and light gray clay with sand	CH	98.9	98.5	98.1	97.7	91.9	86.5	85.7	74.5
	4-11	22.5-24	Reddish brown and light gray clay	CH	100.0	100.0	100.0	99.0	99.3	98.7	98.6	98.3
8A2S-MWDF-05	5-1	0-1	Light brown silty sand	SM	99.4	98.3	97.3	94.8	86.7	71.0	60.7	35.7
	5-2	2.5-3.5	Light brown and gray clayey sand	SC	99.4	98.6	98.2	97.7	93.3	80.1	71.2	47.3
	5-3	4.5-6	Gray and tan silty sand	SM	99.9	99.9	99.3	93.4	76.1	66.1	57.4	37.8
	5-4	7.5-9	Gray and tan silty sand	SM	100.0	100.0	99.9	98.8	89.0	70.4	58.1	33.8
	5-5	10-11.5	Gray and tan silty sand with clay	SM-SC	100.0	100.0	99.9	98.5	61.9	33.1	27.9	17.5
	5-6	12.5-14	Gray silty sand with clay	SM-SC	100.0	100.0	100.0	99.8	98.7	90.6	70.8	20.8

SUMMARY OF LABORATORY TEST RESULTS
**LABORATORY TESTING SERVICES
 MILITARY WORKING DOG FACILITY
 FORT POLK , LOUISIANA**

Boring No.	Sample No.	Sample Depth (ft.)	Visual Description & Unified Soil Classification (ASTM D-2488)		Percent Passing Sieve							
					#4	#10	#20	#40	#60	#80	#100	#200
10A2S-MWDF-06	6-1	0.5-2	Light brown silty sand	SM	99.7	99.2	99.0	98.4	93.2	74.7	60.3	31.7
	6-2	2.5-4	Light gray and tan sandy clay	CH	97.9	96.3	95.9	95.3	92.6	84.6	79.7	63.8
	6-3	4-6	Light gray and tan clay	CH	100.0	100.0	100.0	99.9	99.8	99.4	99.1	93.9
	6-4	6-8	Light gray and tan clayey sand	SC	100.0	100.0	100.0	100.0	99.3	89.2	69.1	34.8
	6-5	8.5-10	Light gray and tan clayey sand	SC	100.0	100.0	100.0	99.9	98.3	79.5	56.0	25.3
10A2S-MWDF-09	9-1	0.5-2	Brown clayey sand	SC	99.8	99.5	99.1	98.7	94.5	76.4	67.6	44.9
	9-2	2.5-4	Gray and tan clayey sand	SC	97.5	96.0	95.4	94.8	91.3	77.8	66.9	43.5
	9-3	4.5-6	Gray and tan clayey sand	SC	100.0	100.0	99.8	99.5	94.8	78.9	64.5	38.5
	9-4	6.5-8	Gray and tan clayey sand	SC	100.0	100.0	100.0	99.6	83.2	40.3	30.6	20.7
	9-5	8.5-10	Reddish brown and gray clayey sand	SC	100.0	100.0	100.0	99.2	79.7	47.7	40.8	32.6
10A2S-MWDF-12	12-1	0.5-2	Brown and tan silty sand with clay	SM-SC	99.0	98.5	98.0	95.9	84.4	58.2	44.8	25.0
	12-2	2.5-4	Brown and gray clayey sand	SC	99.3	98.8	98.6	96.8	85.3	53.0	41.0	23.0
	12-3	4.5-6	Tan and gray silty sand with clay	SM-SC	100.0	99.8	99.7	98.4	88.1	56.3	41.0	25.0
	12-4	6.5-8	Gray and tan clayey sand	SC	100.0	100.0	100.0	99.8	87.9	45.9	31.1	18.7
	12-5	8.5-10	Gray and tan silty sand	SM	100.0	100.0	100.0	98.9	81.8	38.6	23.6	13.3

SUMMARY OF LABORATORY TEST RESULTS
**LABORATORY TESTING SERVICES
MILITARY WORKING DOG FACILITY
FORT POLK , LOUISIANA**

Boring No.	Sample No.	Sample Depth (ft.)	Visual Description & Unified Soil Classification (ASTM D-2488)		Moisture Content (%)	Unit Dry Weight (pcf)	Atterberg Limits			Consolidation Test
							LL	PL	PI	
8A2S-MWDF-01	1-1	0-1.5	Brown silty sand	SM	12.4	---	Non Plastic			
	1-2	2.5-4	Light brown clayey sand	SC	17.4	---	26	16	10	
	1-3	4.5-6	Light brown clayey sand	SC	18.0	---	30	16	14	
	1-4	6.5-8	Gray and tan clayey sand	SC	17.8	---	38	19	19	
	1-5	8.5-10	Gray clayey sand	SC	21.5	---	30	20	10	
8A2S-MWDF-02	2-1	0.5-2	Brown silty sand	SM	10.5	---	Non Plastic			
	2-2	3.5-5	Light brown and gray silty sand	SM	18.2	---	17	15	2	
	2-3	7.5-9	Gray and tan silty sand	SM	17.1	---	Non Plastic			
	2-4	11.5-13	Gray and tan silty sand	SM	28.0	---	Non Plastic			
	2-5	14.5-16	Reddish brown and gray silty sand	SM	32.7	---	Non Plastic			
8A2S-MWDF-03	3-1	0.5-2	Brown silty sand	SM	14.1	---	Non Plastic			
	3-2	3.5-5	Brown and tan silty sand	SM	19.2	---	18	16	2	
	3-3	7.5-9	Light gray silty sand	SM	19.5	---	Non Plastic			
8A2S-MWDF-04	4-1	0.5-2	Brown silty sand with clay	SC-SM	16.2	---	20	16	4	
	4-2	2.5-4	Light brown and tan silty sand with clay	SC-SM	18.1	---	20	15	5	
	4-3	4.5-6	Gray silty sand	SM	18.0	---	Non Plastic			
	4-4	8.5-10	Gray and tan silty sand	SM	15.7	---	Non Plastic			
	4-5	10.5-12	Gray and tan silty sand	SM	23.2	---	Non Plastic			
	4-6	12.5-14	Reddish brown silty sand	SM	35.0	---	Non Plastic			
	4-7	14.5-16	Reddish brown sand with silt	SP-SM	26.3	---	Non Plastic			
	4-8	16.5-18	Reddish brown sand with silt	SP-SM	29.3	---	Non Plastic			
	4-9	18.5-20	Reddish brown sand with silt	SP-SM	28.6	---	Non Plastic			
	4-10	20.5-22	Reddish brown and light gray clay with sand	CH	42.0	---	57	16	41	
	4-11	22.5-24	Reddish brown and light gray clay	CH	43.3	---	79	29	50	
8A2S-MWDF-05	5-1	0-1	Light brown silty sand	SM	14.3	---	Non Plastic			
	5-2	2.5-3.5	Light brown and gray clayey sand	SC	18.6	---	25	15	10	
	5-3	4.5-6	Gray and tan silty sand	SM	15.8	---	Non Plastic			
	5-4	7.5-9	Gray and tan silty sand	SM	14.6	---	Non Plastic			
	5-5	10-11.5	Gray and tan silty sand with clay	SM-SC	20.2	---	21	17	4	
	5-6	12.5-14	Gray silty sand with clay	SM-SC	29.2	---	25	20	5	

SUMMARY OF LABORATORY TEST RESULTS
**LABORATORY TESTING SERVICES
 MILITARY WORKING DOG FACILITY
 FORT POLK , LOUISIANA**

Boring No.	Sample No.	Sample Depth (ft.)	Visual Description & Unified Soil Classification (ASTM D-2488)		Moisture Content (%)	Unit Dry Weight (pcf)	Atterberg Limits			Consolidation Test
							LL	PL	PI	
10A2S-MWDF-06	6-1	0.5-2	Light brown silty sand	SM	11.8	---	Non Plastic			
	6-2	2.5-4	Light gray and tan sandy clay	CH	24.8	---	72	22	50	
	6-3	4-6	Light gray and tan clay	CH	27.0	97.3	72	23	49	*
	6-4	6-8	Light gray and tan clayey sand	SC	20.9	101.8	41	19	22	*
	6-5	8.5-10	Light gray and tan clayey sand	SC	19.0	---	34	19	15	
10A2S-MWDF-09	9-1	0.5-2	Brown clayey sand	SC	15.0	---	26	14	12	
	9-2	2.5-4	Gray and tan clayey sand	SC	17.4	---	32	16	16	
	9-3	4.5-6	Gray and tan clayey sand	SC	16.8	---	31	16	15	
	9-4	6.5-8	Gray and tan clayey sand	SC	23.2	---	29	20	9	
	9-5	8.5-10	Reddish brown and gray clayey sand	SC	31.8	---	36	18	18	
10A2S-MWDF-12	12-1	0.5-2	Brown and tan silty sand with clay	SM-SC	12.7	---	20	17	3	
	12-2	2.5-4	Brown and gray clayey sand	SC	16.9	---	28	18	10	
	12-3	4.5-6	Tan and gray silty sand with clay	SM-SC	21.9	---	24	17	7	
	12-4	6.5-8	Gray and tan clayey sand	SC	23.9	---	29	21	8	
	12-5	8.5-10	Gray and tan silty sand	SM	30.7	---	Non Plastic			

* See attached "Laboratory Test Data Sheets" for Consolidation Test Results

SUMMARY OF LABORATORY TEST RESULTS
**LABORATORY TESTING SERVICES
MILITARY WORKING DOG FACILITY
FORT POLK , LOUISIANA**

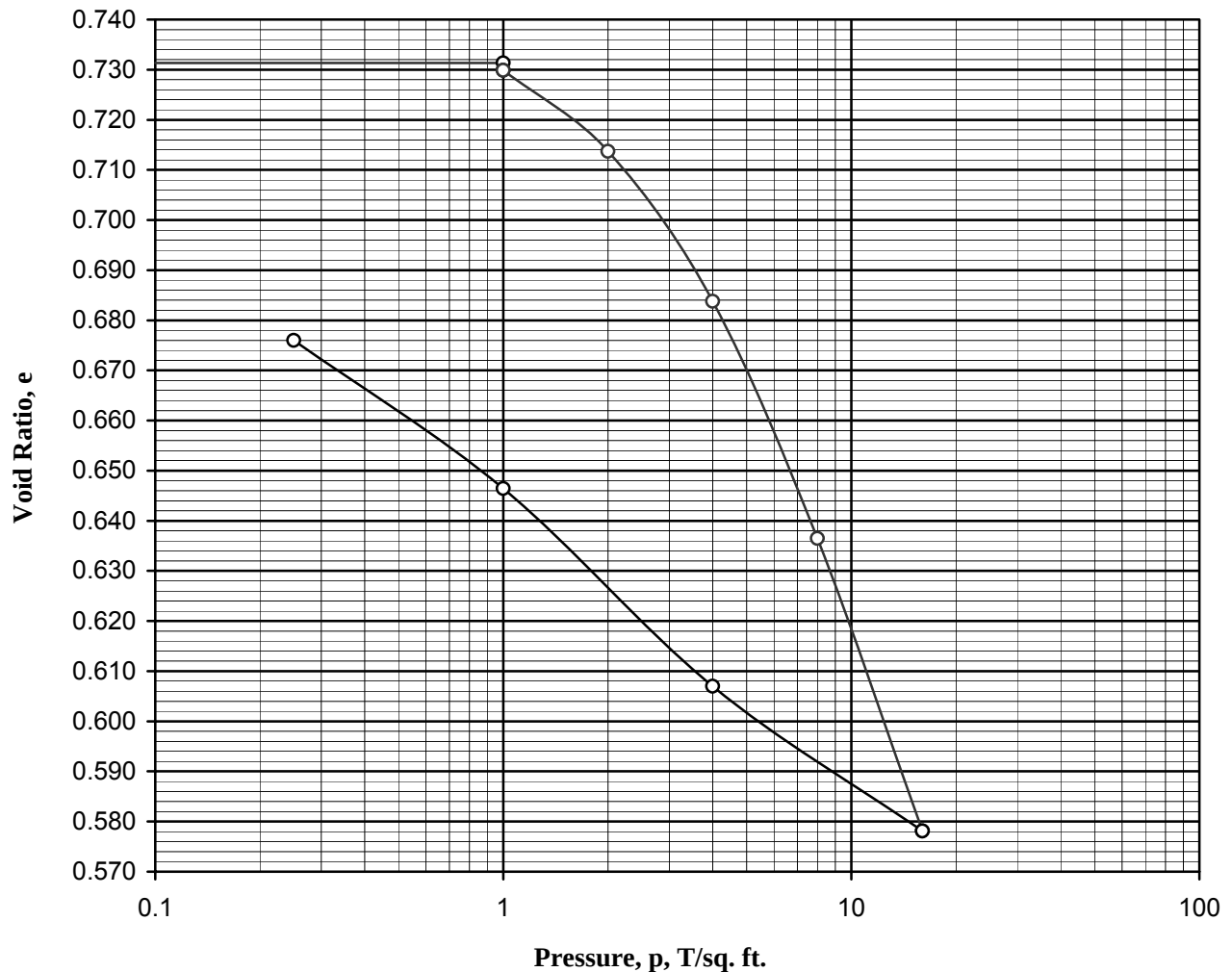
Boring No.	Sample No.	Sample Depth (ft.)	Visual Description & Unified Soil Classification (ASTM D-2488)		Moisture Content (%)	Unit Dry Weight (pcf)	Confining Pressure (tsf)	Q (tsf)	Strain @ Failure (%)	Type Failure
8A2S-MWDF-01	1-1	0-1.5	Brown silty sand	SM	12.4	---	---	---	---	
	1-2	2.5-4	Light brown clayey sand	SC	17.4	---	---	---	---	
	1-3	4.5-6	Light brown clayey sand	SC	18.0	---	---	---	---	
	1-4	6.5-8	Gray and tan clayey sand	SC	17.8	---	---	---	---	
	1-5	8.5-10	Gray clayey sand	SC	21.5	---	---	---	---	
8A2S-MWDF-02	2-1	0.5-2	Brown silty sand	SM	10.5	---	---	---	---	
	2-2	3.5-5	Light brown and gray silty sand	SM	18.2	---	---	---	---	
	2-3	7.5-9	Gray and tan silty sand	SM	17.1	---	---	---	---	
	2-4	11.5-13	Gray and tan silty sand	SM	28.0	---	---	---	---	
	2-5	14.5-16	Reddish brown and gray silty sand	SM	32.7	---	---	---	---	
8A2S-MWDF-03	3-1	0.5-2	Brown silty sand	SM	14.1	---	---	---	---	
	3-2	3.5-5	Brown and tan silty sand	SM	19.2	---	---	---	---	
	3-3	7.5-9	Light gray silty sand	SM	19.5	---	---	---	---	
8A2S-MWDF-04	4-1	0.5-2	Brown silty sand with clay	SC-SM	16.2	---	---	---	---	
	4-2	2.5-4	Light brown and tan silty sand with clay	SC-SM	18.1	---	---	---	---	
	4-3	4.5-6	Gray silty sand	SM	18.0	---	---	---	---	
	4-4	8.5-10	Gray and tan silty sand	SM	15.7	---	---	---	---	
	4-5	10.5-12	Gray and tan silty sand	SM	23.2	---	---	---	---	
	4-6	12.5-14	Reddish brown silty sand	SM	35.0	---	---	---	---	
	4-7	14.5-16	Reddish brown sand with silt	SP-SM	26.3	---	---	---	---	
	4-8	16.5-18	Reddish brown sand with silt	SP-SM	29.3	---	---	---	---	
	4-9	18.5-20	Reddish brown sand with silt	SP-SM	28.6	---	---	---	---	
	4-10	20.5-22	Reddish brown and light gray clay with sand	CH	42.0	---	---	---	---	
	4-11	22.5-24	Reddish brown and light gray clay	CH	43.3	---	---	---	---	
8A2S-MWDF-05	5-1	0-1	Light brown silty sand	SM	14.3	---	---	---	---	
	5-2	2.5-3.5	Light brown and gray clayey sand	SC	18.6	---	---	---	---	
	5-3	4.5-6	Gray and tan silty sand	SM	15.8	---	---	---	---	
	5-4	7.5-9	Gray and tan silty sand	SM	14.6	---	---	---	---	
	5-5	10-11.5	Gray and tan silty sand with clay	SM-SC	20.2	---	---	---	---	
	5-6	12.5-14	Gray silty sand with clay	SM-SC	29.2	---	---	---	---	

SUMMARY OF LABORATORY TEST RESULTS
**LABORATORY TESTING SERVICES
 MILITARY WORKING DOG FACILITY
 FORT POLK , LOUISIANA**

Boring No.	Sample No.	Sample Depth (ft.)	Visual Description & Unified Soil Classification (ASTM D-2488)		Moisture Content (%)	Unit Dry Weight (pcf)	Confining Pressure (tsf)	Q (tsf)	Strain @ Failure (%)	Type Failure
10A2S-MWDF-06	6-1	0.5-2	Light brown silty sand	SM	11.8	---	---	---	---	
	6-2	2.5-4	Light gray and tan sandy clay	CH	24.8	---	---	---	---	
	6-3	4-6	Light gray and tan clay	CH	27.0	97.3	0.312	2.090	11.0	Angular (45 ⁰)
	6-4	6-8	Light gray and tan clayey sand	SC	20.9	101.8	0.438	2.158	8.6	Angular (60 ⁰)
	6-5	8.5-10	Light gray and tan clayey sand	SC	19.0	---	---	---	---	
10A2S-MWDF-09	9-1	0.5-2	Brown clayey sand	SC	15.0	---	---	---	---	
	9-2	2.5-4	Gray and tan clayey sand	SC	17.4	---	---	---	---	
	9-3	4.5-6	Gray and tan clayey sand	SC	16.8	---	---	---	---	
	9-4	6.5-8	Gray and tan clayey sand	SC	23.2	---	---	---	---	
	9-5	8.5-10	Reddish brown and gray clayey sand	SC	31.8	---	---	---	---	
10A2S-MWDF-12	12-1	0.5-2	Brown and tan silty sand with clay	SM-SC	12.7	---	---	---	---	
	12-2	2.5-4	Brown and gray clayey sand	SC	16.9	---	---	---	---	
	12-3	4.5-6	Tan and gray silty sand with clay	SM-SC	21.9	---	---	---	---	
	12-4	6.5-8	Gray and tan clayey sand	SC	23.9	---	---	---	---	
	12-5	8.5-10	Gray and tan silty sand	SM	30.7	---	---	---	---	

TEAM Consultants, Inc.

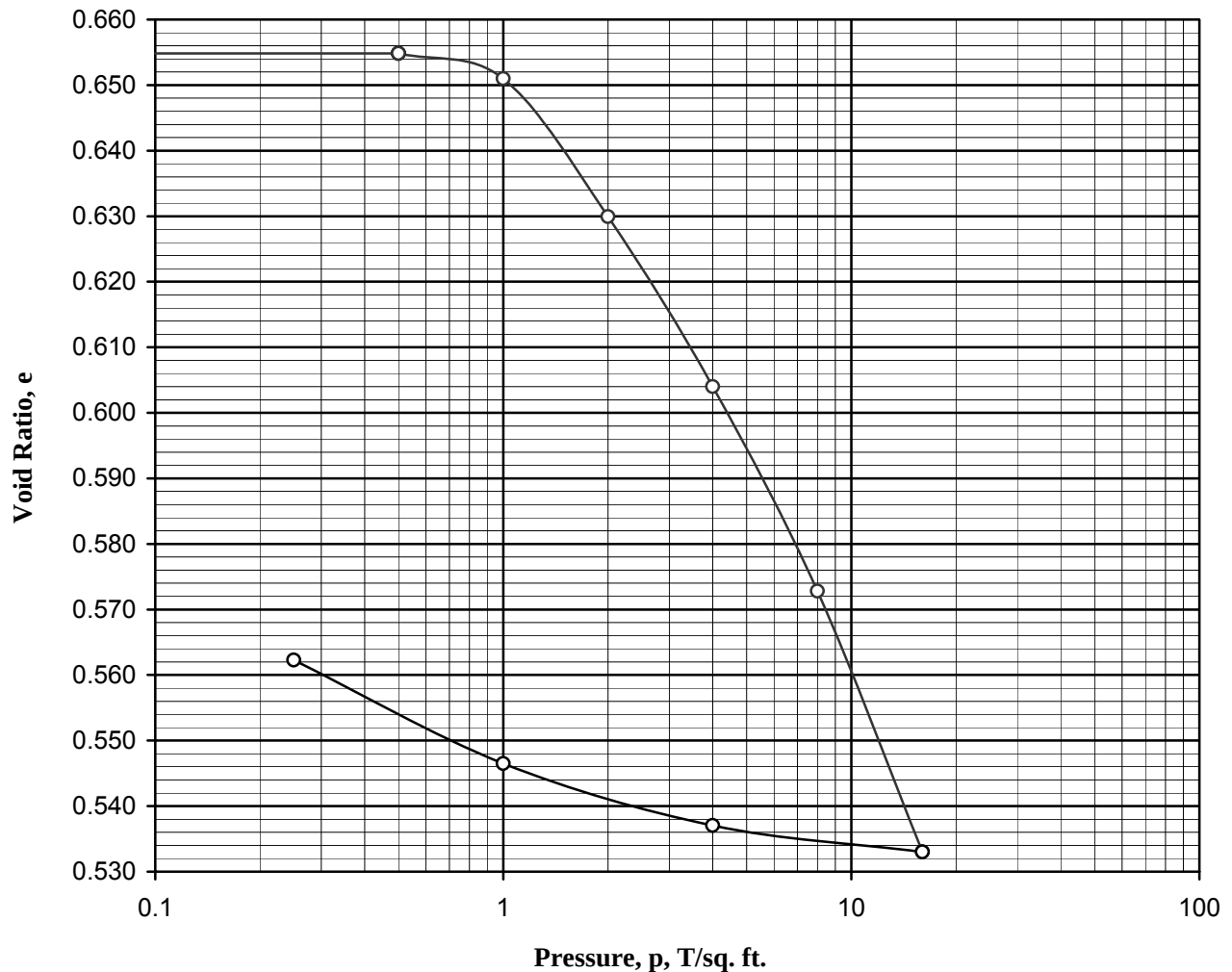
Geotechnical, Environmental, Construction Materials Testing



Type of specimen:		Undisturbed		Before Test		After Test		
Diam.	2.50 in.	Ht.	0.522 in.	Water Content, w_o	27.06%	W_f	25.09%	
Overburden Pressure, P_o				T/sq. ft.	Void Ratio, e_o	0.7314	e_f	0.6760
Preconsol. Pressure, P_c				T/sq. ft.	Saturation, S_o	99.9%	S_f	100.2%
Compression Index, C_c				Dry Density, γ_d	97.3 lb/ft ³			
Classification Light gray and tan clay								
LL	72	G_s	2.700 (assumed)	Project Fort Polk MWDF				
PL	23							
Remarks				Team Project No.: 082018				
				Boring No:10A2S-MWDF-6		Sample No.: 6-3		
				Depth: 4-6'		Date: 4/14/08		
				CONSOLIDATION TEST REPORT				

TEAM Consultants, Inc.

Geotechnical, Environmental, Construction Materials Testing



Type of specimen:		Undisturbed	Before Test		After Test					
Diam.	2.50	in.	Ht.	0.472	in.	Water Content, w_o	20.91%	W_f	25.09%	
Overburden Pressure, P_o					T/sq. ft.	Void Ratio, e_o		0.6548	e_f	0.5963
Preconsol. Pressure, P_c					T/sq. ft.	Saturation, S_o		86.2%	S_f	120.1%
Compression Index, C_c						Dry Density, γ_d		101.8	lb/ft ³	
Classification Light gray and tan clayey sand										
LL	41	G_s		2.700 (assumed)		Project Fort Polk MWDF Team Project No.: 082018 Boring No:10A2S-MWDF-6 Sample No.: 6-4 Depth: 6-8' Date: 4/18/08				
PL	19									
Remarks										
						CONSOLIDATION TEST REPORT				

APPENDIX D

DCP TEST DATA

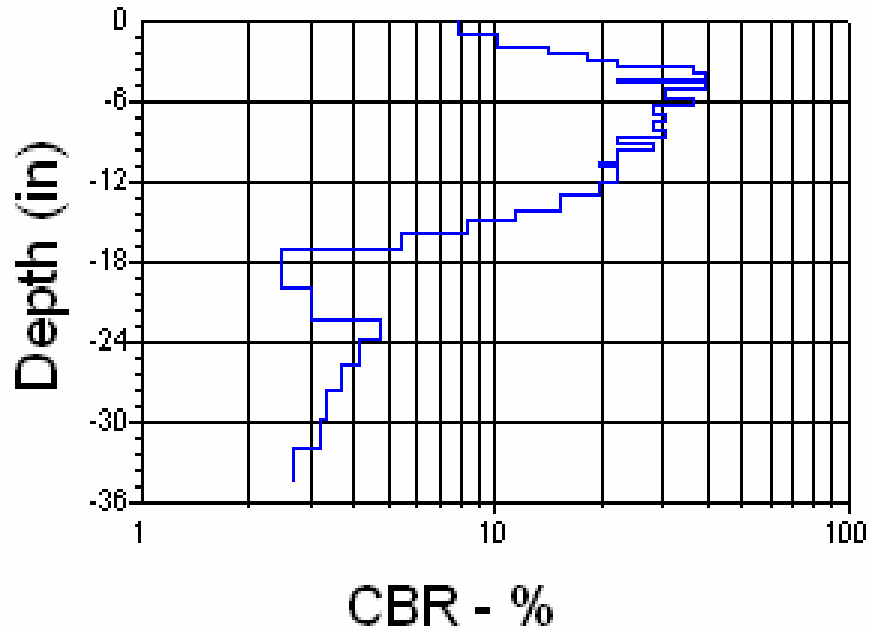
Project: Military Working Dog Facility

Date: 21 March 2008

Feature: 10A2S-MWDF-6

Station: 10A2S-MWDF-6

CBR VS DEPTH



(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" CBR 25	5
254	UNASSIGNED 6.00" CBR 26	10
381	UNASSIGNED 6.00" CBR 13	15
508	UNASSIGNED 6.00" CBR 4	20
635	UNASSIGNED 6.00" CBR 4	25
762	UNASSIGNED 4.50" CBR 3	30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

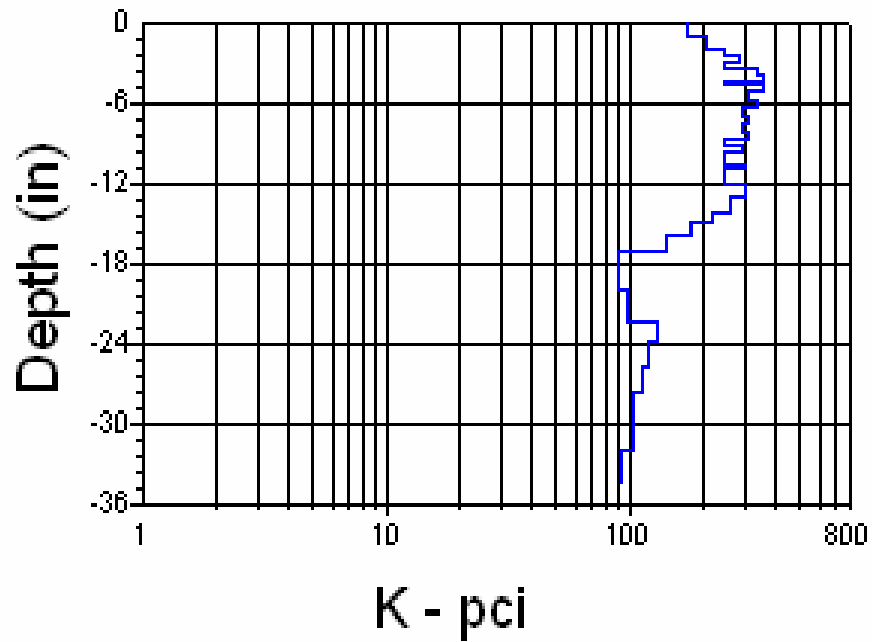
Project: Military Working Dog Facility

Date: 21 March 2008

Feature: 10A2S-MWDF-6

Station: 10A2S-MWDF-6

SUBGRADE MODULUS VS DEPTH



(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" K 278	5
254	UNASSIGNED 6.00" K 276	10
381	UNASSIGNED 6.00" K 228	15
508	UNASSIGNED 6.00" K 111	20
635	UNASSIGNED 6.00" K 110	25
762	UNASSIGNED 4.50" K 97	30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

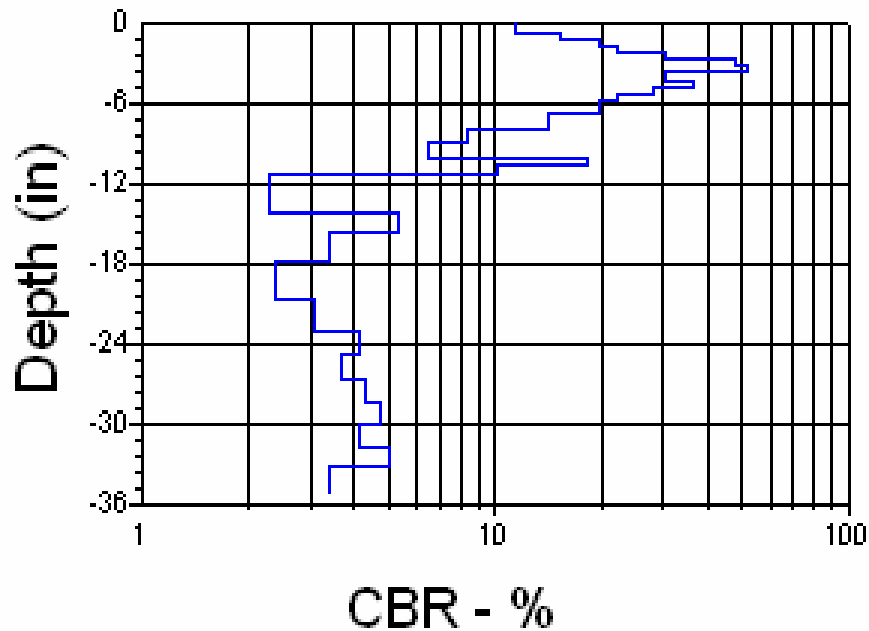
Project: Military Working Dog Facility

Date: 20 March 2008

Feature: 10A2S-MWDF-7

Station: 10A2S-MWDF-7

CBR VS DEPTH



(MM)	TEST PROFILE	(IN)
0	SUBGRADE 6.00" CBR 28	0
127	UNASSIGNED 6.00" CBR 13	5
254	UNASSIGNED 6.00" CBR 4	10
381	UNASSIGNED 6.00" CBR 3	15
508	UNASSIGNED 6.00" CBR 4	20
635	UNASSIGNED 5.25" CBR 4	25
762		30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

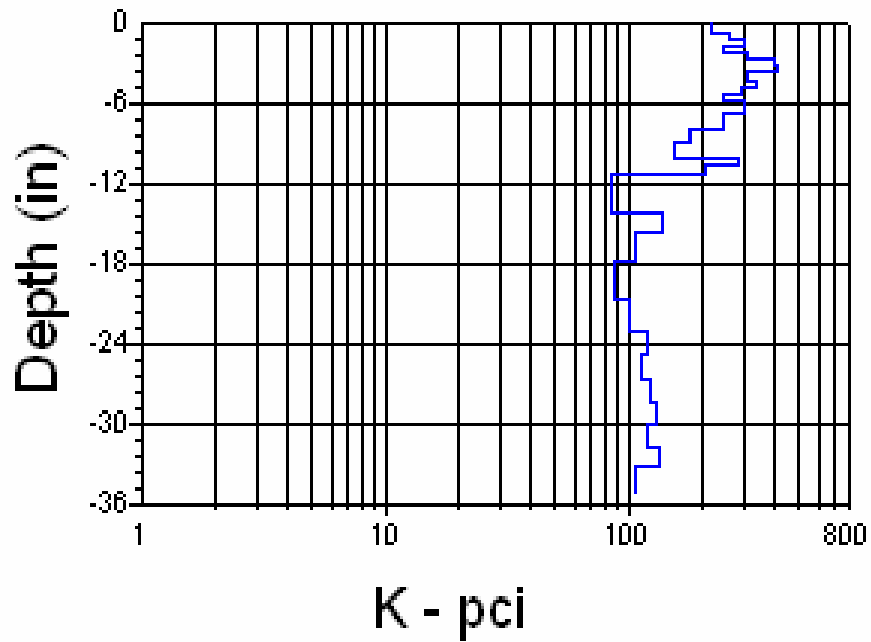
Project: Military Working Dog Facility

Date: 20 March 2008

Feature: 10A2S-MWDF-7

Station: 10A2S-MWDF-7

SUBGRADE MODULUS VS DEPTH

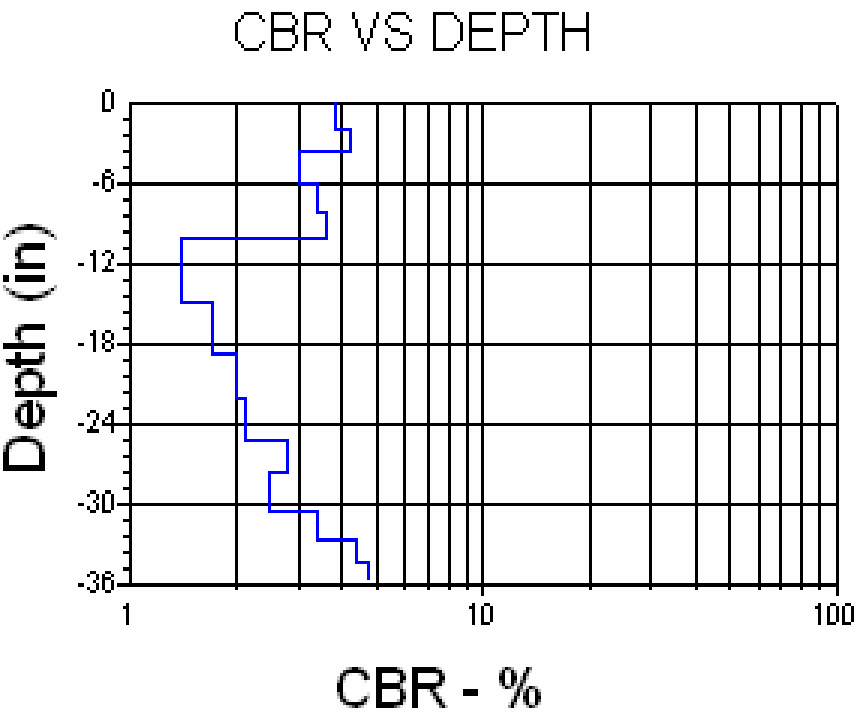


(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" K 300	5
254	UNASSIGNED 6.00" K 226	10
381	UNASSIGNED 6.00" K 111	15
508	UNASSIGNED 6.00" K 103	20
635	UNASSIGNED 6.00" K 121	25
762	UNASSIGNED 5.25" K 121	30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

Project: Military Working Dog Facility
Feature: 10A2S-MWDF-8

Date: 20 March 2008
Station: 10A2S-MWDF-8



(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" CBR 4	5
254	UNASSIGNED 6.00" CBR 3	10
381	UNASSIGNED 6.00" CBR 2	15
508	UNASSIGNED 6.00" CBR 2	20
635	UNASSIGNED 6.00" CBR 3	25
762	UNASSIGNED 5.75" CBR 4	30
889		35
1016		40
1143		45
1270		50

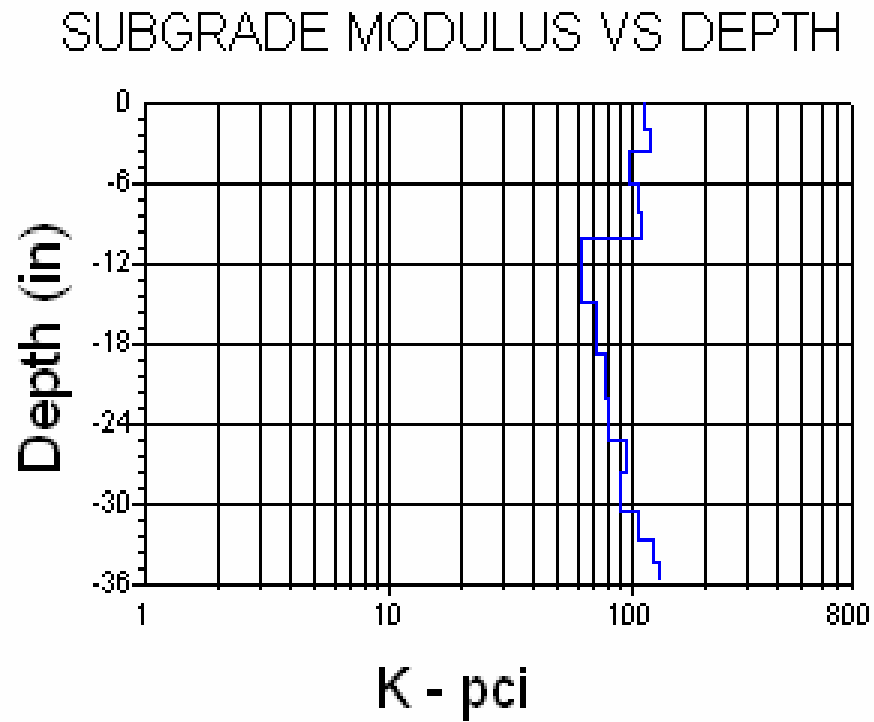
DCP TEST DATA

Project: Military Working Dog Facility

Date: 20 March 2008

Feature: 10A2S-MWDF-8

Station: 10A2S-MWDF-8



(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" K 111	5
254	UNASSIGNED 6.00" K 98	10
381	UNASSIGNED 6.00" K 67	15
508	UNASSIGNED 6.00" K 77	20
635	UNASSIGNED 6.00" K 90	25
762	UNASSIGNED 5.75" K 116	30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

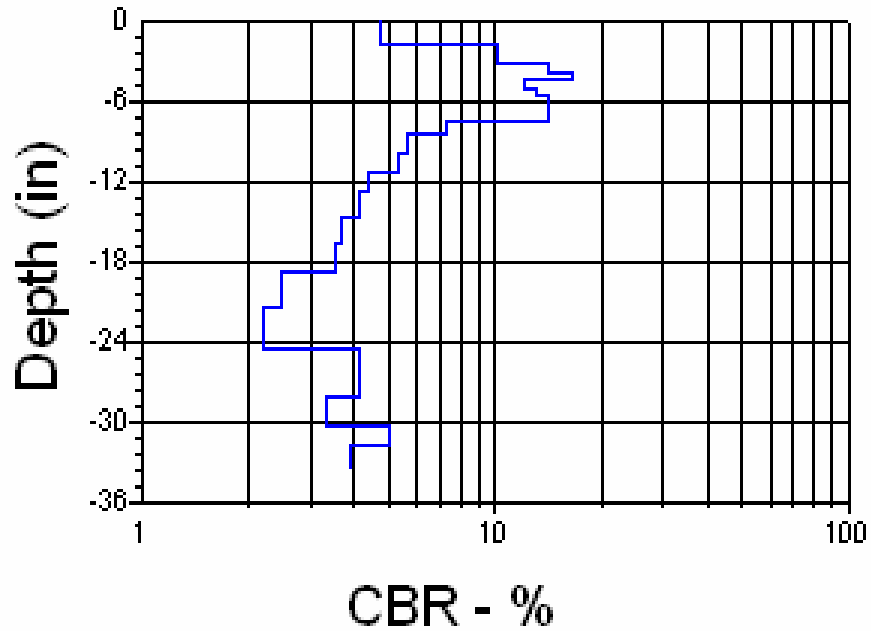
Project: Military Working Dog Facility

Date: 20 March 2008

Feature: 10A2S-MWDF-9

Station: 10A2S-MWDF-9

CBR VS DEPTH



(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" CBR 12	5
254	UNASSIGNED 6.00" CBR 9	10
381	UNASSIGNED 6.00" CBR 4	15
508	UNASSIGNED 6.00" CBR 3	20
635	UNASSIGNED 6.00" CBR 4	25
762	UNASSIGNED 3.50" CBR 4	30
889		35
1016		40
1143		45
1270		50

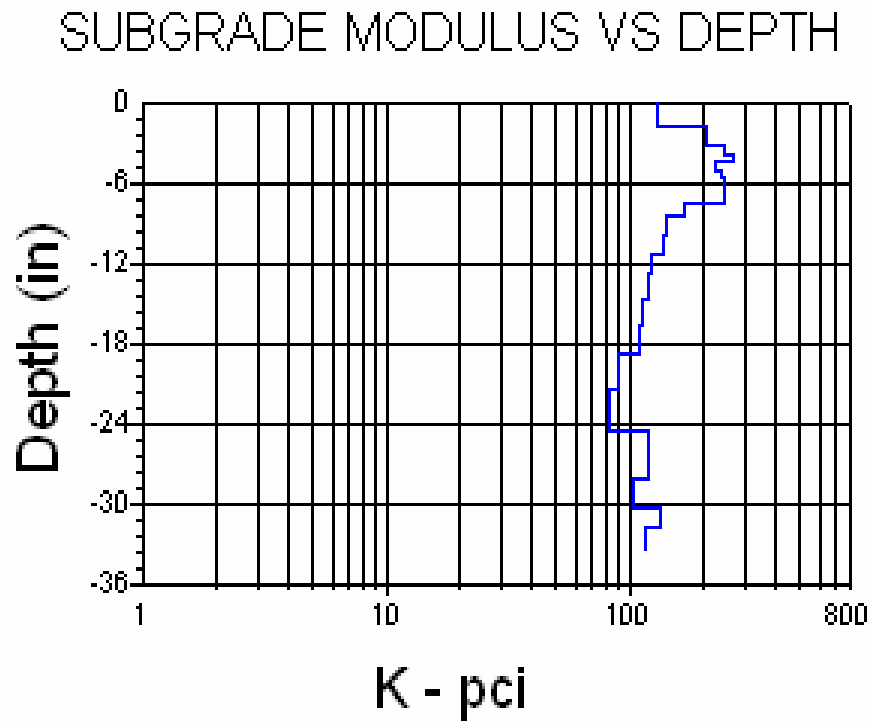
DCP TEST DATA

Project: Military Working Dog Facility

Date: 20 March 2008

Feature: 10A2S-MWDF-9

Station: 10A2S-MWDF-9



(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" K 218	5
254	UNASSIGNED 6.00" K 188	10
381	UNASSIGNED 6.00" K 116	15
508	UNASSIGNED 6.00" K 93	20
635	UNASSIGNED 6.00" K 111	25
762	UNASSIGNED 3.50" K 121	30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

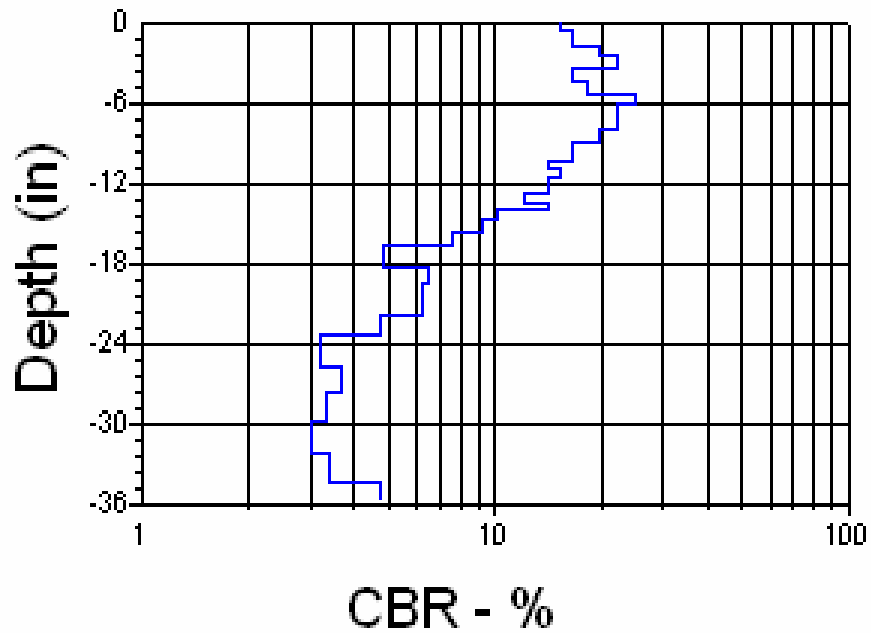
Project: Military Working Dog Facility

Date: 21 March 2008

Feature: 10A2S-MWDF-10

Station: 10A2S-MWDF-10

CBR VS DEPTH



(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" CBR 19	5
254	UNASSIGNED 6.00" CBR 19	10
381	UNASSIGNED 6.00" CBR 11	15
508	UNASSIGNED 6.00" CBR 6	20
635	UNASSIGNED 6.00" CBR 3	25
762	UNASSIGNED 5.75" CBR 4	30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

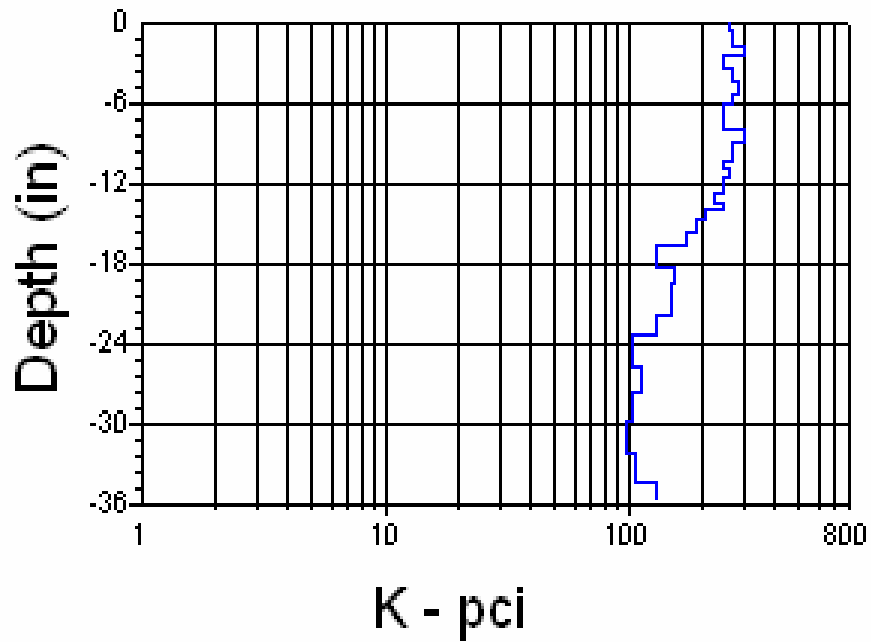
Project: Military Working Dog Facility

Date: 21 March 2008

Feature: 10A2S-MWDF-10

Station: 10A2S-MWDF-10

SUBGRADE MODULUS VS DEPTH



(MM)	TEST PROFILE	(IN)
0	SUBGRADE 6.00" K 271	0
127	UNASSIGNED 6.00" K 262	5
254	UNASSIGNED 6.00" K 210	10
381	UNASSIGNED 6.00" K 142	15
508	UNASSIGNED 6.00" K 107	20
635	UNASSIGNED 5.75" K 115	25
762		30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

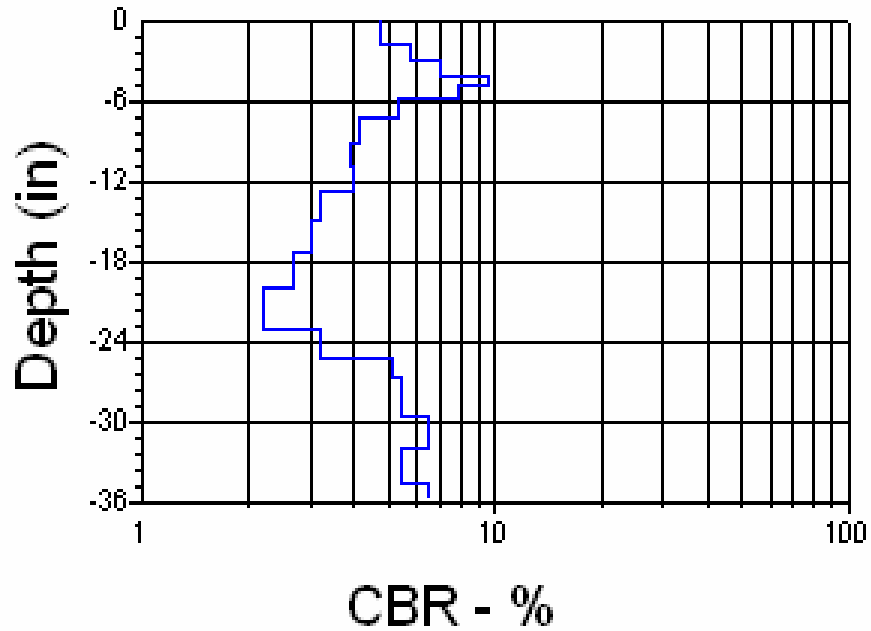
Project: Military Working Dog Facility

Date: 20 March 2008

Feature: 10A2S-MWDF-11

Station: 10A2S-MWDF-11

CBR VS DEPTH



(MM)	TEST PROFILE	(IN)
0	SUBGRADE 6.00" CBR 7	0
127	UNASSIGNED 6.00" CBR 4	5
254	UNASSIGNED 6.00" CBR 3	10
381	UNASSIGNED 6.00" CBR 3	15
508	UNASSIGNED 6.00" CBR 3	20
635	UNASSIGNED 6.00" CBR 5	25
762	UNASSIGNED 5.75" CBR 6	30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

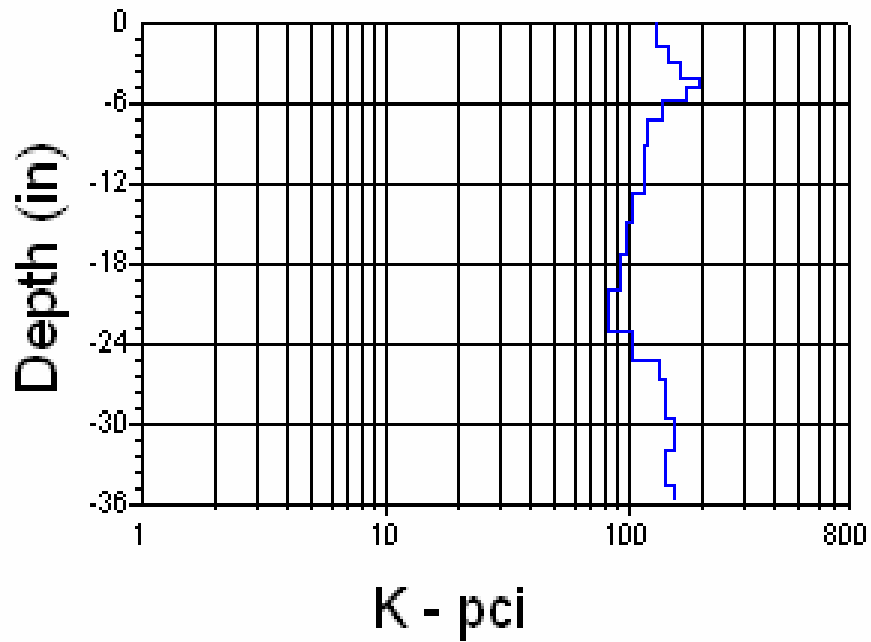
Project: Military Working Dog Facility

Date: 20 March 2008

Feature: 10A2S-MWDF-11

Station: 10A2S-MWDF-11

SUBGRADE MODULUS VS DEPTH



(MM)	TEST PROFILE	(IN)
0	SUBGRADE 6.00" K 160	0
127	UNASSIGNED 6.00" K 121	5
254	UNASSIGNED 6.00" K 103	10
381	UNASSIGNED 6.00" K 91	15
508	UNASSIGNED 6.00" K 137	20
635	UNASSIGNED 5.75" K 149	25
762		30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

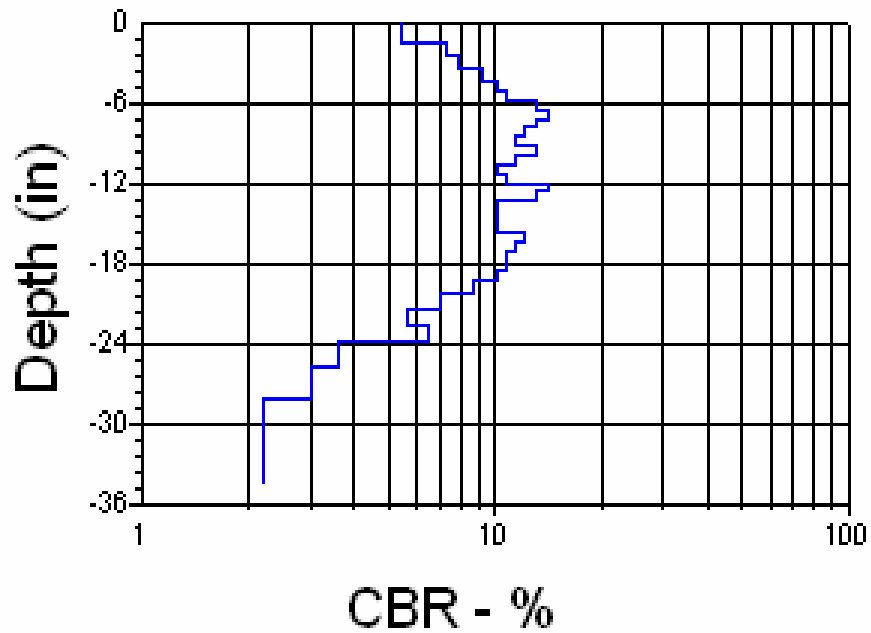
Project: Military Working Dog Facility

Date: 20 March 2008

Feature: 10A2S-MWDF-12

Station: 10A2S-MWDF-12

CBR VS DEPTH

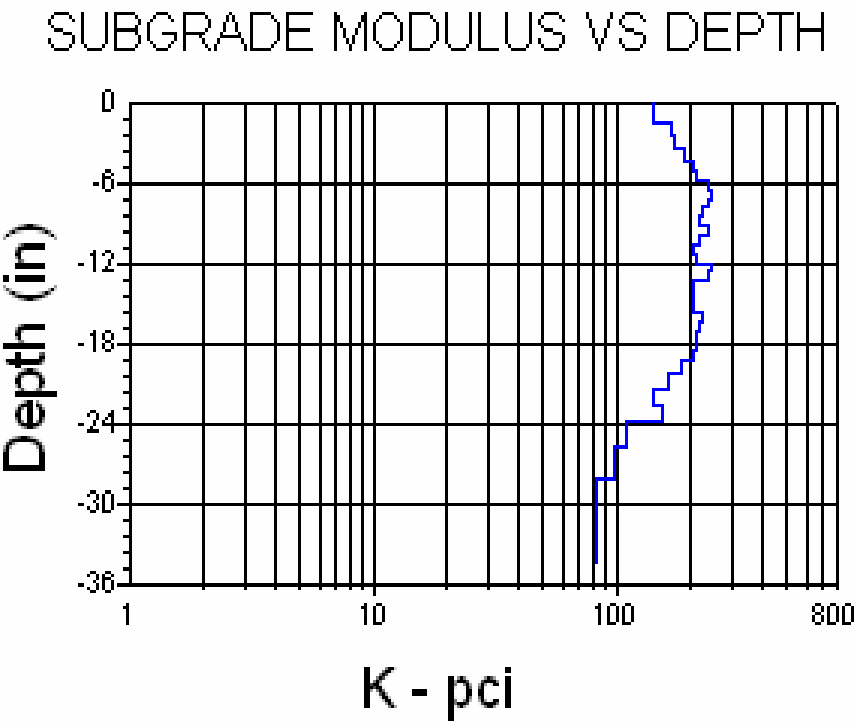


(MM)	TEST PROFILE	(IN)
0	SUBGRADE 6.00" CBR 9	0
127	UNASSIGNED 6.00" CBR 12	5
254	UNASSIGNED 6.00" CBR 11	10
381	UNASSIGNED 6.00" CBR 8	15
508	UNASSIGNED 6.00" CBR 3	20
635	UNASSIGNED 4.50" CBR 2	25
762		30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

Project: Military Working Dog Facility
Feature: 10A2S-MWDF-12

Date: 20 March 2008
Station: 10A2S-MWDF-12



(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" K 186	5
254	UNASSIGNED 6.00" K 226	10
381	UNASSIGNED 6.00" K 216	15
508	UNASSIGNED 6.00" K 169	20
635	UNASSIGNED 6.00" K 98	25
762	UNASSIGNED 4.50" K 83	30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

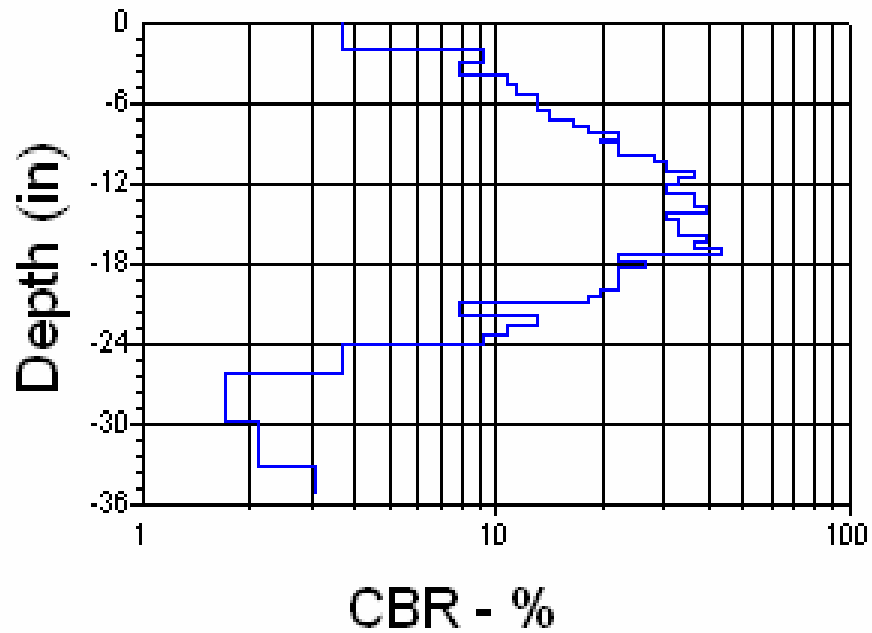
Project: Military Working Dog Facility

Date: 20 March 2008

Feature: 10A2S-MWDF-13

Station: 10A2S-MWDF-13

CBR VS DEPTH



(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" CBR 10	5
254	UNASSIGNED 6.00" CBR 23	10
381	UNASSIGNED 6.00" CBR 34	15
508	UNASSIGNED 6.00" CBR 17	20
635	UNASSIGNED 6.00" CBR 2	25
762	UNASSIGNED 5.50" CBR 3	30
889		35
1016		40
1143		45
1270		50

DCP TEST DATA

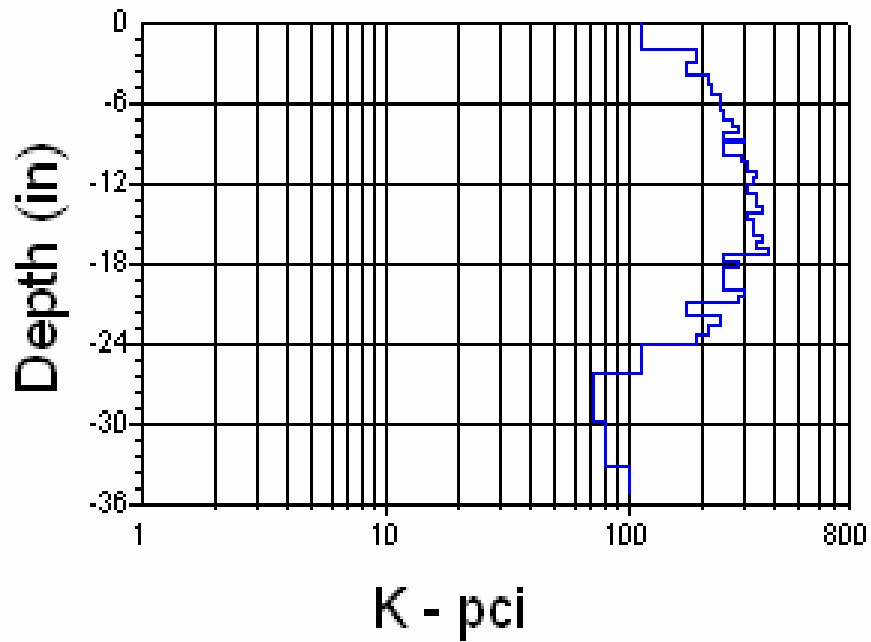
Project: Military Working Dog Facility

Date: 20 March 2008

Feature: 10A2S-MWDF-13

Station: 10A2S-MWDF-13

SUBGRADE MODULUS VS DEPTH



(MM)	TEST PROFILE	(IN)
0		0
127	SUBGRADE 6.00" K 194	5
254	UNASSIGNED 6.00" K 277	10
381	UNASSIGNED 6.00" K 324	15
508	UNASSIGNED 6.00" K 234	20
635	UNASSIGNED 6.00" K 84	25
762	UNASSIGNED 5.50" K 95	30
889		35
1016		40
1143		45
1270		50

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