B3010 Energy Renovation
MCLB Albany, GA

Work Order Number: 618343
Date: October 15, 2014

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Preface

This Request for Proposal (RFP) consists of six parts.

Part 1 contains typical contractual forms, procedures, bidding instructions, bond information, clauses and wage decisions.

Part 2 contains general contract administrative and execution requirements including, but not limited to safety, design criteria & process, quality control, security, schedule, invoicing, temporary facilities, and design and construction oversight processes.

Part 2, Attachment A, contains project-specific general requirements that may either modify and/or supplement the corresponding standard paragraphs in the Part 2 “General Requirements” section.

Part 3 lists the project requirements, specific scope items, and expected quality level above and beyond those outlined in Part 4.

Part 4 contains Performance Specifications and minimum quality requirements.

Part 5, prescriptive specifications, is typically not used in this Small Project format.

Part 6 contains background project information, references, and other project-specific requirements.

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Part 2 General Requirements

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1.0 DEFINITIONS

As used throughout the contract, the following terms shall have the meaning set forth below:

Contracting Officer (KO): The individual designated to administer the contract. Throughout this contract this individual will be responsible and possess the authority to act on behalf of the Government with respect to the specific contract.

Contracting Officer Representative (COR): The individual designated by the Contracting Officer as the authorized representative of the Contracting Officer. The COR is responsible for monitoring performance and technical management of the effort required and should be contacted regarding questions or problems of a technical nature.

Contractor: The term Contractor refers to both the prime Contractor and subcontractors, including the Designer of Record.

Designer of Record (DOR): Licensed architect/engineer working as subcontractor to or partner with prime Contractor who provides design for this contract.

Quality Control (QC): Contractor's system to control the quality of design, material, equipment and construction.

Quality Assurance (QA) Program: Government's program to evaluate the effectiveness of the Contractor's quality control. The Government's QA Program is not a substitute for the Contractor's QC Program.

Federal Holidays: New Year's Day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day; Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day.

Contract: Contract or task order.

2.0 ORDER OF PRECEDENCE

NFAS Clause 5252.236-9312. In the event of conflict or inconsistency between any of the below described portions of the confirmed contract, precedence shall be given in the following order:

a. Any portions of the proposal or final design that exceed the requirements of the solicitation..

1) Any portion of the proposal that exceeds the final design.

2) Any portion of the final design that exceeds the proposal.

3) Where portions within either the proposal or the final design conflict, the portion that most exceeds the requirements of the solicitation has precedence.

b. The requirements of the solicitation, in descending order of precedence:

1) Standard Form 1442, Price Schedule, and Davis Bacon wage rates.

2) Part 1 - Contract Clauses.

3) Part 2 - General Requirements.

4) Part 3 - Statement of Work/Project Program Requirements.

5) Part 6 - Attachments (excluding Concept Drawings).

6) Part 5 - Prescriptive Specifications, exclusive of performance specifications.

7) Part 4 - Minimum Materials, Engineering and Construction Requirements, exclusive of prescriptive specifications.

8) Part 6 - Attachments (including Concept Drawings).

3.0 POST AWARD KICKOFF MEETING (PAK)

Prior to commencement of design, and within 21 calendar days of award, meet with representatives of the Contracting Officer, installation and client to present the concept design for discussion and acceptance. The project team will develop a mutual understanding relative to the approved proposal, safety program, environmental permits and requirements, quality control procedures, and design and construction schedule. During the meeting, Contractor shall propose and gain acceptance for any critical path work activities requiring advance submittal and approval. If the contract includes work on any fire protection system, including fire alarm and mass notification systems, the Contractor and the appropriate DOR shall meet with the NAVFAC Fire Protection Engineer (FPE) to establish clear expectations of fire protection requirements of the project.

The Contractor's key personnel shall attend at the expense of the Contractor. Key personnel are defined as the Project Manager, Superintendent, CQC representative(s), DOR, major subcontractors and specialized supplementary personnel.

The PAK includes partnering, held during normal work hours with the non-labor -related costs shared by both parties. Partnering is a structured process, as well as philosophy of doing business with Contractors and clients that recognizes common goals through communication and teamwork. It helps create an environment where trust and teamwork prevent disputes, foster good working relationships to everyone's benefit, and facilitate the completion of a successful contract. If included in Attachment A, a Performance Assessment Plan that provides monthly performance feedback to the Contractor, will be discussed during the partnering session.

Key personnel will meet to identify strategies to ensure the project is carried to expeditious closure and turnover to the Client. Start the turnover process at the PAK Meeting utilizing the NAVFAC Red Zone (NRZ) Checklist and convene the Facility Turnover Meetings once the project has reached approximately 75% completion or 3 to 6 months prior to Beneficial Occupancy Date (BOD), whichever comes first. The Contracting Officer's Representative will lead the meetings and guide the discussions based on an agenda provided by the Government. The Facility Turnover effort shall fill in the NRZ Checklist including Contractor, Client, and NAVFAC Checklist Items and assign a person to be responsible for each item and a due date. The Contracting Officer's Representative will facilitate the assignment of responsibilities and fill out the NRZ Checklist. The Contracting Officer's Representative shall develop a Plan of Action and

Milestones (POAM) for the completion of all Contractor, Client, and NAVFAC Checklist items.

4.0 DESIGN

Design is the work necessary to ensure functionality, quality, and safety for critical facets of the project. Special coordination requirements, such as for phone, LAN and cable, are included in Attachment A.

a. Provide work in compliance with the following design standards and codes, as a minimum. Government standards listed in this RFP take precedence over industry standards.

b. This RFP references published standards, the titles of which can be found in the *Unified Master Reference List (UMRL)*on the Whole Building Design Guide at the Unified Facilities Guide Specification (UFGS) Website. The publications referenced form a part of this specification to the extent referenced.

The advisory provisions of all codes, requirements, and standards shall be mandatory; substitute words such as "must" or "required" for words such as "shall", "should", "may", or "recommended," wherever they appear. The results of these wording substitutions incorporate these code and standard statements as requirements. Reference to the "authority having jurisdiction" shall be interpreted to mean Contracting Officer or Contracting Officer Representative. Comply with the required and advisory portions of the current edition of the standard at the time of contract solicitation.

The following list of codes and standards is not comprehensive and is augmented by other codes and standards referenced and cross-referenced in the RFP. Refer to Parts 3 and 4 for specific requirements within other UFC's.

1) UFC 1-200-01, *General Building Requirements*

2) UFC 1-300-08, *Criteria for Transfer and Acceptance of Military Real Property*

3) UFC 1-300-09N, *Design Procedures*

4) UFC 3-560-01, *Electrical Safety, O&M*

5) UFC 3-600-01, *Fire Protection Engineering for Facilities*

6) UFC 3-600-10N, *Fire Protection Engineering*

7) UFC 3-800-10N, *Environmental Engineering for Facility Construction*

8) UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*

9) UFC 4-020-01, *Security Engineering: Facilities Planning Manual*

c. Part 3 contains the project description, functional and performance requirements, scope items, and expected quality levels that exceed Part 4. Part 4 identifies design criteria, verification requirements, and performance and quality requirements of products. See "Order of Precedence" paragraph in Part 2 for relationships between all parts of this RFP.

d. Provide professional registration and design signing and stamping requirements per requirements of UFC 1-300-09N, *Design Procedures*.

e. See Attachment A for project-specific submittal requirements.

f. Meet sustainability requirements per UFC 1-200-02 High Performance and Sustainable Building requirements and UFGS section 01 33 29.05 20 *Sustainability Requirements for Design Build*.

5.0 FIRE PROTECTION AND LIFE SAFETY REQUIREMENTS

Work shall comply with applicable criteria identified herein and Attachment A. Any project including work on means of egress, fire rated elements, Fire Suppression, Mass Notification, or Fire Alarm Systems shall require the services of a Registered Fire Protection Engineer per Attachment A.

a. Final Life Safety/Fire Protection Certification Documentation: Unless otherwise specified in Attachment A, provide certification that all life safety and fire protection features and systems have been installed in accordance with applicable criteria, the contract documents, approved submittals, and manufacturer's requirements. This certification shall summarize all life safety and fire protection features.

6.0 QUALITY CONTROL

Maintain quality control for and inspect all work under the contract. The DOR, as a member of the Contractor QC organization, shall remain directly involved during the construction process. For certain projects, the Quality Control Manager, Superintendent, and Site Safety and Health Officer may be combined - see paragraphs 6 and 34 in Attachment A. Further QC requirements are identified in Attachment A.

a. Submit a QC Plan for Government review and acceptance. The QC plan shall include the following:

1) NAMES, QUALIFICATIONS and RESPONSIBILITIES: For each person in the QC organization (design and construction).

2) OUTSIDE ORGANIZATIONS: Outside organizations, including architectural and consulting engineering firms and a description of the services these firms will provide.

3) INITIAL SUBMITTAL REGISTER (DESIGN & CONSTRUCTION): Include submittal reviewer, estimated date of delivery, and identify which design submittals require Government approval prior to construction, and which construction submittals require DOR or Government approval prior to construction.

4) TESTING LABORATORIES: Accredited laboratories as applicable.

5) TESTING PLAN AND LOG: Tests required, referenced by specification paragraph

number requiring the test, frequency, and person responsible for each test.

6) LIST OF DEFINABLE FEATURES: A Definable Feature of Work (DFOW) is a task, which is separate and distinct from other tasks, and has the same control requirements and work crews.

7) COMMUNICATION PLAN: Provide a plan for key decisions and possible problems the Contractor and Government may encounter during the design phase of the project. Communication Plan shall indicate the frequency of design meetings and what information is covered in those meetings, key design decision points tied to the Network Analysis Schedule and how the DOR plans to include the Government in those decisions, peer review procedures, interdisciplinary coordination, design review procedures, and comment resolution.

b. QC Manager Responsibilities:

1) Participate in the Post Award Kick-off, Partnering, Design Development and Coordination Meetings and Production Meetings.

2) Ensure that no construction begins before the DOR has signed and stamped the design for that segment of work, and design and construction submittals are approved as required in Attachment A and the QC Plan.

3) Immediately stop any work that does not comply with contract plans and specifications, and direct the removal and replacement of any defective work.

4) Prepare QC Reports.

5) Hold biweekly QC meetings with DOR, Superintendent and Government technical team; participation shall be suitable for the phase of work.

6) Ensure that safety inspections are performed. Attend weekly Toolbox meetings.

7) Maintain submittal log.

8) Maintain updated as-built drawings on site.

9) Maintain testing plan and log. Ensure that all testing is performed per contract.

10) Maintain deficiency log on site, noting dates deficiency identified, and date corrected.

11) Certify and sign statement on each invoice that all work to be paid under the invoice has been completed in accordance with contract requirements.

12) Perform Punch-out and Pre-final inspections, and participate in Final Inspections. Establish list of deficiencies; correct prior to the Final inspection.

13) Ensure that all required keys, operation and maintenance manuals, warranty certificates, and the As-built drawings are submitted to the Contracting Officer.

14) If Commissioning is part of work, engage Commissioning Authority (CxA), coordinate their oversight of Contractor's work and verify CxA's performance in accordance with UFGS section 01 45 00.05 20.

c. Use the Three Phases of Control process for construction QC.

1) Preparatory Phase: Review all applicable documents for compliance with all applicable laws, codes, regulations, and the requirements of the contract, including contract drawings and specifications. Determine requirements for testing and certification. Review submittal approvals for materials, equipment, shop drawings, and applicable methods of construction and installation. Include all Preparatory Phase items in the QC Report.

2) Initial Phase: Observe and inspect the initial portion of the work performed under a DFOW to establish the quality of the workmanship, resolve conflicts in construction, ensure that testing is done and certified as required, and to check all work procedures to ascertain the work is in conformance with required safety requirements. Record and report nonconforming work and work not of acceptable quality and requiring correction or rework. Include all Initial Phase items, along with initial phase checklist and, in the QC Report.

3) Follow-Up Phase: Occurs at the completion of each DFOW. Ensure the work is in compliance with contract requirements, quality of workmanship for all work is maintained, and all work performed meets safety requirements. Include all Follow-Up Phase items, including date, in the QC Report.

d. The QC Manager must posses a current certificate showing successful completion of the NAVFAC Contractor Quality Management (CQM) Training.

7.0 SUBMITTAL PROCESS

Provide to the Government submittals as listed. See Paragraph 4, DESIGN, and Attachment A for specific design and construction submittal format and approval and surveillance requirements. Design drawings may be prepared more like shop drawings to minimize construction submittals after final designs are approved. Therefore, the Contractor is encouraged to prepare and submit with the design drawings, appropriate connection, fabrication, layout, and product specific drawings.

a. QC Plan, prior to Design/Construction (may be phased).

b. Design and construction submittals, prior to construction, approved IAW QC Plan, the DOR or QC Specialist is the approving authority for submittals unless otherwise indicated in Attachment A.

c. Sustainability Action Plan in accordance with 01 33 29.05 20 Sustainability Requirements

d. DOR-approved design and construction submittals identified in Attachment A for Government surveillance (typically Fire Protection system and Life Safety submittals). Stamp the submittals "FOR SURVEILLANCE ONLY." Submit Surveillance submittals to the Government prior to starting work for that item. Submittals required for surveillance will be returned only if corrective actions are required.

e. Material Safety Data Sheets (MSDS) as applicable.

f. Schedule: Provide detailed design schedule and preliminary construction schedule, due prior to PAK.

g. Environmental Protection Plan, prior to start of the work.

h. Contractor Safety Self-Evaluation Checklist.

i. Accident Reports - submit if incidence occurs.

j. Safety Submittals: Per Paragraph 34 and Attachment A, prior to construction.

k. Schedule of Prices, initial due 21 calendar days after award and a detailed due prior to construction.

l. Budget Management Summary: Per Attachment A.

m. Record Drawings, due at Beneficial Occupancy

n. Operation and Maintenance Information: Per Paragraph 23, Part 2 Attachment A, and Part 4. Due prior to testing as applicable, no later than 30 calendar days before Beneficial Occupancy.

o. Licenses and Permits: Per Attachment A and Part 4.

p. DD Form 1354: For all new construction, demolition, and any construction on an existing facility that adds new parts, items, or systems that are not maintenance or repair; e.g. replacement of windows, replacement of roofs, replacement of an exterior utility, adding an AC system, adding exterior lighting, the DOR shall prepare DD Form 1354 TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY, in accordance with UFC 1-300-08, available at http://65.204.17.188/report/doc_ufc.html . Submit form for Government approval a minimum of 30 calendar days prior to final acceptance of work.

q. High Performance and Sustainable Building (HPSB) compliance checklists in accordance with UFC 1-200-02, *High Performance and Sustainable Building Requirements*.

8.0 SUPERVISION

The Contractor shall have a supervisor fluent in English on the job site during working hours. Additional requirements per Attachment A.

9.0 SCHEDULE

Provide Design and Construction Schedule adequate for Contractor to efficiently manage project and for Government to efficiently manage QA and scheduling interfaces. Include construction phasing and any work restrictions (such as occupied spaces, special hours, potential work

disruptions). Schedule shall contain DFOWs and dates for completion of each task including material procurement, and construction activities. Update the schedule at least monthly; use 3-week look-ahead for each QC meeting.

10.0 BUDGET MANAGEMENT

The Contractor shall be responsible for budget management throughout the entire project. It is the intent of the Government to partner with the Contractor to maximize project value while strictly controlling contract modifications and maintaining overall fiscal control. When required in Attachment A, develop a Budget Management System for each phase of the design.

11.0 PRECONSTRUCTION CONFERENCE

Prior to construction or demolition start, meet with representatives of the Contracting Officer to discuss and develop mutual understanding relative to administration of the safety programs, environmental issues, safety of building occupants and surrounding area, hazardous materials, waste disposal, construction QC procedures, construction schedule, labor provisions and other construction phase contract procedures. The Preconstruction Conference shall reinforce partnering philosophy initially established during the PAK.

12.0 ACCESSIBILITY

Provide barrier-free design in accordance with UFC 1-200-01, *General Building Requirements*.

13.0 CONTRACTOR'S PRODUCTION REPORTS

Submit Contractor Production Reports on forms furnished for this purpose. Complete the reports weekly unless otherwise requested by the Contracting Officer. Reports shall include:

a. Worker hours by classification, move-on and move-off of construction equipment furnished by the prime, subcontractor or the Government, and materials and equipment delivered to the site.

b. Safety meetings, checks and inspections.

c. Disposition of Construction Waste Material: Per Waste Management Plan and per Environmental Protection Plan.

d. Design and Construction Services: Including, but not necessarily limited to:

1) Check all Contract Documents for correctness and correlation. If the Contractor notes any discrepancy or ambiguity, immediately notify the COR.

2) Examine the work site as to conditions affecting the work. Field verify the site and scope of work, including but not limited to the measurement and location of all significant items required to perform the work. Failure by the Contractor to familiarize oneself with available information regarding these conditions shall not relieve the Contractor from the responsibility of successfully completing the work.

14.0 SCHEDULE OF PRICES

Submit on forms furnished by the Government. The initial schedule of prices may be preliminary for construction activities until the design is developed. Include a detailed breakdown of the contract price, with quantities for each kind of work. Include General Conditions, profit, and overhead in the unit prices. Break down into design and each construction category if stated in Attachment A. The Contractor may invoice for bonds once the Government has approved the bonds, however, no other requests for payment will be processed without an approved Schedule of Prices.

15.0 CONTRACTOR INVOICES

Contractor requests for payment shall conform and will be processed in accordance with the requirements of FAR 52.232-5 and FAR 52.232-27.

a. Content of Invoice: Requests for payment in accordance with the terms of the contract shall consist of the following: (If NFAS Clause 5252.232-9301 is present in the contract, documents shall be provided as attachments in Wide Area Workflow (WAWF). The maximum size limit per attachment is less than 2 megabytes, but you may have an unlimited number of attachments. If a document cannot be attached to WAWF due to system or size restrictions it shall be provided as instructed by the contracting officer). If NFAS Clause 5252.232.9301 is not present in the contract, follow the invoicing instructions provided in the contract.

1) Contractor's Invoice on NAVFAC Form 7300/30, which shall show, in summary form, the basis for arriving at the amount of the invoice.

2) Contractor's Monthly Estimate for Voucher (LANTNAVFACENGCOM Form 4-4330/110 (New 7/84)), with subcontractor and supplier payment certification.

3) Affidavit to accompany invoice (LANTDIV NORVA Form 4-4235/4 (Rev. 5/81)).

4) Updated copy of submittal register.

5) Updated copy of progress schedule. Furnish as specified in "FAR 52.236-15, Schedules for Construction Contracts."

6) Network mathematical analysis.

7) Contractor Safety Self Evaluation Checklist (original)

8) Final release (for final payment only)

b. Payment:

1) Payment will be made on Contractor's submission of itemized requests and will be subject to reduction for overpayments or increased for underpayments from previous payments. The Government may withhold payment or reduce payments for the following:

a) Defects in material or workmanship.

b) Claims the Government may have against the Contractor under or in connection

with this contract.

c) Contractor's failure to submit an updated schedule.

d) Payroll violations.

e) Unless otherwise adjusted, repayment to the Government upon demand for overpayments made to the Contractor.

2) Payments may be made for materials, stored off construction sites, under the following conditions:

a) Conditions described in Attachment A.

b) Materials adequately insured and protected from theft and exposure.

c) Materials not susceptible to deterioration or physical damage in storage or in transit to the job site are acceptable for progress payments. Items such as steel, machinery, pipe and fittings and electrical cable are acceptable, but items such as gypsum board; glass, insulation and wall covering are not.

d) Materials in transit to the job or storage site are not acceptable for payment.

e) Conditions specified in FAR 52.232-5(b) Payments Under Fixed Price Construction Contracts.

16.0 PROTECTION OF GOVERNMENT PROPERTY

Take special care to protect Government property. Return areas damaged as a result of construction under this contract to their original condition. In addition to FAR 52.236-9, *Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements*, perform the following:

a. Remove or alter existing work or facilities in such a manner as to prevent injury or damage to any portion of the existing work or facilities that remain.

b. Repair or replace portions of existing work altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.

c. Preserve the natural resources in accordance with the approved environmental protection plan.

17.0 EXISTING UNDERGROUND UTILITIES

Verify on-site utilities and have them marked out by a utility locator service prior to the start of construction. Where existing piping, utilities, oil and gas lines, and underground obstructions of any type that are to remain are indicated in locations to be traversed by new piping, ducts, and other work provided herein, and such are not indicated or specified to be removed, the elevations

of the existing utilities and obstructions shall be determined before the new work is laid closer than the nearest manhole or other structure at which an adjustment in grade could be made. Obtain required dig permits and notify the Contracting Officer 21 calendar days prior to any excavation. Refer to Attachment A for specific station requirements.

18.0 LICENSES / PERMITS

Obtain all appointments, licenses, and permits required to perform work under this contract at no additional expense to the Government. See "Permits Record of Decision" (PROD) form for list of permits. Comply with all applicable federal, state, and local laws, and base regulations and procedures. Provide evidence of such permits and licenses to the Contracting Officer before work commences and at other times as requested by the Contracting Officer (see FAR 52.236-7, *Permits and Responsibilities*). Coordinate permit applications with Navy or local environmental office.

The contractor shall submit a complete PROD form with the first design submittal package. A blank PROD form can be obtained at the Download Tab of Part 6 of the NAVFAC Design-Build website at the following link http://ndbm.wbdg.org/system/html/6/453 . Contractor shall determine correct permit fees and pay said fees. Copies of all permits, permit applications, and the completed PROD form shall be forwarded to the Government's Civil Reviewer and Environmental Reviewer.

Contractor is exclusively responsible for his full compliance with patent laws and shall affirm that the company is licensed to use equipment and processes the company shall employ in this project.

19.0 CONTRACTOR WORK SITE

Limit use of the premises for work and for storage of material and equipment associated with the contract. Unless otherwise specified or separately agreed to, Government owned material handling equipment, transportation equipment or general tools will not be available for Contractor's use. Clean work area daily and after completion of the work, removing all loose debris and disposing of all non-permanent materials IAW the contractor's Waste Management Plan.

a. **Temporary Facilities**: The Contractor may provide his own office facilities; coordinate and obtain advance approval from the Contracting Officer. Provide and maintain suitable sanitary facilities within the construction limits of the contract. Dispose of sanitary waste in accordance with the applicable laws, and local regulation.

b. **Contractor-Furnished Equipment**: Equipment is subject to the inspection and approval of the Contracting Officer, prior to and during the life of the contract. All equipment and vehicles shall display readily visible Contractor identification markings. Relocate stored Contractor equipment which may interfere with operations of the Government or with others on-site.

c. **Contractor-furnished Material**: Protect and secure products stored at this site.

1) All replacement units, parts, components, and materials to be used in the maintenance, repair and alteration of facilities and equipment shall be new and compatible with the existing equipment on which it is to be used, and shall comply with applicable Government, commercial, or industrial standards such as Underwriter's Laboratories, Inc., and National Electrical Manufacturers Association.

2) In addition, submit a current certificate recognized by the State or local authority that states the Contractor has completed at least 10 hours of training in backflow preventer installations.

20.0 TEMPORARY UTILITIES

a. The Government will provide water and power in reasonable quantities at the prevailing rates.

b. All labor, material, and equipment necessary to affect temporary utility tie-ins, including transformers if necessary, shall be at the expense of the Contractor and under the surveillance of the Contracting Officer.

c. The Contractor shall be responsible for any damages to Government, private or public facilities and property that may result from the installation and removal of these temporary utility tie-ins. Corrections and repairs shall be made at the Contractor's expense.

d. The actual location and installation of the temporary tie-in, together with any interruptions of utilities systems, shall be identified and approved by the Contracting Officer prior to execution. Notify the COR and Station Utilities 15 calendar days prior to any tie-ins.

e. Permanent utility systems, when indicated, will be available for tie-in.

f. Telephone and Data Service: Make arrangements with local telephone company, NMCI and other pertinent base communication departments.

g. Maintain utility services to existing facilities surrounding the site at all times during construction.

h. Contractor shall install and certify back flow preventers on all connections to the potable water supply system.

21.0 ENVIRONMENTAL CONTROLS AND PROTECTION

Unforeseen Hazardous Conditions: Do not disturb hazardous materials and report condition immediately to the Contracting Officer potentially hazardous conditions that are uncovered or the Contractor becomes aware of that have not been identified in the RFP. This includes hazardous components and materials and contamination (see UFC 3-800-10N, *Environmental Engineering for Facility Construction*, for more information). This includes conditions that are not only hazardous to humans but wildlife, marine life and the environment. Stop work in the area of the questionable material or condition until identification and direction is provided.

22.0 WASTE MANAGEMENT

Develop a Waste Management Plan that identifies all recyclable material and disposal methods for all material. Contractor shall reduce, recycle or salvage as much waste material as possible with a goal of diverting at least 50% of construction waste from landfill. Address waste reduction, recycling and salvage as part of the waste management plan. Report volume or weight of disposed and recycled materials. Report destination of debris diverted from disposal. The Contractor is responsible for removing and disposing of all waste materials generated. Consider all material recyclable or reusable, unless clearly demonstrated the material requiring disposal is waste material.

23.0 RECORD DRAWINGS AND OPERATION & MAINTENANCE (O&M) DATA

Furnish hard copy and electronic format for all as-built and O&M information. Record drawings shall incorporate all changes to the approved final design. Provide O&M data for as-built products, materials, and equipment, including data sheets, test reports, warranties, certificates, list of spare parts suppliers for all pieces of equipment, and approved construction submittals. Refer to Attachment A.

24.0 WARRANTY

Warrant all materials and work for not less than one year after final acceptance of the work, except as otherwise indicated in this RFP. If required to provide remedial repair of previously installed work due to latent defect or unacceptable work performance, warrant the repaired work for one year after the completion and acceptance of the repair. For warranted items, furnish the manufacturers' original written warranty accompanied by a copy of the supplier's receipt showing place of purchase, telephone number of supplier, address, delivery order number if applicable, and ticket number.

25.0 PERFORMANCE EVALUATIONS

The evaluation will take into account all aspects of the Contractor's performance, including evaluations from Performance Assessment Plans when included in Attachment A. Performance evaluations may be completed any time during the contract. The Government will provide a copy of the performance evaluation and an opportunity to discuss the evaluation. The performance evaluations will have an impact on the award of future contracts.

26.0 WORK HOURS, ACCESS AND PASSES

All Contractor employees, including subcontractors, and subcontractors' employees, suppliers, and suppliers' employees shall be required to comply with the Installation Security Requirements regarding personnel, vehicle, and equipment security passes and access the jobsite. Nothing in the contract shall be construed in any way to limit the authority of the Commanding Officer to prescribe new, or to enforce existing security regulations governing the admission or exclusion of persons and the conduct of persons while aboard the station, including but not limited to, the rights of search of all persons or vehicles aboard the station.

Coordinate with the Contracting Officer for specific security and access requirements.

a. Access to Buildings/ Occupied Buildings: The Contractor may work in or around existing occupied buildings. The Contractor is responsible, via the Contracting Officer, to obtain access to building and facilities and arrange for them to be opened and closed. Do not enter the building(s) without prior approval of the Contracting Officer. Keep the existing

buildings and their contents secure at all times. Provide temporary closures as required to maintain security. Contract personnel will not be permitted in security-regulated buildings or areas unless cleared by the Security Officer.

b. Passes and Badges: Contractor employees and representatives performing work under this contract are required to be either United States citizens or documented legal residents (status verified by prime contractor). All Contractor employees shall obtain the required employee and vehicle passes. Follow guidance per Attachment A for bases that participate in the Navy Commercial Access Control System (NCACS). Each employee shall wear the Government issued badge over the front of the outer clothing. Failure to obtain security and base access passes shall not be a cause for contract performance time extension. The Contractor shall immediately turn in all terminated employee's badges to the issuing office.

1) Personnel will be issued appropriate identification badges when the Contractor submits, in writing on company letterhead, a list indicating that all individuals are bona fide employees. Employees shall complete questionnaires and other forms as required for security. Allow 14 calendar days for background checks and processing. The list shall contain the following information:

a) Name of employee

b) Social Security Number

c) Date of Birth

d) Place of Birth

e) Citizenship, Statement of (U.S.) or proof of documented legal residency

f) Employment Eligibility Verification Form (DHS FORM I-9). This form is available at http://uscis.gov/graphics/formsfee/forms/files/I-9.pdf

c. Contractor Vehicles: All vehicles shall display a valid state license plate and safety inspection sticker, if applicable, and shall be maintained in good repair. The company name shall be displayed in a clearly visible manner and size on each Contractor vehicle used in the course of work. Registration, proof of insurance and driver's licenses are required to obtain a station vehicle pass.

d. Work Hours: Unless otherwise indicated, work will be located on a Government compound, military installation, or station. Contractor work hours shall be between 0630 and 1700 Monday through Friday, or as indicated in Attachment A. Obtain advance approval from the Contracting Officer for Contractor personnel to remain on site beyond normal working hours. Notify the Contracting Officer at least 48 hours in advance to obtain approval for access to the jobsite or work outside of normal working hours or on Saturday, Sunday, and Federal Holidays.

e. Contractor Personnel: Provide the Contracting Officer the name(s) of the supervisory person(s) authorized to act for the Contractor. Provide, and update as required, a list of the key personnel for the Contractor and subcontractors including addresses and telephone numbers for use in the event of an emergency.

f. Contractor employees shall conduct themselves in a proper, efficient, courteous and

businesslike manner. Remove from the site any individual whose continued employment is deemed by the Contracting Officer to be contrary to the public interest or inconsistent with the best interests of National Security.

27.0 SECURITY REQUIREMENTS

All security requirements apply to all subcontractors and suppliers associated with this contract. Special or extraordinary security requirements are identified in Attachment A. In addition to special or extraordinary security requirements, comply with the following:

a. Do not publicly disclose any information concerning any aspect of the materials or services relating to this contract, without prior written approval of the Contracting Officer.

b. Do not disclose or cause to be disseminated any information concerning the operations of the activity's security or interrupt the continuity of its operations.

c. Do not disclose any information to any person not entitled to receive it. Failure to safeguard any classified information that may come to the Contractor or any person under his control, may subject the Contractor, his agents or employees to criminal liability under 18 U.S.C., Sections 793 and 798.

d. Direct to the Contracting Officer and or Installation Security Officer for resolution all inquiries, comments or complaints arising from any matter observed, experienced, or learned as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information.

e. Coordinate photography requirements with the Contracting Office. Some areas restrict or prohibit photographing Government property.

Deviations from or violations of any of the provisions of this paragraph, will, in addition to all other criminal and civil remedies provided by law, subject the Contractor to immediate termination for default and withdrawal of the Government's acceptance and approval of employment of the individuals involved.

28.0 REQUIRED INSURANCE

Within 15 calendar days after award, furnish the Contracting Officer a Certificate of Insurance as evidence of the following insurance coverage amounts not less than the amount specified below in accordance with FAR Clause 52.228-5, *Insurance Work On A Government Installation*:

a. Comprehensive General Liability: $500,000 per occurrence.

b. Automobile Liability: $200,000 per person, $500,000 per occurrence for bodily injury; $20,000 per occurrence for property damage.

c. Worker's Compensation: As required by Federal and State Worker's compensation and

occupational disease and other laws.

d. Employer's Liability Coverage: $100,000, except in states where worker's compensation may not be written by private carriers.

e. Others as required by state law.

f. Above insurance coverages are to extend to Contractor personnel operating Government owned equipment and vehicles.

g. The Certificate of Insurance shall provide for 30 calendar days written notice to the Contracting Officer by the insurance company prior to cancellation or material change in policy coverage. Other requirements and information are contained in Attachment A.

For projects which require removal of asbestos containing materials the Asbestos Contractor or Subcontractor, as the case may be shall provide occurrence-based liability insurance with asbestos coverages in an amount not less than $1,000,000 and shall name the Government and PQP as additional insureds.

29.0 PROPRIETARY RIGHTS

All field notes, design drawings, specifications, and other documents collected and produced as part of this contract shall be considered property of the Government. These data shall not be used, in whole or part, published or unpublished, as a part of any technical or non-technical presentation without written pre-approval of the Contracting Officer.

30.0 GOVERNMENT FURNISHED MATERIAL AND EQUIPMENT

If applicable, the Government will furnish the materials and equipment for installation by the Contractor pursuant to contract clause FAR 52.245-2, *Government Property (Fixed Price Contracts)*. Notify the Contracting Officer in writing at least 15 calendar days before the materials and equipment are required. Pick up materials and equipment no later than 30 calendar days after such date. When materials and equipment are not picked up by the 30th day, the Contractor will be charged for storage at the prevailing rate. The Contracting Officer will specify the location of materials and equipment and the delivery location.

31.0 ORAL MODIFICATION

No oral statement by any person other than the Contracting Officer, as provided in the contract clause entitled, "CHANGES AND CHANGED CONDITIONS," will in any manner or degree modify or otherwise affect the terms of this contract.

32.0 NO WAIVER BY THE GOVERNMENT

The failure of the Government in any one or more instances to insist upon strict performance to any of the terms of this contract or to exercise any option herein conferred shall not be construed as a wavier or relinquishment to any extent of the right to assert or rely upon such terms or options on any future occasion.

33.0 EQUITABLE ADJUSTMENTS - WAIVER AND RELEASE OF CLAIMS

a. Whenever the Contractor submits a claim for equitable adjustment under a clause which provides for equitable adjustment of the contract, such claim shall include all types of adjustments in the total amounts to which the clause entitles the Contractor, including, but not limited to, adjustment arising out of delays or disruptions.

b. Except as the parties may otherwise expressly agree, the Contractor shall be deemed to have waived: (1) any adjustments to which he otherwise might be entitled under the clause where such claim fails to request such adjustments; and (2) any increase in the amount of equitable adjustments additional to those requested in its claim.

c. The Contractor agrees that, if required by the Contracting Officer, it shall execute a release, in form and substance satisfactory to the Contracting Officer, as part of the supplemental agreement setting forth the aforesaid equitable adjustment. The Contractor further agrees that such release shall discharge the Government, including its officers, agents, and employees, from any further claims, including, but not limited to, further claims arising out of delays or disruptions caused by the aforesaid change.

34.0 SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS

a. References: The publications listed below form a part of this specification to the extent referenced. Use current version of referenced requirements at the time of contract solicitation. The publications are referred to within the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
ANSI Z359.1, *Safety Requirements for Personal Fall Arrest System, Subsystems and Components*
ANSI A10.32, *Fall Protection systems for Construction and Demolition Operations*
ANSI A10.6, *Demolition Operations*
ANSI Z9.2, *Fundamentals Governing the Design and Operation of Local Exhaust Systems*
ANSI Z88.2, *Respiratory Protection*
ANSI Z358.1, *Emergency Eyewash and Shower Equipment*

ASME INTERNATIONAL (ASME)
ASME B30.22, *Articulating Boom Cranes*
ASME B30.3, *Construction Tower Cranes*
ASME B30.5, *Mobile and Locomotive Cranes*
ASME B30.8, *Floating Cranes and Floating Derricks*

AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM)
ASTM Standards on Lead-Based Paint Abatement in Buildings
ASTM E 1368, *Visual Inspection of Asbestos Abatement Projects*

DEPARTMENT OF DEFENSE (DoD)
MIL-STD-1472F, Military Standard, *Human Engineering Design Criteria for Military Systems, Equipment and Facilities*

DoD-HDBK 743A, *Anthropometry of US Military Personnel*

DEFENSE LOGISTICS AGENCY (DLA)
DLA 4145.25, *Storage and Handling of Compressed Gases and Liquids in Cylinders*

EPA Standards and Documents - General
15 U.S.C. 2601 - *Toxic Substances Control Act*
EPA Title X - *The Residential Lead Based Paint Hazard Reduction Act*
EPA & HUD - *Lead Safe Work Practices*
HUD Guidelines, *Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing*

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
NFPA 241, *Safeguarding Construction, Alteration, and Demolition Operations*
NFPA 51B, *Fire Prevention During Welding, Cutting, and Other Hot Work*
NFPA 70, *National Electrical Code*
NFPA 70E, *Electrical Safety in the Workplace*

U.S. ARMY CORPS OF ENGINEERS (USACE)
EM 385-1-1 Safety -- *Safety and Health Requirements*

UNITED FACILITIES CRITERIA (UFC)
UFC 3-560-01, *Electrical Safety, O&M*

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
29 CFR 1910 *Occupational Safety and Health Standards*
29 CFR 1910.146 *Permit-required Confined Spaces*
29 CFR 1915 *Occupational Safety and Health Standards for Shipyard Employment*
29 CFR 1926 *Safety and Health Regulations for Construction*

b. Submittals: A "G" following a submittal indicates that Government approval action is required.

1) Contractor Accident Prevention Plan (APP), comply with EM 385-1-1, Appendix A; G

2) Contractor Safety Self-Evaluation Checklist; G

3) Monthly Work-Hour Reports

4) Crane Critical Lift Plan; G

5) Accident Reports – submit if incidence occurs.

6) Activity Hazard Analyses, as applicable.

c. Weight Handling Equipment (WHE) Accident: A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; or collision, including unplanned contact between the load, crane, or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over).

d. Contractor Safety Self-Evaluation Checklist: Contracting Officer will provide a "Contractor Safety Self-Evaluation checklist" to the Contractor. Complete the checklist monthly and submit with each request for payment. A score of 90 or greater is required. Failure to submit the completed safety self-evaluation checklist or achieve a score of at least 90, will result in a retention of up to 10 percent of the voucher.

e. Regulatory Requirements: In addition to the detailed requirements included in this contract, work performed shall comply with USACE EM 385-1-1, and the laws, ordinances, criteria, rules and regulations included in Attachment A. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply. UFC 3-560-01 takes precedence over all other guidance for electrical safety.

f. Site Safety and Health Officer (SSHO) Qualifications & Duties: SSHO shall perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The assignment of the SSHO does not relieve the Contractor from the regulatory requirements governing safety responsibility. The SSHO on this project can be the site superintendent unless otherwise indicated in Attachment A.

In addition to duties required in EM 385-1-1 the SSHO shall perform the following:

1) Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Attach safety inspection logs to the daily production report.

2) Attend pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic progress meetings.

Failure to actively apply an acceptable safety program will result in dismissal and a project work stoppage that will remain in effect pending approval of a suitable replacement.

g. Accident Notification and Reports

1) For recordable injuries and illnesses, and property damage accidents resulting in at least $2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, fill out the Contractor Incident Report (CIR) electronically and submit via the NAVFAC Enterprise Safety Applications Management System (ESAMS) within 5 calendar days. The Contracting Officer will provide copies of any required or special forms.

2) For any weight handling equipment accident (including rigging gear accidents), the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the WHE Accident Report (Crane and Rigging Gear) form and provide the report to the Contracting Officer within 30 calendar days of the accident. Crane operations shall not proceed until cause is determined and corrective actions have been implemented to the satisfaction of the contracting officer. The Contracting Officer will provide a blank copy of the accident report form.

3) Notify the Contracting Officer as soon as practical, but not later than four hours, after

any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than $2,000, or any weight handling equipment accident. 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 (e.g., type of construction equipment used, PPE used). Preserve the conditions and evidence on accident site until the Government investigation team arrives and Government investigation is conducted.

4) Monthly Work-Hour Reports: Monthly work-hour reporting to the Contracting Officer is required to be attached to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. The Contracting Officer will provide copies of any special forms.

h. Hot Work: Prior to performing "Hot Work" (e.g., welding, cutting) or operating other flame-producing/ spark-producing devices, request a written permit from the Fire Division. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. It is mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch shall be trained in accordance with NFPA 51B and remain on-site as required after completion of the task or as specified on the hot work permit.

i. Hazardous Material Use: Each hazardous material must receive approval prior to being brought onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material.

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with USACE EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocynates, or lead-based paint are prohibited. The Contracting Officer, upon written request may consider exceptions to the use of any of the above excluded materials.

The Request for Proposal should have identified materials such as PCB, lead paint, and friable and non-friable asbestos. If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to FAR 52.243-4, *Changes*, and FAR 52.236-2, *Differing Site Conditions*.

j. Pre-outage Coordination Meeting: Apply for utility outages at least 15 days in advance. As a minimum, include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Once approved, and prior to beginning work on the utility system requiring shut down, attend a pre-outage coordination meeting with the Contracting Officer to review the scope of work and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

k. Fall Hazard Protection and Prevention Program: Establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. Include company policy; identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures.

1) Fall Protection for Roofing Work: Implement all protection controls based on the type of roof being constructed and work being performed. Evaluate the roof area to be accessed for its structural integrity including weight-bearing capabilities for the projected loading.

a) A safety monitoring system is not adequate fall protection for low sloped roofs and is not authorized.

b) Work on steep-sloped roofs, including residential or housing type construction, requires a personal fall arrest system, guardrails with toe-boards, or safety nets.

2) Fall Prevention and Design: During design, consider and eliminate fall hazards encountered at the facility during maintenance evolutions whenever possible. If it is not feasible to eliminate or prevent the need to work at heights with its subsequent exposure to fall hazards, include control measures in the design to protect personnel conducting maintenance work after completion of the project. In addition to the detailed requirements included in the provisions of this contract, incorporate the requirements of 29 CFR 1910 Standards in the design (29 CFR 1915 applies for work in Shipyards).

l. Weight Handling Equipment: All handling equipment must meet the requirements of NAVFAC P-307 Section 1.7.2.

1) Crane Critical Lift Plan: Prepare and sign weight handling critical lift plans for lifts over 75 percent of the capacity of the crane or hoist (or lifts over 50 percent of the capacity of a barge mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane or hoist; lifts of personnel; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. Submit the plan 15 calendar days prior to on-site work and include the requirements of USACE EM 385-1-1, paragraph 16.C.18. as well as the following:

a) For lifts of personnel, demonstrate compliance with the requirements of 29 CFR 1926.550(g).

b) For barge mounted mobile cranes, barge stability calculations identifying barge list and trim based on anticipated loading; and load charts based on calculated list and trim. The amount of list and trim shall be within the crane manufacturer's requirements.

2) Provide a Certificate of Compliance for each crane entering an activity under this contract (see Contracting Officer for a blank certificate). Certificate shall state that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance shall comply with 29 CFR 1926 and USACE EM 385-1-1 section 16 and Appendix H. The Certificate of Compliance shall state that the crane operator(s) is qualified and trained in the operation of the crane to be used. Also certify that all of its crane operators working on the DOD activity have been trained in the proper use of all safety devices (e.g., anti-two block devices). Post these certifications on the crane.

3) Notify the Contracting Officer 15 days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Contractor's operator

shall remain with the crane during the spot check.

4) Comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30.5). Perform all testing in accordance with the manufacturer's recommended procedures.

5) Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes and floating derricks.

6) Under no circumstance make a lift at or above 90% of the crane's rated capacity in any configuration.

7) When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of USACE EM 385-1-1 section 11 and ASME B30.5 or ASME B30.22 as applicable.

8) Use cribbing when performing lifts on outriggers.

9) Position the crane hook/block directly over the load. Side loading of the crane is prohibited.

10) Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall be available for review by Contracting Officer personnel.

11) Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.

12) Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

13) Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. Prior to conducting lifting operations, set a maximum wind speed at which a crane can be safely operated based on the equipment being used, the load being lifted, experience of operators and riggers, and hazards on the work site. Include this maximum wind speed determination in the activity hazard analysis plan for that operation.

m. Utility Locations and Verification Prior to Excavation: Obtain appropriate digging permit from Base personnel through Contracting Officer prior to digging. All underground utilities in the work area must be positively identified by a private utility locating service in addition to any station locating service and coordinated with the station utility department. Maintain all markings during utility investigation throughout the contract. Locate utilities in accordance with Paragraph 17 and Attachment A.

Physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system. Use hand digging within 0.61 m (2 feet) of a known utility. If construction is parallel to an existing utility, expose the utility by hand digging every 30.5 m (100 feet) if parallel within 1.5 m (5 feet) of the excavation.

n. Utilities Within Concrete Slabs: Utilities located within concrete slabs are extremely

difficult to identify due to the reinforcing steel used in the construction of these structures. Whenever work involves concrete chipping, saw cutting, or core drilling, the existing utility location must be coordinated with station utility departments in addition to a private locating service. Outages to isolate utility systems shall be used in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the contractor from meeting this requirement.

o. Conduct of Electrical Work: Follow electrical safety criteria specified in UFC 3-560-01, USACE EM 385-1-1, and NFPA 70E during the conduct of all work.

p. Work in Confined Spaces: In addition to the requirements of Section 06.I of USACE EM 385-1-1, OSHA 29 CFR 1910.146 and OSHA 29 CFR 1926.21(b)(6), comply with the following paragraphs. Any potential for a hazard in the confined space requires a permit system to be used.

1) Confined Space Signage: Provide permanent signs integral to or securely attached to access covers for permit-required confined spaces provided by this contract. Signs wording: "DANGER--PERMIT-REQUIRED CONFINED SPACE - DO NOT ENTER -" in bold letters a minimum of 25 mm (one inch) in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" shall be red and readable from 1.52 m (5 feet).

2) Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and all potential hazards are controlled or eliminated and documented. (See Section 06.I.06 of USACE EM 385-1-1 for entry procedures.) Review all hazards pertaining to the space with each employee during AHA process.

3) Forced air ventilation is required for all confined space entry operations. Maintain minimum air exchange requirements to ensure exposure to any hazardous atmosphere is kept below its' action level.

4) Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

q. Ergonomics Considerations During Design: Design facilities, processes, job tasks, tools and materials to reduce or eliminate work-related musculoskeletal (WMSD) injuries and risk factors in the workplace. Design maintenance access to reduce WMSD risk factors to the lowest level possible. In addition to requirements included in this contract, design shall incorporate the requirements of MIL-STD-1472F.

-- End of Section --

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Small Project Part 2, Attachment A
Project-Specific General Requirements

05/11

The following requirements are project specific and may either supplement and/or modify those requirements contained in the body of Part 2, General Requirements, for Small Projects. Paragraph numbers in Part 2 correspond to paragraph numbers used in Part 2, Attachment A.

Paragraph 3 POST AWARD KICKOFF MEETING (PAK)

Post award kickoff is expected to last two hours followed by a site visit. Contractor shall contact the Contracting Officer to set up the PAK meeting date within 14 calendar days from award. Location will be at 5500 Walker Avenue, MCLB Albany, GA.

Paragraph 4 DESIGN

Submit design drawings or sketches, calculations and manufacturer's data to demonstrate compliance with contract requirements. The Contractor is encouraged to prepare design drawings more like shop drawings to minimize construction submittals.

Provide hard and electronic copies of design submittal package to the following reviewers 1 week prior to the review meeting:

Deliverable	FEAD/ ROICC	IPT	PWO	User
Design Development (50% and 100%)				
Half-size Drawings or Sketches	4	5	4	
Specifications and Manufacturer's Cut Sheets	4	5	4	
Design/Construction Schedule	3	5	4	
Calculations	4	5	4	
PROD Form (Permits)	1	5	4	
CD-Rom (to include all information above)	1	1	1	
Final Design				
Half-size Drawings or Sketches	3	5	4	
Specifications and Manufacturer's Cut Sheets	3	5	4	
Design/Construction Schedule	3	5	4	
Calculations	3	5	4	
Full-size, signed and sealed drawings, specs, basis of design	1		1	
CD-Rom (to include all information above)	1	1	1	

1. The final design submittal must be professionally signed and sealed by the DOR and forwarded to the Contracting Officer prior to the start of construction. Separated final design packages will only be considered for Government review and approval during the Post Award Kick-off Meeting. All design submittals must be approved by the Contracting Officer prior to the start of construction.

2. Construction submittals are to be Contractor-approved, except those listed below:
    a. DOR Approval required for:
        1) Fire Protection related submittals
        2) Film for skylight and Storefronts
        3) All components of the interior doors, hardware, cabinets, fireproofing/fire stopping, railings, paint, finish materials/colors.
        4) HVAC Testing, Adjusting and balancing, and commissioning.
        5) Telecommunications
    b. Government Approval required for:
        1) Fire Protection related submittals
        2) Film for skylight and Storefronts
        3) All components of the interior doors, hardware, cabinets, fireproofing/fire stopping, railings, paint, finish materials/colors.
        4) HVAC Testing, Adjusting and balancing, and commissioning.
        5) Telecommunications
        6) Asbestos and Lead tests
        7) All submittals during submittal phases.

3. Submit the following construction submittals, approved by the DOR, to the Government for surveillance:
    a. Submit fire protection related submittals pertaining to spray-applied fire proofing and fire stopping, exterior fire alarm reporting systems, interior fire alarm & detection systems, and fire suppression systems including fire pumps and standpipe systems.
    b. Submit HVAC Testing, Commissioning, Adjusting, and Balancing required submittals.
    c. Submit telecommunications shop drawings for coordination with the NMCI Contractor.
    d. Submit Performance Verification and Acceptance Testing required by IBC or this RFP.

Paragraph 5 FIRE PROTECTION AND LIFE SAFETY REQUIREMENTS

The Contractor shall retain the services of a Registered Fire Protection Engineer (FPE). This FPE shall be an integral part of the Prime Contractor's Design and Quality Control Organization, and shall have no business relationships (owner, partner, operating officer, distributor, salesman, or technical representative) with any fire protection equipment device manufacturers, suppliers or installers for any such equipment provided as part of this project. Unless otherwise specified, all work performed on means of egress, fire rated elements, Fire Suppression, Mass Notification, and Fire Alarm Systems shall be designed, reviewed, inspected and approved by the FPE.

1. Qualifications/Experience:

    a. Qualifications of the Designer: The FPE DOR shall have obtained professional registration by successfully completing the Fire Protection Engineering discipline examination.

b. Qualifications of the Installer: Prior to installation, submit data showing the Contractor has successfully installed systems of the same type and design as specified herein, or that Contractor has a contractual agreement with a subcontractor having such experience. Include names and locations of at least two installations where the Contractor, or subcontractor, has installed such systems. Indicate type and design of each system and certify that each has performed satisfactorily as intended for not less than 18 months.

c. Qualifications of the System Technician: Installation drawings, shop drawing and as-built drawings shall be prepared, by or under the supervision of, an individual who is experienced with the types of works specified herein, and is currently certified by the National Institute for Certification in Engineering Technologies (NICET) as an engineering technician with minimum Level-III certification in the fire protection certification program applicable to the work being performed. Submit data for approval showing the name and certification of all involved individuals with such qualifications at or prior to submittal of drawings.

2. Area of Responsibility: The FPE is responsible for assuring the proper design, construction and installation of life safety, fire protection, and mass notification features across all disciplines and trades. Services include preparing the Design Analysis, preparing or reviewing and approving the design documents (drawings), preparing or reviewing all fire protection related specification sections (including fireproofing, firestopping, fire suppression systems, and mass notification and fire alarm systems), certifying in writing that the completed design incorporates all required features, and certifying in writing that the facility was constructed in accordance with the approved design documents and applicable criteria. The FPE shall be responsible for assuring that the construction and installation are in accordance with the approved design documents by reviewing and approving all fire protection construction submittals, providing construction surveillance and preliminary and final inspections and testing services. Examples include, but are not limited to, water distribution systems including fire pumps and fire hydrants, fire resistive assemblies such as spray-applied fire proofing of structural components and fire rated walls/partitions, mass notification, fire alarm and detection systems, fire suppression and standpipe systems, means of egress components, and emergency and exit lighting fixtures. A copy of each approved submittal, with a copy of the Contractor's FPE review comments, shall be forwarded to the Government FPE prior to starting work for that item.

3. Construction Surveillance: The FPE shall visit the construction site as necessary to ensure life safety and fire protection systems are being constructed, applied, and installed in accordance with the approved design documents, approved construction submittals, and manufacturer's requirements. Frequency and duration of the field visits are dependent upon particular system components, system complexity, and phase of construction. At a minimum, field visits shall occur just prior to installation of suspended ceiling system to inspect the integrity of passive fire protection features and fire suppression system piping, preliminary inspections of mass notification, fire alarm/detection and suppression systems, and final acceptance testing of mass notification, fire alarm/detection and suppression systems.

a. Preliminary and Final Inspections and Acceptance Testing: FPE shall personally witness all preliminary inspections and testing of mass notification, fire alarm/detection and suppression systems. Once preliminary inspections and testing have been successfully completed, the FPE shall submit a signed certificate to the QC Manager that systems are fully compliant and ready for final inspection and acceptance testing. The QC Manager shall provide 14 days advance notice to the Contracting Officer to schedule the final inspection and acceptance testing with the activity Fire Inspection Office and the NAVFAC Fire Protection Engineer.

b. Final Life Safety/Fire Protection Certification Documentation: The FPE shall provide certification that all life safety and fire protection features and systems have been

installed in accordance with applicable criteria, the contract documents, approved submittals, and manufacturer's requirements. This certification shall summarize all life safety and fire protection features, and shall bear the professional seal of the fire protection engineer.]

Paragraph 6 QUALITY CONTROL

The Superintendent may serve as the Quality Control Manager on this project. Quality Control Manager serve as Site Safety and Health Officer.

Paragraph 7 SUBMITTAL PROCESSING

	SUBMITTAL/BENCHMARK	DURATION	BENCHMARK	RECEIVED	STATUS
1	Quality Control Plan				
2	Material Safety Data Sheets				
3	Design/Construction Schedule				
4	Waste Management Plan				
5	Safety and Health Plan				
6	Schedule of Prices				
7	Budget Management Summary				
8	Record Drawings				
9	Operation and Maintenance Information				
10	Licenses and Permits				
11	Badge Requests				
12	Statement of Acknowledgement SF 1413				
13	Demolition and Work Plan				
14	Design Development Docs				
15	Final Design Docs				
16	Submittal Register				
17	Performance/Payment Bonds				
18	Environmental Protection Plan				
19	Certificates of Insurance				
20	DD Form 1354				

Paragraph 15 INVOICES

Invoices are to be submitted in Wide Area Work Flow.

Paragraph 17 EXISTING UNDERGROUND UTILITIES

The contractor shall submit required documentation to the ROICC Albany for a dig permit no fewer than 21 days prior to digging. Forms will be provided by the Construction Manager at the post award kickoff meeting.

Paragraph 19 CONTRACTOR WORK SITE

The contractor shall coordinate with the Construction Manager at the PAK meeting to establish a lay down area and shall secure access to the work site.

Paragraph 20 TEMPORARY UTILITIES

Backflow preventers, if required, shall have a certificate of full approval from FCCCHR-USC, 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 will not be acceptable.

Temporary utilities (water, electric, and sewer) are provided at no charge.

Paragraph 21 ENVIRONMENTAL CONTROLS AND PROTECTION

The Contractor is required to complete and submit evidence of completion of the Environmental Compliance Assessment Training and Tracking (ECATTS) program. For more detailed information on ECATTS see UFGS 01 57 19.00 20.

The DOR is required to edit and submit UFGS 01 57 19.00 20, *Temporary Environmental Controls,* and UFGS 01 57 19.01 20, *Supplementary Temporary Environmental Controls.* The DOR must ensure state and local regulations are met within the edited UFGS section.

The Contractor is responsible for fully executing the plans and procedures as applicable with state erosion and sediment control regulations (The Georgia Erosion and Sediment Control Act of 1975). Provide temporary protection of disturbed soils in accordance with State regulations.

The DOR is required to edit and submit UFGS 02 82 16.00 20, *Engineering Control of Asbestos Containing Materials.* Submit evidence of DOR qualifications as an EPA and state accredited Asbestos Project Designer.

Submit evidence of DOR qualifications as an EPA and state accredited Lead Project Designer.

The DOR is required to edit and submit UFGS 02 82 33.13 20, *Removal/Control and Disposal of Paint with Lead* UFGS 02 83 13.00 20, *Lead in Construction.*

Paragraph 22 WASTE MANAGEMENT

Disposition of Removal Materials: All Construction and Debris materials (C&D) that is disposed of offsite shall be weighed and the weight disposal tickets are given to contract surveillance representative.

Salvable Material and Equipment: Except where specifically specified otherwise herein, all salvable materials and equipment disconnected or removed during the course of the work and not indicated or specified for reuse in the new work shall remain the property of the Government. All recyclable material such as metals and certain electrical components, to include switch gear, MCCs, conduit, copper wire, distribution and control panels nuts, bolts, washers, old motor starter, obsolete breakers, cable lugs, conduit, conduit fittings, connection boxes, etc will be recycled in accordance with MCO 5090.2A through base Qualified Recycling Program (QRP). Remaining material shall be removed from the Government property.

Paragraph 23 RECORD DRAWINGS AND OPERATION & MAINTENANCE (O&M) DATA

Provide the Contracting Officer with two copies of half size as-built drawings, one copy of full-size as-built drawings, and two CDs containing drawings (in both pdf and Autocad formats), and all construction submittals. Drawings must be compatible and geo-referenced to the MCLB Albany GIS system.

Paragraph 26 WORK HOURS, ACCESS AND PASSES

Contact the Contracting Officer to begin the process of Base passes. Processing of Base passes can take up to 30 days.

Paragraph 34 SAFETY AND OCCUPATIONAL HEALTH

The DOR is required to edit and submit UFGS 01 35 26.05 25, *Safety and Occupational Health Requirements* for Design Build – NAVFAC SE Version.

Submit evidence of DOR qualifications as a Certified Industrial Hygienist (general practice) or Certified Safety Professional.

All work requiring energy (electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other) removal shall be done in compliance with OSHA 29, CFR 1910.147 and 1910.333 lock-out/tagout procedures for worker protection.

No work will be performed on energized electrical circuits unless proof is provided that no other means exist. NFPA-70E (current edition), Standard for Electrical Safety in the Workplace, shall also be utilized for worker safety compliance.

Sub-Paragraph f., Safety and Health Officer (SSHO)
The Site Safety and Health Officer may not serve as the Superintendent. Quality Control Manager may serve as Site Safety and Health Officer.

Sub-Paragraph h., Hot Work
Obtain services from a NFPA Certified Marine Chemist for “HOT WORK” within or around flammable materials (such as fuel systems, welding/cutting on fuel pipes) or confined spaces (such as sewer wet wells, manholes, and vaults) that have the potential for flammable or explosive atmospheres.

Perform all work in accordance with EM-385 and OSHA 1926.

End of PART 2 Attachment A

Small Project Part 3
Statement of Work / Project Program

05/11

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E20 Furnishings
F20 Selective Building Demolition
G20 Site Improvements
G30 Site Mechanical Utilities

1. PROJECT DESCRIPTION

Renovate Building 3010 to generate energy savings through improved design and technology and to promote improved operations and efficiencies for the units currently residing in the building. Included in the work, but not by way of limitation, are the following:

Work under this project includes, but is not limited to:

1. Demolition of select interior walls, interior doors, floors, and finishes
2. Installation of new select walls, interior doors, floors, finishes and all associated work
3. Installation of a new fire sprinkler system and mass notification system throughout entire building
4. Demolition of all interior drop ceilings, ceiling mounted lights, light switches, thermostats and mini-blinds and installation of new ceilings, lights, occupancy sensors, programmable thermostats, and mini-blinds throughout the entire building.
5. Application of solar film to existing skylight
6. Modifications to existing HVAC system to conform to new layout in areas receiving new flooring, see section D30. Work includes new programmable thermostats, grills, and registers throughout the building and testing/balancing the areas receiving new flooring.
7. Recaulking all windows
8. Installation of solar film on storefront and windows.
9. Power wash existing exterior walkways
10. Demolition of existing bathroom fixtures and finishes and installation of new ADA bathroom fixture and finishes. Installation of new public ADA bathrooms.
11. Installation of new pass-through interior windows, conduit and junction boxes for card reader entry system, weather-stripping on all exterior doors, and select interior signage

The Designer of Record (DOR) is to determine extent of demolition required for the existing electrical, HVAC, and plumbing in order to meet the contract requirements. Existing electrical wiring and conduit and existing HVAC ductwork shall be reused as much as possible if determined by the DOR that the existing is in good condition and meets existing code requirements. Protect systems designated and determined during design to remain during construction from damage including damage from dust and construction debris.

For bidding purposes, assume the following:

Due to the value of the renovations, there are no antiterrorism UFC 4-010-01 requirements under this project

All VCT and mastic contains asbestos, see Section F20

All metal doors, jambs and painted window frames contain lead based paint, see Section F20The requirements of UFC 1-200-02 High Performance and Sustainable Buildings are not required under this project as they will be performed separately under another project

1.1 SCHEDULING:

The building will be occupied Monday through Friday between 7am and 5pm during the construction period except for Federal holidays. The following work restrictions apply:

1) Asbestos floor tile removal in the EEO vestibule, HR Corridor, HR Reception Area and Classroom Corridor shall be performed on the weekend or after hours. See conceptual drawings in Part 6 for locations.
2) During working hours, access to the EEO Area and HR Area shall be free and clear for all Government persons and visitors, including handicapped. Contractor shall provide temporary ADA access ramps as required. Access from the exterior into the EEO Area shall be either by EEO vestibule, Lobby entrance or Classroom Corridor entrance. If access is provided from an entrance other than the EEO vestibule, Contractor shall provide temporary signage directing

Government personnel and visitors to the EEO Area. Floor and ceiling finishes do not have to be installed for Government persons and visitors to occupy the spaces.

3) Pass & ID and Veterans Affairs (VA) shall be free and clear for all Government persons and visitors, including handicapped, during working hours. Contractor shall provide temporary ADA access ramps as required. Access from the exterior into the Pass & ID and VA areas shall be either by EEO vestibule, Lobby entrance or Classroom Corridor entrance. If access is provided from an entrance other than the Lobby, Contractor shall provide temporary signage directing Government personnel and visitors to the Pass & ID and VA areas. Pass & ID and VA personnel can be relocated temporarily to Training Classroom 1, Training Classroom 2, and Open Office 1 and 2. Contractor shall provide 6 temporary computer connections to the relocated Pass & ID and VA areas. Contractor shall move all Pass & ID and VA existing furniture, furnishings, and equipment, except for computers, printers and fax machines, to the temporary location and back into finished area at the completion of the work. See conceptual drawings in Part 6 for locations.
4) At least one male and one female bathroom facility shall be available to building occupants and visitors at all times during working hours.
5) Contractor shall move existing furniture, furnishings, and equipment, except for computers, printers and fax machines, that are in Area 4 as shown on conceptual drawing AD102 in Part 6 to another area within the building as indicated by the Contracting Officer.
6) Contractor shall move existing furniture, furnishings, and equipment, except for computers, printers and fax machines, that are in Area 3 to Area 4 as shown on conceptual drawing AD102 in Part 6.
7) New ceilings, lighting, occupancy sensors, thermostats, and fire sprinkler system are to be installed throughout the entire building. Installation of these items shall be coordinated with Contracting Officer at least 2 weeks prior to beginning work in an area. Each work station within the building will be made available for up to a one 8 hour period during the work day. Although the occupant will not be at the work station during the 8 hour period, their furniture, furnishings and equipment will be in the work station. The vacating of numerous work stations can be combined during an 8 hour period to allow the Contractor to work in a section of the building. In addition to the one 8 hour period where a work station will be vacated, the Contractor may performed additional work in an area but work shall not disturb Government employees for longer than a 1 hour time period during a single work day. Contractor shall protect work station and all equipment, furnishings and furniture. For example, the Contractor can schedule the western wing of the building to be vacated on Monday from 7am to 5pm. The Contractor can work in the space from Friday at 5pm to Tuesday at 7am. Following this, the contractor can work in the area for one hour on Tuesday, one hour on Wednesday and continue this until the work is complete.

1.2 SAMPLE SCHEDULE

The following schedule is provided to assist the contractor in scheduling the major portions of work. The schedule is not inclusive of all work on the project. The contractor is not required to follow this schedule but is required to meet the requirement in the previous paragraph 1.1 SCHEDULING. See conceptual drawings in Part 6 for location of existing Areas and rooms and location of final rooms.

1) Confirm there is VCT under carpet in areas indicated to be removed as shown in conceptual drawing AD101.
2) Test existing VCT and mastic for asbestos in areas indicated to have flooring removed in accordance with Section F2020.
3) Move existing furniture, furnishings, and equipment from Area 4 as shown as conceptual drawings AD102 in Part 6 to another area of the building as indicated by the Contracting Officer.
4) Move existing furniture, furnishings, and equipment from Area 3 to Area 4 as shown on conceptual drawings AD102 in Part 6.
5) Move existing furniture, furnishings, and equipment from Area 1 and Area 2 to the Training Classroom 1 & 2 and Open Office areas 1 & 2 as shown on conceptual drawings AD102 in Part 6.

6) Install a temporary ADA ramp at both the Classroom Corridor exterior door and the EEO Vestibule exterior door. Classroom Corridor and EEO Vestibule locations are shown on conceptual drawing AF110 in Part 6.
7) After test reports on VCT and mastic are received and provided to the Contracting Officer, remove flooring in EEO vestibule, HR Corridor, HR Reception Area and Classroom corridor over a weekend.
8) Set out temporary signage directing persons to Pass & ID and the VA via the Classroom Corridor entrance.
9) Remove flooring in all other areas indicated to be removed except for existing bathrooms.
10) Install new public bathrooms prior to beginning work on existing bathrooms so that bathroom facilities are available to Government employees and visitors at all times.
11) Perform work in the Lobby, Area 1, 2, and 3 as indicated in conceptual drawing AD102 in Part 6. Note that HR Reception wall must be removed prior to new wall being installed in HR corridor in Area 3 to allow for access down the hallway.
12) Installation of new ceilings, lighting, occupancy sensors, mini-blinds, thermostats and sprinkler system throughout the remainder of the building can be installed anytime as long as the conditions of the SCHEDULING paragraph above are met.
13) Move Pass & ID and VA furniture, furnishings and equipment to final location as shown on conceptual drawing A110 in Part 6.
14) Once Lobby is reopened, provide temporary signage to direct EEO visitors to EEO Area via Lobby and complete work in EEO Vestibule.

The DB RFP conceptual drawings in Part 6 are provided for aesthetics and functionality. This does not preclude the Contractor from making improvements to the concept during design so long as such improvements are consistent with the requirements of the RFP and acceptable to the Government. The Contractor shall be allowed latitude in manipulating the drawings to improve functional layout, to accommodate structural, mechanical, electrical and other system conflicts and to allow flexibility for design and esthetic expression. However, the square footage allotted per room on the conceptual drawings in Part 6 is based on a Government standard and changes to the square footages of the room sizes will not be allowed without prior approval from the Contracting Officer. In addition, the location of the offices compared to the surrounding offices was established to allow Government personnel in the same command to work together and any changes to the location of an office must be approved by the Contracting Officer. The Contractor shall perform all design calculations. If any calculations are provided in this DB RFP, the Contractor shall not rely on them for the final design.

In accordance with FAR 52.236-27, Contractor shall field verify all information during bid period to confirm existing conditions and determine the extent of work required under this project.

2. PROJECT OBJECTIVES

The objective of this project is to renovate Building 3010 with special attention paid to energy savings in accordance with federal mandates and executive orders. The existing building is a steel framed structure with a masonry exterior enclosure, slab-on-grade and steep sloped roof. The building does not have an existing fire sprinkler system.

2.1 APPLICABLE CODES AND STANDARDS:

In addition to the codes and standards listed in Part 4, the design and construction shall be in accordance with the latest revision/edition of the following referenced codes and standards. The term "Latest Revision/Edition" is defined as the version as of the project award date.

1. Georgia State Standards

State Standards are based on the Uniform Codes Act as codified at chapter 2 of title 8 of The Official Code of Georgia Annotated. O.C.G.A. Section 8-2-20(9) (B) identifies the ten “state minimum standard codes”. Each of these separate codes typically consists of a base code (e.g. The International Building Code as published by the International Code Council) and a set of Georgia amendments to the base code. Georgia law further dictates that eight of these codes are "mandatory" (are applicable to all construction whether or not they are locally enforced) and two are "permissive" (only applicable if a local government chooses to adopt and enforce one or more of these). See additional information on Georgia Construction Codes at http://www.dca.state.ga.us/development/constructioncodes/programs/codes2.asp.

2. 2010 ADA Standards for Accessible design
   www.ADA.gov

2.2 SUSTAINABLE DESIGN

The requirements of UFC 1-200-02 High Performance and Sustainable Buildings will be met by MCLB Albany and will not be required as part of this contract. Contractor should make every effort to include sustainable design practices during the design.

3. SITE ANALYSIS

The project involves an existing building located on MCLB Albany. Building 3010 is freestanding and is served by all utilities and a parking lot. Construction services do not include site preparation, grading, clearing or major excavation.

When project is complete, cleanup grounds and repair/replace landscape, lawns, and sidewalks and building features that may become damaged during construction. Project includes no change to the building footprint, parking, landscaping, or drainage/storm water runoff.

3.1 EXISTING SITE CONDITIONS

Marine Corps Logistics Base Albany is located in Dougherty County in southwest Georgia about 80 miles southeast of Columbus GA. The base sits on approximately 3,300 acres. This project is located outside the security fencing at the Base entrance off of Fleming Road at Building 3010.

3.2 SITE DEVELOPMENT

Vehicular Access and Circulation

This project will not require an entrance road. Designated parking, temporary and laydown space will be assigned on the existing parking lot for Contractor use during construction.

4. BUILDING REQUIREMENTS

The completed building shall be ADA compliant. Provide barrier-free design in accordance with the requirements of the DEPSECDEF Memorandum "Access for People with Disabilities" dated Oct 31, 2008. The memorandum updates the DoD standards for making facilities accessible to people with disabilities. The US Access Board issued an update of the accessibility guidelines which the DEPSECDEF Memorandum implements with military unique requirements specified in the memorandum attachment. The new DoD, "ABA (Architectural Barriers Act) Accessibility Standard" (DoD ABAAS) and the DEPSECDEF Memorandum are located at http://www.access-board.gov/ada%2Daba/aba-standards-dod.cfm.

5. ROOM REQUIREMENTS

See Conceptual drawings attached in Part 6.

6. ENGINEERING SYSTEMS REQUIREMENTS (ESR)

B20 Exterior Closure
B30 Roofing
C10 Interior Construction
C30 Interior Finishes
D20 Plumbing
D30 HVAC
D40 Fire Protection Systems
D50 Electrical Power and Lighting
E20 Furnishings
F20 Selective Building Demo
G20 Site Improvements
G30 Site Mechanical Utilities

Frost penetration: Frost penetration depth: Zero (0) in.

Live loads: In accordance with UFC 3-310-3, 100 psf for corridors. Live Load _In accordance with IBC. Wind load: 115 mph, Exposure Category C

Earthquake loads: Mapped seismic acceleration parameters: S_S: 0.129; S_1: 0.061, Seismic Design Category B

B20 EXTERIOR ENCLOSURE

B2010 EXTERIOR WALLS

The primary exterior material of the building is brick masonry with metal siding.

Exterior Coatings

Provide field applied exterior coatings for all new items that are not prefinished, to all existing items that were painted when installed, and to prefinished items when required to provide a color other than a standard prefinished color. All paint shall be in accordance with the Master Painter Institute (MPI) standards for the exterior architectural surface being finished.

Paint all exterior hollow metal doors and frames including all interior and exterior surfaces.

Joint Sealants

Provide exterior application of joint sealants to seal joints and prepare for finish material installation.

Remove existing sealants from all wall control and expansion joints, between opening frames and the brick masonry, and around all doors and windows. Replace backer rods and re-seal all existing joints as well as all joints directly affected by the construction.

Skylight

Provide film coating to skylight glazing to reduce transmitted glare and heat into the building. High performance, non-metalized, nano-technology film, manufactured to resist IR heat and block min

90% of UV rays and providing visual light transmission level of 60%, achieve a glare reduction of 32% and a Luminous Efficacy of 1.3.

B2020 EXTERIOR WINDOWS

Storefronts

Provide film coating to storefront glazing to reduce transmitted glare and heat into the building. Apply to fixed glass units and the glass in the doors. High performance, non-metalized, nano-technology film, manufactured to resist IR heat and block min 90% of UV rays and providing visual light transmission level of 60%, achieve a glare reduction of 32% and a Luminous Efficacy of 1.3.

B2030 EXTERIOR DOORS

Re-paint and re-use existing hollow metal doors. Reuse existing hardware.

Exterior Door Hardware

Clean, lubricate and refurbish all existing exterior door hardware.

Provide new weather-stripping at all existing exterior doors.

B30 ROOFING

Provide methods and materials necessary for watertight patch and repair of the existing roof system where the existing roof system is penetrated by the execution of this work. Finish materials shall match the existing.

Contractor shall investigate reported leaks around existing skylight and provide a written report to the Contracting Officer stating the reason for the leaks and including recommendations. Work to correct any identified repairs is not included in this project.

B3020 PERFORMANCE REQUIREMENTS

Patch and repair work is to be coordinated with and executed in accordance with requirements that do not invalidate existing roof warranty for the building. Patch and repair work is to be executed by a licensed and bonded roofer.

Work is to be watertight, free of defects in materials and workmanship, free of damage, including blisters, delamination, cuts, scratches, and abrasions. Provide for positive drainage of the roof surface, flashings, curbs, fasteners in the area where work is performed suitable for the climatic and service conditions of the installation.

The patched, replaced or repaired roof system components shall maintain the Class A or Class B fire resistance of the existing roof system, as tested by standard ASTM, FM, or UL procedures.

B3040 ROOF WARRANTY

Contractor shall perform all work as to not void existing roof warranty. If work is performed under this project that requires modifications to the existing roof, Contractor shall provide a written statement from roof warranty manufacturer certifying that work performed under this contract will not void existing roof warranty

B3050 ROOF SPECIFICATION AND DETAILING

All roofing patch and repair work, materials, installation and details shall be in accordance with Standard Design-Build Template PTS B30 and comply with all applicable Unified Facilities Guide Specification (UFGS) materials and installation requirements. UFGS's are referenced in PTS B30 and are available at www.ccb.org. Provide for complete rough carpentry, roof insulation, roof covering, sheet metal flashing, and other components necessary to complete the installation.

All details shall be in accordance with recommendations and guidelines of the National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual and Construction Details and as required by the RFP.

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Fixed Partitions

Provide fixed interior partitions. Sound-rated partition assemblies shall have a minimum Sound Transmission Coefficient (STC) of 40 in accordance with ASTM E 90 or ASTM E 413 for frequency data.

Interior fixed partitions shall be metal studs with 5/8 inch gypsum board on each side, metal studs with impact rated gypsum board on each side at corridors and other heavily trafficked areas. Where required for acoustic rating, extend partitions and seal to floor slab and roof deck, above. See conceptual drawings for locations of acoustical rated rooms.

Interior Windows

Provide interior pass thru windows of hollow metal fixed frames with clear glazing. Cut speaker holes in glass for transactions, location and size to be chosen by the Contracting Officer. Allow openings for paper transactions.

C1020 INTERIOR DOORS

Provide interior doors as indicated on conceptual drawings in Part 6. New doors shall be wood except where metal doors are required for durability or to meet fire ratings. All interior door frames shall be new hollow metal. New doors shall have Factory Finish to match existing doors. Provide doors finished to AWI Quality Standards Section 1500. Contractor shall refinish existing interior doors that are indicated to be reused to match existing doors.

Interior Door Hardware

Provide the services of a Certified Door Hardware Consultant to prepare the door hardware schedule.

Provide new interior door hardware for new doors.

Provide hardware keying compatible with the existing base-wide keying system. Replacement interchangeable cores shall be compatible with the Best Lock system.

Provide conduit, junction boxes and access boxes for a AMAG Model S844 card reader door entry system at locations indicated on conceptual drawing A-110 in Part 6. Card reader system will be provided and installed by others and is not included in this project.

Door hardware finish shall match the existing.

C1030 SPECIALTIES

Compartments, Cubicles, & Toilet Partitions
Provide toilet partitions in all toilet rooms with more than one water closet or urinal. Toilet partitions and screens shall be high density polyethylene/solid plastic.

Toilet and Bath Accessories
Provide toilet and bath accessories including 20” x 30” tall mirrors over lavatories, recessed trash receptacles for each bathroom, grab bars and robe hooks. Other toilet accessories are GFGI. Coordinate type of devices compatible with base standard and Contracting Officer.

Identifying Devices
Provide 20 interior identifying devices. Identifying devices are to be laminated thermosetting Type MP plastic signs with colored background and raised white lettering/symbols that meet ADA requirements. Include universal symbols as required by Codes. Signs are to be placed at locations provided by the Contracting Officer. Verbiage for signs shall be provided by the Contracting Officer. 16 signs are to be 2 inches high by 10 inches wide. 4 signs are to be 8 inches high by 6 inches wide. A sample sign shall be made and provided to the Contracting Officer for final approval prior to making any of the signs.

Remove existing exterior sign over the EEO Vestibule area and replace with similar. Photo provided in Part 6. Wording of sign to be coordinated with Contracting Officer.

Fire Extinguisher Cabinets and Fire Extinguishers
Salvage existing fire extinguishers, recondition and re-install. Provide additional fire extinguishers and cabinets where required by UFC 3-600-01 and the building / fire codes. Provide 4A; 80B; C type fire extinguishers.

Counters
Provide solid surface counter tops and back splashes in and toilets.

Cabinets
Provide cabinetry and millwork items with associated accessories and hardware. Cabinetry shall be AWI premium grade and have concealed hinges with adjustable standards for shelves. All exposed surfaces will be covered with high pressure plastic laminate clad.

Casework
Casework shall comply with Mil Std 1691.

Firestopping Penetrations
Provide all sleeves, caulking, and flashing for firestopping penetrations.

Entrance Floor Grilles and Mats
Contractor shall provide floor grids with carpet tread inserts and associated frames in Lobby to replace existing. Floor grids shall be aluminum rails spaced at 1.5 inches on center. Frames shall be surface mounted aluminum not less than 2 inches wide, screwed to the floor. Color to be chosen by the Contracting Officer. Carpet treads shall be carpet composed of solution dyed nylon or polypropylene carpet fibers.

C30 INTERIOR FINISHES

See Conceptual Finish Plan for Room Finish Schedule and MCLB Albany Interior Architectural Standards as provided in Part 6.

C3010 WALL FINISHES

Provide 48 inches high of ceramic tile wainscot in all bathrooms. All interior concrete masonry partitions shall be prepared and repainted.

All interior gypsum board wall partitions indicated to be painted shall be finished to a level five surface and painted. See section C3030.

C3020 FLOOR FINISHES

See Conceptual Room Finish Plan and Schedule for extent of each finish. Work includes the following finishes.

Vinyl composition tile flooring

Class 2, 1/8 inch thick, 12 inch x 12 inch, through pattern vinyl composition tile with butt toe cove 4 inch high, vinyl base with job formed corners.

Ceramic tile flooring

Ceramic tile flooring shall be Class V, heavy commercial classification and a wet dynamic coefficient of friction value of 0.42 or greater

C3030 CEILING FINISHES

Ceilings in Waiting Area/Lobby 1 and bathrooms shall be suspended gypsum board. Existing gypsum board ceiling in Lobby may be reused if determined to be in good condition by the DOR. No ceiling works shall be performed in the mechanical, janitorial, electrical, sprinkler and communications rooms. All other ceilings shall be 24 inch by 24 inch by 5/8 inch minimum thickness suspended acoustical panel ceiling system with a tegular edge.

Where wall partitions with an STC rating of 40 extend to ceiling and not to deck, construct ceiling to achieve STC of 40 between the adjacent spaces.

Paint all gypsum board ceilings.

C3040 INTERIOR COATINGS AND SPECIAL FINISHES

Paint new and previously painted interior surfaces including walls, doors, trim, ceilings as well as all interior exposed metal items, access panels, and panel boxes in rooms receiving new flooring. All new walls shall be painted on both sides of wall. Provide transparent stain finish for wood surfaces unless indicated otherwise in the RFP.

D20 PLUMBING

D2010 PLUMBING FIXTURES

Provide low flow, energy efficient type of plumbing fixtures required for the occupancy, use, and functions described for this facility. Provide handicapped fixtures in accordance with the referenced criteria.

Water Closets
Provide wall mounted flush valve type water closets with concealed hard wired infrared sensor electronic controls in all restroom spaces.

Urinals
Provide low flow flush valve type urinals with concealed hard wired infrared sensor electronic control in all restroom spaces.

Lavatories
Provide countertop lavatories with concealed hard wired infrared sensor electronic controls and low flow aerators in Men's and Women's Restrooms 1.

Provide one piece wall mounted with concealed hard wired infrared sensor electronic control with low flow aerators in each Men's and Women's Public Restroom 1 private toilet.

Water Coolers
Provide one hi-low and one single height Barrier Free electric water coolers as indicated on drawings in Part 6. Unit shall run on 115 V at 15 Amps and delivering 8 gallons of chilled water per hour.

D2020 DOMESTIC WATER EQUIPMENT

Provide routing of water lines to equipment and vent lines extending out of the building. Connect vents to existing VTRs wherever possible. Avoid additional roof penetrations if possible.

Insulation & Identification
Provide insulation on domestic water hot and cold supply and recirculation piping that is exposed during construction.

Other Domestic Water Supply
Provide piping supports in accordance with the IPC. Provide inspections, disinfection, and testing in accordance with the IPC.

D2030 SANITARY WASTE

Floor Drains
Provide floor drains in restrooms.

Sink Drains
Provide drain line from sinks.

Fixture Drains
Provide drain lines from water cooler, water closets and lavatories. Connect all new sanitary waste lines to the existing sanitary system below slab.

D30 HVAC

HVAC SYSTEM REQUIREMENTS

In accordance with Section 1, for bidding purposes, the requirements of UFC 1-200-02 High Performance and Sustainable Buildings are not required under this project

The existing HVAC equipment is to be reused. Provide inspection, testing and balancing in areas where new flooring is installed to ensure proper operation.
The HVAC system shall provide each zone with the choice of heating or cooling year round unless otherwise indicated. Each zone shall have its own limited range of control, as allowed by the control system central workstation.

D3010 ENERGY SUPPLY

The existing building is served with natural gas supplied from the base. Contractor is to inspect premises to determine compliance of existing facility with current codes and standards in accordance with Part 2 and to report noncompliant construction to Contracting Officer before starting work. Corrective action to bring natural gas supply up to current code is not included in this project.

D3040 DISTRIBUTION SYSTEMS

Air Distribution, Heating & Cooling

Provide insulated, galvanized steel ductwork if needed. Provide new steel grilles, registers, and diffusers in all areas of the building. Provide filter grilles for return air. Contractor may reuse existing ductwork if deemed acceptable and up to code by the DOR.

Exhaust Systems

Provide ducted exhaust ventilation systems and exhaust fans to serve bathrooms. Provide in-line or ceiling centrifugal exhaust fans.

D3060 CONTROLS AND INSTRUMENTATION

HVAC Controls

Throughout the entire building, remove existing thermostats and replace with programmable DDC capable thermostats. If the outline of the existing thermostat is visible when the new thermostat is installed, patch as necessary and repaint wall to the nearest column or joint to match the adjacent walls.

Coordinate with Contracting Officer to program DDC controls. The existing DDC system shall remain. New thermostats shall be tied into existing DDC system. For bidding purposes, assume the existing DDC system at the building has capacity to tie in the new thermostats. Adjust building set points via the Base DDC system to reduce overall HVAC equipment operating run times. Set point shall be as follows:

Occupied cooling set point = 77F
Unoccupied cooling set point = 79F
Occupied heating set point = 68F
Unoccupied heating set point = 60F

Once programming is complete provide history testing to indicate the temperature set points do clearly maintain as scheduled in each building as specified and relative humidity levels are kept below 60 percent.

D3070 SYSTEMS TESTING AND BALANCING

Provide complete Testing and Balancing (TAB) of all air and water distribution systems and HVAC equipment in areas that receive new flooring.

Commission building HVAC systems are not included in this project and will be performed by others.

D40 FIRE PROTECTION SYSTEMS

D4010 FIRE ALARM AND DETECTION SYSTEMS

Contractor shall provide a fire sprinkler system for the entire building. The building does not have an existing fire sprinkler system. In addition to other fire protection UFCs, the Contractor shall meet the design requirements set forth in UFC 3-600-10N Fire Protection Engineering (DRAFT). Provide a combined mass notification /fire alarm and detection system. Provide mass notification system in accordance with UFC 4-021-01. Fire protection equipment shall be identified in an approved manner. Rooms containing controls for air-conditioning systems, sprinkler risers and valves, or other fire detection, suppression or control elements shall be identified for the use of the fire department. Approved signs required to identify fire protection equipment and equipment location shall be constructed of durable materials, permanently installed and readily visible. Fire protection signs are separate from interior signs called for in section C1030. 509.2 equipment access shall be provided and maintained for all fire protection equipment to permit immediate safe operation and maintenance of such equipment. Storage, trash and other material or objects shall not be placed or kept in such a manner that would prevent such equipment from being readily accessible.

Provide speakers for combined mass notification/fire alarm systems. Install carbon monoxide detectors and provide a system to monitor and supervise the carbon monoxide detectors.

Provide a remote annunciator with alarm acknowledge, alarm silence, and reset functions. The remote annunciator shall be located as directed by the Contracting Officer in conjunction with the cognizant NAVFAC Fire Protection Engineer. Provide Class A Notification Appliance Circuits, Class A, Style 6 Signaling Line Circuits.

Fire alarm signals shall be sent to the fire alarm receiving station via base approved method and will be compatible with existing equipment. All fire alarms, supervisory alarms and trouble conditions indicated at the fire alarm control panel shall be transmitted to the fire alarm receiving station. Transmitter zones shall be as follows:

a) Sprinkler Water Flow
b) Heat Detector
c) Manual Pull Station
d) Supervisory (i.e., valve tamper switch, fire pump loss of power, fire pump phase reversal)
e) Duct Smoke Detector

D4020 FIRE SUPPRESSION WATER SUPPLY AND EQUIPMENT

Contractor shall assume for bidding purposes that existing water supply will be sufficient to meet the hydraulic demands of the building and that no fire pump will be required. The contractor will be responsible for performing a flow test in accordance with NFPA 291 and UFC 03.-600-01 and

confirming that the existing system is adequate for the new fire protection system. If the existing system is not adequate for the fire protection system, notify the Contracting Officer immediately.

D4040 SPRINKLERS

Provide wet pipe automatic sprinkler protection for complete coverage throughout in accordance with UFC 3-600-0, UFC 3-600-10N Fire Protection Engineering (DRAFT), and NFPA 13.

The incoming sprinkler service shall be provided with a double check backflow preventer.

D4090 OTHER FIRE PROTECTION SYSTEMS

Provide portable fire extinguishers and cabinets as required in accordance with NFPA 10 and in accordance with section C1030.

D50 ELECTRICAL

The electrical design shall comply with the design criteria specified in UFC 3-501-01, *Electrical Engineering*, and its referenced documents.

Update all existing electrical systems to current codes and standards. Contractor may re-use existing electrical systems providing circuiting and devices as required for compliance with codes and standards. Contractor shall provide all new lights and outlets.

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Provide an insulated equipment grounding conductor in all raceways for systems operating at greater than 50 volts.

D5020 LIGHTING & BRANCH WIRING

RECEPTACLES

Provide general purpose receptacles throughout spaces receiving new flooring if existing system is not up to code or do not meet the requirements set forth in this section. Provide circuitry and connections to each work stations in the areas to receive new flooring to allow for, as a minimum, one computer, one monitor, one printer, one clock and one small fan per work station. Cabling systems are described in Paragraph D5030 Communications and Security. All new conduit and wiring shall be concealed unless run down a block wall in which case, conduit may be run exposed.

Provide dedicated power connections to all ancillary office equipment such as printers, faxes, plotters, and shredders. For bidding purposes, bid an additional 5 receptacles in the areas receiving new flooring in addition to what the NEC, drawings in Part 6, and section D5030 requirements. Provide GFCI receptacles and circuits where required by NFPA-70 National Electric Code.

LIGHTING

Provide a complete interior lighting system for the renovations of Building 3010. Contractor can reuse existing conduit and wiring if determined in good condition and up to code by the DOR. All conductors shall be copper.

Provide a complete efficient lighting system throughout the entire building 3010, even those areas not receiving new flooring, New lighting system shall consisting of exit and emergency lighting and interior area lighting consisting of fluorescent incandescent high intensity discharge lighting including

switches and automatic controls including occupancy sensors automatic lighting shutoff systems dimming systems.

The fluorescent light fixtures shall adhere to the following requirements:

1. Electronic ballast shall be provided with anti-arcing and minimum power factor rating of 95%. The ballast shall be sound rated A. The ballast output frequency to the lamp shall be above 20 kHz to minimize visible flicker and outside frequency of 30-42KHz to avoid interference with infrared devices. The ballast shall be rapid start.

2. The lamp shall be T8 with medium bi-pin lamps suitable for rapid start ballast with 3500 degree Kelvin color temperature, 80 color rendering index (CRI) or higher and at least 20,000 hour rated average life. The lamp shall be low mercury with less than 70 picograms per lumen hour of life and shall be toxicity characteristics leaching procedure (TCLP) compliant. The lamp shall have green end caps to demonstrate TCLP compliance.

OCCUPANCY SENSORS

Provide and install occupancy sensor device(s) for each category of room as listed, as a minimum:

Room Category	Type of Occupancy Senor
Private Office	PIR
Open Office Area	Dual Technology, ceiling mounted
Conference Room	PIR
Women's Restroom	Dual Technology for bathrooms
Men's Restroom	Dual Technology for bathrooms
Classroom and Breakroom	Dual Technology
Comms, Storage and Janitor rooms	PIR

Device(s) shall give full coverage over the controlled area. Occupancy sensors shall be Underwriters Laboratories (UL) listed. Occupancy sensors and power packs (if used) shall be designed to operate with existing building voltages. Sensors and power packs shall have circuitry that only allows load switching at or near zero current crossing of supply voltage.

Dual Technology Occupancy Sensors: Wall Mount and Ceiling Mount, PIR and Ultrasonic Technology:

Sensor shall be dual technology utilizing passive infrared (PIR) for movement and Ultrasonic sensor. Passive infrared sensor shall utilize Pulse Count Processing and Detection Signature Processing to respond only to those signals caused by human motion. The sensor shall provide high immunity to false triggering from RFI and EMI. PIR lens shall have standard, dense and long range type. Ultrasonic operating frequency shall be crystal controlled between 20kHz and 28kHz and shall utilize Advanced Signal Processing to adjust detection threshold dynamically to compensate for constantly changing levels of activity and air flow throughout controlled space. Ultrasonic shall have adjustable frequency for multiple ultrasonic occupancy sensors in same area. The sensor shall have no leakage current to load, in manual or in Auto/Off mode for safety purposes and shall have voltage drop

protection. The sensor shall operate with rapid start fluorescent ballast and short 'off' times (5 minutes). Sensor shall have adjustable time delay (30 seconds to 30 minutes, minimum)

Coverage pattern:
Wall Mount:
Minor motion, PIR 20' X 15', Ultrasonic 15' X 15'
Major motion, PIR 35' X 30', Ultrasonic 20' X 20'
Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
Ceiling Mount:
Sensor shall have standard range 360 degrees lens with microphonics.
Viewing angle shall be 56 degrees in a 360 degree conical shaped pattern.
Sensor shall utilize advanced filtering to prevent non-occupant noises from keeping the lights on.

Sensor shall be UL Listed and shall operate at low temperature/high humidity. Sensor shall have manual override and manual on-off. Wall switch sensor shall accommodate loads from 0 to 800 watts at 120V; 0 to 1200 watts at 277V and shall have 180 degrees coverage capability. Wall-mounted sensors shall match the color of adjacent wall plates; ceiling-mounted sensors shall be white
Wall switch sensor shall be capable of detection of occupancy at desktop level up to 300 square feet and gross motion up to 1000 square feet.

Passive Infrared Occupancy Sensor (PIR):
Sensor shall be passive infrared sensor (PIR) only and shall utilize Pulse Count Processing and detection Signature Processing to respond only to those signals caused by human motion. The sensor shall provide high immunity to false triggering from RFI and EMI. PIR lens shall have standard, dense and long range type. The sensor shall have no leakage current to load, in manual or in Auto/Off mode for safety purposes and shall have voltage drop protection. The sensor shall operate with rapid start fluorescent ballast and short 'off' times (5 minutes). Sensor shall have adjustable time delay (30 seconds to 30 minutes, minimum). Wall switch sensor shall accommodate loads from 0 to 800 watts at 120V; 0 to 1200 watts at 277V and shall have 180 degrees coverage capability. Wall-mounted sensors shall match the color of adjacent wall plates; ceiling-mounted sensors shall be white. Wall switch sensor shall be capable of detection of occupancy at desktop level up to 300 square feet and gross motion up to 1000 square feet.

Dual Technology Occupancy Sensors in Restrooms: Wall Mount and Ceiling Mount
In restrooms, provide and install units that control lights AND exhaust fans.

Dual Technology Occupancy Sensor utilizing 'See and Hear' Technology.
Sensor shall be dual technology utilizing passive infrared (PIR) for movement and a listening device (microphone) for sound. Passive infrared sensor shall utilize Pulse Count Processing and Detection Signature Processing to respond only to those signals caused by human motion. The sensor shall provide high immunity to false triggering from RFI and EMI. Sensor shall be passive infrared sensor (PIR) and shall utilize Pulse Count Processing and Detection Signature Processing to respond to those signals caused by human motion. The sensor shall provide high immunity to false triggering from RFI and EMI. PIR lens shall have standard, dense and long range type. The sensors shall have two isolated relays to automatically turn both the lighting and fan load when initial occupancy is detected. The sensor shall have two internal timers to keep the lights/fan on during brief period of inactivity and turn the lights/fan off when time expires. The timers shall each be programmable from 30 seconds to 20 minutes and shall reset every time occupancy is re-detected. The sensor shall be set to 10 minutes for lights and 20 minutes for the fan. The sensor shall have no leakage current to load, in manual or in Auto/Off mode for safety purposes and shall have voltage drop protection. Wall switch sensor shall accommodate loads from 0 to 800 watts at 120V; 0 to 1200 watts at 277V and shall have 180 degrees coverage capability. Wall switch sensor shall be capable of detection of occupancy at desktop level up to 300 square feet and gross motion up to 1000 square feet.

D5030 COMMUNICATIONS & SECURITY

Telecommunications Systems

Provide cabling system consisting of CAT 6 cable. Provide fourteen (14) quad ports in the new Pass & ID and VA area and ten (10) other locations throughout the building as identified by the Contracting Officer. Final location of devices is to be coordinated with Contracting Officer. In the Pass & ID and VA area, the intent is to provide one quad port at each work station, each space defined by wall enclosures and a door, and two in the Waiting Area. Cable each device with 1 data (blue), 1 data (green), 2 voice (white) with port colors matching cable. Contractor may reuse existing conduit if determined by the DOR to be up to code and in good condition. New conduit shall be concealed unless on a block wall in which case, it can be run exposed. For 10 other locations throughout the building, assume that there is no existing conduit and all runs shall be concealed (no block walls).

The following rooms shall be wired for a television system mounted within 3' of the ceiling with the number of locations per room in parenthesis:

a) Lobby (2)
b) Waiting Room (2)
c) Training Classroom Room 1 (1)
d) Break Room (1)

Work shall also include adding blocking to the walls for mounting of a TV bracket. Bracket will be provided by others. In addition to the blocking, Contractor shall provide and install a shelf for a TV to sit on in two locations to be identified by the Contracting Officer. TVs will be similar to existing TV in the current Pass & ID waiting room. Exact location of electrical and cable outlets for televisions shall be coordinated with the Contracting Officer.

Security Systems

For card reader system, see Section C1020.

In the Waiting Room, connect the door into the Pass & ID offices to a switch/button by the pass thru window so that Pass & ID employees can unlock the door to allow visitors to enter the Pass & ID offices. Exact location of the switch/button will be identified by the Contracting Officer. The door from the Waiting Room into the Pass & ID offices shall be locked at all times unless opened by a key or buzzed in via the switch/button at the pass thru window. The door will be in the unlocked position when going from the Pass & ID offices into the Waiting Room.

In the EEO Receptionist area, connect the interior door in the EEO Vestibule to a switch/button by the pass thru window so that the EEO Receptionist can unlock the door to allow visitors to enter the EEO area. Exact location of the switch/button will be identified by the Contracting Officer. The door from the interior door in the EEO Vestibule shall be locked at all times from the Vestibule into the EEO office area unless opened by a key or buzzed in via the switch/button at the pass thru window. The door will be in the unlocked position when going from the EEO office area into the EEO Vestibule.

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

Fixed Furnishings (SID) are funded as part of the construction project and are not funded as part of collateral equipment.

Develop design as described herein and provide built-in cabinetry and window treatments. Cross-reference C3000 Interior Finishes for performance requirements. Each submittal must demonstrate complete coordination with the facility design and with the Furniture, Fixtures and Equipment (FF&E) package for movable loose furniture.

Window Treatments

All windows, other than storefronts, to the exterior of the building shall be provided with mini-blinds, including rooms that are not indicated to receive new flooring. Blinds shall have aluminum; 1 inch horizontal louvered blind slats with intermediate brackets provided for blinds over 48 inches wide.

F20 SELECTIVE BUILDING DEMOLITION

F2020 HAZARDOUS COMPONENT ABATEMENT

Prior to starting any work in the building, Contractor shall test, where existing flooring is being removed, all existing VCT, VCT mastic, gypsum board, and gypsum board finishing/joint compound for asbestos. In areas receiving new paint, Contractor shall test all metal doors, metal door jambs and painted window frames for lead content in accordance with current standards. The intent is not to remove lead based paint from the doors, jambs or window frames but to take precautions during work around lead based paint. Contractors shall submit test reports to the Contracting Officer at least 3 weeks prior to any work being performed.

As indicated in Section 1, for bidding purposes, Contractor shall assume that existing VCT and VCT mastic contain asbestos material and metal doors, metal door jambs and painted window frames have lead containing paint.

Prior to the start of the work the ECATTS trained contractor is required to inspect the work area with the designer of record, and government representative to address existing potentially hazardous components as part of the work. The contractor is required to provide a list of hazardous components, locations and quantities that must be addressed as part of the work. If tests indicate results show evidence of hazardous materials, notify the Contracting Officer immediately.

Private Qualified Person (PQP)

The Contractor is required to hire a PQP to ensure compliance with the approved work plans and perform independent inspections, testing and verification of the hazardous components work

Disposal

All hazardous waste materials shall become the property of the Contractor and shall be transported, disposed of or recycled in accordance with local governance except for lead painted metal doors and jambs in which the contractor can turn over to the government to a location on Base to be recycled.

G20 SITE IMPROVEMENTS

G2030 PEDESTRIAN PAVING

Power wash existing concrete sidewalks leading from Classroom Corridor, Lobby and EEO Vestibule to the parking lot.

G2040 SITE DEVELOPMENT

Contractor is allowed to use the existing parking lot on the east side of the building for temporary facilities. Contractor is responsible for repairing all damage to the parking lot during the period of construction.

G2050 LANDSCAPING

Seeding and Sodding

Replace and repair turf areas damaged or destroyed during the period of construction. Replace and repair existing trees, plants and landscape beds damaged or destroyed during the period of construction.

G30 SITE CIVIL/MECHANICAL UTILITIES

G3010 WATER SUPPLY

Domestic water supply is existing. Provide new water system for the fire protection system.

G3020 SANITARY SEWER

The sanitary sewer system is existing. Provide new connections as required.

-- End of Section --

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Part 4 Minimum Materials, Engineering and Construction Requirements

1.0 GENERAL REQUIREMENTS

The requirements indicated here are minimum performance requirements. More specific project functional and performance requirements, scope items and expected quality levels over and above the standards in Part 4 are identified in Part 3 of the Request for Proposal or Basic Ordering Agreement. The Contractor is encouraged to exceed the minimum requirements. The Contractor's performance evaluation will be based in part on enhancements to materials, engineering, design and construction provided for the contract that exceed minimum requirements.

Part 4 is a general section. Not all items in Part 4 will be required for this project. See Part 3 for project-specific requirements. See "Order of Precedence" paragraph in Part 2 for relationships between all parts of the RFP.

In general, unless otherwise indicated, Contractor shall provide all labor, equipment and materials necessary to complete the work required for the contract. All work shall be in conformance with all applicable referenced criteria, construction standards, laws and regulations, including applicable building and fire, life safety codes.

Recycled Materials Considerations:

An Affirmative Procurement Program has been established within the Federal government to promote the purchase of products containing recovered materials. This program promotes the purchase of products containing materials recovered from the solid waste stream. The intent is to conserve resources and reduce solid waste by developing markets for recycled products and encouraging manufacturers to produce quality recycled content products. The contractors shall use products that meet or exceed the EPA guideline standards for recovered content as required by the Federal Acquisition Regulations (FAR). Availability lists of manufacturers and EPA research on product usage are on the Construction Criteria Base (CCB) at http://www.ccb.org under Documents Library, NAVFAC Criteria. A partial list of products containing recycled materials for possible use is as follows:

- Rock Wool Insulation
- Fiberglass Insulation
- Cellulose Insulation
- Structural Fiberboard and Laminated Paperboard
- Cement and Concrete - Coal Fly Ash
- Carpet including backings and cushions
- Floor Tiles
- Reprocessed and Consolidated Latex Paint

- Crushed Concrete Aggregate for new asphalt, concrete or subgrade
- Recycled glass for terrazzo aggregate
- Acoustical Ceiling Tile
- Gypsum Wallboard
- Steel wall studs
- Cellulose spray applied fireproofing
- HDPE Toilet Partitions

1.1 MATERIALS AND METHODS OF CONSTRUCTION

Only new materials and equipment shall be installed in the work. All materials, equipment and appliances shall be of the current manufacturers' products. No obsolete or discontinued materials, equipment and appliances shall be used, except that construction materials containing recycled content as described in Paragraph 1 of this Part that completely comply with all materials specifications found elsewhere in this Part may be used.

1.2 APPLICABLE CODES AND STANDARDS

The design and construction shall be in accordance with established construction practices, and the latest revision/edition of the following referenced codes and standards. The term "Latest Revision/Edition" is defined as the version as of the project award date. References are available at www.wbdg.org/ndbm/ . The advisory provisions of all codes and standards shall be mandatory, as though the word "shall" had been substituted for "should" wherever it appears. Reference to the "authority having jurisdiction" shall be construed to mean "Contracting Officer". Comply with the required and advisory portions of the current edition of the standard at the time of contract award. All work to comply with UFC 1-200-01, *General Building Requirements*, and IBC 2009 or later edition as modified by applicable NFPA Standard as well as codes and standards listed in RFP Part 2 Attachment A.

1.3 LOCATION-SPECIFIC CODES AND STANDARDS

See Part 3.

1.4 DISCREPANCIES

When discrepancies in the referenced standards and the contract requirements occur, the more stringent requirements shall govern. The word "should" in all NFPA publications shall be interpreted as a requirement. The Authority Having Jurisdiction in the interpretation of the codes and standards, and approving the exceptions allowed in the referenced standards, shall be the Contracting Officer, and the parties designated by the Contracting Officer.

2.0 PERFORMANCE TECHNICAL SPECIFICATIONS

Note: The paragraph numbers used correspond with the numbers used in UNIFORMAT II/Work

Breakdown Structures (WBS) as listed in the Whole Building Design Guide, Navy Design Build Master, accessible at this website: www.wbdg.org/ndbm .

SECTION A. SUBSTRUCTURE

A10 FOUNDATION

Foundations shall be reinforced concrete slabs-on-grade with continuous strip footings or isolated spread footings. Concrete slabs shall not be less than 4 inches in thickness and footings shall not be less than 18 inches below the lowest adjacent grade. Foundations shall be designed and constructed of reinforced concrete. All design and construction shall comply with IBC and with applicable requirements in Section B Shell. For the purposes of interpreting IBC Chapter 18, the "Owner" and "Building Official" shall mean the "Government", and the "Applicant" shall mean the "Contractor/Designer of Record".

1. **Contractor-Foundation Design**: The Designer of Record shall evaluate the RFP data, and obtain and evaluate all additional data as required to support the design and construction.

2. **Geotechnical Site Data required in Design Drawings**: The Contractor's final design drawings shall include:
   a. Notes identifying the soil allowable bearing capacity used in design.
   b. Subsurface soil information, be it Government provided or Contractor obtained, that represents subsurface conditions existing on the project site (such as boring logs, test pits, laboratory test results and groundwater observations). The locations of all borings shall be indicated on the drawings.

3. **Performance Verification and Acceptance Testing**: Verification of satisfactory construction and system performance shall be via Performance Verification Testing, as detailed in this part of the RFP.
   a. **Earthwork:** Perform quality assurance for earthwork in accordance with IBC Chapter 17. See Section G1030.

SECTION B. SHELL

Building shell may be of any materials and design allowed by applicable codes and standards, subject to specific requirements that may be applicable to a particular activity, such as the base exterior architecture plan (BEAP) and UFC 4-010-01.

B10 SUPERSTRUCTURES

Superstructure work includes structural frames, bearing walls, floors, roofs, roof canopies, and balcony construction. Unless otherwise specified in Part 3, superstructures may be designed and constructed using any materials or combination of different materials allowed by applicable codes and standards. All design and construction shall comply with IBC. Special inspection, testing, approvals, certifications, observations and quality assurance plans as prescribed in Chapter 17 of the IBC are required.

1. **Concrete**: All concrete shall be constructed in accordance with ACI 301. Concrete shall have a 28-day minimum compressive strength of 3,000 psi. Slump shall be between 2

and 4 inches in accordance with ASTM C143. Provide joints as required to minimize cracking. All concrete shall be reinforced. Provide joints as required by applicable ACI standards. Unless otherwise specified in Part 3 or as indicated by the contracting officer, provide steel trowel finish for all exposed floor surfaces.

2. **Masonry**:
   a. All concrete masonry shall be constructed in accordance with ACI 530.1. Concrete masonry shall have a minimum 28-day compressive strength of 1500 psi. Concrete masonry units shall conform to ASTM C90, grade A1. Broken blocks are not allowed. Use only standard size and shape blocks. Block may be cut when necessary. Mortar shall be Type S.
   b. When used, brick shall conform to ASTM C216. In exposed construction, broken brick shall not be allowed. Standard size brick may be cut to fit job condition. Use Type S mortar.
   c. Provide metal anchors for masonry and brick, including veneer construction as required by IBC.

6. **Structural Steel**: Structural steel exposed to weathering shall be adequately protected to prevent corrosion.

7. **Steel deck**: Steel form deck shall have a G90 galvanized finish, and must have a minimum 26-gage thickness. All other steel deck shall have a G90 galvanized finish, and must have a minimum 20-gage thickness.

8. **Cold-formed metal framing**: Cold-formed steel studs, joists and track shall be galvanized with a minimum thickness of 20-gage.

9. **Wood framing**: Wood framing members shall be new lumber, unless otherwise allowed by Part 3. Timber can be Douglas Fir, Douglas Fir-Larch, Hem-Fir, Southern Pine or other structurally competent species allowed by applicable codes and standards. Wood framing shall meet the following minimum grading requirements:
   a. Studs - #3
   b. Joists and rafters- #2
   c. Beams, 4x and larger - #1
   d. Posts, 4x and larger - #1
   e. Blocking - #3
   f. Fascia, trim - #1
   g. Wood Structural Panel Sheathing (Exterior Glue)
   h. Roof - APA rated with span index of 24/0 - minimum thickness 1/2 inch
   i. Walls - APA rated with span index of 32/16 - minimum thickness 1/2 inch
   j. Flooring- APA rated with span index of 48/24 - minimum thickness 3/4 inch

B20 EXTERIOR ENCLOSURE

B2010 EXTERIOR WALLS

1. **Exterior Wall Performance**:
   a. **Vapor Transmission Analysis:** Perform a job specific vapor transmission analysis in accordance with ASHRAE 90.1 or WUFI. The conclusion of the

analysis shall indicate the appropriate locations of needed vapor retarders, air barriers, and anticipated dew-point locations in the exterior enclosure during different critical times of the year.

b. **Maximum Air Infiltration:** The air leak flow rate must not exceed 0.25 CFM at 75 Pa per square foot (0.076 cm 75 Pa per square meter) of building envelope area including roof or ceiling, walls and floor as provided by the DOR.

Where required in RFP Part 3, provide air barrier testing. Perform testing as described in "U.S. Army Corps of Engineers Air Leakage Test Protocol for Building Envelopes Version 3, May 11, 2012". Repair leaks and repeat testing until prescribed maximum air leak flow rate is achieved. Provide intermediate and final reports.

c. **Wind Loads:** Provide wind load calculations for exterior cladding in accordance with ASCE-7 with comparative analysis of the cladding system to be provided.

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

e. **Insulating Value:** Provide complete thermal envelope in accordance with ASHRAE 90.1, Chapter 5 with improvements required to meet project energy goals.

Where required in RFP Part 3, provide infrared thermal envelope performance testing. Test the building envelope using Infrared Thermography in accordance with the requirements of ASTM C1060 (latest edition) and ISO 6781. The Contracting Officer will witness the testing. Provide thermography test report including thermographs in color and a color temperature scale to define the temperature indicated by the various colors. The report shall identify the high temperature reading, the outdoor air temperature, the building indoor air temperature, and the wind speed and direction. Report to note any areas of compromise in the building envelope, and note all actions required and taken to correct those areas. Repair and repeat testing until discrepancies are demonstrated to be resolved.

2. **Masonry Veneer Exterior Wall Closure Components**: Masonry veneer shall include load bearing and non-load bearing exterior walls of the structure, and shall include colored mortar, special shapes such as sills, headers, trim units and copings of brick masonry, precast concrete, concrete masonry units, or other approved material. Utilize BIA Technical Notes to design, detail, and construct brick masonry walls. Substitute directive language in the place of BIA suggestive language. The results of these wording substitutions change this document to required procedures. The veneer shall be tied to the backup wall system with a system that allows the veneer to move independently of the backup wall system, while being structurally supported. The masonry veneer shall allow for expansion and contraction of the veneer without cracking the exterior material.

a. **Masonry Veneer Installation:** Conform to ACI 530.1 for masonry veneer installation, including cold weather construction. Antifreeze admixtures are not to be used.

b. **Mortar:** Provide factory-tinted colored mortar conforming to ASTM C270, unless DOR directs otherwise.

c. **Expansion/Control Joints:** Locate expansion/control joints and seal with proper backing material and ASTM C 920 polyurethane sealant, or preformed foam or rubberized expansion joint closure. Conform to UFC 3-100-10 and BIA Technotes 18, 18A.

d. **Brick:** shall be ASTM C216, Grade SW, type FBS, or type FBX for detail work. ASTM C67 test rating shall be "Not effloresced". Use FBA brick only for special architectural effects requiring a non-uniform size.

e. **Split Faced or Ground Faced Masonry:** ASTM C 90

f. **Cast Stone Trim Units:** Cast Stone shall meet or exceed the requirements of ASTM C 1364.

g. **Wall Cavity:** shall Comply with the and BIA Technical Notes 21A, 21B, 21C, 28B

8. **Through-Wall Flashing Components:** Through-wall flashing with weep holes shall be incorporated in cavity wall construction. Flashing shall be 7 ounce copper flashing with a 3 ounce bituminous coating on each side or a fiberglass fabric bonded on each side of the copper sheet; 16-ounce uncoated copper, 28 gauge Type 302 or 304 stainless steel is also acceptable. 'Flexible membrane flashing, plastic or PVC-based membrane flashing is prohibited.

i. **Reinforcing in Veneer Layer:** Reinforcing in the veneer layer shall be galvanized in accordance with ASTM A 123/A123M, ASTM A153/A153M, or ASTM A653/A653M, Z275 (G90) coating, and be of sufficient size to eliminate damage to the veneer layer from wind and other live and dead loads imposed on the veneer layer.

j. **Masonry Cleaning:** Clean the masonry in accordance with manufacturer's instructions and BIA Technote 20.

3. **Metal Wall Panel Exterior Closure**

Panels shall have factory applied, baked coating to the exterior and interior of metal wall panels and metal accessories. Exterior finish topcoat shall be of 70 percent polyvinylidene fluoride (PVDF) resin with not less than 0.8 mil dry film thickness (DFT). Exterior primer shall be standard with panel manufacturer with not less than 0.8 mil dry film thickness (DFT).

Wall system and attachments shall resist wind loads as determined by ASCE 7, with a factor of safety appropriate for the material holding the anchor. Maximum deflection due to wind on aluminum wall panels shall be 1/60. Maximum deflection due to wind on steel wall panels and girts behind aluminum or steel wall panels shall be limited to 1/120 of their respective spans, except that when interior finishes are used the maximum allowable deflection shall be limited to 1/180 of their respective spans.
Conformations - Non-insulated steel or aluminum wall panels shall have configurations for overlapping adjacent sheets or interlocking ribs for securing adjacent sheets and shall be fastened to framework using concealed fasteners, or choose the option for exposed fasteners when exposed fasteners are acceptable at the installation. Length of sheets shall be sufficient to cover the entire height of any unbroken wall surface.

a. **Steel Wall Panels**:

1) Material and Coating: Form sheets from steel conforming to ASTM A 653/A 653M, Structural Grade 40, galvanized coating conforming to ASTM A 924/A 924M, Class G-90; aluminum-coated steel conforming to SAE AMS 5036; or steel-coated with aluminum-zinc alloy conforming to ASTM A 792/A 792M, except that coating chemical composition shall be approximately 55 percent aluminum, 1.6 percent silicon, and 43.4 percent zinc with minimum coating weight of 0.5 ounce per square foot.

2) Gage: Minimum 22 U.S. Standard Gage for wall panels, but in no case lighter than required to meet maximum deflection requirements specified.

b. **Aluminum Wall Panels**:

1) Material and Coating - Form sheets of Alloy 3004 or Alclad 3004 conforming to ASTM B 209 having proper temper to suit respective forming operations.

2) Thickness - Minimum 0.81 mm (0.032 inch) nominal, but in no case thinner than that required to meet maximum deflection requirements specified.

c. **Insulated Aluminum or Steel Wall Panels:** Insulated wall panels shall be steel or aluminum factory-fabricated units with insulating core between metal face sheets securely fastened together and uniformly separated with rigid spacers. Panels shall have a factory color finish. Wall panels shall have edge configurations with interlocking ribs for securing adjacent panels. System shall utilize factory fabricated corners and trim pieces at intersections with other materials. Insulated wall panels shall be fastened to framework using concealed fasteners.

1) Insulated Steel Panels - Zinc-coated steel conforming to ASTM A 653/A 653M; or Aluminum-zinc alloy coated steel conforming to ASTM A 792/A 792M, AZ 55 coating. Uncoated wall panels shall be 0.61 mm (0.024 inch) thick minimum.

2) Insulated Aluminum Panels - Alloy conforming to ASTM B209, temper as required for the forming operation, minimum 0.81 mm (0.032 inch) thick.

4. **Stucco Exterior Wall Closure**

a. **Portland Cement Plaster:** ASTM C150, gray Portland cement Type II with 13 mm (1/2 inch) maximum chopped alkali resistant fiberglass strands, minimum 1.5 percent by weight to cement; .68 kg (1 1/2 pounds) per sack of cement. Lime shall conform to ASTM C206, Type S. System shall utilize stainless steel or zinc corner beads, J-beads and other accessories. Unless specifically deleted, the system shall utilize an acrylic admixture or coating to give additional moisture suppression to control fungus growth.

b. **Exterior Insulation and Finish System (EIFS):** EIMA TM 101 and 01 EIMA TM 101.86. EIFS shall be used as the non-primary or the primary exterior finish material only for projects where it is necessary to match existing EIFS.

5. **Precast Concrete Wall Panels**: ACI 211.1 and ACI 301. PCI MNL-116 or PCI MNL-117. Concrete shall have a minimum 28-day compressive strength of 281 Kg/cm2 (4000 psi). Joints shall include properly sized and placed backing material and fully loaded and tooled sealant joint of no less than 1/4 inch sealant material thickness.

6. **Other Wall Finish Systems**

a. **Horizontal Wood Siding:** Horizontal Wood Siding: DOC PS 20, exterior, lap type, 6 inches wide, maximum practicable lengths, 11 mm (7/16 inch) thick, smooth face. All surfaces of wood siding and trim shall be shop coated with an alkyd primer.

Species and Grades 1. Grade 1 Common spruce-pine-fir; NELMA, NLGA, WCLIB, or WWPA. 2. Grade Prime or D finish, pressure-preservative-treated hem-fir; NLGA, WCLIB, or WWPA. 3. Grade D Select (Quality) eastern white pine, eastern hemlock-balsam fir-tamarack, eastern spruce, or white woods; NELMA, NLGA, WCLIB, or WWPA. 4. Grade D Select northern white cedar; NELMA or NLGA. 5. Grade B & B, pressure-preservative-treated southern pine; SPIB.

b. **Vinyl Siding System:** Integrally colored, vinyl siding complying with ASTM D 3679.

c. **Manufactured Faced Panels Systems Exterior Wall Siding:** Glass Fiber Reinforced Cementitious Panels System: Siding made from fiber-cement board that does not contain asbestos fibers; complies with ASTM C 1186, Type A, Grade II; horizontal or vertical pattern in plain or beaded-edge style. Texture: Rough sawn or smooth, factory primed.

7. **Exterior Wall Backup Construction**
   a. **Concrete Unit Masonry:** Provide concrete unit masonry to comply with ACI 530.1. Load-bearing units: ASTM C90, Non-load bearing- units: ASTM C129, Type I or II. Provide ground face units, split-faced units, ground-faced units, or split-ribbed units for exposed exterior walls. Provide water repellent admixture to masonry units where the exterior face of the units will not receive a waterproof coating such as paint
   b. **Dampproofing:** Dampproof the cavity-facing wythe of the backup masonry using asphaltic primer according to ASTM D 41, if dampproofing is not provided by a sprayed on foam or other DOR-approved membrane insulation system.

8. **Load-Bearing Metal Framing System**
   If permitted, provide load-bearing metal framing including top and bottom tracks, bracing, fastenings, and other accessories necessary for complete installation. Framing members shall have the structural properties indicated. Where physical structural properties are not indicated, they shall be as necessary to withstand all imposed loads. Design framing in accordance with AISI SG-673. Installation shall be in accordance with DOR-approved shop drawings and manufacturer's installation instructions.

9. **Exterior Studs**:

Max. Deflection Criteria	Exterior Finish
L/360	Cement Plaster, Wood Veneer, Synthetic Plaster, Metal Panels
L/600	Brick Veneer, Stone Panels

Wall deflections shall be computed on the basis that studs withstand all lateral forces independent of any composite action from sheathing materials. Studs abutting windows or louvers shall also be designed not to exceed 1/4-inch maximum deflection and as required in UFC 4-010-01.1) Studs - ASTM A 1003/ASTM A 1003M, Structural Grade 50, Type H minimum; provide Z180 (G60) galvanized coating in accordance with ASTM A 653/ASTM A 653M. Do not expose studs to direct moisture contact2) Bracing - Provide horizontal bracing in accordance with design calculations and AISI SG-673, consisting of, as a minimum, runner channel cut to fit between and welded to the studs.3) Sheathing - Provide sheathing to withstand structural loads imposed on the wall structure. Cover sheathing with either a 15 pound asphalt-impregnated building paper, or air barrier as required by the wall moisture analysis. Sheathing shall be one of the following: a) Plywood: C-D Grade, Exposure 1; b) Structural-Use and OSB Panels; c) Gypsum: ASTM C 79/C 79M and ASTM C 1177/C 1177M, 13 mm (1/2 inch) thick fire retardant (Type X) 15 mm (5/8 inch) thick; 1.2 meters (4 feet) wide with square edge for supports 400 mm (16 inches) o.c. with or without corner bracing of framing. Gypsum sheathing shall be faced with materials capable of resisting six months of weathering exposure without degradation of the covering or the gypsum. Seal all joints as recommended by the manufacturer.

10. **Wood Framing System**: All materials shall be kiln-dried lumber complying with DOC PS 20. Installation shall be in accordance with AF&PA T11. System shall use preservative pressure treated lumber at sill plates and other members in contact with concrete and masonry surfaces.
    a. **Species and Grades:** Provide species and grades listed: 1) Grade 2 Common spruce-pine-fir; NELMA, NLGA, WCLIB, or WWPA: 2) Grade 2 Common, hem-fir; Douglas-fir; NLGA, WCLIB, or WWPA; 3) Grade 2 Common, southern pine;

SPIB.

b. **Sheathing:** Sheathing shall withstand structural loads imposed on the wall structure. Cover sheathing with either a 15 pound asphalt-impregnated building paper, or air barrier as required by the wall moisture analysis. Sheathing shall be as for Metal Studs.

11. **Cast-in-place Concrete System**: Concrete construction must be in accordance with ACI 301.

12. **Insulation and Vapor Retarder**: Insulation, Vapor Retarders, and Air Barrier Systems in or on Exterior Enclosure shall include: insulation, liquid, sheet or continuous film materials installed separately in or on wall assemblies to provide resistance to heat loss/gain, and vapor penetration.
    a. **Vapor retarder:** Comply with ASTM C755. Incorporate in the exterior wall system where required by vapor transmission calculations or dew point analysis indicates the need or in conditions of high moisture exposure.
    b. **Bituminous Dampproofing:** Bituminous Dampproofing shall be ASTM D449, Type I or Type II bituminous dampproofing on the exterior surface of the interior wythe of masonry in a cavity wall (back-up wall for masonry veneer).
    c. **Building Paper:** FS UU-B-790, Type I, Grade D, Style 1.
    d. **Air Barrier:** Building wrap consisting of air barrier sheeting complying with ASTM E 1677, Type 1, not less than 3 mils thick with a permeance of not less than 575 ng/Pa x s x sq.m. (10 perms). Building wrap shall have a flame spread index of less than 25 in accordance with ASTM E 84. Provide building wrap over sheathing of wood or metal framed construction to reduce air penetration and airborne vapor penetration. Provide building wrap tape as recommended by the manufacturer for sealing all joints in the building wrap. Installation shall be in accordance with manufacturer's instructions. Air barrier installation at windows shall be in accordance with ASTM E 2112.
    e. **Insulation Systems:** Vertical and horizontal polystyrene insulation conforming to ASTM C578 or rigid polyisocyanurate board wall insulating products conforming to ASTM C591 or mineral-fiber blanket insulation conforming to ASTM C 665 shall be provided.

13. **Parapets**: Avoid parapets when possible, but when necessary, provide parapets with the same materials as the exterior wall construction. Provide scuppers and wall edge according to SMACNA.

14. **Exterior Louvers and Screens**: If required, provide louvers for Screened Equipment Enclosure or as louvers for exterior doors.

    Storm shutters shall comply with ASTM E 1996-03.

15. **Balcony Walls and Handrails**: Balcony walls to match exterior construction. Handrails to comply with the IBC and OSHA.

16. **Exterior Soffits**: Exterior soffit system.

17. **Exterior Painting and Special Finishes**; All painting and coating materials shall be low VOC. Painting practices shall comply with applicable federal, state and local laws enacted to insure compliance with Federal Clean Air Standards. Apply coating materials in accordance with SSPC PA 1. SSPC PA 1 methods are applicable to all substrates.

All paint shall be in accordance with the Master Painters Institute (MPI) standards for the exterior architectural surface being finished. The current MPI, "Approved Product List" which lists paint by brand, label, product name and product code as of the date of contract award, will be used to determine compliance with the submittal requirements of this specification. Provide paint systems tested to "Detailed Performance Level" standard as defined by MPI.

18. **Exterior Joint Sealant**: Sealant joint design, priming, tooling, masking, cleaning and application shall be in accordance with the general requirements of Sealants: A Professionals' Guide from the Sealant, Waterproofing & Restoration Institute (SWRI). All sealant shall conform to ASTM C 920.

19. **Sun Control Devices**: Sun control devices shall be manufactured devices to provide sun control on exterior windows and storefronts. Sun control devices shall be designed and installed to withstand the wind loads prevailing at the project site.

B2020 EXTERIOR WINDOWS

All windows and doors in new or existing buildings, which are subject to Anti-terrorism Standards, must be blast-resistant as prescribed in UFC 4-010-01.

Unless otherwise allowed by Part 3, windows for new facilities shall be aluminum. In building additions or renovations windows shall match existing window materials. Exterior windows design, dimension, and construction shall meet or exceed the requirements for Anti Terrorism Force Protection requirements. In addition, exterior windows shall meet or exceed Energy Star requirements. The design and placement of exterior windows shall take into considerations view, natural light, privacy, and protection for the occupants of the facilities. Provide operable hardware and insect screen for exterior windows. Windows shall be fabricated by manufacturers normally involved in the manufacturing of windows and shall be of the current make and model. No obsolete or discontinued windows shall be used. Provide weather stripping, STC and IIC rating, commensurate with the intended use of the facility. Submit catalog information and manufacturer's specifications for approval by Contracting Officer prior to purchase of windows.

All window assemblies shall meet performance grade CW tested in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-08 or most current edition of this standard.

Where windows separate conditioned spaces from non-conditioned spaces, provide windows bearing NFRC energy label indicating window exceeds current EnergyStar criteria. For storefront or curtainwall systems, provide thermally broken framing and insulating glazing with whole-assembly U-value of 0.40 or less. Provide windows exceeding requirements of ASHRAE 90.1, Table 5.5 for project climate zone.

Windows shall consist of fixed and operable sash used singly and in multiples. Provide operable sash in spaces occupied by people as a minimum. Include operating hardware, non-corroding framed metal screens for operable sash, integrated blinds set between glass panels and security grilles. Provide jamb support for larger windows where recommended by manufacturer.

1. **Metal Windows**: All windows shall conform to ANSI/AAMA/WDMA 101. Metal windows with insulating glass shall have thermally broken frames and sash. Factory finish aluminum windows and provide with aluminum frame screens with aluminum mesh at operable sash, hardware and locks, and tinted glazing. Aluminum screens shall comply with ANSI/SMA 1004.

2. **Wood Windows**: Clad wood and wood windows shall consist of complete units including sash, glass, frame, weatherstripping, insect screen, and hardware. Window units shall meet the requirements of AAMA 101, except maximum air infiltration shall not exceed 0.30 CFM per linear foot of sash crack when tested under uniform static air pressure difference of 7.66 Kg/m2 (1.57 psf).

3. **Storefronts**: Provide one-story storefront system fabricated from formed and extruded aluminum and glass components for exterior use. Utilize the specific section of the Standard Design-Build Performance Technical Specifications Section B202002 for the storefront to be provided. Storefront framing shall meet or exceed the structural requirements, as measured in accordance with ANSI/ASTM E330: Design system to withstand this as a minimum and comply with design pressure established within the required ASCE 7-05 Wind Speed Calculations determined by the overall average opening within the project.

4. **Glazing**: All exterior glazing shall be insulating glass.
   a. Clear Glass - Type I, Class 1 (clear), Quality q4 (A);
   b. Heat-Absorbing Glass - ASTM 1036, Type I, Class 2 Quality q3 (select) ray frames;
   c. Wire Glass - Type II, Class 1, Form 1, Quality q8 Mesh m1 or Form 2, Quality q7;
   d. Laminated Glass - ASTM 1172, total thickness shall be nominally 6 mm (1/4 inch);
   e. Insulating Glass Units - Typically ASTM C 1036, Type I, Class 1, Quality q4, minimum 6 mm;
   f. Tempered Glass - ASTM C 1048, Kind FT (fully tempered);
   g. Patterned Glass - ASTM 1036, Type II, Class 1 (translucent), Form 3 (patterned), Quality q7 (decorative), Finish f1 (patterned one side), Pattern p2 (geometric) 5.55 mm (7/32 inch) thick.

B2030 EXTERIOR DOORS

Exterior doors shall be heavy duty insulated steel doors and frames for service access. Door frames shall have welded corners. Use heavy-duty overhead holder and closer to protect doors from wind damage. Steel shall have G60 galvanized coating in accordance with ASTM A 924/A 924M and ASTM A 653/A 653M when the job site is located within 300 feet from a body of salt water. Provide commercial quality, coating Class A zinc coating in accordance with ASTM A591 for other steel or steel skin hollow metal doors at other locations. Provide kickplates on the inside face of all exterior doors. Weather-protect all exterior doors and related construction with low infiltration weatherstripping and sealants. Provide threshold with offset to stop water penetration while maintaining accessibility compliance. Conform to the design criteria of ASCE 7. See the hardware schedule for door hardware requirements.

Where doors separate conditioned spaces from non-conditioned spaces, provide doors exceeding current EnergyStar criteria. For storefront entrances, provide thermally broken door framing and insulating glazing with whole-assembly U-value of 0.67 or less. Provide doors exceeding requirements of ASHRAE 90.1, Table 5.5 for project climate zone.

1. **Steel Doors**: Exterior doors shall comply with ANSI A250.8-1998 (SDI-100). Hardware preparation shall be in accordance with ANSI A250.6. Doors shall be hung in accordance with ANSI A115.16.
   a. Doors Required:

1) Standard Duty Doors - Level 1, MSG # 20 (IP 0.032", 0.8 mm), physical performance Level C, Model 1 or 2.

2) Heavy Duty Doors - MSG # 18 (IP 0,042", 1 mm), physical performance Level B, Model 1 or 2.

3) Extra Heavy Duty Doors - Level 3, MSG #16, (0.053", 1.3 mm) physical performance Level A, Model 1, 2, or 3.

4) Maximum Duty Doors - Level 4 (IP 0.067", 1.6 mm), physical performance Level A, Model 1 or 2.

b. Insulated steel doors and frames are required for entrances to dwelling units, and may also be specified as a Contractor's option to Level 1 standard hollow metal doors. Do not use wood doors for exterior doors, unless they are fully protected from the elements, an exterior grade species, and specially finished. If wood doors are used, provide in accordance with Standard Design-Build Performance Technical Specification Paragraph B203001 2.

2. **Standard Steel Frames**; ANSI A 250.8. Form frames with welded corners for installation in exterior walls. Form stops and beads of 20 gage steel. Frames shall be set in accordance with ASTM A250.11. Anchor all frames with a minimum of three jamb anchors and base steel anchors per frame, zinc-coated or painted with rust-inhibitive paint, not lighter than 18 gage. Mortar infill frames in masonry walls, and infill with gypsum board compound at each jamb anchor in metal frame walls. Only use surface exposed bolted anchors in concrete walls.

3. **Door and Frame Finishes**: a) Exterior Doors, Factory-Primed and Field Painted Finish - Doors and frames shall be factory primed with a rust inhibitive coating as specified in ANSI A250.8. Factory prime doors on six sides of the door; b) Exterior Doors Galvanized Finish -- Shall be Commercial Quality, Coating Class A, zinc coating in accordance with ASTM A 591 when facility is located further than 91 meters (300 feet) from the ocean. When facility is located within 91 meters (300 feet) of the ocean, provide G60 galvanized coating in accordance with ASTM A 924/A 924M and ASTM A 653/A 653M.

4. **Upward Acting Doors**: Upward acting doors shall be capable of withstanding the design wind loading of ASCE 7. Provide galvanized steel tracks not lighter than 14 gage for 50 mm (2 inch) tracks and not lighter than 12 gage for 75 mm (3 inch) track. Provide a positive locking device and cylinder lock with two keys on manually operated doors.

5. **Overhead and Roll-up Doors**: Large exterior overhead and roll-up doors system shall consist of manual or automatic exterior doors and door assemblies.

6. **Rolling Service Doors and Grilles**: Coiling overhead doors shall have minimum 22 gage thermal insulated slats. Electric operators shall have three-button switches conforming to NEMA MG 1, NEMA ICS 1, and NEMA ICS 2, and auxiliary hand chain operation, weather-stripping and wind-locks. Doors shall be capable of withstanding the design wind loading of ASCE 7 and still operate normally. Finish of the door shall be hot-dipped galvanized with a painted finish.

7. **Sectional Overhead Doors**: Sectional overhead doors shall conform to NAGDM 102, Residential or Commercial or Industrial door standards. If doors are electrically

operated, pushbuttons shall be full-guarded to prevent accidental operation, and include limit switches to automatically stop doors at the fully open and closed positions. Limit switch positions shall be readily adjustable.

8. **Hardware**: Provide the services of a Certified Door Hardware Consultant to prepare the door hardware schedule.

   Provide all new hardware with satin chrome finish throughout. Hardware shall be commercial grade, suitable for the operational requirements and in compliance with life safety code and handicapped accessibility requirements, similar in quality to the hardware shown in C1020 Interior Doors and Hardware below.

   Coordination: Provide a master keying system compatible with the existing base system. Provide an emergency access key box for exterior door fireman key access.Coordinate with the local authority and the Contracting Officer to determine the local requirements for hardware, keying and master keying.

B30 ROOFING

For repair of existing roofing, the cutting of the existing roof shall be kept to a minimum and, where necessary, shall be made in a clean and orderly manner to prevent the appearance of a patch.

Repair all damage to existing and new roofing caused by the work of this Contract at no additional cost to the Government. The work shall be executed in such a manner as to maintain the integrity of the existing roofing manufacturer's warranty.

1. **Pre-Roofing Conference**: Prior to beginning roofing work, the Contractor shall hold a Pre-Roofing Conference with the personnel directly responsible for the roofing systems work, as well as the roofing manufacturer's technical representative.

2. **Roof Design Assurance**: If the roofing project is significant (Significant Roof - A single or group of buildings greater than 1,400 m^2 (15,000 sf)), or where extenuating circumstances of the roof project such as building use, content, safety, or visibility require a roofing consultant, the Contractor shall utilize the services of a Registered Roof Consultant (RRC) certified by the Roof Consultant Institute, or a Registered Professional architect or Engineer who specializes in roofing, to approve the roof design. The roof consultant must be engaged in roofing design and roofing construction as his primary endeavor. The roof consultant shall verify in writing that the design for the project is in accordance with the current edition of *NRCA Roofing and Waterproofing Manual*, UFC's, and RFP, and standard industry practices and building codes.

   If a Roof Design Assurance Consultant is needed, consider using a Registered Roof Observer as a QC specialist.

B3010 ROOF COVERINGS

Roof coverings and procedures shall comply with the requirements of UFC 3-110-03, *Roofing*, and NRCA, *Roofing and Waterproofing Manual*found at http://www.nrca.net/rp/technical/manual/manual.aspx as the primary NAVFAC roofing criteria.

Roof selection shall comply with UFC 3-330-02A, *Design: Commentary on Roof Systems*. Determine wind uplift using wind speed in accordance with ASCE-7.

1. **STEEP SLOPE ROOF SYSTEMS**: Steep slope systems shall be roofs with a pitch greater than 3 in 12. Steep Slope Systems are slate roofing, Asphalt Shingles, Roof Tiles, Foam Set Tiles, Metal Roof Panels (Architectural Standing Seam Metal Roofs on supported substrate), and Structural Standing Seam Metal Roof (SSSMR). Asphalt shingles can only be used for residential construction and light commercial construction.

2. **LOW SLOPE ROOF SYSTEMS**: Low slope systems shall be roofs with a pitch 3 in 12 or less. Low slope roofing systems shall be built-up asphalt roofing (aggregate surfaced, with modified bituminous components), modified bituminous membrane roofing of a minimum of 3 plies with aggregate surface or granular surface modified bitumen cap sheet, or structural standing seam metal roofing. Use epdm systems only to match existing construction.

3. **ROOF COMPONENTS**:
   a. **Insulation:** For existing structures, provide insulation in accordance with ASHRAE 90.1. For new construction, provide R-30 insulation in the ceilings, attic spaces and soffit areas for interior spaces. Injected polyurethane and Urea Formaldehyde Foam field applied shall not be used. Provide acoustical insulation above walls separating bathroom/restrooms and corridor and adjacent occupied spaces, and between offices and corridors. Insulation shall have a minimum sound attenuation rating of STC-55.

      Insulation shall be Polyisocyanurate Rigid Board Insulation , Mineral Fiber Blanket Insulation to conform to ASTM C 991, with Glass Mat Gypsum Roof Board for use above the deck or insulation conforming to ASTM C 1177/C 1177M, where necessary.

      Only on portions of the roof where the sloping of structure does not allow the minimum slopes, provide a factory tapered roof insulation system to provide positive drainage of roof system, and to include drainage around curbs, penetrations, and projections through the roof plane.

      Provide Glass Mat Protection Board meeting ASTM C 1177 for use as a thermal barrier (underlayment) or protection board for hot-mopped applications.
   b. **Vapor Retarder:**-Determine the need and location in the roof assembly for a vapor retarder. Where the mean January temperature is 40 degrees Fahrenheit or less, and the expected interior relative humidity is 45% or greater, use a vapor retarder. Otherwise, use ASHRAE 90.1 for the determination.

      1) Vapor Retarders as Integral Facing - Alloy conforming to ASTM B 209, or Vapor Retarders Separate from Insulation - Vapor retarder material shall be 10 mil polyethylene sheeting conforming to ASTM D 4397.

      2) A slip sheet is required to separate the roofing panels from the insulation facing where the facing would be in direct contact with the roofing panels. If a slip sheet is necessary for use with a vapor retarder, use a 5 lb. per 100 square feet rosin-sized, unsaturated building paper.
   c. **EPDM Rubber Boots:** Flashing devices around pipe penetrations shall be flexible, one-piece devices molded from weather-resistant EPDM rubber.
   d. **Prefabricated Curbs and Equipment Support:** Provide Prefabricated curbs and equipment supports shall be of structural quality, hot-dipped galvanized or galvanized sheet steel, factory primed and prepared for painting with mitered and

welded joints. Integral base plates and water diverter crickets shall be provided. Minimum height of curb shall be 8 inches above finish roof.

e. **Fasteners:** Shall meet all requirements of the NRCA and Factory Mutual

f. **Wood Nailers:** Wood nailers shall be pressure-preservative-treated in accordance with AWPA M2 Standards, permanently marked or branded, and installed flush with the top of the adjacent insulation board.

g. **Flashing and Sheet Metal:** Provide flashing and sheet metal work including scuppers, splash pans, and sheet metal roofing. Flashing and sheet metal shall be provided in accordance with roof manufacturer's printed installation instructions and in compliance with NRCA and SMACNA recommendations. Fabricate Flashing and sheet metal components from Copper, Lead-Coated Copper sheet, Steel Sheet, Zinc-Coated (Galvanized) - ASTM A 653/ A 653M, Stainless Steel - ASTM A 167, Type 302 or 304, 2D finish, or Pre-Finished Aluminum.

h. **Gutters and Downspouts:** Provide gutters and downspouts compatible with roofing material and finish. Concealed (interior) gutters and downspouts are prohibited. Provide splash guards at points of discharge.

i. **Roof Openings and Supports:** Provide flashings for roof openings and supports as recommended by the NRCA. Assure all penetration flashings extend minimum 200 mm (8 inches) above the finished roof surface.

j. **Roof Hatches:** Provide roof hatch where required by OSHA, and as access to roof when roof mounted equipment is used or other routine roof maintenance is required.

k. **Glazed Roof Openings:** Skylights and other glazed roof openings shall be used only to supplement interior lighting levels (generally in steep slope or vertical applications), and otherwise, are discouraged from use.

l. **Guards:** Provide rails or guards as required by the OSHA, the International Building Code or other applicable safety standards.

m. **Traffic Pads:** Provide on roof system to protect roof from foot traffic. Provide traffic pads around roof mounted mechanical equipment and underneath removable mechanical equipment access panels. Traffic pads shall be of compatible material to roof.

4. **OTHER ROOFING**

a. **Lightning Protection:** Lightning protection component penetrations and attachments shall be sealed and flashed and anchored in a permanent manner and in a manner to avoid the degradation of the watertight integrity of the roof system.

b. **Roof Drains (Existing):** Where existing roof drains are to be reused in roof replacement construction, the contractor shall provide new, compatible flashing materials, a new drain clamping ring and new bolts for anchorage. Reuse of existing clamping ring and bolts is unacceptable.

SECTION C. INTERIORS

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

1. **Fixed Partitions**: wood frame; light gage steel frame; concrete masonry complying with

ACI 530.1/ASCE 6/TMS 602 and associated ASTM Standards; or cast-in-place concrete complying with UFC 1-200-01, ACI 117 and ACI 301/301M. In addition, interior partitions shall comply with tables for sound isolation and noise reduction in Chapter 1, "Architectural Graphic Standards". Include a statement of adherence to the applicable criteria.

Gypsum board/stud partitions may be standard gypsum board, moisture resistant, or impact resistant. Use cement board in showers and other wet areas. Reinforce points where doorknobs can strike a wall and anchorage points for wall mounted equipment.

2. **Demountable or Removable Partitions**: shall be of materials allowed by code and shall be anchored firmly to the structure to carry their own weight as well as impact forces and seismic lateral forces. Sound Transmission Class (STC) rating and Impact Isolation Class (IIC) rating shall be in accordance with ASTM E 90 or ASTM E 413 for frequency data, and shall meet the requirements of the intended use in Part 3.

3. **Glazed Partitions and Interior Windows**: shall be of the materials allowed by code IBC, and shall comply with fire and smoke separation requirements. Provide safety glazing and fire resistant rating where they are required.

C1020 INTERIOR DOORS

1. **Wood Doors**: Stile and rail wood doors shall be WDMA I.S.6A-01, premium or custom grade, heavy duty or extra heavy duty. Flush wood doors shall be WDMA I.S.1A-04, premium or custom grade, heavy duty or extra heavy duty; or WDMA I.S.-97 (PC-5 5-ply particleboard core or SCLC-5 5-ply structural composite lumber core). Doors adjacent to paneling or millwork shall comply with corresponding AWI millwork grade. Provide interior fire doors.

2. **Steel doors**: shall be ANSI A 250.8, Level 1, (occasional use, low abuse types such as closet doors without locks); Level 2, (low use, moderate abuse types such as office/storeroom doors); Level 3, (moderate use, high abuse types such as BEQ sleeping room doors); Level 4, (high use, high abuse types such as corridors, stairways, assembly spaces, and main entry doors), with a physical performance level of 'A'. Maximum door undercut shall not exceed 19 mm (3/4 inch).

3. **Sound Insulated Doors and Frames**: Utilize Sound Insulated Doors and Frames with sound control weatherstripping in rooms requiring wall assemblies to be sound insulated with a Sound Transmission Class (STC) rating as required. The STC rating for the door and frame assembly shall be not less than the wall assembly STC rating.

4. **Aluminum Doors and Frames**: Provide swing-type aluminum doors and frames complete with framing members, transoms, side-lites, and accessories. Fabricate of ASTM B 221, Alloy 6063-TS for extrusions.

5. **Steel Door Frames**: ANSI A 250.8. Form frames with welded corners for installation in masonry partitions and knock-down field assembled corners for installation in metal stud and GWB partitions. Frames shall be set in accordance with SDI 105. Form stops and beads with 20 gauge steel.

Provide a minimum of three jamb anchors and base steel anchors per frame, zinc-coated or painted with rust-inhibitive paint, not lighter the 18 gauge. Secure frames to previously installed concrete or masonry with expansion bolts in accordance with SDI 11-F. Provide mortar infill of frames in masonry walls, and gypsum board compound infill at each jamb anchor in metal frame walls.

6. **Fire doors**: Provide in conformance with NFPA 80 an NFPA 105. Fire doors and frames shall bear the label of UL, FM or WHI attesting to the rating required. Door and frame assemblies shall be tested for conformance per NFPA 252 or UL 10B (for neutral pressure) or UL 10C (for positive pressure). Wood fire doors shall also comply with ASTM E 152.

   Provide stainless steel astragals complying with NFPA 80 for fire-rated assemblies and NFPA 105 for smoke control assemblies.

7. **Interior Door Hardware**: Provide the services of a certified door hardware consultant to prepare the door hardware schedule. Unless otherwise noted, interior doors shall include latch, hinges, door stops and door silencers. Provide closers and kick plates for fire-rated, corridor, stairway and high-use non-residential doors.
   a. **Hinges** - BHMA A156.1, Grade 1, 108 x 108 mm (4 1/2 x 4 1/2 inches) with non-removable pin or anti-friction bearing hinges.
   b. **Locks and Latches** - For non-residential buildings use Series 1000, Operational Grade 1, Security Grade 2 for stairways, building entrances, corridors, assembly spaces, and other high use interior doors. Use Series 4000, Grade 1 for non-residential locations not using Series 1000 hardware. For residential buildings use Series 4000, Grade 2 for interior doors. a) Mortise Locks and Latches - BHMA A 156.13, Series 1000, Operation Grade 1, Security Grade 2. b) Bored Locks and Latches - BHMA A 156.2, Series 4000, Grade 1, or Grade 2.
   c. **Exit Devices** - BHMA A 156.3, Grade 1. Touch bars shall be provided in lieu of conventional crossbars and arms. Use manufacturer's integral touch bars in aluminum storefront doors.
   d. **Card Key Access** - Provide card key type access units for specialized entries. Provide lithium battery powered, magnetic stripe keycard locksets that are ANSI/BHMA A156.13, Series 1000, Grade 1, mortise or ANSI/BHMA A156.2, Series 4000, Grade 1, cylindrical locks, tamper resistant, UL listed with 25 mm (1 inch) throw deadbolt, 19 mm (3/4-inch) throw latch bolt, auxiliary dead-locking latch, and 68.75 mm (2-3/4 inch) backset.

      Provide hardware keying compatible with the existing base-wide keying system. Replacement interchangeable cores shall be compatible with the Best Lock system.
   e. **Key Cabinet**: Provide a Key Cabinet with 30% over capacity.

C1030 SPECIALTIES

1. **Compartments, Cubicles, & Toilet Partitions**: FS A-A-60003. Provide toilet compartments at multi-fixture toilet rooms of Type I, Style B-Ceiling Hung, C-Overhead Braced, or F-Overhead braced-alcove. Reinforce panels to receive partition-mounted accessories. Urinal screens shall be FS A-A-60003. Type III, Style A, floor supported and wall hung or Style D, wall hung. Wall hung urinal screens shall be secured with continuous flanges to urinal screen and wall. Steel and Plastic toilet partitions shall have

a recovered materials content of 20 to 30 percent. Chrome-plated or stainless steel door latches and coat hooks. Provide one coat hook per compartment door. Latches and hinges for handicapped compartments shall comply with UFAS & ADAAG.

2. **Toilet and Bath Accessories**: Provide toilet and bath accessories and install per ADAAG and manufacturers' requirements.

3. **Marker Boards and Tack Boards**: Provide porcelain enamel marker boards fused to a nominal 28 gauge steel sheet and tack boards of cork, with a tensile strength of at least 40 psi when tested according to ASTM F 152, with woven or vinyl covering.

4. **Identifying Devices**: All interior doors shall have an identifying device. All handicap accessible facilities shall utilize signage which meets current ADAAG requirements with regard to Braille, raised characters, finishes (contrast), size and mounting height. If room names are subject to frequent change, provide an interchangeable strip to be utilized to facilitate removal and replacement.

5. **Lockers**: Provide lockers to meet FS AA-L-00486 (Rev J), enameled steel with special bases.

6. **Shelving**: Provide steel shelving.

7. **Counters**: Provide solid plastic or plastic laminate counter tops and back splashes, AWI Custom grade.

8. **Cabinets**: Provide cabinetry and millwork items with associated accessories and hardware. Cabinetry shall be AWI premium or custom grade and have concealed hinges with adjustable standards for shelves.

9. **Casework**: Provide all built-in premanufactured metal cabinetry for specialized functions such as laboratories, libraries, medical and dental facilities. Casework shall comply with Mil Std 1691.

10. **Closets**: Provide premanufactured or millwork closets or prefabricated coat closets

11. **Fire Extinguisher Cabinets**: Provide fire extinguisher cabinets. Size and locate fire extinguisher cabinets to encase extinguisher as required by NFPA 10 & 101. Fire extinguishers will be provided by the Customer.

12. **Firestopping Penetrations**: Provide all sleeves, caulking, and flashing for firestopping penetrations.

13. **Entrance Floor Grilles and Mats**: Provide recessed pan or surface floor mats at main only or all building entrances.

14. **Ornamental Metal Work**: Provide ornamental metalwork

15. **Other Interior Specialties**: Motorized projection screen shall be wall or ceiling or above-ceiling mounting. Pull-down projection screens shall be provided in lieu of motorized projection screens as approved by the Activity.

C20 STAIR CONSTRUCTION

Provide interior and exterior stair construction. Stair design, materials and construction shall comply with IBC, and applicable codes and standards, including NFPA 101. Provide refuge area at top of stair in accordance with applicable Americans with Disability Act Design Guide requirements.

C30 INTERIOR FINISHES

C3010 WALL FINISHES

Unless otherwise noted in the RFP, primary wall finishes shall be painted gypsum wall board. Provide fire resistive construction and finishes for fire separation between areas of the building in accordance with the latest adopted version of the IBC, and NFPA 101. Provide water resistant cementitious board at floors and walls of tubs and showers.

1. **Ceramic Tile**: Provide ceramic tile wall systems as defined in the Tile Council of America (TCA) handbook for ceramic tile installation and materials for the service requirements listed. Provide installation and materials in accordance with ANSI A108/A118 series standards, except do not use organic adhesives. Provide manufacturer's full range of colors and styles. Tile shall be a minimum of one grade above base grade. Coordinate with ceramic bath accessories for modularity. Include all trim pieces, caps, stops, and returns to complete installation.

2. **Wallcovering**: Vinyl wallcovering shall conform to ASTM F793, Category V Type II, 371 g to 624 g (13.1 to 22 ounces) total weight per square yard and width of 1370 mm (54 inches). Provide ASTM F793, Category VI, Type III, 624 g (22 ounces) and above to cover rough textured walls such as masonry. High performance fabric wallcovering shall be woven or non-woven Class A, fire resistive material, a minimum of 1219 mm (48 inches) wide, with a soil repellent finish and a minimum of 340 g (12 ounces) per square yard exclusive of backing. "Tackable" wall covering shall be "self-healing" from tack penetration through the covering into the substrate. Acoustical wallcovering shall be textured, woven or non-woven, Class A fire resistive material with an acrylic backing, a minimum of 1219 mm (48 inches) wide and a minimum of 454 g (16 ounces) per square yard. The material shall have an NRC rating of .15 on gypsum board in accordance with ASTM C423. Do not install wall covering on interior face of exterior walls.

C3020 FLOOR FINISHES

Provide new flooring materials as required. All flooring materials, adhesives, finish coats, sealers and mortar materials shall meet or exceed EPA requirements for toxic substance content restrictions and air quality requirements; and shall meet or exceed fire protection requirements, such as smoke and flame spread requirements. When laying broadloom carpets and resilient flooring, use the widest sheet materials available to avoid or minimize the number and extent of seams. When seams are required, locate seams at infrequent traffic areas. Contractor is required

to submit seam layout to Contracting Officer for approval prior to installation.

1. **Ceramic Tile**: Provide ceramic tile floor systems as defined in the Tile Council of America (TCA) handbook for ceramic tile installation and materials for the service requirements listed. Provide installation and materials in accordance with ANSI A108/A118 series standards, except do not use organic adhesives. Provide manufacturer's full range of colors and styles. Tile shall be a minimum of one grade above base grade.

   Provide ceramic or porcelain tile with a minimum breaking strength of 202kg (300 pounds), ASTM C648, and a maximum absorption rate of 0.5%, ASTM C373. Tile shall have a minimum coefficient of friction (wet and dry) of 0.6, ASTM C1028.

2. **Resilient Flooring**: Shall meet or exceed applicable ADA horizontal requirements, and shall be installed per manufacturer's recommended methods and adhesives. Provide manufacturers full line of color and pattern selections, including multi-color patterns.

   Linoleum Sheet or Tile Flooring shall be 2.5 mm (0.10 inch) gage; minimum 250 psi static load limit, ASTM F970; and with multi-color pattern and color extending throughout thickness, ASTM F2034, Type I. Resilient homogeneous vinyl sheet flooring shall be commercial quality, 2.0 mm (0.080 inch) overall gage, with minimum 1.6 mm (.066 inch) thick wear layer, protective urethane finish, ASTM F1303, Type II, Grade 1, Class A. Resilient vinyl composition tile shall be commercial grade, 3 mm (.125 inch) gage, FS SS-T-312B (1), Type IV, Comp. 1, Class 2, through pattern.

3. **Carpet**: Carpet manufacturer and installer shall be experienced, established and in good standing with the industry. Carpet, broadloom or tile, shall be installed per the Carpet & Rug Institute's recommendations. Carpet shall be tufted, textured loop, cut/loop or tip sheared, a minimum of 26 oz. face weight, minimum density of 6600, 100% premium branded yarn- or solution-dyed, Type 6 or 6.6 continuous hollow filament nylon. Carpet shall be multi-color and patterned for soil and wear hiding properties. Carpet shall have high performance backing warranted against zippering, edge raveling and delamination, be anti-static and anti-microbial. Carpet shall meet Flammability ratings; generate less than a 450 rating, ASTM E662; meet the Critical Radiant Flux Classification of not less than 0.45 W/sq. cm., ASTM E648. Where indicated in the room requirements, provide attached polyurethane cushion or separate polyurethane cushion for double stick pad installations, ASTM 1667 and ASTM 3676.

4. **Wall Base**: Provide porcelain or ceramic tile base for porcelain or ceramic tile floor. Provide solid, through color preformed rubber or vinyl base for carpeted/resilient flooring areas. Provide a sealant between base and floor finish in all wet areas.

C3030 CEILING FINISHES

Unless otherwise noted in the room requirements, acoustical ceiling panels shall be 24 inch by 24 inch, with a minimum light reflectance of .75, Class A, flame spread 25 or less and smoke development of 50 or less, ASTM E84. Acoustical ceiling panels shall have minimum 60% recycled content and conform to ASTM E1264. Panels shall have a factory-applied standard washable painted finish or Type IV with factory-applied plastic membrane-faced vinyl, Form: 1, 2 or 3. Provide square edge except as noted.

Unless otherwise noted in the room requirements for entrance lobby, restrooms and showers,

provide a painted, suspended gypsum board ceiling. Exposed structural systems shall be painted.

C3040 PAINTING

All painting and coating materials shall be low VOC, comply with local air quality control laws and, regulations; and conform to the Master's Painters Institute's (MPI) *Architectural, Interior Systems Manual*and the MPI's *Maintenance and Repainting Manual*recommendations for paint systems, surface preparation and applications.

Provide minimum of one prime coat and two finish coats. The prime coat shall not be combined with texture or other coatings. Seal and prime all surfaces to cover underlying stains or discoloration that may affect finish paint. Finish coats shall provide full coverage of undercoats and substrates. All walls and ceilings in wet area shall have semi-gloss paint. All wood or metal cased openings, door trims and casings, window trims and casing, and other finish trim shall have semi-gloss paint. All interior walls and ceilings shall have satin or eggshell finish. For previously painted surfaces, prime all surfaces to ensure compatibility of finish coats. Do not paint prefinished surfaces except as noted.

Provide Institutional Low Odor/Low VOC Latex paint or High Performance Architectural Latex systems as defined and approved by the MPI Systems Manual for the various substrates required to be painted.

Paint/Color Selection: Provide paint systems tested to "Detailed Performance Level" standard as defined by MPI. Paints shall be readily available for purchase in standard colors.

SECTION D. SERVICES

D10 CONVEYING Elevators and Escalators - Not used

D20 PLUMBING

Provide plumbing fixtures, appliances, and equipment complete and usable as required by Part 3. All plumbing fixtures, appliances and equipment, piping, valves, accessories, and appurtenances shall comply with International Plumbing Code (IPC) and all other applicable codes and standards, including energy, water conservation, and local activity regulations and standards. Provide all plumbing fixtures to meet current criteria of EPA Watersense program http://www.epa.gov/watersense

1. **Domestic Water**: Provide ASTM B 88 Type K or L copper tubing and fittings for pipe sizes 4 inches or smaller. Provide Type L tubing above ground with solder fittings. For buried piping, use Type K tubing with solder fittings, or Chlorinated polyvinyl chloride (CPVC) Plastic pipe, fittings, and solvent cement per ASTM D 2846/D 2846M for sizes 4 inches and smaller.

   Provide mineral fiber insulation with vapor barrier on domestic water (hot and cold) supply and recirculation piping. Provide re-circulating pumps or instantaneous water heaters for hot water systems with fixtures greater than 100 ft from hot water source. Provide water hammer arrestors per PDI STD WH-210 as required for rapid water shut off scenarios. All water valves except for fixture shut off valves shall be ANSI B16.18 brass, full port ball type. All plumbing fixtures shall have separate shut off valves. All piping shall be concealed in walls, attic spaces, or in crawl spaces under floors. Provide access panels for valves behind walls. No under slab water piping is allowed. Fittings

for annealed copper tubing shall conform to ANSI Bl6.22. Solder and flux shall be lead free. Exposed exterior piping is prohibited unless otherwise not practical. Provide identification for piping and equipment.

2. **Wall Penetrations**: Piping which penetrates fire rated walls shall be completely sealed to maintain fire resistance integrity as required by Code. Penetrations through walls that are not fire rated shall be adequately supported and sealed. Pipe penetrations through exterior walls shall be sleeved, caulked with weatherproof sealant and provided with finish trim.

D2010 PLUMBING FIXTURES

Fixtures shall be provided complete with fittings, and chromium-plated, or nickel-plated brass (polished bright or satin surface) trim. All fixtures, fittings, and trim, shall be from the same manufacturer and shall have the same finish. Access panels shall be provided for all bathtubs and showers, except at exterior and party walls and where tub or showers are back to back. Provide cleanouts in accordance with the plumbing code. Rotate or extend cleanouts required to facilitate maintenance and clearing of blockage in waste piping.

1. **Faucets**: All faucets shall be brass construction, washerless type, with seals and seats combined in one replaceable ceramic disk valve cartridge designed to be interchangeable with all lavatories, bathtubs and kitchen sinks, or having replaceable seals and seats removable either as a seat insert or as a part of a replaceable valve unit. Faucets provided shall be of the same type and manufacturer throughout the facility, unless otherwise noted. Lavatory faucets shall be U.S. Environmental Protection Agency (EPA) WatersenseÂ® certified and labeled bathroom sink faucets.

2. **Water Closets**: Water closets shall be in accordance with ANSI A112.19.2, with trim conforming to A112.19.5. Water closets shall be vitreous china and have an elongated bowl with trip lever, unlined tank, close coupled siphon jet, floor outlet with wax gasket, flange and an anti-siphon float valve. Provide white closed front seat and cover for private toilets and open front seat cover for public facilities. Water consumption shall be no greater than 1.6 gallon maximum per complete flushing cycle. Provide self-closing metering type flush valve on flush valve type water closets, unless electronic control is specified in Part 3. Maximum flush volume shall not exceed 1.28 gallon per flush (GPF) (4.8 Liter per flush (LPF)) for single function flush valves. Dual function flush valves shall provide a flush of 0.8 to 1.6 GPF (3.0 to 6.0 LPF) or 1.28 GPF (4.8 LPF) average for 2 low volume flushes and one high volume flush. Tank type water closets shall be U.S. Environmental Protection Agency (EPA) WatersenseÂ® certified and labeled toilets.

3. **Urinals**: Provide U.S. Environmental Protection Agency (EPA) WatersenseÂ® certified and labeled ceramic-type urinals.

   Non Water Use Urinals: ASME A112.19.2, white vitreous china, wall-mounted, wall outlet, non-water using, integral drain line connection, with sealed replaceable cartridge or integral liquid seal trap insert. The urinal and trap assembly shall maintain a sufficient barrier of a biodegradable immiscible liquid to provide the trap seal and inhibit the backflow of sewer gases. For urinals that use a replaceable cartridge, provide four additional cartridges for each urinal installed. Provide an additional quart of biodegradable liquid for each urinal installed. Provide ASME A112.6.1M concealed chair carriers. Installation and testing shall be in accordance with the manufacturers'

recommendations. Drain lines that connect to the urinal outlet shall not be made of copper tube or pipe. Urinal design and installation shall be ADA compliant. Slope the sanitary sewer branch line for non-water use urinals a minimum of 1/4-inch per foot. Manufacturer shall provide an operating manual and on-site training for the proper care and maintenance of the urinal.

4. **Lavatories**: Unless otherwise specified by Part 3, lavatories shall be integral to the vanity countertops. Each lavatory shall be provided with hot and cold water tempered by means of a mixing valve or combination faucet.

5. **Sinks**: ASME/ANSI A112.19.3M sink, 20 gage stainless steel with integral mounting rim, minimum dimensions of 840 mm (33 inches) wide for two compartment or 560 mm (21 inches) wide for one compartment by 560 mm (21 inches) front to rear, with ledge back and undersides coated with sound dampening material.

6. **Water Coolers**: ARI 1010, wall-mounted, bubbler style, air-cooled condensing unit, 4.20 mL per second (4.0 gph) minimum capacity, stainless steel splash receptor, double wall heat exchanger, and all stainless steel cabinet. Install in accordance with the manufacturers instructions.

7. **Showers**: Provide U.S. Environmental Protection Agency (EPA) WatersenseÂ® certified and labeled showerheads connected to concealed pipe connected to copper alloy single control type mixing valve with front access integral screwdriver stops. Anchor the mixing valves and the pipe to each showerhead in wall to prevent movement. Unless otherwise specified by Part 3, showers shall be supplied with water at a temperature no more than 110Â°F by means of a pressure balance, tempering or mixing valve.

8. **Service sinks**: ASME A112.19.1M, white enameled cast-iron or ASME A112.19.2M white vitreous china, wall mounted and floor supported by wall outlet cast-iron P-trap, minimum dimensions of 560 mm (22 inches) wide by 457 mm (18 inches) front to rear with 230 mm (9 inch) splashback, and stainless steel rim guard. Provide ASME A112.18.1M copper alloy back-mounted combination faucets with vacuum breaker and 20 mm (0.75 inch) external hose threads

9. **Mop Sinks**: Pre-cast terrazzo or ASME A112.19.2M white vitreous china floor-mounted mop sink, 914 mm x 914 mm x 305 mm (36 inches x 36 inches x 12 inches). Terrazzo shall be made of marble chips cast in white Portland cement to a compressive strength of not less than 25 mPa (3625 PSI) 7 days after casting. Provide brass body drains with nickel bronze strainers cast integral with mop sink. Provide stainless steel rim guard for mop sink. Provide chrome-plated exposed hot and cold water faucets ASME A112.15.M wall-mounted copper alloy faucets swing spout with 20 mm (3/4 inch) hose connection, vacuum breaker, and pail hook. Provide mop hanger on wall above sink suitable for four mops.

10. **Laundry Sinks**: ANSI Z124.1, plastic, two compartment, minimum dimensions of 1016 mm wide by 533 mm (40 inches wide by 21 inches) front to rear, with floor-supported steel mounting frame secured to wall. Provide ASME A112.18.1M copper alloy centerset faucets, swing spout with aerator, and stainless steel drain outlets with cup strainers, and 40 mm (1.5 inch) adjustable P-trap with drain piping to vertical vent stack.

11. **Emergency Eyewash**: ANSI Z358.1, wall-mounted self-cleaning, non-clogging eye and face wash with quick opening, full-flow valves, stainless steel eye and face wash receptor. Provide copper alloy control valves. Pressure-compensated tempering valve is required for emergency fixtures, with leaving water temperature setpoint adjustable throughout the range 15.5 and 35 degrees C (60 to 95 degrees F) unless cold water supply meets temperature criteria.

D2020 DOMESTIC WATER DISTRIBUTION

1. **Natural Gas or Propane Fired Storage Water Heaters**: Provide high efficiency storage type natural gas or propane fired water heaters per ANSI Z21.10.1 or ANSI Z21.10.3 meeting AGA requirements. Unit efficiency shall meet or exceed that listed in the Title-24 Standards. Water heaters shall be equipped with glass-lined steel tanks, minimum R-15 polyurethane foam insulation, replaceable anodes, and adjustable range thermostat to allow hot water settings between 43 and 71 degrees C (110 and 160 degrees F). Water heater warranty shall be a minimum of 10 years. Provide vent in accordance with NFPA 54. Provide low NOx burners that meet SCAQMD requirements. Install in accordance with manufacturer's instructions and the code. Where earthquake loads are applicable, water heater supports shall be designed and installed for seismic forces in accordance with the International Building Code.

2. **Electric Water Heaters**: Provide electric water heaters with double heating element per UL 174. Unit efficiency shall meet or exceed that listed for FEMP or ENERGYSTAR, or as listed in ASHRAE 90.1, whichever is greatest. Water heaters shall be equipped with glass-lined steel tanks, high efficiency type, insulated with polyurethane foam insulation, replaceable anodes, and adjustable range thermostat to allow hot water settings between 43 and 71 degrees C.

3. **Domestic Water Boilers**: Boilers shall be designed, tested, and installed per ASME CSD-1 (Controls and Safety Devices) and ASME BPVC (Boiler and Pressure Vessel Code). The boiler shall meet the requirements of the UL 795, NFPA 85, ANSI Z83.3, and ASME CSD. Boilers must be certified by Naval Personnel or a contractor approved by the Contracting Officer.

D2030 SANITARY WASTE & VENT

All new sewers below concrete slab shall be solid core, minimum schedule 40 (DWV Type), ABS in accordance with ASTM 2661. New waste and vent piping above floor shall be Schedule 40 PVC (DWV Type) ASTM 2665 or ABS ASTM 2661. Use of ABS plastic pipe shall conform to the IBC and IPC. Provide pipe sizing, configurations, and cleanouts as required by the IPC. Cellular core plastic pipe is not allowed. SOVENT systems are not allowed.

D2040 RAINWATER DRAINAGE

Below concrete slab shall be solid core, minimum schedule 40 (DWV Type), ABS in accordance with ASTM 2661. Above floor shall be cast iron hubless, or hub and spigot, or Schedule 40 PVC (DWV Type) ASTM 2665 or ABS ASTM 2661 as indicated in Part 3. Pipe materials shall conform to the IBC and IPC. Provide pipe sizing, configurations, and cleanouts as required by applicable

codes and standards.

D2090 OTHER PLUMBING SYSTEMS

Natural Gas Piping Systems: Exterior above grade natural gas piping shall be schedule 40 galvanized steel pipe with threaded fittings and joints. Underground exterior gas piping shall be polyethylene pipe that satisfies the requirements of NFPA 54, ASTM D2513-01, and ASME B31-8. Provide warning tape at 12 inches below grade directly above buried gas pipes. Below grade metal gas piping is prohibited. Interior gas piping shall be ASTM A 53, schedule 40 black steel with ASME B16.3 threaded fittings and joints. The use of semi-rigid tubing and flexible connectors for gas equipment and appliances is prohibited except for final connections to the equipment and appliances where they shall be provided. Provide flexible gas connections in accordance with ANSI Z21.45 and not more than 40 inches long. Provide accessible gas service with shutoff valve for all equipment. Gas piping shall conform to NFPA 54 and shall be pressure tested in accordance therewith. . Gas piping is considered a fragile utility in the content of UFC 4-010-01, *DOD Minimum Antiterrorism Standards for Buildings*.

D30 HEATING, VENTILATION AND AIR CONDITIONING (HVAC) SYSTEMS

The HVAC systems shall comply with the latest edition of the International Mechanical Code, International Plumbing Code, ASHRAE Standards, National Electrical Code, National Fire Protection Association Publications, International Building Code, and California Title 24 or ASHRAE 90.1 energy efficiency standards (the more stringent of the two) unless otherwise specified in Part 3. All equipment, appliances, ductwork and accessories shall comply with applicable codes and standards. For projects located in California, also comply with California Energy Commission (CEC) efficiency rating requirements as stated in Ca. AB 970 Title 24. The Contractor shall certify that the installation is in conformance with the applicable codes and standards at the completion of the contract, prior to final invoice being processed and final acceptance. Provide Energy Star rated equipment where available. Provide equipment with performance in excess of Energy Star requirements where specified.

1. **Equipment Clearance**: Provide working space around all equipment. Provide all required fittings, connections and accessories required for a complete and usable system. All equipment shall be installed per the manufacturer's recommendations. Where the word "should" is used in manufacturer's instructions, substitute the word "shall".

2. **Material and Equipment Qualifications**: All materials and equipment shall have been in satisfactory commercial or industrial use for 2 years prior to the bid opening. The 2-year use shall include applications of equipment and materials under similar circumstances and of similar size. The product shall have been for sale on the commercial market through advertisements, manufacturer's catalogs, or brochures during the 2-year period.

3. **Motors**: Single-phase fractional-horsepower alternating-current motors shall be high efficiency types corresponding to the applications listed in NEMA MG 11. Select polyphase motors based on high efficiency characteristics relative to the applications as listed in NEMA MG 10. Additionally, all polyphase squirrel-cage medium induction motors with continuous ratings shall meet or exceed energy efficient ratings per Table 12-10 of NEMA MG 1. Provide controllers for 3-phase motors rated 0.75 kW (1 hp) and above with phase voltage monitors designed to protect motors from phase loss and over/under-voltage. Provide means to prevent automatic restart by a time adjustable

restart relay. For packaged equipment, the manufacturer shall provide controllers including the required monitors and timed restart. Provide reduced voltage starters for all motors 25 hp and larger.

4. **Equipment Support**: Provide housekeeping pads and vibration isolators under all floor-mounted equipment.

5. **Coatings**: When required in Part 3, provide chiller and air handler coils with copper tube/copper fin coil construction or immersion applied, baked phenolic or other approved coating. Field applied coatings are not acceptable. Mechanical equipment casings shall have painted finishes that pass a salt-spray test conducted per ASTM B117 for duration of at least 500 hours.

6. **Equipment Insulation**: Provide insulation on all chilled water equipment. Insulate hot and chilled water pumps and equipment as suitable for the temperature and service in rigid block, semi-rigid board, or flexible unicellular insulation to fit as closely as possible to equipment. Provide vapor retarder for chilled water applications.

7. **Acoustical considerations**: Noise levels in all areas served (supply, return, and exhaust) by a mechanical system shall comply with ASHRAE Design Guidelines for HVAC related background sound in rooms as indicated in the lasted ASHRAE Fundamentals Handbook. The RC-rating method shall be utilized.

D3020 HEAT GENERATING SYSTEMS

1. **Boilers**: Boilers shall be designed, tested, and installed per ASME CSD-1 (Controls and Safety Devices) and ASME BPVC (Boiler and Pressure Vessel Code). The boiler shall meet the requirements of the UL 795, NFPA 85, ANSI Z83.3, and ASME CSD. Do not provide watertube boiler(s) for hydronic heating when size permits otherwise. Provide insulated boiler stack in accordance with manufacturer's recommendations and conform to NFPA 211 or provide pre-manufactured, multi-wall stacks complying with NFPA 54 or NFPA 58 and UL-listed. Low pressure boilers shall be equipped with one or more pressure relieving devices, adjusted and sealed to discharge at a pressure not to exceed the maximum allowable working pressure of the boiler. The combined capacity of these devices shall be such that with the fuel burning equipment installed and operating at maximum capacity, the pressure cannot rise more than 5 psi for steam boilers or 10% for water boilers above the maximum allowable working pressure of the boiler. Pressure relieving devices shall be installed as required by the referenced code, be ASME stamped and rated, and shall be installed with the valve spindle in the vertical position. Provide with manual lifting device for periodic testing. Boilers shall comply with the local air quality regulations. Boilers shall be equipped with pressure and temperature gauges as required for proper maintenance and operation. Thermometers shall also be provided at the inlet and exit of the boiler, and shall be visible to the operator from the operating area.

2. **Furnaces**: UL-listed, factory assembled, self contained, forced circulation, furnace. Provide electronic ignition system. Unit shall be design certified by AGA, GAMA efficiency rating certified, for gas furnaces and NFPA 31 for oil furnaces. Provide with

cooling coil as necessary. Furnaces shall comply with the local air quality regulations.

D3030 COOLING GENERATING SYSTEMS

1. **Chillers**: Air-cooled chillers shall be type indicated in Part 3 and meet the requirements of ARI 550/590-98. Provide control panel with the manufacturers' standard controls and protection circuits. If DDC system is required in project, provide a control interface for remote monitoring of the chiller's operating parameters, functions and alarms from the DDC control system central workstation. Provide complete start-up and operational testing of chiller equipment.

2. **Direct expansion systems**: Provide units factory assembled, designed, tested, with ducted air distribution and rated in accordance with ARI 210/240 or ARI 340/360. Refrigerant piping size shall be per the manufacturer's recommendations. Insulate refrigerant piping suction lines and condensate drain.

3. **Refrigerants**: The use of Ozone Depleting Substances (ODS) as well as the qualifications and credentials of personnel servicing equipment that contains ODS is restricted. Refrigerants shall have an Ozone Depletion Factor (ODF) of 0.055 or less. The ODF shall be in accordance with the "Montreal Protocol on Substances That Deplete the Ozone Layer", September 1987, sponsored by the United Nations Environment Program.

4. **Coils**: If coatings are indicated in Part 3, provide with copper tube/copper fin construction or immersion applied, baked phenolic or other approved coating that passes the 3000 hour salt spray resistance test using ASTM B117 procedure. Field applied coatings are not acceptable.

5. **Variable Refrigerant Flow (VRF) systems**: The system shall consist of VRF heat pump units, branch circuit controllers, VRF fan coil units, and associated controls. The system shall be designed to provide the facility with simultaneous heating and cooling utilizing hot gas refrigerant or sub-cooled liquid. Provide system with heat recovery. The heat pump units shall be inverter driven and shall utilize R410A refrigerant. Total capacity of the branch controllers shall be between 50% and 150% of the rated capacity. All refrigerant piping shall be sized and installed in strict compliance with the manufacturer’s requirements. Refrigerant piping shall be clean, dry, and leak free. Prior to installation all refrigerant pipes shall remain sealed. During installation and prior to filling, nitrogen shall be used to maintain cleanliness and prevent oxidation and scaling while brazing.

D3040 DISTRIBUTION SYSTEMS

1. **Ductwork**: All ductwork shall be provided in accordance with the latest SMACNA guidelines. Flexible duct lengths shall not exceed 6 feet. Provide galvanized sheet metal ducts except for special exhaust systems and the following:
   a. For fume hood exhaust, kitchen hood exhaust, and dishwasher exhaust, provide stainless steel ductwork.

b. For shower area exhausts, provide aluminum or stainless steel ductwork and sloped to drain provisions. After the shower exhaust is mixed with a volume of general exhaust air equal to 200% of the shower exhaust rate, standard galvanized construction may be used.

c. Internal insulation-lined ductwork is prohibited in all areas. For ductwork located exterior to the building, provide externally insulated systems with sheet metal cladding. Provide external thermal insulation for all ductwork. Insulate ductwork in concealed spaces with blanket flexible mineral fiber. Insulate ductwork in Mechanical Rooms and exposed locations with rigid mineral fiber insulation. Provide insulation with factory applied all-purpose jacket with integral vapor retarder. In exposed locations, provide a jacket with white surface suitable for painting. Flame spread/smoke developed rating for all insulation shall not exceed 25/50. Minimum insulation thickness shall be the minimum thickness required by ASHRAE 90.1. Insulate the backs of all supply air diffusers with blanket flexible mineral fiber insulation.

d. The ductwork shall be sealed with an approved duct sealer and in accordance with SMACNA standards. If leakage testing is indicated in part 3, the duct leakage shall not exceed 2%.

e. Provide manual volume dampers in each branch take-off from the main duct to control air quantity. Dampers shall conform to SMACNA DCS. Dampers shall be installed in accessible locations.

2. **Fire Dampers**: Fire dampers shall be rated per UL 555. Fire dampers shall be dynamic type rated for closure against a moving airstream. Provide fire dampers that do not intrude into the air stream when in the open position.

3. **Piping**:

a. Provide insulated, steel piping for sizes 4 inches and larger and insulated copper piping for sizes less than 4 inches for water supply and return piping to serve the HVAC equipment throughout the facility.

b. Provide system flushing and start-up for water systems.

c. Oil piping: ANSI/ASTM A53 or A106 piping with associated ASME fittings or ASTM B88, type L or M copper tubing with ASME B16.26 flared fittings or compression type fittings.

4. **Exhaust Fans And Ducts**:

a. **General:** Exhaust fans shall be sized to move the volume of air required to comply with International Mechanical Code for the areas requiring exhaust.

b. **Bathroom, restrooms and Utility Room Exhaust Fans:** Exhaust fans shall be sized to give not less than 10 air changes per hour in the space to be ventilated. Fans shall have a maximum sound level of 3 sones and be separately switched from light.

c. **Flues:** When required, provide new Type B, U.L. listed, double wall flues. Flue installation shall be in accordance with the International Mechanical Code.

5. **Air handling units**: Modular construction, double wall air handling units with minimum of 25 mm (1 inch) casing insulation. Provide ARI 430 certified fans and ARI certified coils. Provide stainless steel, positive draining condensate drain pan. For 100% outside air units provide capability for cooling, heating, dehumidification and reheat.

D3050 TERMINAL AND PACKAGE UNITS

1. **Unit ventilators**: Unit shall be factory assembled unit ventilator capable of up to 100% outdoor air ventilation and UL-listed.

2. **Unit heaters**: ANSI Z83.8 and AGA label. Equip each heater with individually adjustable package discharge louver. Provide with thermostat.

3. **Fan coil units**: UL-Listed, factory assembled and tested fan coils, ARI 440 and ARI certified.

4. **Packaged units**:

   Factory packaged rooftop units in accordance with ARI 430 and suitable for outdoor installation. Provide with manufacturer's roof curb.

   Packaged through wall units shall be factory assembled air conditioner or heat pump and rated in accordance with ARI 310 or ARI 380 and ARI certified. Unit shall include heat and operate under the standard unit controls. Units shall be designed to allow ease of maintenance by use of a wall sleeve. Units shall have internal condensate removal (condensate shall not be externally drained).

D3060 CONTROLS AND INSTRUMENTATION

1. **General**: Provide stand-alone or distributed direct digital controls, as required in Part 3.

2. **Distributed Direct Digital Controls (DDC)**: DDC hardware shall be UL-916 rated. Use controllers in a distributed control manner. Controllers shall be stand alone with an internal clock and modem. The total number of I/O hardware points shall not exceed 48 in any controller. Provide sufficient memory for each controller to support required control, communication, trends, alarms, and messages. Provide communications ports for controller to controller, on-site interface, remote workstation interface, and telecommunications interface. When providing a partial DDC system or connecting to an existing DDC system, provide a laptop computer with all necessary software for user interface.

D3070 SYSTEMS TESTING AND BALANCING

All HVAC water and air systems, both new and retrofit, shall be TABed in accordance with NEBB or AABC standards. As part of any TAB air balancing effort, acceptable air quantity variations shall be 0 to -10% for exhaust systems and 0 to +10% for supply air systems.

D40 FIRE PROTECTION

Provide new or extend existing Automatic Fire Sprinkler systems, Smoke and Heat detection systems, Fire Alarm and Mass Notification systems as required. The work for fire sprinklers, fire alarm, smoke detection, and heat detection shall be provided by contractors licensed to perform such work.

Project Requirements: Prior to the start of design, the Designer of Record shall meet with the Government's Fire Protection Engineer to determine the extent and types of fire protection required**.**

D4010 FIRE ALARM AND DETECTION

Fire alarm system shall include manual stations, system smoke detectors, duct smoke detectors, heat detectors, audio/visual alarms, connection to basewide fire alarm monitoring, electrical supervision of fire pump controllers, and electrical supervision of all sprinkler system alarm and supervisory devices as required.

D4020 FIRE SUPPRESSION WATER SUPPLY AND EQUIPMENT

The water supply information is provided for bidding purposes. The design point of connection to existing water supply shall require the approval of the Contracting Officer. The FPE DOR shall conduct additional flow tests after contract award prior to any design submissions. Tests shall be coordinated through the Contracting Officer.

D4040 SPRINKLERS

Areas subject to freezing shall be provided with a dry pipe system.

D50 ELECTRICAL

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Provide interior electrical wiring, fixtures, switches, outlets, and apparatus in accordance with applicable codes and standards. The electrical system shall conform to NFPA 70. Power and lighting circuits shall be separate.

1. **Wiring**: All wiring shall be in electrical metal conduits and shall be concealed except in the industrial spaces and at locations indicated in Part 3. No conductors shall be smaller than No. 12 AWG, copper wires. Wiring below slab or underground shall be in Schedule 40 PVC with ground wire. Exposed conduits on the exterior of the building are prohibited. Provide a ground conductor for each circuit; conduits shall not be used for grounding. Use of cable assemblies Types AC, MC, or MI and flat conductors are prohibited. Circuit breakers shall be bolt-on type. Series rated circuit breakers and fusible panelboards shall not be used.

2. **Outlet Circuits**: Lighting and convenience outlets shall be on separate circuits. Install GFI protected receptacles at all wet or damp areas. Location of outlets shall be as required by applicable codes and standards. Provide extra outlets for maintenance and service staffs in spaces such as corridors, hallways and other public spaces as identified below. All exterior outlets shall be on separate circuits, shall be GFI protected, and equipped with a cover to prevent accidental water infiltration into the devices.
   In addition to the location requirements specified by NFPA 70, locate general purpose and dedicated outlets in accordance with the following:
   a. Mechanical equipment: Provide receptacle within 7.6 m (25 ft) of mechanical equipment on the interior and exterior of buildings.
   b. Office, staff support spaces, and other workstation locations: One receptacle for each workstation with a minimum of one for every 3050 mm (10 ft) of wall space.

When less than 3500 mm (10 ft) of wall at the floor line, provide a minimum of two receptacles spaced appropriately to anticipate furniture relocations. Limit loads to a maximum of four workstations per 20 amp circuit. See Appendix C, Table C1 for workstation load data.

c. Conference rooms and training rooms: One for every 3.6 m (12 ft) of wall space at the floor line. Ensure one receptacle is located next to each voice/data outlet. Provide one receptacle above the ceiling to support video projection device. Extend circuit to wall location for connection to motorized screen. When it is expected that a conference room table will be specifically dedicated to floor space in a conference room, locate a floor-mounted receptacle under the table. This receptacle may be part of combination power/communications outlet.

d. Provide power outlets throughout the building to serve all proposed equipment, including government furnished equipment, and allow for future reconfiguration of equipment layout. Provide power connections to all ancillary office equipment such as printers, faxes, plotters, and shredders. Provide dedicated circuits where warranted.

e. In each telecommunications room provide a dedicated 20 amp circuit with a receptacle adjacent to each rack or backboard for each of the following:

1) CCTV for training systems

2) CCSTV for security systems

3) CATV

4) Voice systems

5) Data systems.

f. Provide dedicated receptacles as required throughout the facility for television monitors. These outlets will typically be located at the ceiling level for wall mounted television monitors.

g. Provide dedicated receptacles as required throughout the facility for tape players and disc players.

h. Corridors: One every 15 m (50 ft) with a minimum of one per corridor.

i. Janitor's closet and toilet rooms: One GFI receptacle per closet. Provide GFI receptacles at counter height for each counter in toilets such that there is a minimum of one outlet for each two sinks.

j. Space with counter tops: One for every 1.200 m (4 ft) of countertop, with a minimum of one outlet. Provide GFI protection of outlets when located within 1.8 m (6 ft) of plumbing fixtures.

k. Building exterior: One for each wall, GFI protected and weatherproof.

l. Kitchen non-residential: One for each 3.05 m (10 ft) of wall space at the floor line. Provide GFI protection when located within 1.8 m (6 ft) of plumbing fixture.

m. Child occupied spaces (including toilets): One for every 3.6 m (12 ft) of wall space. Use child safety type such as those that require rotating an integral surface cover plate to access current. Removable caps and plugs are not acceptable.

n. All other rooms: One for every 7.6 m (25 ft) of wall space at the floor line. When 7.6 m (25 ft) or less of wall at the floor line exists in a room, provide a minimum of two receptacles spaced appropriately to anticipate furniture relocations.

o. Special purpose receptacles: Designer of Record must coordinate with the user to provide any special purpose outlets required. Provide outlets to allow connection of equipment in special use rooms.

3. **Service Entrance Equipment**: When a switchboard or switchgear is required, the Designer of Record shall utilize UFGS Section 26 23 00, *Switchboards and Switchgear*,

for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

D5020 LIGHTING & BRANCH WIRING

1. Lighting Fixtures: All lighting fixtures shall be energy conservation compact fluorescent except where indicated by Part 3.
   a. **Fluorescent Fixtures for Administrative and Commercial Spaces**: For offices, commercial and administrative spaces and facilities provide high efficiency ballast, and instant or rapid start recessed fluorescent fixtures.
   b. **Three-Way and Four-Way Switches**: Provide three-way or four-way switching of light fixtures as necessary to facilitate movement between adjacent spaces to allow efficient energy management.

2. **Exterior Lighting Fixtures for Large Open Areas**: Exterior lighting fixtures for large open areas such as parking lots, streets and playgrounds shall be energy efficient High-Intensity Discharge (HID) or compact fluorescent fixtures and shall comply with local regulations regarding low lighting levels to avoid light pollution.
   a. Photocell Overriding Switch: Provide photocell-overriding switch for all outdoor light fixtures.

D5030 COMMUNICATIONS & SECURITY

1. **Telecommunications Systems**: Provide a horizontal distribution system including, but not necessarily limited to, all wiring, pathway systems, connector blocks, protectors for all copper service entrance pairs, terminators for all fiber optic cables, outlet boxes, telephone jacks, and data jacks cover plates in accordance with EIA/TIA standards. Provide Category 6 UTP telephone premise wiring where telephones are required.

2. **Public Address Systems**: Provide a Public Address system with speakers in all locations identified in Part 3.

3. **Intercommunications Systems**: Provide an Intercommunication System to allow two-way communications between all locations identified in Part 3.

4. **Television Systems**: Provide television systems to the extent specified in Part 3. Coordinate with the local Cable Company, Local users and Local Authority at the Activity for other specific requirements. The interior cable outlets and wiring shall be complete and ready for use. Wiring shall not be run exposed on any surface of the building.

5. **Security Systems**: Provide an Intrusion Detection System (IDS) to sense all perimeter doors and windows and the interior volume in at least two locations. System shall have 90-minute battery back-up and annunciate both locally and at the Base Security Office via a telephone dialer. System shall have entry/exit timer. Provide wall mounted keypad control at two locations.

D5090 OTHER ELECTRICAL SERVICES

1. **Surge Protective Device (SPD)**: Provide SPD in accordance with UFC 3-501-01.

2. **Variable Frequency Drives**: When variable frequency drives are required, the Designer of Record shall utilize UFGS Section 26 29 23 20 for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

3. **Emergency Generators**: When an emergency generator is required, the Designer of Record shall utilize UFGS Section 26 32 13.00 20 for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

4. **Automatic Transfer and Bypass/Isolation Switches**: When an Automatic Transfer Switch is required, the Designer of Record shall utilize UFGS Section 26 36 23.00 20 for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

5. **Uninterruptible Power Supply (UPS) System:** When a UPS system is required, the Designer of Record shall utilize UFGS Section 26 33 53.00 20 and shall submit the edited specification section as a part of the design submittal for the project.

6. **400 Hertz Systems**: The Designer of Record shall utilize UFGS Section 26 32 26 or 26 35 43 for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

7. **Lightning Protection**: When lightning protection is required, the Designer of Record shall utilize UFGS Section 26 41 00.00 20 for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

8. **Building Photovoltaic System**

Provide a grid tied photovoltaic system including roof mounted crystalline photovoltaic panels, combiner boxes, inverters, and support structure.

Provide all labor, materials, equipment and supervision required to implement the design and to provide a fully operational system.

Provide PV modules with a 20-year limited manufacturer warranty that generates no less than 80% of the rated output under Standard Test Conditions (STC).

Provide start-up and testing utilizing certified technician. Submit startup and testing report.

The PV system hardware and services shall meet or exceed all applicable local, State and utility requirements, conform to the applicable codes and standards, and have passed the listing and qualification tests, listed below. (Comply with the most recent version of each document).

a. IEEE 1262 "Recommended Practice for Qualification of Photovoltaic Modules".

b. PowerMark certification for PV modules.

c. IEEE Standard 928-1986, Recommended Criteria for Terrestrial Photovoltaic Power Systems (PV system performance criteria).

d. IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems

e. Underwriters Laboratories 1741-2001 (UL Standard for Inverters and Charge Controllers).

f. Underwriters Laboratories 1703 (UL Standard for Listing Photovoltaic Modules).

g. Certification of PV Equipment: All PV modules, inverters, and electrical components shall be required to be listed or recognized by an appropriate and recognized United States Safety Laboratory (for example: UL or ETL).

Provide a comprehensive "Photovoltaic Application Analysis" with a detailed description of system, application, site shading conditions and expected kW output of the rooftop photovoltaic applications. The analysis shall utilize the Solmetric Suneye or the Solar Pathfinder shading analyzers to analyze the effects of the existing site shading conditions. Analysis shall include estimated PV output in kWh per year. Coordinate rooftop application analysis with other equipment that is required to be placed on the roof to determine space available and proper solar orientation for photovoltaic equipment.

The contractor work responsibilities include at a minimum: system design, equipment selection, and PV system installations. System shall be individually capable of providing peak power output of at least proposed PV system size, 208 or 480 volt, 3-phase, 4-wire power.

The final System configuration shall allow automatic operation without operator intervention. System design and equipment specifications shall minimize maintenance requirements. System shall include metering that must be incorporated with current AMI network (Advanced Metering Infrastructure) and planned energy metering projects.

The inverter(s) disconnects and associated electrical equipment must be located in an area that is accessible, weather-protected, and secure from vandalism and personal injury.

Disconnects and over current devices shall be mounted in approved boxes, enclosures, or panel boards. Disconnects and switches shall be DC rated when used in DC applications. Metal enclosures and boxes shall be bonded to the grounding conductor.

At a minimum, electrical meters shall capture the following data on individual system performance (minimum solar irradiance, DC power, AC real power, AC current, AC voltage, and power factor (recommend ION 8600 for AC); ambient air temperature, PV cell temperature, kW, and kWh). This data shall be captured at hourly intervals for a minimum one year. Units of temperature, power, and current shall be in Fahrenheit, Watts, and Amps respectively.

Transformers, if required, shall have a minimum efficiency based on factory test results of not less than the efficiency indicated in 10 CFR 431, Subpart K, paragraph 431.196(b). Transformers

shall be housed in a NEMA 4X enclosures.

Mounting structures shall be corrosion resistant to marine environment.

Provide permanent plaque or directory at each building service and power source identifying all other building services and power sources.

Operators manuals for each system component shall include detailed instructions on how to operate the system, programming and installation instructions, emergency operating procedures, default program values and set points, listing of field programmed variables and set points, equipment wiring diagrams, product model number, with Name, Address and Telephone number of local representative, and starting, operating, and shut down procedures. Include normal and emergency shutdown procedures, schedule of maintenance work, if any, recommended cleaning agents and methods, replacement parts list, including internal fuses, and warranty information.

Provide a formal 2-hour on-site training session instructing operators in the operation and maintenance of the new system, including operation and maintenance of inverters, disconnects and other system components. Instruct personnel in removal and installation of panels, including wiring and all connections. At the time of training the Contractor shall furnish, for the equipment specified, operation and maintenance manuals, record drawings and recommended spare parts lists identifying components adequate for competitive supply procurement for operation and maintenance of system.

SECTION E. EQUIPMENT AND FURNISHINGS

E10 EQUIPMENT

Equipment and Appliances: Provide appliances and equipment to fulfill the work for Part 3. Whenever possible, all appliances and equipment provided for the facilities in the contract shall be by the same manufacturer and shall be the current model available at the time of proposals. Discontinued makes and models are prohibited. All appliances and equipment shall comply with applicable Energy Star efficiency rating requirements and shall be rated as high efficiency models. Appliances and equipment on California projects shall comply with California Title 24 and be rated as high efficiency. All appliances shall be of the same manufacturer and shall be the same, or similar in color. Submit catalog information for approval by the Contracting Officer prior to purchasing, delivery and installation of the appliances at the job site. Equipment and appliances such as dishwashers, ice machines with drains, garbage disposers, and ovens/ranges are not considered FF&E.

E20 FURNISHINGS

E2010 FIXED FURNISHINGS

Window Treatments: Unless otherwise specified in Part 3 window treatments shall be as follows: Horizontal blinds shall be aluminum, washable, cleanable, installed in all windows except for bathroom, kitchen, and utility windows. Horizontal blinds shall be installed at all sliding glass doors. All blinds shall be screwed or securely anchored to wood backing and shall be inside mounted except at sliding glass door. Submit catalog information for approval by the Contracting Officer. Blinds shall have 1-inch aluminum slats, mounted within window opening. Blinds shall have separate tilt and height controls, metal truck, head channels, wand, and valance. Solar

shades shall be woven polyester/resin coated fiberglass or polyester fabric with fade resistance and dimensional stability; with clutch or motorized roller operation. Roller shades shall be screwed or securely anchored to wood backing and shall be inside mounted except at sliding glass door. Submit catalog information for approval by the Contracting Officer. Blinds shall have prefinished steel or aluminum roller housing and valance. Window treatments are not considered FF&E.

E2020 MOVABLE FURNISHINGS

1. Furnishings, Fixtures and Equipment (FF&E): FF&E shall include furniture, shop equipment, audiovisual equipment (excluding motorized screens), and specialty equipment. Weapon racks, drying cages, motorized projection screens and lockers are not considered FF&E. FF&E shall be fully integrated with the building system.

   Design and provide FF&E for all areas as developed during client programming. Design an FF&E package and prepare supporting plans and procurement data in accordance with the General Interior Design Requirements UFC 3-120-10.

   The contractor shall have an NCIDQ certified Interior designer not affiliated with any furniture dealership prepare both the SID and FF&E package and participate in design charettes to develop the building floorplan. The designer must have previous experience in project types similar to this contract. As required, the contractor shall obtain services of equipment specialists to specify the audiovisual, shop, or specialty equipment. Equipment specialists shall not have any affiliation with the product specified.

   The contractor's Interior Designer shall be responsible for specifying product and installation for all FF&E for the designated facilities built under this contract, using NAVSUP Blanket Purchase Agreements, GSA federal supply schedules or other government supply sources and complying with priorities found in FAR Part 8.404.

   All fixed and movable furnishings selections shall be coordinated with Sections C10, "Interior Construction" and C30, "Interior Finishes." The FF&E shall be fully integrated with the building systems as well as the design and construction schedule.
   As an option to the contract/task order, the contractor shall be authorized to procure all FF&E with separate funding.

   a. **FF&E Package:** Provide the FF&E loose furnishings package from Government supply sources schedules according to Federal Acquisition Regulations, to include but not limited to, systems and modular furniture, training and conference furniture, seating, tables, artwork, window covering, specialty furniture and equipment, and accessories. NAVSUP Blanket Purchase Agreements (BPA) must be used whenever possible.

      The Government will provide separate funding for procurement of the FF&E package. Upon receipt of required funding, the Contractor shall be authorized by the Contracting Officer as an option to contract/task order to procure all FF&E using predominately negotiated price schedules from GSA or other Federal contracts. The amount of the modification will be the actual cost of these items from the Federal price schedules or NAVSUP BPAs, including any freight and installation charges from the furniture supplier as well as the contractor's FF&E Handling and Administration Rate (HAR). The HAR includes all of the prime contractor's effort related to storage, coordination, handling, administration of subcontractors, and all other associated costs and profit for the procurement of FF&E. The prime contractor will propose in the contract/task order solicitation

the FF&E HAR. The contractor's proposed HAR may not exceed 5% of the total FF&E costs, as noted on the bid schedule. No other charges, expenses, fees, or other markups will be authorized.

When the FF&E package is complete and accepted by the Government, the procurement option will be awarded based on the specific line items in the final package. The Government's Interior Designer will approve the final FF&E submittal. The FF&E package will be presented to the Project Manager and they will expect the Contractor to procure the FF&E exactly as specified and approved by the government Interior Designer.

Two copies of all ordering documentation shall be provided to the Contracting Officer including purchase orders and warranty information. The Contractor shall take maximum advantage of all exemptions from State and Local taxation authorities whether available to it directly or available to the contractor based on an exemption afforded the Government. The responsibility for paying applicable taxes rests with the contractor. Any state and local taxes applicable to the FF&E option will be included with the FF&E Dealer quote, if applicable.. Under regulation 1521, Construction Contractors performing work for the US Government are not required to charge the Government sales tax for the purchase of furniture. Any items purchased as building materials such as carpet are taxable. FF&E items are subject to the Buy American Act. The contractor shall not be required to secure any additional bond for the award of the FF&E option item. Any performance and payments bonds required for the FF&E option will be included in the prim contractor's FF&E HAR.

b. **Procurement and Installation:** Upon completion and Government acceptance of the design, using the Best Value Determination (BVD) method in association with the Government's Interior Design Representative, the Government will award the FF&E procurement option for the Contractor to purchase the FF&E package. The Government's Interior Designer shall provide a certification to the Contracting Officer that the process was completed. The Design-Build Contractor will receive a letter of authorization from the Contracting Officer citing the name of the furniture dealer and other information to use when accessing the Government supply sources. The FF&E package includes the installation of all furniture and furnishings as specified in the FF&E package. The installation dealer specified in the FF&E package will receive, store, if required, transport to the project site, off load, inside deliver, unpack, assemble, place/install, clean, if required, and dispose of all the trash for all furniture and furnishings. The Contractor's Interior Designer will be responsible for specifying installation services and warehousing, as required, for all collateral equipment. It is the Contractor's responsibility to coordinate the building completion, occupancy, and furniture installation dates with the installation dealer specified in the FF&E package. Any costs associated with storing or delaying furniture shipments is the responsibility of the Construction Contractor. Davis Bacon wages do not apply to the FF&E installer accessed through Government supply sources. The Contractor should anticipate providing a deposit of between 30% and 50% of the furniture costs when placing their order.

All movable furnishings shall be installed in accordance with the manufacturer's instructions and warranty requirements. All movable furnishings shall be level and aligned and all doors, drawers and accessories shall be level and aligned to open, close and otherwise operate smoothly and securely. All systems furniture shall be installed by the systems furniture manufacturer's dealer of record and not by the General Contractor.

c. **Furnishings for Special Functions:** Contractor shall coordinate shop equipment, audiovisual equipment, and specialty equipment, with the building

systems.

SECTION F. SPECIAL CONSTRUCTION AND DEMOLITION

F10 SPECIAL CONSTRUCTION AND DEMOLITION

F1010 SPECIAL STRUCTURES

1. Pre-Engineered Buildings

Provide the design and installation in accordance with the UFC 3-100-10, *Architecture* and UFC 3-301-01, *Structural Engineering.*

a. **Design Requirements -** The metal building manufacturer must be accredited by the International Accreditation Services (IAS) AC472. The Metal Building System design shall be in accordance with the Metal Building Manufacturers Association (MBMA) *Metal Building SystemsManual*. All structural design shall comply with the provisions of Section B10, "Superstructures", above.

b. **Additional Roof Design Requirements -** Roof Decking - In addition to any other load requirements, roof decking shall be designed to support a 91 kg (200-pound) concentrated load at mid-span on a 300 mm (12-inch) wide section of deck.

c. **Deflection -** the maximum deflection for -

1) Structural Members - main framing members shall be L/240.

2) Purlins and Roof Panels: The deflection due to live, snow, or wind shall not exceed L/180.

3) For buildings with masonry infill, limit frame sway to L/600th of building eave height.

4) Wall Panels - Maximum deflection of wall panels due to wind loads shall be L/120th of their respective spans except that when interior finishes are used the maximum allowable deflection shall be limited to L/180th of their respective spans.

d. **Wall and Roof materials -**

1) Alum/Zinc-Coated Steel Sheet: ASTM A792/ A792M, AZ 55.

2) Aluminum Sheet: Alloy 3004 Alclad conforming to ASTM B209.

3) Framing and Structural Members - Steel - ASTM A992 / A992M, ASTM A529/ A529M, ASTM A572/ A572M, or ASTM A588/ A588M.

4) Framing and Structural Members, Aluminum: ASTM B221 or ASTM C308

e. **Structural Tube:** ASTM A500 or ASTM B221.

f. **Fasteners** - Shall be compatible with the materials they are fastening to, be gasketed when exposed to weather to prevent leaks, and shall provide both shear and tensile strengths not less than 3,336 N (750 pounds) per fastener. The main fastening system shall use concealed fasteners, however, when exposed fasteners are needed, color fasteners shall be color coated to match wall/roof panels.

g. **Light Transmitting Roof Panels (Non-Insulated):** ASTM D3841, Type II, Grade 1.

h. **Insulation:** Blanket-type fiberglass insulation with a factory applied facing on one side and having a permeance rating of 0.05 or less in accordance with ASTM E96. Flame Spread Rating 75 or less, and a Smoke Developed Rating of 150 or less when tested in accordance with ASTM E84.

i. **Panel Finish -** Factory Color Finish - Provide factory applied baked coatings to the exterior and interior of metal wall panels and metal accessories. Provide exterior primer standard with panel manufacturer but not less than 0.8 mil dry film thickness (DFT). Provide PVDF exterior finish top coat of 70 percent inorganic pigments with 0.8 mil DFT. Provide factory-applied clear finish over the color topcoat and edge coating for projects within 91 meters of a water shoreline or industrial environments. Field apply 70 percent PVDF clear coat to unfinished panel edges or field cut panels. Interior finish exposed to sun or rain shall be the same coating and DFT as the exterior coating. Interior finish protected from sun or rain exposure shall receive 1.0 mil DFT coating of siliconized polyester (SMP) resin coating with organic or blended pigments and manufacturer's standard primer.

F20 SELECTIVE BUILDING DEMOLITION

In general terms, demolition work shall include the removal and effective management and disposition of existing construction and or structures. Contractor shall take care to prevent damage to existing utilities and construction that are not scheduled for demolition. If damage occurs, the Contractor shall make repairs to the satisfaction of the Contracting Officer and at no cost to the Government. Comply with local Activity and Installation local requirements regarding demolition and removal. Unless otherwise specified in Part 3, all demolished materials and equipment must be removed from government property in accordance with applicable laws and regulations, including local Activity or Installation regulations. Selling of demolished or salvaged materials and equipment on government properties is prohibited.

Demolition Plan and Environmental Protection Plan: No demolition work shall take place until a Demolition Plan, Environmental Protection Plan, Safety Plan (including Activity Hazard Analysis), Asbestos Abatement Plan, and a Lead Abatement Plan have been submitted to, and approved by, the Contracting Officer. The Plans shall take into consideration, and indicate method of removal, disposition, and abatement of environmentally hazardous materials. Demolition, disposition, and abatement of hazardous materials must comply with all applicable Local, State, and Federal regulations and laws. If destructive investigation is to occur, the Contracting Officer shall approve a Destructive Investigation Plan.

When hazardous materials such as asbestos, lead paint, PCB and other hazardous materials are involved in the performance of the work, the contractor shall abate, remove and manage the hazardous materials in construction and finish materials such as insulation, flooring, wall materials, ceiling materials, roofing materials, heating, plumbing, ventilation, air conditioning equipment and installations in accordance with National as well as local Environmental Protection Laws and Regulations.

F2020 HAZARDOUS COMPONENT ABATEMENT

1. **Asbestos in DoD Schools**: For projects that require removal or disturbance of asbestos containing materials within DoD schools, perform work in accordance with the edited UFGS 02 82 14.00 10, *Asbestos Hazard Control Activities*.

2. **Asbestos Materials**: Asbestos shall be removed, transported and managed in accordance with the following regulations: 29 CFR 1926.1101, and 40 CFR 61-Subpart M.

   Category I & II Nonfriable: Demolition of Category I & II nonfriable asbestos containing materials (approved to be left in place during building demolition) shall be performed in accordance with 40 CFR 61 - Subpart M.

3. **Lead Based Paint in Child Occupied Facilities**: For projects that require removal or disturbance of painted surfaces within a child occupied facility, perform work in accordance with the edited UFGS 02 83 19.00 10, *Lead Based Paint Hazard Abatement, Target Housing and Child Occupied Facilities.*

4. **Paint Containing Lead, Cadmium and Chromium**: Work which requires the disturbance of paint that have been determined to contain all or any of the following: lead, cadmium and chromium must be performed in accordance with: 29 CFR 1926.62, 29 CFR 1926.1126 and 29 CFR 1926.1127.

5. **Mercury & LLR Components**: Work which requires removal of mercury and LLR components shall be performed in accordance with: 29 CFR 1910.1000, 10 CFR 20, and 40 CFR 273.

6. **PCBs**: Work which requires removal of PCB containing components or materials shall be performed in accordance with 29 CFR 1910.1000, 40 CFR 761, and 40 CFR 273.

7. **Hazardous Materials Reporting**:
   a. **Daily Report**: Notify the Contracting Officer of work involving hazardous materials abatement and removal, including the quantities involved, on daily reports.
   b. **Hazardous Material Inventory Report:** The Contractor shall provide a list of all hazardous materials used on the site.

SECTION G. BUILDING SITEWORK

G10 SITE PREPARATIONS

1. **General Requirements**: Building site work includes site preparation, site improvements, site civil/mechanical utilities, site electrical utilities, exterior furnishings, landscaping, and irrigation. Provide site work in accordance with UFC 3-201-01, *Civil Engineering*.

2. **Project Limitations**: Prior to the start of design, the contractor shall determine the exact limit-of-work line for the project periphery, considering items such as, but not limited to, utility work, landscape re-vegetation of disturbed areas, and lay down areas. The Civil Engineer and Landscape Architect of Record shall determine limit-of-work lines. Minimize the impact of construction activity on operations and neighboring facilities.

3. **Geotechnical Data**: A geotechnical engineer shall conduct the subsurface exploration,

investigation/evaluation, testing, and analysis that the Designer of Record deems necessary for the design and construction of the proposed facilities, including building pad, structure, pavement sections, repairs, overlays, stormwater management facilities, utility structure foundations, septic systems, and other features requiring soil support.

G1010 SITE CLEARING

1. **Existing Utilities**: When the Contractor is to work at a site that has existing utilities, the contractor is responsible for coordination with Contracting Officer and utility companies for staking out, capping, connection and relocation of any existing utility systems or traffic interruption. Notify utility locator service for area where Project is located before site clearing.

2. **Interruption**: All interruption to the existing utilities and traffic shall be coordinated with and approved by the Contracting Officer not less than 14 calendar days in advance of such interruption.

G1020 SITE DEMOLITION & RELOCATIONS

Abandon utility systems in-place conforming to applicable codes and regulations, removing their presence from the ground surface and clearly indicating that they have been abandoned. Remove utilities underneath or within 3.0 m (10 feet) of any new facilities. Fill abandoned gravity systems with flowable fill. Fill abandoned utility system piping under pavements subject to potential vehicle loading with flowable fill.

Remove existing utility structures to 900 mm (3 feet) below existing or new adjacent grade, whichever is greater. Break up bases to permit drainage. Fill with clean sand.

Comply with the requirements of the utility provider concerning utility relocation.

G1030 SITE EARTHWORK

The DOR shall utilize UFGS Section 31 23 00.00 20 for the project specification and shall submit the edited section as a part of the design submittal. Perform quality assurance for earthwork in accordance with UFGS Section 31 23 00.00 20. If sheeting/shoring or dewatering is required, the Contractor shall provide a registered Professional Engineer to provide excavation, sheeting, shoring, and dewatering plans and inspection of excavations and soil/groundwater conditions throughout construction. The Engineer shall be responsible for performing pre-construction and periodic site visits throughout construction to assess site conditions. The Engineer, with the concurrence of the contractor and the Contracting Officer, shall update the excavation, sheeting, shoring, and dewatering plans as construction progresses to reflect actual site conditions and shall submit the updated plan and a written report (with professional seal) at least monthly informing the Contractor and the Contracting Officer of the status of the plan and an accounting of Contractor adherence to the plan; specifically addressing any present or potential problems. The Engineer shall be available to meet with the Contracting Officer at any time throughout the contract duration.

G20 SITE IMPROVEMENTS

Provide site improvements as required to make a useable facility that meets functional and operational requirements, incorporates all applicable anti-terrorism, force protection and physical security requirements and blends into the existing environment.

Provide site improvements in conformance with applicable requirements of the Uniform Federal Accessibility Standards.

1. **Pavements**: For work in and adjacent to existing pavements, the Contractor is required to match the existing adjacent finish elevation, materials, paving section and texture, unless otherwise indicated in Part 3 or directed by the Contracting Officer.

   Provide pavement design and pavement section materials in accordance with UFC 3-200-10N, *Civil Engineering*.

2. **Traffic Control**: If the site work involves interference with normal vehicular and or pedestrian traffic, the Contractor shall coordinate with the authority having jurisdiction, propose and obtain approval for traffic control measures that may be required in performance of the work required by the contract.

3. **Performance Verification And Acceptance Testing**:
   a. **Subgrade Preparation:** If required by the Designer of Record, perform proof rolling. Proof rolling shall be performed in the presence of the Contracting Officer. Rutting or pumping of material shall be undercut as directed by the Contracting Officer and replaced with satisfactory soil materials as defined by the Geotechnical Engineer.
   b. **Base Course Performance Verification**: At a minimum, Contractor must perform visual performance verification. Surface shall be smooth with no ruts, sloped or crowned to not pond water.
   c. **Bituminous Concrete Pavement Performance Verification**: At a minimum, Contractor must perform visual performance verification. Finished surface shall be uniform in texture and appearance, free of defects such as cracks and creases, and be sloped or crowned so as to not pond water.
   d. **Portland Cement Concrete Pavement Performance Verification**: At a minimum, Contractor must perform visual performance verification. Finished surface shall be uniform in texture and appearance, free of defects such as cracks and spalls, and be sloped or crowned so as to not pond water.
   e. **Concrete Joint Performance Verification**: Joint sealer that fails to cure properly, or fails to bond to joint walls, or reverts to uncured state or fails in cohesion, or shows excessive air voids, blisters, or has surface defects, swells, or other deficiencies, or is not recessed within indicated tolerances shall be rejected. Remove rejected sealer, re-clean and reseal joints.

G2040 EXTERIOR FURNISHINGS

All site furnishings shall be permanently attached to concrete pads. Site furnishings shall conform to the Base Exterior Architecture Plan (BEAP) or Installation Appearance Plan (IAP) for each Activity. If no product guidance is given, coordinate material, finish and color with architecture (fiberglass and aluminum are not acceptable) and provide to the greatest extent possible, materials with industrial recycled content, preferably from regionally local manufacturers. At a minimum, provide a trash and ash receptacle at each entry and gathering/smoking area.

G2050 LANDSCAPING

G30 SITE CIVIL/MECHANICAL UTILITIES

Develop the site to provide water, fire protection, sanitary sewer, storm drainage, heating, cooling and fuel distribution services that meet the requirements of each utility provider and each applicable regulatory agency that governs and issues permits for the construction and operation of these systems. Site design shall also comply with Department of Defense requirements concerning Low Impact Development (LID) per UFC 3-210-10, as well as state or local stormwater management regulations, and applicable project sustainability goals. Submit sealed calculations with narrative to the Government for civil and environmental review documenting all assumptions and which criteria governs the design.

Coordinate with the local utility providers and pay any fees or charges required to connect to their utility. Identify and obtain all permits to comply with all federal, state, and local regulatory requirements associated with this work. Coordinate all reports, submittals, and permit applications through the Contracting Officer. The Contractor shall perform work in accordance with the obtained permits.

Provide all required fittings, connections and accessories required for a complete and usable system. All equipment shall be installed per the criteria indicated in this RFP and the manufacturer's recommendations. Where the word "should" is used in the manufacturer's recommendations, substitute the word "must".

G3010 WATER SUPPLY

1. **Water System Design and Construction**: Provide the new water system and connections to the existing water system in accordance with UFC 3-230-01, *Water Supply: Storage, Distribution, and Transmission*; the utility provider's requirements; or the state waterworks' regulations; whichever is more stringent.

2. **Notifications**: Notify the utility provider of the additional demand generated by the proposed facility. Provide a copy of all correspondence with the utility provider to the Government's Civil/Mechanical Reviewer.

3. **Performance Verification And Acceptance Testing**: Provide testing on water mains and service lines in accordance with the state waterworks' regulations and the following:

   a. Ductile iron and other materials: AWWA C600.

   b. PVC: AWWA C605.
   whichever is more stringent. Do not begin testing on any section of a pipeline where concrete thrust blocks have been provided until at least 5 days after placing of the concrete.

G3020 SANITARY SEWER

1. Sanitary System Design and Construction: Provide the new sanitary sewer system and

connections to the existing sanitary sewer collection system in accordance with UFC 3-240-01, *Wastewater Collection*; the utility provider's requirements; or the state sewerage regulations; whichever is more stringent.

2. Notifications: Notify the utility provider of the additional wastewater flow generated by the proposed facility. Provide a copy of all correspondence with the utility provider to the Government Civil Reviewer.

3. Wastewater Pump Station: Where required, provide a duplex, grinder pump station in accordance with the utility provider's requirements. Provide pump station wet well of fiberglass construction. Provide adjacent valve vault of precast concrete construction.

   Provide automatic control to start and stop the pump system. Provide automatic level control by floats in accordance with the preferences of the system owner to fill and prevent overflow of the wet well. Provide an emergency pump connection.

   Provide a telephone dialer in the control panel capable of accepting up to 8 telephone numbers. At the control panel provide an alarm horn and light with battery backup. Alarms shall include high liquid wet well level; loss of main power; no flow as sensed by current sensor; and pump failure via overload or motor heat sensor trip. Provide seal failure indicator lights and elapsed time meters.

   Provide electrical connections for a portable emergency generator hook-up sized to start up and maintain the total rated running capacity of the station, including the pumps, controls, lighting, and other auxiliary equipment.

4. Performance Verification And Acceptance Testing:
   a. Sanitary Sewer Distribution System Performance Verification: Provide testing on sewer mains and laterals in accordance with the state sewerage regulations. At a minimum, perform the following:

      1) Visual Test: Remove manhole colvers and conducts a visual inspecation as follows:

         a) Inspect for visible leaks in lines or manholes.

         b) Inspect condition of grout in the interior joints of the manholes.

         c) Inspect manhole frames and covers for proper type and installation.

         d) Inspect to see if lines are free of debris.

         e) Inspect manhole benches and inverts.

         f) Check alignment and grade of gravity lines by laser or by introducing sufficient water into the line to verify the absence of sags, as directed by the Contracting Officer.

         g) Mirror test: Check each straight run of pipeline for gross deficiencies by holding a light in a manhole; it shall show a full circle of light through the pipeline when viewed from the adjoining end of line.

      2) Leakage Tests: Test lines for leakage by either infiltration tests or exfiltration tests, or by low-pressure air tests in accordance with the following:

a) Exfiltration Tests: ASTM C 969M (ASTM C 969) and perform calculations in accordance with its Appendix.

b) Low-pressure Air Tests: Pipelines: ASTM C 924M (ASTM C 924) and perform calculations in accordance with its Appendix. PVC plastic pipelines: UBPPA UNI-B-6 and perform calculations in accordance with its Appendix.

3) Cross Connection Tests: Cross connection tests shall be observed by the Contracting Officer and the utility provider's inspector.

a) Perform a tracer study from the project sewer connection to the first manhole downstream on the active sewer system. Use a nontoxic, non-staining sewer tracing dye. Testing shall continue until the dye visually confirms the design connection is appropriate. During the test, the contractor shall monitor the storm drainage system (structures and outfalls) downstream from the project for any sign of cross connection.

b) Perform a smoke test on the project sewer to verify that project storm drainage inlets or drains have not been connected to the sanitary sewer.

f. Sanitary Sewer Manholes Verification Testing: Provide testing on sanitary sewer manholes in accordance with the state sewerage regulations. At minimum, perform hydraulic testing in accordance with ASTM C 969M (ASTM C 969).

g. Wastewater Pump Station Verification Testing: Test the wastewater pump station in accordance with the state sewerage regulations. Conduct testing on discharge piping and force main in accordance with tests for water distribution mains; see G30, paragraph 1.3.2. Test pumps, controls, and alarms, in operation, under design conditions to ensure proper operation of all equipment.

G3030 STORM SEWER

1. Storm System Design and Construction: Provide the new storm sewer system and connections to the existing storm sewer system in accordance with UFC 3-201-01, Civil Engineering; the utility provider's requirements; UFC 3-210-10, Low Impact Development; the state stormwater management laws and regulations; and applicable sustainability requirements; whichever is more stringent.The Contractor shall make necessary adjustments to the drainage design in order to avoid disruption to existing utilities and to protect existing trees to remain.Confirm that the existing receiving system has adequate capacity to receive the additional stormwater flow generated by the project.

2. Storm Sewer System Performance Verification: At a minimum, perform the following:
   a. Visual Test: Remove drainage structure covers and conduct a visual inspection as follows:

      1) Inspect for visible leaks in lines or structures.

      2) Inspect condition of grout in the interior joints of the structures.

      3) Inspect structure frames and covers for proper type and installation.

      4) Inspect to see if lines are free of debris.

      5) Inspect structure inverts.

      6) Check alignment and grade of gravity lines by laser or by introducing sufficient water into the line to verify the absence of sags, as directed by the Contracting Officer.

      7) Mirror test: Check each straight run of pipeline for gross deficiencies by holding a light in a structure; it shall show a full circle of light through the pipeline when viewed from the adjoining end of the line.

G3060 FUEL DISTRIBUTION

Gas Distribution System: Refer to Section D20 for requirements.

G40 SITE ELECTRICAL UTILITIES

G4010 ELECTRICAL DISTRIBUTION

1. **Electrical Utilities Design and Construction**: Site electrical utilities include all exterior electrical work, including the connection to the primary distribution system. This also includes telephone and cable television supplies.

   Provide electrical overhead and underground, distribution systems in accordance with IEEE C2 (National Electrical Safety Code), NFPA 70, local utilities company requirements, and local Activity guidelines.

2. **Coordination With Local Utilities Company and Local Activity**: Service meters for electrical services shall be provided and installed in conformance with the local utilities company requirements and local activity guidelines.

3. **Substations**: When secondary unit substations are required, the Designer of Record shall utilize UFGS Section 26 11 13, *Secondary Unit Substation*, and UFGS Section 26 23 00, *Switchboards and Switchgear*, for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

4. **Transformers**: When transformers are required, the Designer of Record shall utilize UFGS Section 26 12 19.10, *Three-Phase Pad Mounted Transformers*, UFGS Section 26 12 19.20, *Single-Phase Pad Mounted Transformers*, or UFGS Section 33 71 01,

Overhead Transmission and Distribution, for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

5. **Switches, Controls and Devices**: When switches or control devices are required, the Designer of Record shall utilize UFGS Section 26 13 00.00 20, SF6 *Insulated Pad Mounted Switchgear*, or UFGS Section 33 71 01, *Overhead Transmission and Distribution*, for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

G4020 EXTERIOR LIGHTING FIXTURES AND CONTROLS

1. Utilize broad spectrum (white light) sources such as metal halide, induction, SSL, and fluorescent to provide good visibility at low light levels, unless lighting is required to match existing sources. The IESNA 10th Edition Handbook has developed a methodology to apply white light.

2. Comply with ANSI/ASHRAE/IES 90.1-2007 for all exterior lighting applications and controls.

3. Comply with EPACT 2005, the exterior lighting power density must be below ASHRAE by 30% if considered a building load and 20% if considered a non-building load.

4. Provide surge protective device (SPD) at panelboards that include circuits feeding exterior lighting systems.

5. Coordinate the design and luminaire selection with the landscape designer. Such coordination should include the location of poles which may conflict with tree locations.

6. When exterior lighting is required the designer of record shall utilize UFGS Section 26 51 00 for the project specification section as part of the design submittal for the project and shall submit the edited specification section as a part of the design submittal for the project. Provide “dark-sky” compliant exterior light fixtures and design to minimize light trespass and light pollution.

G4030 SITE COMMUNICATION & SECURITY

1. **Telephone Distribution System**: Provide all telephone distribution systems in accordance with EIA/TIA Standards, NFPA 70, and the cognizant telephone company requirements.

2. **Cable Television System**: Provide all cable television systems in accordance with NFPA 70, and the cognizant cable television company requirements and BICSI recommendations.

End of Section

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PART 6
ATTACHMENTS
05/11

Attachment	Title
A	Conceptual Drawings
B	Photographs
C	MCLB Base Interior Architectural Standards, dated 15 July 2008

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Attachment A

Conceptual Drawings

Drawings provided are for informational purposes and do not reflect as-built conditions. Contractor must field verify all information. Drawings are to be used for bidding purposes and to show the conceptual design approved by the Government

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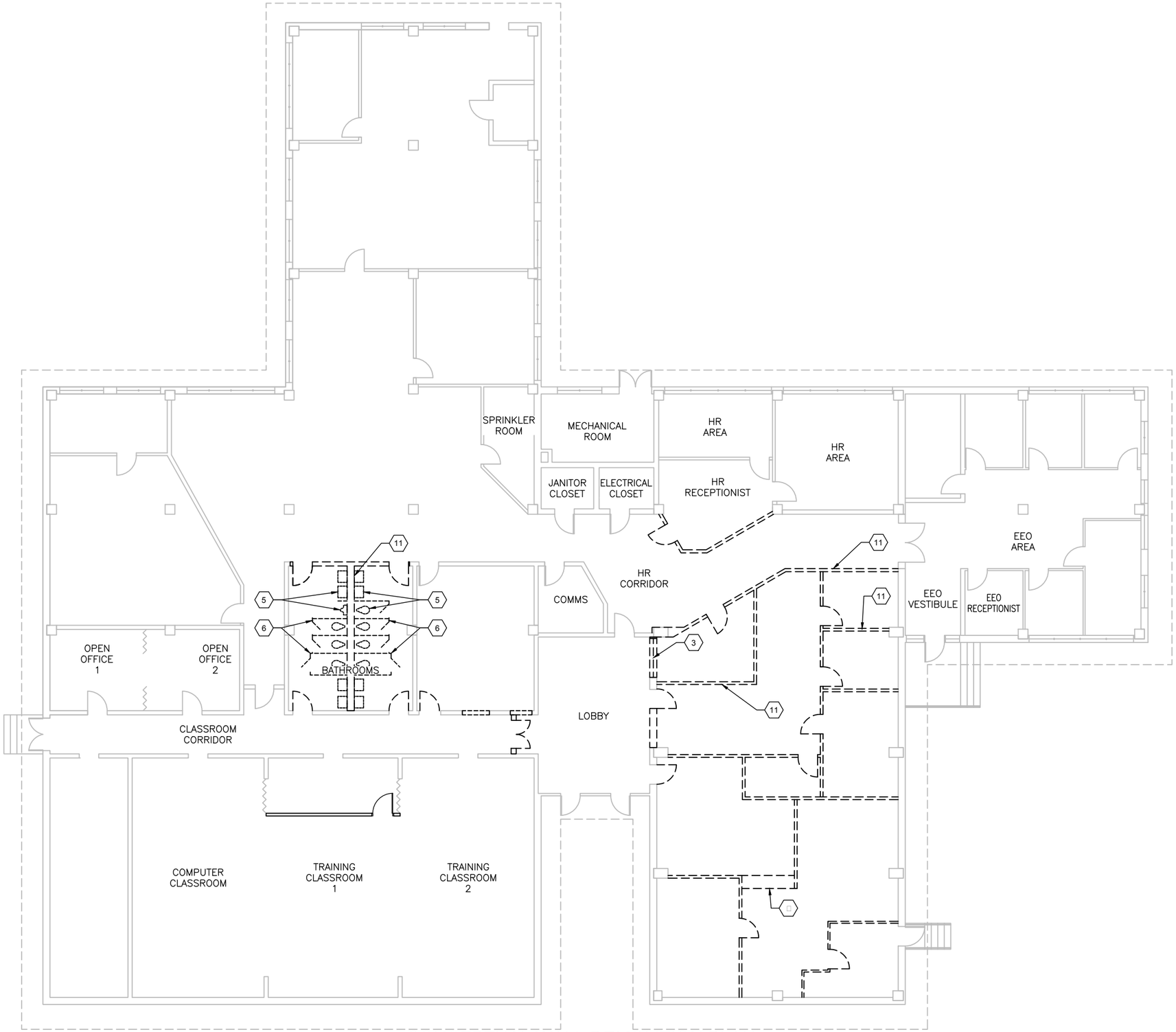

CONCEPTUAL WALL DEMOLITION PLAN

1/16" = 1'-0"

GENERAL NOTES

A. NOT USED.

B. NOT USED.

C. SALVAGE E□ISTING DOOR LOCKING HARDWARE AND DELIVER TO COMMANDING OFFICER.

D. WHERE PORTIONS OF CONSTRUCTION (SUCH AS LIMITED LENGTH OF WALL) IS SHOWN, COORDINATE SI□E AND E□TENT OF REMOVAL WITH THE RENOVATION PLAN.

E. FOR ASBESTOS AND LEAD, SEE PART 3.

KEY NOTES

1. NOT USED.
2. NOT USED.
3. REMOVE E□ISTING ROLL-UP WINDOW.
4. NOT USED.
5. REMOVE ALL E□ISTING PLUMBING FI□TURES IN BATHROOM.
6. REMOVE ALL E□ISTING TOILET PARTITIONS IN BATHROOM.
7. NOT USED.
8. NOT USED.
9. REMOVE E□ISTING CASEWORK AND COUNTERTOP.
10. NOT USED.
11. REMOVE E□ISTING WALL TO E□TENT REQUIRED TO PERFORM WORK.

LEGEND

- DEMOLISH WALL
- DEMOLISH DOOR AND FRAME
- ROOF OVERHANG
- E□ISTING TO REMAIN

NOT FOR CONSTRUCTION

MARK	DESCRIPTION	DATE	APPR.

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Drawing Code:
Plot Date: Sep 08, 2015
Plot Scale: 1:1
Designed By: JB
Reviewed By: SM
Submitted By: CM
Contract No.:
Solicitation No.:

MARINE CORPS LOGISTICS BASE
ALBANY, GA

Contractor:

BUILDING 3010 RENOVATION

ARCHITECTURAL
CONCEPTUAL WALL
DEMOLITION PLAN

Sheet Reference Number:

AD-100

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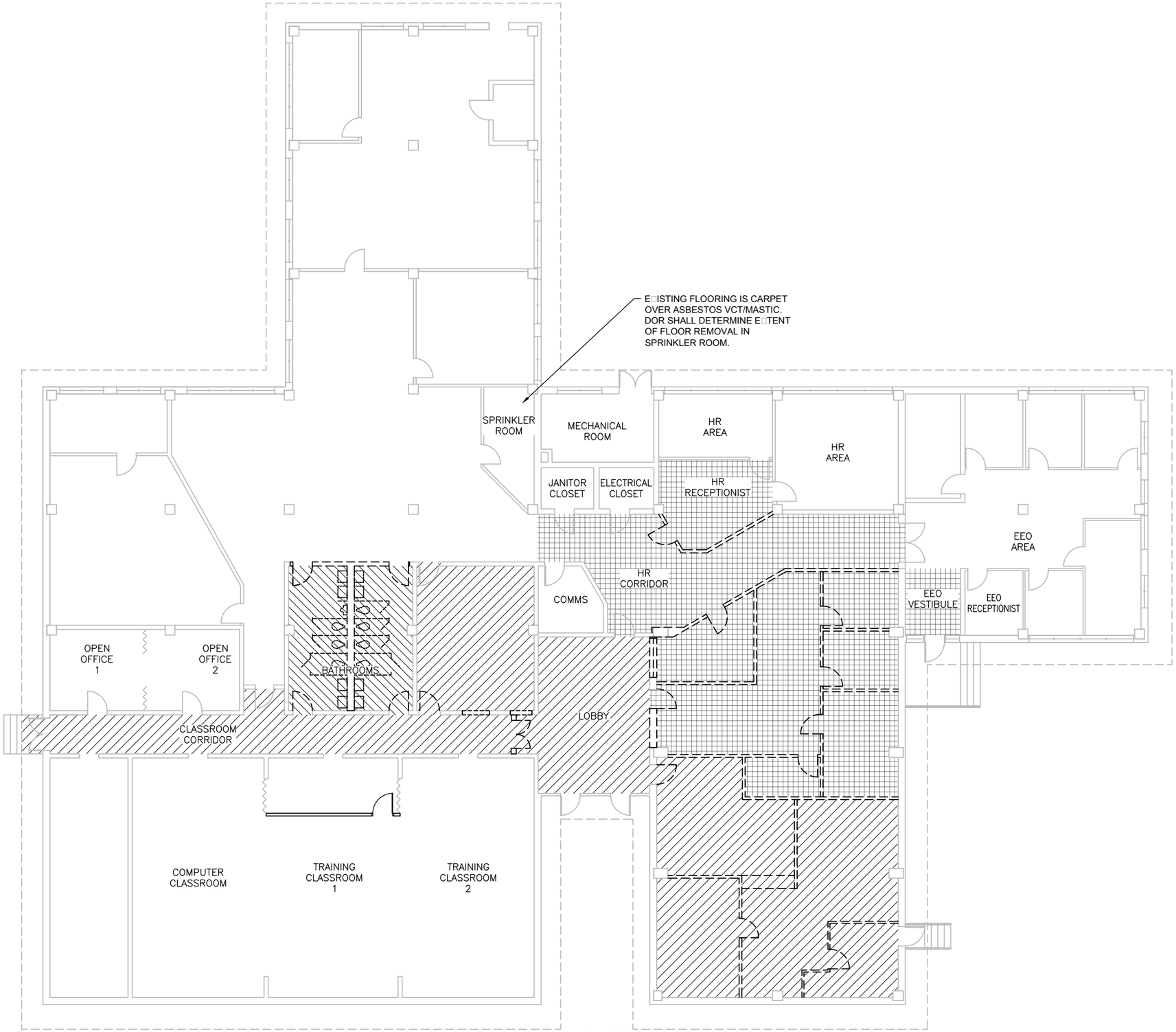

CONCEPTUAL FLOOR DEMOLITION PLAN

1/16" = 1'-0"

LEGEND

EXISTING FLOORING

- CARPET AND ASBESTOS VCT/MASTIC FLOORING TO BE REMOVED
- CERAMIC TILE FLOORING TO BE REMOVED
- ASBESTOS VCT/MASTIC FLOORING TO BE REMOVED

NOT FOR CONSTRUCTION

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Drawn By: MB
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Reviewed By: SM
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Submitted By: CM
Plot Date: Wed Sep 16, 15
Plot Scale:
Solicitation No.:
Contract No.:

MARINE CORPS LOGISTICS BASE
ALBANY, GA

Contractor:

BUILDING 3010 RENOVATION

ARCHITECTURAL
CONCEPTUAL FLOOR
DEMOLITION PLAN

Sheet Reference Number:

AD-101

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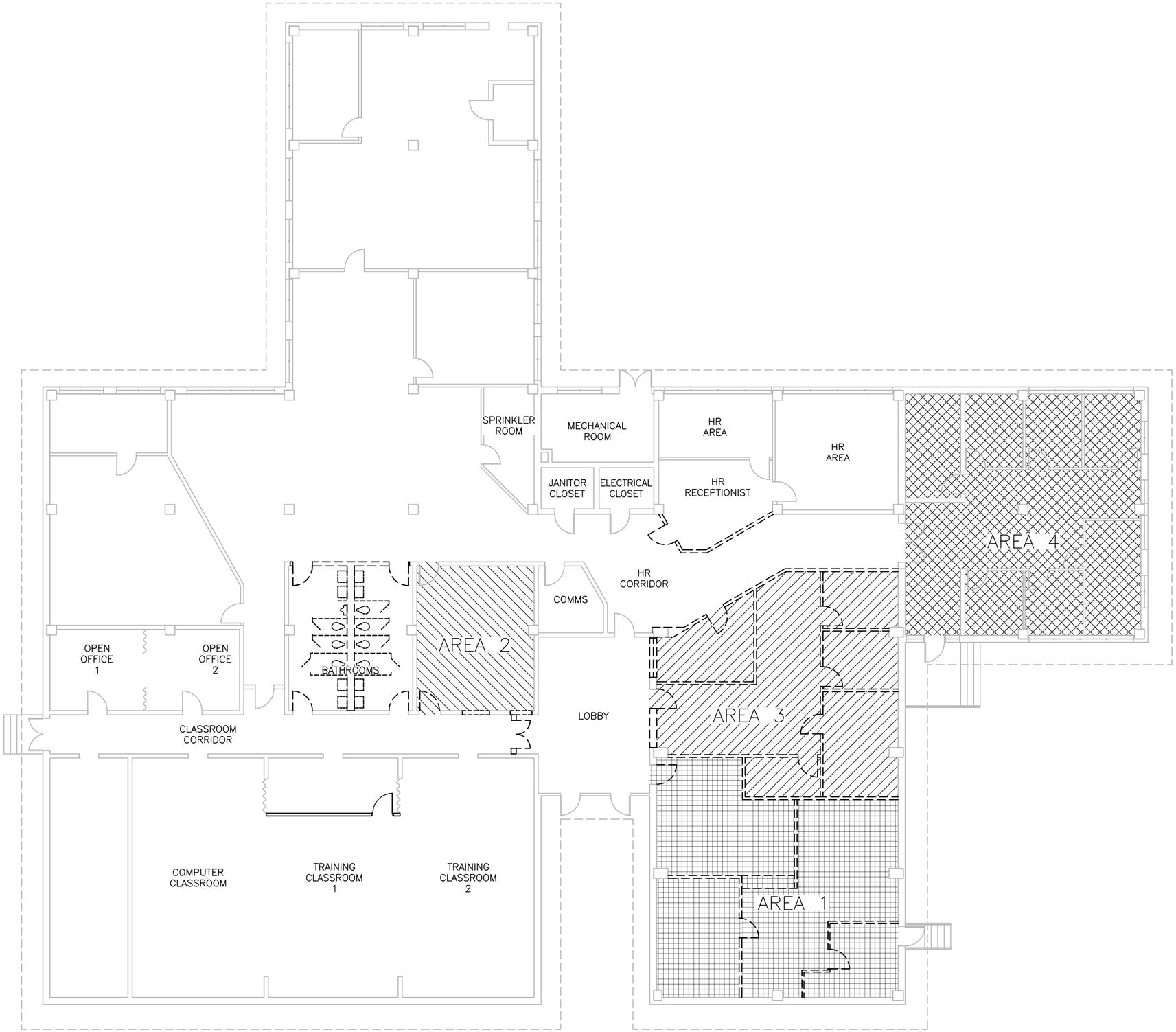
GENERAL NOTES

A. SEE PART 3 SECTION

LEGEND

- AREA 1: E□ISTING PASS AND ID
- AREA 2: E□ISTING VA
- AREA 3
- AREA 4



CONCEPTUAL AREA PLAN

1/16" = 1'-0"

N

0 8 16 24

1/16"=1'-0"

NOT FOR CONSTRUCTION

MARK	DESCRIPTION	DATE	APPR.

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Designed By: JB

Reviewed By: SM

Submitted By: CM

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Drawing Code:

Plot Date: Dec-08-15

Plot Scale:

Contract No.:

Solicitation No.:

MARINE CORPS LOGISTICS BASE
ALBANY, GA

Contractor:

BUILDING 3010 RENOVATION

ARCHITECTURAL CONCEPTUAL AREA PLAN

Sheet Reference Number:

AD-102

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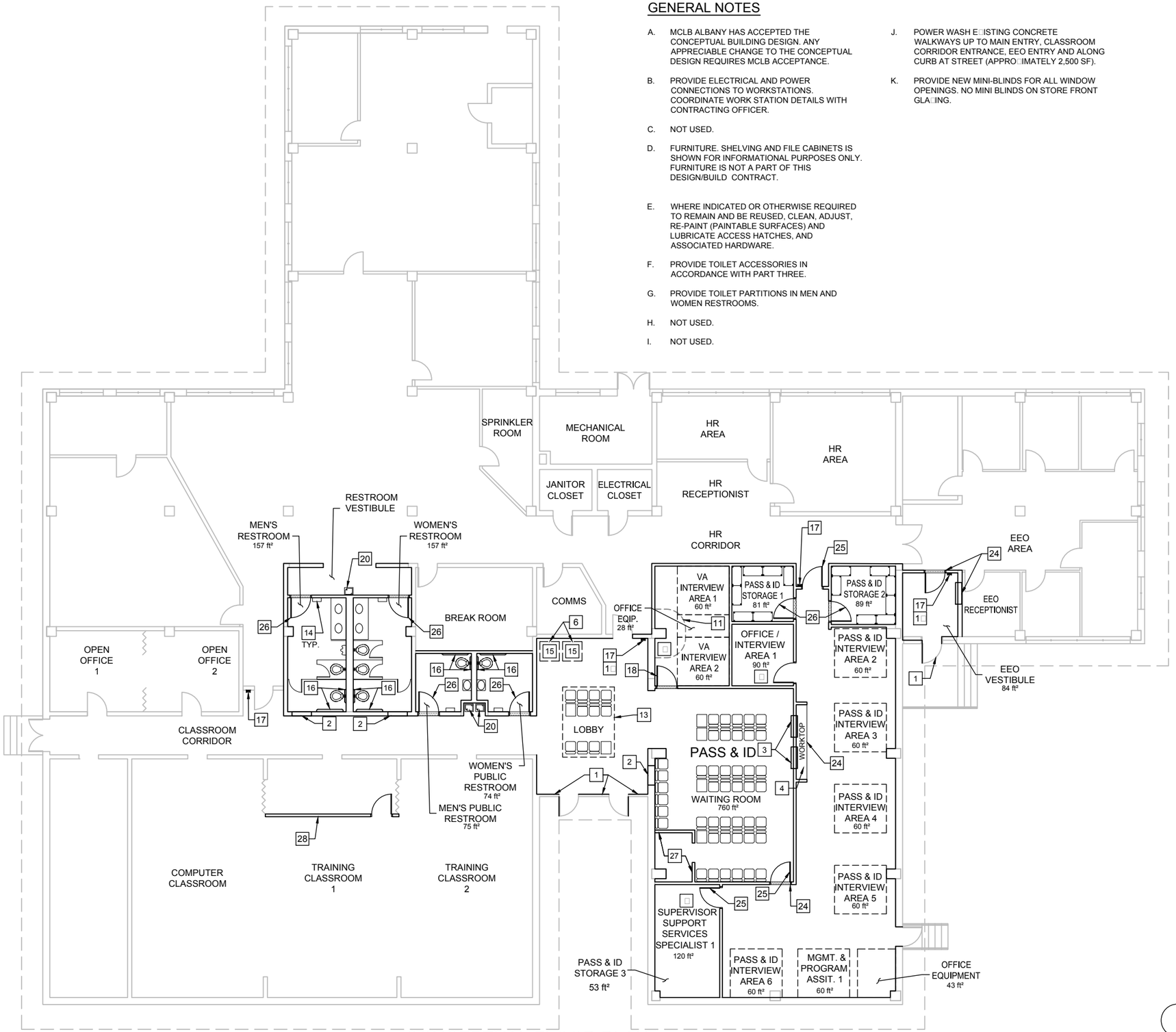

CONCEPTUAL FLOOR PLAN

1/8" = 1'-0"

GENERAL NOTES

A. MCLB ALBANY HAS ACCEPTED THE CONCEPTUAL BUILDING DESIGN. ANY APPRECIABLE CHANGE TO THE CONCEPTUAL DESIGN REQUIRES MCLB ACCEPTANCE.

B. PROVIDE ELECTRICAL AND POWER CONNECTIONS TO WORKSTATIONS. COORDINATE WORK STATION DETAILS WITH CONTRACTING OFFICER.

C. NOT USED.

D. FURNITURE. SHELVING AND FILE CABINETS IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. FURNITURE IS NOT A PART OF THIS DESIGN/BUILD CONTRACT.

E. WHERE INDICATED OR OTHERWISE REQUIRED TO REMAIN AND BE REUSED, CLEAN, ADJUST, RE-PAINT (PAINTABLE SURFACES) AND LUBRICATE ACCESS HATCHES, AND ASSOCIATED HARDWARE.

F. PROVIDE TOILET ACCESSORIES IN ACCORDANCE WITH PART THREE.

G. PROVIDE TOILET PARTITIONS IN MEN AND WOMEN RESTROOMS.

H. NOT USED.

I. NOT USED.

J. POWER WASH E□ISTING CONCRETE WALKWAYS UP TO MAIN ENTRY, CLASSROOM CORRIDOR ENTRANCE, EEO ENTRY AND ALONG CURB AT STREET (APPRO□IMATELY 2,500 SF).

K. PROVIDE NEW MINI-BLINDS FOR ALL WINDOW OPENINGS. NO MINI BLINDS ON STORE FRONT GLA□ING.

KEY NOTES

1. APPLY SOLAR FILM TO INTERIOR SURFACE OF E□ISTING GLASS IN STOREFRONT FRAMES AND DOORS.
2. CONSTRUCT INFILL SECTION OF WALL WHERE DOOR OR OTHER OPENING IS REMOVED. MATCH ADJACENT WALL CONSTRUCTION.
3. PASS THRU WINDOW WITH LAMINATED PLASTIC TRANSACTION LEDGE.
4. LAMINATED PLASTIC WORK COUNTER.
5. NOT USED.
6. PROVIDE ELECTRICAL POWER FOR (2) VENDING MACHINES.
7. PROVIDE METAL STUD AND GWB ENCLOSURE AT ALL ENCLOSED COLUMNS, TYP.
8. NOT USED.
9. ACOUSTICAL RATED ROOM (STC40).
10. NOT USED.
11. ARRANGE CUBICLES IN A MANNER SO AS TO PROVIDE THREE FEET CLEAR AREA AROUND COLUMN.
12. NOT USED.
13. PROVIDE FILM COATING TO SKYLIGHT, SEE PART 3.
14. TRASH RECEPTACLE.
15. E□ISTING VENDING MACHINES ARE TO BE REMOVED BY OTHERS PRIOR TO THE WORK AND REPLACED AFTER COMPLETION OF THE WORK (BY OTHERS).
16. ADA GRAB BARS.
17. PROVIDE CONDUIT AND ACCESS BO□ES FOR CARD READER SYSTEM.
18. PROVIDE DUTCH DOOR WITH S.S. TRANSACTION LEDGE 2'-8" □ 2'-0" SAFETY GLASS LITE IN TOP PANEL. DOORS SHALL BE LOCKABLE ON BOTH UPPER AND LOWER LEVELS FROM INSIDE VA ROOM.
19. PROVIDE ELECTRICAL BO□ FOR WALL MOUNT PHONE (BY OTHERS), INCLUDE PHONE DIRECTORY SIGN.
20. ELECTRIC WATER COOLER.
21. NOT USED.
22. NOT USED.
23. NOT USED.
24. INSTALL SWITCH/BUTTON TO ACTIVATE DOOR LOCK.
25. DOOR WITH VISION GLA□ING.
26. REUSE DOOR IF POSSIBLE.
27. PROVIDE 3' HIGH WALL FOR CHILD PLAY AREA.
28. PROVIDE 3-1/2' HIGH TEMPORARY WALL AND DOOR PANEL SIMILAR TO E□ISTING CASEWORK AND COUNTERTOP AS INDICATED BY NOTE □ ON AD-100. REMOVE WHEN OCCUPANTS ARE MOVED BACK INTO COMPLETE PASS & ID AREA.

LEGEND

- NEW CONSTRUCTION
- E□ISTING
- E□ISTING ROOF OVERHANG
- FLE□IBLE WORK AREA
- E□ISTING MOVABLE PARTITION
- STORAGE SHELVES (BY OTHERS)

N

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1/8"=1'-0"

NOT FOR CONSTRUCTION

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Plot Date: Plot Scale:
Solicitation No.:
Contract No.:

MARINE CORPS LOGISTICS BASE
ALBANY, GA

Contractor:

BUILDING 3010 RENOVATION

ARCHITECTURAL CONCEPTUAL FLOOR PLAN

Sheet Reference Number:

A-110

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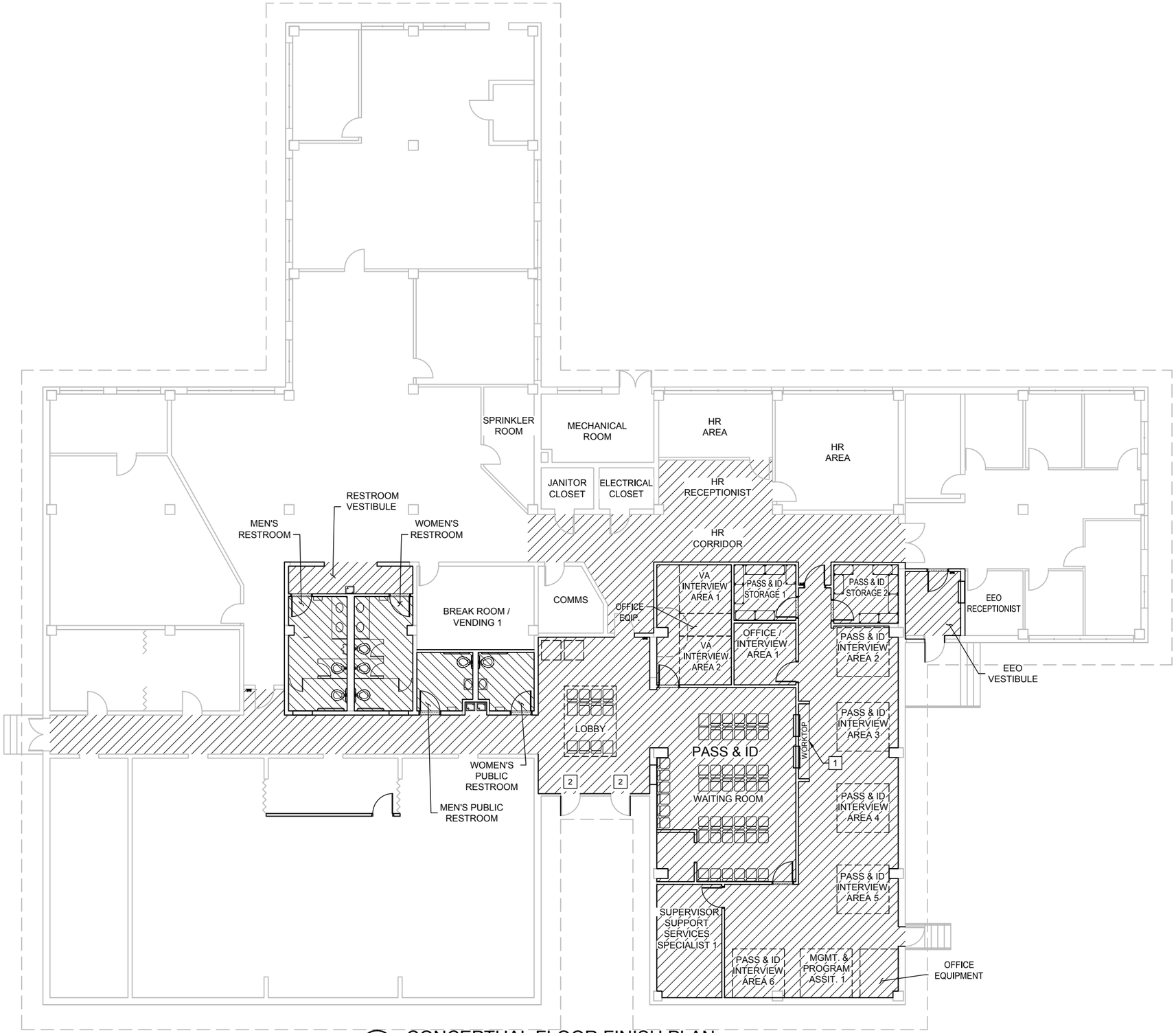

1 CONCEPTUAL FLOOR FINISH PLAN
1/8" = 1'-0"

GENERAL NOTES

A. NOT USED.

B. PROVIDE ALL FINISHES IN ACCORDANCE WITH MANUFACTURER'S WRITTEN SPECIFICATIONS, CUTTING AND TRIMMING TO OPENINGS, TRIM AND INTERSECTING CONSTRUCTION.

C. PROVIDE SEALANT AT JOINTS AND MEETING EDGES OF FINISHES.

D. DO NOT APPLY LIQUID FINISHES TO MOVING PARTS, BREATHING DEVICES (SUCH AS SMOKE ALARMS), PREFINISHED MATERIALS, OR SAFETY PRODUCTS.

E. PROVIDE TRANSITION STRIPS WHERE DIFFERENT MATERIALS MEET WHERE INAPPROPRIATE FOR SEALANT JOINT.

FINISHES

1. PROVIDE LAMINATE PLASTIC COUNTER TOP.
2. BUILT-IN FLOOR MAT.

LEGEND

NEW FLOOR FINISHES

CERAMIC TILE

VCT

NOT FOR CONSTRUCTION

MARK	DESCRIPTION	DATE	APPR.

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Drawn By: MB
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Plot Date: Wed Sep 16, 15
Plot Scale:
Solicitation No.
Contract No.:

MARINE CORPS LOGISTICS BASE
ALBANY, GA

Contractor:

BUILDING 3010 RENOVATION

ARCHITECTURAL CONCEPTUAL FLOOR FINISH PLAN

Sheet Reference Number:

A-111

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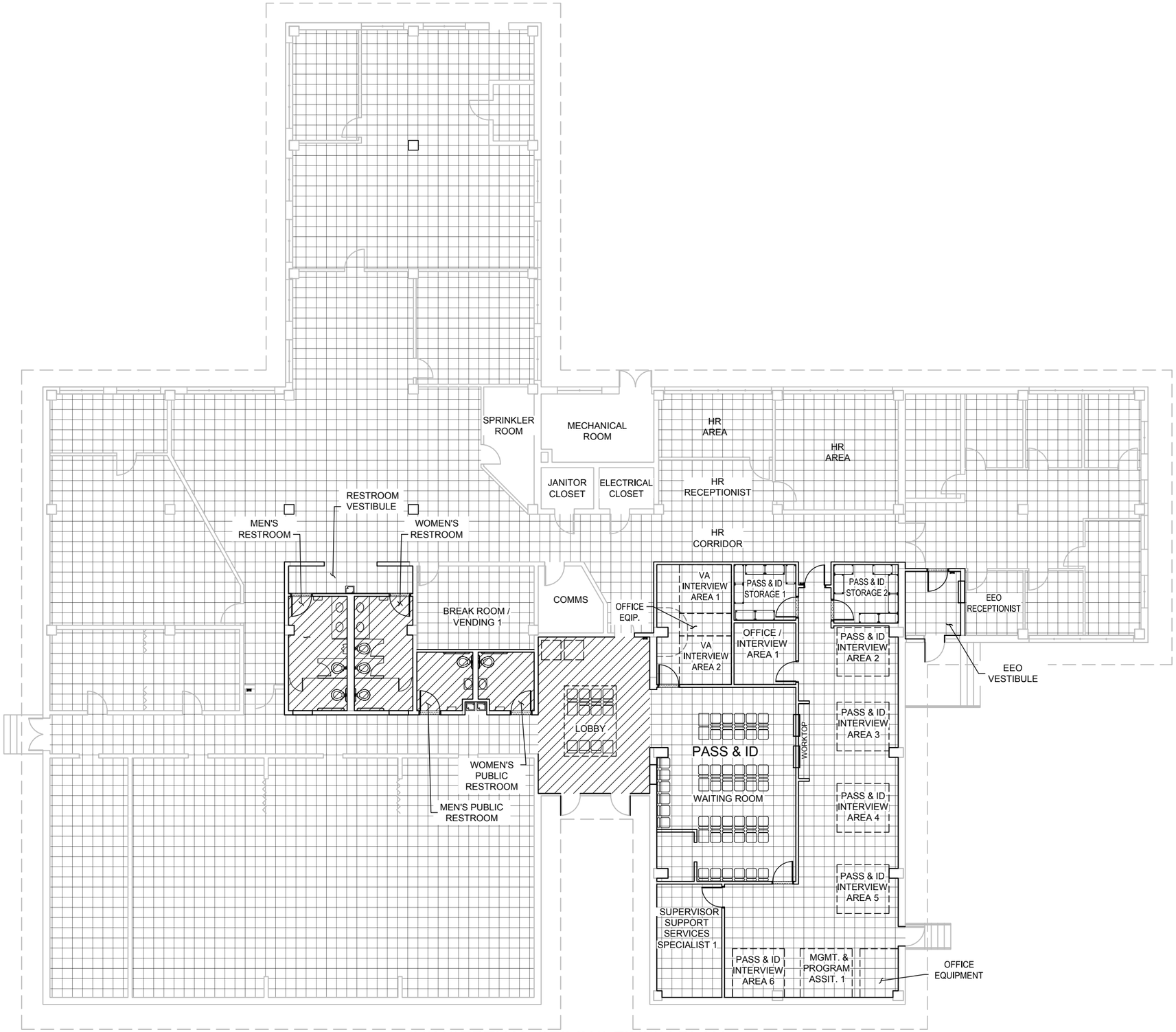

LEGEND

NEW CEILING FINISHES

- SUSPENDED ACOUSTICAL CEILING
- GYPSUM BOARD CEILING

CONCEPTUAL CEILING FINISH PLAN

1/8" = 1'-0"

N

0 8 16 24

1/8"=1'-0"

NOT FOR CONSTRUCTION

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Contract No.:

MARINE CORPS LOGISTICS BASE
ALBANY, GA

Contractor:

BUILDING 3010 RENOVATION

ARCHITECTURAL CONCEPTUAL CEILING FINISH PLAN

Sheet Reference Number:

A-112

NOT FOR CONSTRUCTION

File Name: D:\Projects\458499 - BLDG 3010\Drawings\BLDG-3010-AF112.DWG
User: djackson
Date/Time: Sep 08, 2015 - 11:25am

ROOM FINISH SCHEDULE

ROOM NAME	FLOOR					BASE			WALLS						CEILING MATERIAL			NOTES
	CARPET	VCT TILES	CERAMIC TILES	CONDUCTIVE TILE	EXISTING TO REMAIN	VINYL	CERAMIC TILE	NONE	PAINTED GYPSUM BOARD	CERAMIC TILE UP TO 5'	VINYL WALL COVERING	PAINT EXISTING	EXISTING TO REMAIN	SUSPENDED ACOUSTICAL TILES	GYP. BOARD	EXISTING TO REMAIN	
VA INTERVIEW AREA 1		●				●			●					●			
VA INTERVIEW AREA 2		●				●			●			●		●			
SUPERVISOR SUPPORT SERVICES SPECIALIST 1		●				●			●			●		●			
MGMT. PROGRAM ASSIT. 1		●				●			●			●		●			
PASS & ID INTERVIEW AREA 1		●				●			●			●		●			
PASS & ID INTERVIEW AREA 2		●				●			●			●		●			
PASS & ID INTERVIEW AREA 3		●				●			●			●		●			
PASS & ID INTERVIEW AREA 4		●				●			●			●		●			
PASS & ID INTERVIEW AREA 5		●				●			●			●		●			
PASS & ID INTERVIEW AREA 6		●				●			●			●		●			
PASS & ID WAITING ROOM		●				●			●			●		●			
LOBBY		●				●						●			●		
MEN'S RESTROOM			●				●			●		●			●		PAINT WALL SURFACES ABOVE TILE
WOMEN'S RESTROOM			●				●			●		●			●		PAINT WALL SURFACES ABOVE TILE
MEN'S PUBLIC RESTROOM			●				●		●	●		●			●		PAINT WALL SURFACES ABOVE TILE
WOMEN'S PUBLIC RESTROOM			●				●		●	●		●			●		PAINT WALL SURFACES ABOVE TILE
BREAK ROOM		●				●			●			●		●			
PASS & ID STORAGE 1		●				●			●					●			
PASS & ID STORAGE 2		●				●			●			●		●			
OFFICE EQUIPMENT		●				●			●			●		●			
EEO VESTIBULE		●				●			●			●		●			
HR RECEPTIONIST		●				●			●			●		●			
CLASSROOM CORRIDOR		●				●						●		●			
JANITOR CLOSET					●			●					●			●	
MECHANICAL ROOM					●			●					●			●	
ELECTRICAL CLOSET					●			●					●			●	
COMMS CLOSET					●			●					●			●	
SPRINKLER ROOM					●			●					●			●	
BATHROOM VESTIBULE		●				●			●			●		●			
ALL SPACES NOT INDICATED IN TABLE (SEE NOTE 1)					●			●					●	●			

NOTE:

1. SEE PART 3 FOR PAINTING OF ALL NEW WALLS ON BOTH SIDES.

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MARK	DESCRIPTION	DATE	APPR.

Proceed Notice:
File Name: BLDG-3010-AF113
Drawn By: MB
Drawing Code:
Plot Date: Dec-08-15
Plot Scale:
Designed By: JB
Reviewed By: SM
Submitted By: CM
Contract No.:
Solicitation No.:

MARINE CORPS LOGISTICS BASE ALBANY, GA

Contractor:

BUILDING 3010 RENOVATION

ARCHITECTURAL CONCEPTUAL FINISH PLAN

Sheet Reference Number:

A-113

NOT FOR CONSTRUCTION

File Name: D:\Projects\458499 - BLDG 3010\Drawings\BLDG-3010-AF113.DWG
User: djackson5
Date/Time: Sep 08, 2015 - 11:38am

Attachment B

Photographs

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1 -West Façade at the Northwest Corner

2

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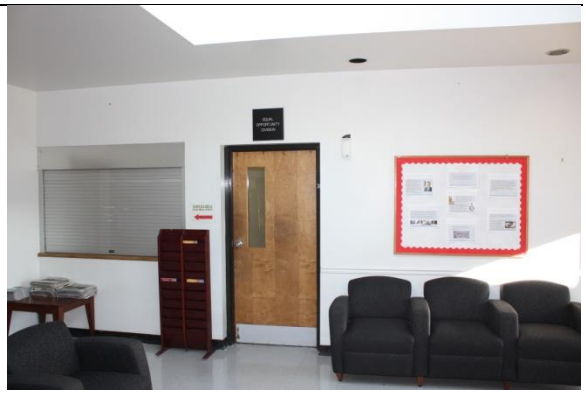
17

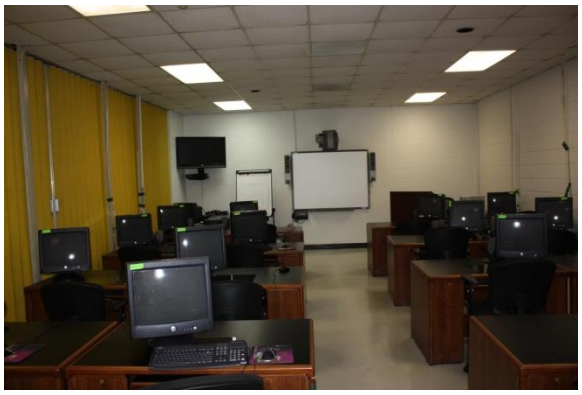
18 North Façade at the Northwest Cornerconer

Lobby Skylight

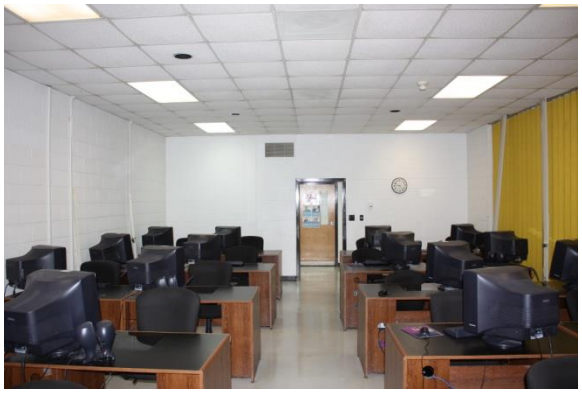


North Wall Lobby

North Wall Lobby



Computer Classroom Looking East



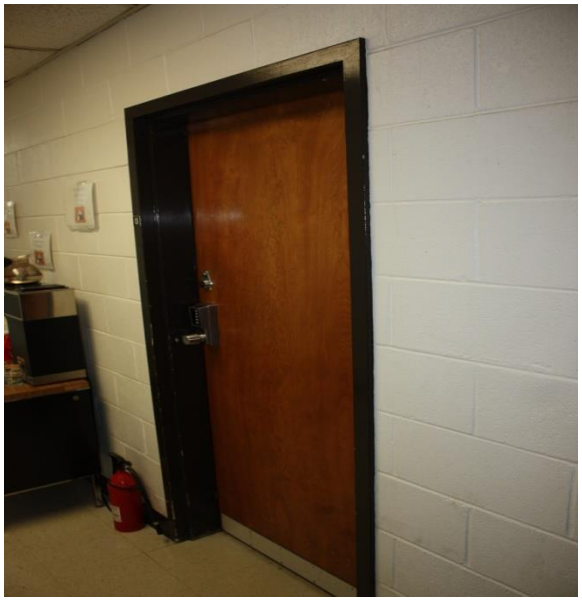
Computer Classroom Looking West

Controls

Small Project Part 6 – Attachments
B3010 Energy Renovation Work Order Number: 618343
MCLB, Albany, GA

Main Corridor Looking North

Alarm Pull Station



Door to Storage Room

Main Corridor Wall Looking South

Equipment and Storage

Electrical Equipment

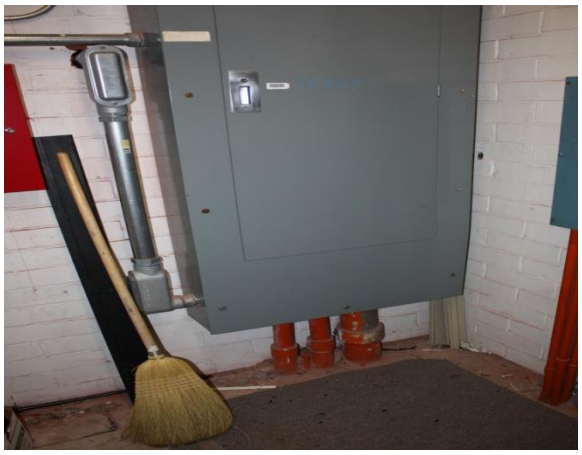
Telecom Equipment

Telecom and Electrical Equipment

Fire Alarm Equipment

Electrical Equipment

Overhead in Electrical Room



Electrical Equipment

Electrical Equipment

Telecom Equipment

Telecom Equipment

Telecom Equipment

Electrical Panel

Telecom Racks

Equipment

Controls

Storage

Secondary Lobby

Open Office Area with Toilets

Electrical Transformer

Chiller Unit

Sign to be replaced above new Vestibule 1 area

Attachment C

MCLB Base Interior Architectural Standards, dated 15 July 2008

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MCLB INTERIOR ARCHITECTURAL STANDARDS
PARTIAL
15 JULY 2008

GNERAL USE COLOR SCHEME

PAINT

Wall color: White mist (by Porter Paints)

- Use "latex ~~satin~~ eggshell" finish on drywall and plaster.
- Use "latex semi-gloss" finish on concrete block, concrete and in restrooms.

Door jamb color: Architectural Brown (by ICI Paints)

- Use "oil base enamel" finish on interior and exterior door jambs.

Door color: Architectural Brown (by ICI Paints)

- Use "oil base enamel" on interior and exterior steel doors.
- Interior wood doors shall be finished natural.

Ceiling color: Decorator White (by Porter Paints)

- Use "latex flat" finish on drywall and plaster ceilings.
- Use "latex semi-gloss" in restrooms and areas requiring the ability to clean.

FLOOR COVERING

Carpet color: Spacewalk (by Shaw Industries, Momentum IV Tile)

- Use 24" x 24" 20 oz. carpet tiles.

VCT color: 1322 white/multi (by Tarkett, Expressions)

- Use 12" x 12" x 1/8" tiles.

Base color: 523 Black Brown (by Burke Flooring, Rubbermyte)

- Use four inch rubber cove base as the standard size.
- Use six inch rubber cove base when required.