3.0 CENTRAL ISSUE FACILITY (CIF) *<VER>*(REV 2.0 – 30 OCT 2019)*</VER>*

3.1. GENERAL REQUIREMENTS:

Gross building area shall be calculated in accordance with UFC 3-101-01, Section 2-2, Building Area Calculations. The total gross square footage in Paragraph 3 shall not be exceeded based on these calculations. The procedures for calculating building area for any other criteria shall follow the procedures as defined in those criteria (e.g. building/life safety code compliance, LEED calculations, etc.). The procedures for calculation of building area measurements for specialized facilities such as Medical Facilities, Military Family Housing, or Unaccompanied Enlisted Personnel Housing are defined in their respective Unified Facility Criteria. Specific site requirements that affect the design and construction of the site appear below and in 01 10 00-6.0.

3.1.1. FACILITY DESCRIPTION

Central Issue Facility (CIF) is required by the Army to provide a single point for the receipt, storage, issue, exchange and turn-in of all authorized Organizational Clothing and Individual Equipment (OCIE) items at United States Army Installations. Facility types may be adapt build (based on approximately 80% level of design), design build (based on specific floor plan) or design/build (based on functional requirements only).

3.1.2. FACILITY RELATIONSHIPS – NOT USED

3.1.3. ACCESSIBILITY REQUIREMENTS

The CIF shall comply with the Architectural Barriers Act Accessibility Guidelines. (ABAAG) and Americans With Disabilities Act (ADA).

3.1.4. BUILDING AREAS:

The procedures for calculation of building area measurements for compliance with the total scope limitations of Paragraph 3 of this document shall follow UFC 3-101-01, Section 2-2, Building Area Calculations. The total gross square footage in Paragraph 3 shall not be exceeded based on these calculations. The procedures for calculating building area for any other criteria shall follow the procedures as defined in those criteria (e.g. building/life safety code compliance, LEED calculations, etc.). The procedures for calculation of building area measurements for specialized facilities such as Medical Facilities, Military Family Housing, or Unaccompanied Enlisted Personnel Housing are defined in their respective Unified Facility Criteria

3.1.5. ADAPT BUILD MODEL – NOT USED

3.2. FUNCTIONAL AND OPERATIONAL REQUIREMENTS

Gross building area shall be calculated in accordance with UFC 3-101-01, Section 2-2, Building Area Calculations. The total gross square footage in Paragraph 3 shall not be exceeded based on these calculations. The procedures for calculating building area for any other criteria shall follow the procedures as defined in those criteria (e.g. building/life safety code compliance, LEED calculations, etc.). The procedures for calculation of building area measurements for specialized facilities such as Medical Facilities, Military Family Housing, or Unaccompanied Enlisted Personnel Housing are defined in their respective Unified Facility Criteria

3.2.1 FUNCTIONAL SPACES

A. ADMINISTRATION AREA:

1) **Vestibules:** Provide vestibules to serve as transition space between the exterior elements and the facility interior. Minimum depth between exterior and interior doors shall be at least 10-feet. Install permanent entryway systems, in accordance with LEED regulations, in the primary direction of travel to capture dirt and particulates entering the building.

2) **CIF Manager:** Provide a private office for one person.

3) **Assistant CIF Manager**: Provide a private office for one person.

4) **Administration Area:** Provide an administration area adjacent to the CIF and Asst. CIF managers' offices. Provide open space for three (3) workstations and a print/copy/fax area in Large, Initial Entry and Medium CIFs; provide space for two (2) workstations and a print/copy/fax area in Small CIFs.

5) **Property Book Officer:** Provide a private office for one person.

6) **Property Section:** Provide an office with space for six (6) workstations and a print/copy/fax area in Large, Initial Entry and Medium CIFs; provide an office with space for three (3) workstations and a print/copy/fax area in Small CIFs.

7) **Stock Control Room (If required):** Provide office for this function in the Property Section as required.

8) **General Purpose Storage:** Storage Closet with 24" deep steel shelving capable of supporting minimum 30-pounds per square foot along the walls.

9) **Team Room:** Provide an open office.

10) **Records Holding/Verification:** Provide room space for 3,000 linear inches of GFGI record storage – (Basis-of-design for record storage is 42-inch wide, 5-drawer, steel, file cabinets, @ approximately 200 linear inches of file storage per cabinet). Records Holding/Verification shall be located adjacent to the Property Section or the Reception Desk.

11) **Multipurpose Room:** Provide a conference type room. The room shall accommodate seating for 12. The room shall accommodate multiple tables on locking casters. The configuration shall accommodate multiple room settings/configurations that can be easily rearranged. Provide and install a low profile ceiling mounting kit for a GFGI projector. Provide a ceiling recessed mounted, motorized projection screen at the front of the room. Projection screen shall have a diagonal viewing area of minimum 108-inches. Provide two (2) dry erase boards at least 48" in height and 96" in width.

12) **Corridors:** Provide as required. Corridors shall have a minimum width of 72 inches.

13) **Male Toilet/Shower/Locker:** Provide toilet facilities to serve the administrative personnel assigned to facility and customers.

14) **Female Toilet/Shower/Locker:** Provide toilet facilities to serve the administrative personnel assigned to facility and customers. Include a separate room to accommodate nursing mother lactation with a compact refrigerator, power outlet, countertop, sink and seating for one (1) person. Door shall be lockable from the interior with an occupancy indicator. When facility staffing does not warrant use as lactation room, space may be repurposed for facility storage.

15) **Employee Break and Vending Room:** Provide a break room with built-in base cabinets with matching upper wall mounted cabinets. Base cabinet shall include 12-inch drawer and adjustable shelf with a door. Provide adequate counter space above the base cabinets to accommodate 3 linear feet of prep area, a built-in single bowl, stainless steel kitchen sink, and two (2) GFGI microwave ovens. Size the area to accommodate the following GFGI items: two (2) refrigerators, three (3) 36-inch tables and twelve (12) chairs. Locate a vending area in the employee break room. Provide a space for the storage of recyclables. Size the recycling area to accommodate five (5) 13 gallon receptacles. Provide dedicated power for each refrigerators, and microwave ovens.

16) **Janitor's Closet: Pr**ovide a janitor's closet. Janitor's closet shall have a 10 inch deep floor mounted stainless steel mop sink, with hot and cold service faucet, a four holder mop rack and two 18 inch deep by 48 inch long heavy duty stainless steel shelves for storage of cleaning supplies. Janitor's closet shall have space for storage of buckets and vacuum.

17) **Vending Areas:** In addition to the vending area in the employee break room, locate one vending area in the warehouse operations area, and one vending area in the administration area for visitors. Size employee vending areas to accommodate three (3) full size GFGI vending machines and one (1) CFCI ice cube machine-dispenser. Size visitor vending area to accommodate three (3) full size GFGI vending machines. Provide a space for the storage of recyclables. Ice cube machine-dispenser shall be designed for hotel type bucket filling, capable of producing a minimum of 250 pounds of regular ice cubes in 24 hours, with 180-pound capacity. Provide manufacturer recommended water filter on the water supply line with isolation valve. Size water supply piping per manufacturer requirements. Place floor drain in area near vending machines and ice maker not subject to user traffic. Route condensate line(s) to floor drain. Provide dedicated power for each vending machine and ice cube machine-dispenser.

18) ***<CIF_LARGE>*****MINIMUM Programmed Administrative Area Space – Large CIF**

SPACE	Minimum NSF
ADMINISTRATION AREA	
VESTIBULES	As Needed
CIF MANAGER	120
ASSISTANT CIF MANAGER	120
ADMINISTRATION AREA	300
PROPERTY BOOK OFFICER	120
GENERAL PURPOSE STORAGE	100
PROPERTY SECTION	570
RECORDS HOLDING/VERIFICATION	250
STOCK CONTROL	200
TEAM ROOM	150
MULTIPURPOSE AND CONFERENCE ROOM	500
CORRIDORS	As Needed
MALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
FEMALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
EMPLOYEE BREAK AND VENDING ROOM	400
LACTATION	50
VENDING (MAY REQUIRE MORE THAN ONE)	As Needed
STAIRS	-
ELEVATOR	-
ELECTRICAL CLOSET	As Needed
TELECOMMUNICATIONS CLOSET	As Needed
JANITOR'S CLOSET (MAY REQUIRE MORE THAN ONE)	40

*</CIF_LARGE><CIF_INITIAL>***MINIMUM Programmed Administrative Area Space – Initial Entry CIF**

SPACE	Minimum NSF
ADMINISTRATION AREA	
VESTIBULES	As Needed
CIF MANAGER	120
ASSISTANT CIF MANAGER	120
ADMINISTRATION AREA	300
PROPERTY BOOK OFFICER	120
GENERAL PURPOSE STORAGE	100
PROPERTY SECTION	750
RECORDS HOLDING/VERIFICATION	230
STOCK CONTROL	200
TEAM ROOM	250

SPACE	Minimum NSF
MULTIPURPOSE ROOM	480
CORRIDORS	As Needed
MALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
FEMALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
EMPLOYEE BREAK ROOM	480
LACTATION	50
VENDING (MAY REQUIRE MORE THAN ONE)	As Needed
STAIRS	As Needed
ELEVATOR	As Needed
ELECTRICAL CLOSET	As Needed
TELECOMMUNICATIONS CLOSET	As Needed
JANITOR'S CLOSET (MAY REQUIRE MORE THAN ONE)	30

*</CIF_INITIAL><CIF_MEDIUM>***MINIMUM Programmed Administrative Area Space – Medium CIF**

SPACE	Minimum NSF
ADMINISTRATION AREA	
VESTIBULES	As Needed
CIF MANAGER	120
ASSISTANT CIF MANAGER	120
ADMINISTRATION AREA	300
PROPERTY BOOK OFFICER	120
GENERAL PURPOSE STORAGE	100
PROPERTY SECTION	750
RECORDS HOLDING/VERIFICATION	230
STOCK CONTROL	200
TEAM ROOM	250
MULTIPURPOSE ROOM	480
CORRIDORS	As Needed
MALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
FEMALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
EMPLOYEE BREAK ROOM	480
VENDING (MAY REQUIRE MORE THAN ONE)	As Needed
STAIRS	As Needed
ELEVATOR	As Needed
ELECTRICAL CLOSET	As Needed
TELECOMMUNICATIONS CLOSET	As Needed
JANITOR'S CLOSET (MAY REQUIRE MORE THAN ONE)	30

*</CIF_MEDIUM><CIF_SMALL>***MINIMUM Programmed Administrative Area Space – Small CIF**

SPACE	Minimum NSF
ADMINISTRATION AREA	
VESTIBULES	As Needed
CIF MANAGER	120
ASSISTANT CIF MANAGER	-
ADMINISTRATION AREA	150
PROPERTY BOOK OFFICER	120
GENERAL PURPOSE STORAGE	-
PROPERTY SECTION	300
RECORDS HOLDING/VERIFICATION	175
STOCK CONTROL	-
TEAM ROOM	150
MULTIPURPOSE ROOM	270
CORRIDORS	As Needed
MALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
FEMALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
EMPLOYEE BREAK ROOM	270
VENDING (MAY REQUIRE MORE THAN ONE)	As Needed
STAIRS	-
ELEVATOR	-
ELECTRICAL CLOSET	As Needed
TELECOMMUNICATIONS CLOSET	As Needed
JANITOR'S CLOSET (MAY REQUIRE MORE THAN ONE)	30

</CIF_SMALL>

B. CUSTOMER MODULE:

1) **Queuing/Orientation Area:** Provide a Queuing/Orientation Hall adjacent to the Reception and Check-In Counter. The Queuing/Orientation Hall shall be located on an opposite side of the building from the Checkout Area. Provide and install wall mounting kits for 2- 52" GFGI flat screen TVs, to include power and communication cables. Mounting kit locations shall be coordinated with the furniture layout and shall be finalized during design. Design space to accommodate seating arrangement for a minimum of sixty (60) seats in the Large and Medium CIFs, a minimum of two-hundred and forty (240) seats in the Initial Entry CIF, and a minimum of fifteen (15) seats in the Small CIF.

2) Reception and Check-In Counter: Provide a Reception area in-line with the entry to the Queuing/Orientation Hall with a check-in counter area to accommodate soldier initial processing and check-in. Provide a reception desk area furnished with a built-in combination work counter and check-in counter. Work counter shall be a minimum of 30 inches high. Work counter shall be furnished with a minimum of six (6) lockable file drawer units. Customer service counter shall be a minimum of 42 inches high with a counter section that is ABA compliant. Provide desk work space for minimum three (3) persons in Large, Initial Entry and Medium CIFs; and desk work space for minimum two (2) persons in Small CIFs.

3) Issue/Turn-in Aisle: Provide an issue aisle to accommodate issue/turn-in of clothing/equipment at furnished issue stations. Issue aisle shall be adjacent to the Issue Counter Area.

4) Issue/Turn-in Counter Area: Provide an issue/turn-in counter area, to accommodate issue/turn-in of clothing/equipment. Each issue station shall be minimum 60 inches wide, 42 inches high, and shall be furnished with a full length 24 inches deep built-in counter capable of supporting a minimum of 30 pounds per square foot. Continuous counters with a maximum of three (3) issue/turn-in stations each may be provided.

5) Issue/Turn-in Support: Provide floor space behind the issue counters for flow racks and back-up storage. The back-up storage space shall accommodate storage bins for Organizational Clothing and Individual Equipment (OCIE) issue.

6) Special MOS Issue/Turn-In: Provide an issue room for special issue items. The room shall accommodate issue/turn-in of unique/special equipment. Furnish a counter 72 inches wide, 42 inches high, and shall be furnished with a full length 24 inches deep built-in counter capable of supporting a minimum of 30 pounds per square foot. Provide steel shelving 24 inches deep to run the entire length of each two side walls.

7) Male Visitor's Toilet: Male visitor's toilet shall be accessible. Provide toilet facilities to serve one hundred twenty (120) soldiers for Large and Initial Entry CIFs. Provide a minimum of one water closet, one urinal and two lavatories for the Medium CIF. For Small CIFs, toilet facilities for staff and visitors are combined.

8) Female Visitor's Toilet: Female visitor's toilet shall be accessible. Provide three (3) each water closets and lavatories for the Large and Initial Entry CIFs. Provide two (2) each water closets and lavatories for the Medium CIF. For Small CIFs, toilet facilities for staff and visitors are combined.

9) Checkout Area: Provide a checkout counter area to accommodate final processing and checkout of clothing/equipment. Provide L-Shaped checkout stations. Each checkout station shall be minimum 36 inches wide, 48 inches high and 30 inches deep with a return of 96 inches wide, 36 inches high and 30 inches deep built-in counter capable of supporting a minimum of 30 pounds per square foot. Checkout counter shall be able to accommodate a workstation and a laser printer. The checkout counter shall resemble a "Grocery Store" style checkout kiosk.

10) Waiting Area: Provide a waiting area to accommodate a minimum of sixty (60) seats in the Large and Medium CIFs, a minimum of two-hundred and forty (240) seats in the Initial Entry CIF, and a minimum of fifteen (15) seats in the Small CIF. This area shall be adjacent to the Checkout area.

11) Cart Area: Provide an area for the storage of shopping carts. Locate as indicated on the floor plan.

12) <CIF_LARGE> **MINIMUM Programmed Issue Area Space – Large CIF**

SPACE	Minimum NSF
ISSUE AREA	
RECEPTION AND CHECK-IN (3 STATIONS)	210
QUEUING/ORIENTATION AREA	2,000
CART AREA	100
ISSUE/TURN-IN AISLE	1,800
FITTING BOOTHS (7 @ 30SF)	210
ISSUE/TURN-IN COUNTER/SUPPORT AREA (12 STATIONS MINIMUM)	2,600
CORRIDORS/PASS-THRU	As Needed
SPECIAL MOS ISSUE/TURN-IN	400
MALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
FEMALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
MALE TOILET (VISITORS)	As Needed
FEMALE TOILET (VISITORS)	As Needed
VESTIBULES	As Needed
ASSEMBLY/WAITING AREA	650
FINAL PROCESSING/CHECKOUT (6 STATIONS)	850

*</CIF_LARGE><CIF_INITIAL>*__MINIMUM Programmed Issue Area Space – Initial Entry CIF__

SPACE	Minimum NSF
ISSUE AREA	
RECEPTION AND CHECK-IN (3 STATIONS)	210
QUEUING/ORIENTATION AREA	3,200
CART AREA	100
ISSUE/TURN-IN AISLE	1,600
FITTING BOOTHS (6 @ 30SF)	180
ISSUE/TURN-IN COUNTER/SUPPORT AREA (12 STATIONS MINIMUM)	2,500
CORRIDORS/PASS-THRU	As Needed
SPECIAL MOS ISSUE/TURN-IN	400
MALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
FEMALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
MALE TOILET (VISITORS)	As Needed
FEMALE TOILET (VISITORS)	As Needed
VESTIBULES	As Needed
ASSEMBLY/WAITING AREA	3,100
FINAL PROCESSING/CHECKOUT (6 STATIONS)	1,500

*</CIF_INITIAL><CIF_MEDIUM>*__MINIMUM Programmed Issue Area Space – Medium CIF__

SPACE	Minimum NSF
ISSUE AREA	
RECEPTION AND CHECK-IN (2 STATIONS)	210
QUEUING/ORIENTATION AREA	1,900
CART AREA	100
ISSUE/TURN-IN AISLE	2,300
FITTING BOOTHS (6 @ 30SF)	180
ISSUE/TURN-IN COUNTER/SUPPORT AREA (12 STATIONS MINIMUM)	2,500
CORRIDORS/PASS-THRU	As Needed
SPECIAL MOS ISSUE/TURN-IN	400
MALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
FEMALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
MALE TOILET (VISITORS)	As Needed
FEMALE TOILET (VISITORS)	As Needed
VESTIBULES	As Needed
ASSEMBLY/WAITING AREA	1,200
FINAL PROCESSING/CHECKOUT (4 STATIONS)	500

*</CIF_MEDIUM><CIF_SMALL>*__MINIMUM Programmed Issue Area Space – Small CIF__

SPACE	Minimum NSF
ISSUE AREA	

SPACE	Minimum NSF
RECEPTION AND CHECK-IN (2 STATIONS)	160
QUEUING/ORIENTATION AREA	700
CART AREA	80
ISSUE/TURN-IN AISLE	1,400
FITTING BOOTHS (4 @ 30SF)	120
ISSUE/TURN-IN COUNTER/SUPPORT AREA (12 STATIONS MINIMUM)	1,400
CORRIDORS/PASS-THRU	As Needed
SPECIAL MOS ISSUE/TURN-IN	400
MALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
FEMALE EMPLOYEE TOILET/SHOWER/LOCKER	As Needed
MALE TOILET (VISITORS)	-
FEMALE TOILET (VISITORS)	-
VESTIBULES	As Needed
ASSEMBLY/WAITING AREA	500
FINAL PROCESSING/CHECKOUT (3 STATIONS)	450

</CIF_SMALL>

13) Exterior Shakedown Area: Provide a covered 3,500 square foot concrete pad for Large and Initial Entry CIFs. Provide a covered 1,500 square foot concrete pad for Medium CIFs. Canopy shall provide 12' clear height and extend 2' beyond the edge concrete pad on all sides. The concrete pad shall be located adjacent to the exit from the Issue Area.

14) Minimum Authorized Exterior Space

EXTERIOR SHAKEDOWN AREA: ***<CIF_LARGE>***Large CIF (3,500-GSF)

MINIMUM NSF: 1,750***</CIF_LARGE><CIF_INITIAL>*** Initial Entry CIF (3,500-GSF)

MINIMUM NSF: 1,750***</CIF_INITIAL><CIF_MEDIUM>*** Medium CIF (1,500-GSF)

MINIMUM NSF: 750***</CIF_MEDIUM><CIF_SMALL>*** Small CIF (1,500-GSF)
MINIMUM NSF: 0***</CIF_SMALL>***

C. WAREHOUSE AREA: Provide a clear loading dock area to accommodate space for receiving and outbound bays, pallet staging, Defense Reutilization Marketing Service (DRMS), sorted laundry pick-up/delivery, and small package receiving. The warehouse module shall have a floor area free of intermediate support columns with a clear height of 32-feet and include a floor loading designed to support a 5,000 lb. rough terrain forklift (minimum), minimum of two (2) but not more than four (4) commercial truck doors (1O'-O"x9'-0" ea.) with integrated dock levelers and automatic rollup doors, at least one (1) but not more than two (2) service doors (18'-0"x14'-0") with integrated dock and fork truck ramp, a dock cover that extends at least 4'-0" past the edge of the loading platform, and separate loading docks for receiving and issue operations to accommodate both commercial and military vehicle deliveries, and an eyewash station.

1) **Kitting Area:** Provide designated floor space for two (2) kitting machines in Large, Initial Entry, and Medium CIFs. Provide designated floor space for one (1) kitting machine in Small CIFs. Kitting machines require electrical power connection; see Electrical Section for more information.

2) Material Handling Equipment Area/Shipping and Receiving: Provide designated floor space adjacent to the loading dock for this function.

3) Warehouse Office: Provide an enclosed and conditioned office space in the warehouse adjacent to the loading dock for Shipping/Receiving, DRMO and Laundry workstations. Size warehouse office to accommodate four (4) workstations in Large, Initial Entry and Medium CIFs, and two (2) workstations in Small CIFs.

4) Laundry: Provide a designated floor space in MHE Area/Shipping and Receiving. This area is used for laundry collection.

5) DRMO: Provide a designated floor space in MHE Area/Shipping and Receiving. This area is used to store salvageable items.

6) Truck Dock: Provide a two bay truck dock. Each bay shall be furnished with a 9 feet wide x 10 feet high high-lift sectional overhead door for Shipping/Receiving Operations. Door shall be electrically operated with manual override. Provide a reinforced concrete edge guard along the edge of the loading dock, as required. Concrete edge guard shall be minimum 1 foot wide and 1 foot high. Mount guardrails on top of concrete edge guard. Loading dock shall be furnished with all necessary dock accessories, including full-pit dock levelers, dock bumpers, fixed and removable safety railing, access stairs, etc. Dock height shall be 48 inches.. Provide wedge type dock seals on the sides plus a top curtain. Dock bumpers 12"d x 24"w x 12"h shall be installed on both sides of each truck bay per manufacturer's specifications. Provide 6-inch diameter bollards on each side of each dock door to protect interior door jambs.

a) **Dock Levelers:** Dock levelers shall be electro-hydraulic lifts with a minimum capacity of 25,000 lbs. Provide dock levelers whose ramp incline can be adjusted to suit the height of the freight carrier. Allow the loading ramp a minimum of 24 inches of vertical adjustment. Divide height adjustments 12 inches above and 12 inches below the dock level position of 48 inches, to provide coverage between 36 inches and 60 inches above grade. The non-fixed end of the dock leveler shall be extendable from a retracted position behind the line of the loading dock platform bumpers to at least 12 inches beyond the forward edge of the dock platform bumpers so as to rest on the bed of the freight carrier. For out of level freight carrier bed condition (difference in elevation from side to side at the rear of the carrier bed), allow a minimum correction of one inch for each 18 inches, and maximum 4 inch correction of ramp width over the width of the ramp. Ensure the rear edge of the ramp is parallel with the rear of the frame in order to prevent tripping or be a pinching hazard. Provide sides or edges, except front and rear edges, of the ramps which rise above the surrounding loading dock with sheet carbon steel skirts or toe guards of minimum 14 gage nominal thickness. Furnish smooth faced toe guards or skirts and mount flush with the edges of the ramp surface. Ensure sufficient depth of toe guards or skirts to protect the full operating range of dock travel. Dock levelers shall be of sufficient width for safe and efficient forklift operation and have features intended to prevent forklifts from driving off the dock when a truck/trailer is not present. Provide each dock leveler with a pushbutton station to activate motor, pump, and valves.

7) Classification Room: Provide a designated conditioned space for the classification of materials. The space shall contain 24" deep steel shelving capable of supporting minimum 30-pounds per square foot along one side wall and the back wall.

8) Repair Room: Provide a designated conditioned space for the repair of materials. The space shall contain 24" deep steel shelving capable of supporting minimum 30-pounds per square foot along one side wall and the back wall.

9) Secure Storage: Provide a designated conditioned space for the secure storage of non-sensitive records. The space shall contain 24" deep steel shelving capable of supporting minimum 30-pounds per square foot along one side wall and the back wall. Enclosure construction shall be in accordance with Army Regulation (AR) 190-51, Appendix B.

10) General Purpose Storage (If Required): Provide a designated conditioned space for the secure storage of non-sensitive records. The space shall contain 24" deep steel shelving capable of supporting minimum 30-pounds per square foot along one side wall and the back wall.

11) Forklift Access: Provide a forklift access door adjacent to the truck dock bays. The high-lift sectional overhead door shall be 12 feet wide x 14 feet high electrically operated with manual override. Assume the use of 5,000-pound capacity forklifts. If a ramp is required for access, the forklift access ramp shall be designed to provide required turning radius of 12-feet. Forklift access ramp shall have a minimum width of 16 feet. Provide a reinforced concrete edge guard along the entire length on both sides of the ramp. Concrete edge guard shall be minimum 1 foot wide and 1 foot high. Mount guardrails on top of concrete edge guard. Access ramp shall be furnished with all necessary dock accessories, including fixed and removable safety railing, access stairs, etc.

12) Recycle Storage: Provide dedicated areas accessible to waste haulers and building occupants for the collection and storage of recyclable materials for the entire building. Collection and storage areas may be

separate locations. Recyclable materials must include mixed paper, corrugated cardboard, glass, plastics, and metals. Provide measures for the safe collection, storage, and disposal for the following: batteries, mercury-containing lamps, and electronic waste in accordance with LEED regulations..

13) Equipment Storage Area: Provide designated floor space adjacent to the heavy item stacking area for storage of forklifts, cherry pickers, pallet jacks, etc. Locate the forklift charge station in this area.

14) Warehouse Supervisor Office: Provide an enclosed and conditioned area in the warehouse adjacent to the loading dock for the warehouse supervisor. Provide extra wide windows, minimum 10-feet wide x 4-feet high, in the long wall of the office facing into the warehouse, and minimum 4-feet wide x 4-feet high, in the short wall.

15) Warehouse Rack Storage Area: Provide an area for storage of goods on pallet racks. The Pallet Rack Storage System is a CFCI item. Coordinate with Government to provide suitable space, lighting and structural support for the system and to define detailed requirements. Provide the detailed design layout necessary to install a complete Pallet Rack System that utilizes industry standard components and dimensions. Assume that a 4,500 pound capacity, electric, standup, reach-type lift truck will be used to place and retrieve pallets. The rack system shall take full advantage of the clear height specified in paragraph 2.1 for the warehouse area. System design shall be based on 48" wide X 40" deep X 48" high pallets weighing no more than 2,500 pounds each. Where possible, use a standard 9'-3" module (108" open) shelf length. Provide at least two heavy-duty (non-waterfall type) pallet supports per pallet space plus heavy-duty waterfall type wire decking. Provide 18" steel upright corner post protectors. Post protectors shall be bolted to the floor. Provide sufficient rack depth for pallets so that they may be placed flush with the aisle beam face without overhanging off the rear. Install top shelves below the top of 26' high standard width uprights so that pallets at the end of a row will not accidentally slip off the side. Pallet rack system design shall include a 4-inch (minimum) clear space between adjacent pallets and a 4-inch (minimum) clear space between the top of each pallet and the bottom of the shelf beam above it. Pallet rack system design shall be such that the top of the load on the top shelves shall be a minimum of 24-inches below the clear unobstructed height required in the warehouse. Assume that a forklift with a 320" mast will be used to place and retrieve pallets.

16) Toilet: Provide one (1) Unisex toilet in the Warehouse Area. The toilet should be located in close proximity to the Truck Docks and the Warehouse Supervisor area.

17) Equipment Corridors: Provide as required. Corridors between the Pallet Rack System shall have a minimum width of 12-feet for forklift access.

18) Mechanical, Fire Protection, Electrical, and Telecommunications Rooms/Closets: Mechanical rooms shall accommodate space for equipment maintenance/repair access without having to remove other equipment. Mechanical, electrical and telecommunications rooms shall be keyed separately for access by Installation maintenance personnel. All telecommunications rooms shall be conditioned space. Telecommunications room shall be provided in accordance with the latest I3A Technical Criteria. Refer to Mechanical and Electrical Sections for additional information.

19) **Forklift Charging Area:** Provide a charging area for forklifts. Size area to accommodate simultaneous charging of a minimum of three (3) 5,000 pound capacity forklifts in Large, Initial Entry and Medium CIFs, and two (2) 5,000 pound capacity forklifts in Small CIFs.

20) **Exterior Employee Break Area:** Provide a 10' x 10' concrete pad on the exterior of the building for use by employees. Pad may be used by employees that smoke and should be located a minimum 50 feet away from the building ingress/egress, in accordance with Army and LEED regulations.

21) **Exterior Baler Area:** Provide a covered 12'-0" x 8'-4" concrete pad for one (1) baler machine. Canopy shall provide 12' clear height and extend 2' beyond concrete pad. The concrete pad shall be located in the shipping and receiving side of the warehouse building exterior. Provide lighting as specified in paragraph 3.10 ELECTRICAL REQUIREMENTS.

22) **Exterior Storage Area:** Provide a 5,000 square foot fenced concrete pad for the storage of pallets. Provide a 6' high chain link fence with barbed wire and a 12' wide double swing gate. Provide lighting as specified in paragraph 3.10 ELECTRICAL REQUIREMENTS.

23) **Brigade Set/Rapid Fielding Initiative (RFI) Storage Module:** If authorized in the 1391 Document, provide a maximum 17,000 gross square foot (GSF) storage module in the warehouse storage area for the exclusive use of Brigade and/or RFI Sets. Space for additional warehouse operations functions resulting from this added storage capacity shall be included in the GSF authorized for the RFI Module.

24) **Minimum Authorized Warehouse Area Space**

SPACE	Minimum NSF
WAREHOUSE AREA	
KITTING AREAS 108 SF EA. + STORAGE	Varies
WAREHOUSE SUPERVISOR	100
LAUNDRY (IN MHE AREA/SHIPPING AND RECEIVING)	Varies
MHE AREA/SHIPPING AND RECEIVING	Varies
DRMO (IN MHE AREA/SHIPPING AND RECEIVING)	Varies
WAREHOUSE OFFICE (80 SF/WORKSTATION)	Varies
CLASSIFICATION	330
REPAIR	330
SECURE STORAGE	330
GENERAL PURPOSE STORAGE (IF REQUIRED)	100
RECYCLE STORAGE	100
UNISEX TOILET	As Needed
WAREHOUSE STORAGE (RACK STORAGE AREA)	Varies
FORKLIFT CHARGING STATIONS	Varies
MECHANICAL ROOM	As Needed
MECHANICAL MEZZANINE	As Needed
FIRE PROTECTION ROOM	As Needed
ELECTRICAL ROOM	As Needed
ELECTRICAL CLOSET	As Needed
TELECOMMUNICATIONS ROOM	110
TELECOMMUNICATIONS CLOSET	As Needed
BALER AREA – All CIFs (100 SF – COUNTS AS HALF SCOPE)	50
BRIGADE SET/RAPID FIELDING INITIATIVE (RFI) STORAGE MODULE	As Authorized

3.3. SITE FUNCTIONAL REQUIREMENTS

A. GENERAL:

1) **Walks**: Provide pedestrian walks within the designated construction area and connect to existing sidewalks, where applicable. Sidewalks shall be a minimum of 6 feet wide. Pedestrian sidewalks shall be constructed of Portland Cement Concrete having a minimum nominal thickness of 4 inches. Design joint patterns uniformly, symmetrical, and in accordance with American Association of State Highway and Transportation Officials (AASHTO) standards. The length to width ratio shall not exceed 1.25 for non-reinforced pavements.

2) Site Structures and Amenities: Dumpster Area: Dumpster enclosure area(s) and screening shall be located, designed and constructed by the Contractor. The Contractor is responsible for locating the dumpster areas in accordance with UFC 4-010-01 DoD Minimum Antiterrorism Standards for Buildings. The GFGI dumpsters shall be located outside of restricted areas to allow for servicing activities. Dumpster pads shall be sized to accommodate both trash and recycling dumpsters. Dumpster screening shall be aesthetically and architecturally compatible with the building it serves and shall be designed in accordance with the Installation's requirements.

3) Site Functional Requirements: External functional requirements include a truck dock shipping and receiving with ample concrete hardstand paving for marshalling and parking of supply trucks. See Paragraph 3.2.2.3(f) for dock requirements

B. PARKING:

Privately Owned Vehicle (POV) Parking: POV parking shall be designed and constructed by the Contractor. The location of the POV parking area(s) shall be designed based on the Installation's site constraints. The Contractor shall ensure that the location of parking complies with UFC 4-010-01. Refer to paragraphs 5.2.3 VEHICLE PAVEMENTS for additional requirements. Provide POV parking spacesl IAW UFC 3-201-01, Table B-2.Parking for physically disabled personnel shall be in accordance with the current Architectural Barriers Act Accessibility Guidelines (ABAAG) and Americans With Disabilities Act (ADA). In accordance with LEED, provide parking capacity that is a percentage reduction below the base ratios recommended by the Parking Consultants Council, as shown in the Institute of Transportation Engineers' Transportation Planning Handbook. Provide preferred parking consideration for carpools, vanpools and green vehicle parking. Paving materials to have SRI meeting current LEED standard.

C. ACCESS DRIVES AND LANES:

1) **3 Service Drives**: The Contractor shall provide service drives to each building. The drives shall be located in accordance with UFC 4-010-01. Where applicable, access to the drives shall be restricted as required by UFC 4-010-01. The pavement design shall be as required by paragraph 5.2.3 VEHICLE PAVEMENTS. The minimum access drive width shall be 10 feet. Provide curb and gutter where needed for drainage and for compliance with Antiterrorism requirements. Minimum turning radius shall be designed as required for emergency vehicle access.

2) 4 Fire Access Lanes: The Contractor shall provide fire access lanes in accordance with UFC 3-600-01, UFC 4-010-01, NFPA 1 and the Installation's requirements.

3) Exterior Support Facilities: See paragraphs 3.2.2.2(k), 3.2.2.3(s), 3.2.2.3(t) and 3.2.2.3(u) for exterior supporting facility requirements.

3.4. SITE AND LANDSCAPE REQUIREMENTS: NOT USED

3.5. ARCHITECTURAL REQUIREMENTS

3.5.1. FINISHES AND INTERIOR SPECIALITIES

A. GENERAL:

Designers are not limited to the minimum finishes listed in this paragraph and are encouraged to offer higher quality finishes.

B. FINISHES:

1) **Paint:** All paints used shall be listed on the "Approved Product List" of the Master Painters Institute (MPI). Application criteria shall be as recommended by MPI guide specifications for the substrate to be painted and the environmental conditions existing at the project site.

2) Exterior surfaces: Except factory pre-finished material or exterior surfaces receiving other finishes, all exterior surfaces shall be painted a minimum of one prime coat and two finish coats. Paints having a lead content over 0.06 percent by weight of nonvolatile content are unacceptable. Paints containing zinc-chromate, strontium-chromate, mercury or mercury compounds, confirmed or suspected human carcinogens shall not be used on this project. Exterior paints and coating products shall be classified as containing low volatile organic compounds (VOCs) in accordance with MPI criteria. At least 90% by volume shall comply with the General Emissions Evaluation unless otherwise specified. Application criteria shall be as recommended by MPI guide specifications. Provide an MPI Gloss Level 5 Finish (semi-gloss), unless otherwise specified.

3) Interior Surfaces: Except factory pre-finished material or interior surfaces receiving other finishes, all interior surfaces shall be painted a minimum of one prime coat and two finish coats. Paints having a lead content over 0.06 percent by weight of nonvolatile content are unacceptable. Paints containing zinc-chromate, strontium-chromate, mercury or mercury compounds, confirmed or suspected human carcinogens shall not be used on this project. Interior paints and coating products shall contain a maximum level of 150 grams per liter (g/l) of VOCs for non-flat coatings and 50 g/l of VOCs for flat coatings. At least 90% by volume shall comply with the General Emissions Evaluation unless otherwise specified. Provide an MPI Gloss Level 5 Finish (semi-gloss) in wet areas and an egg shell finish in all other areas.

4) Wall, Ceiling, Floor and Movable Partitions: Finishes shall conform to the requirements of the IBC, NFPA and UFC 3-600-01 Fire Protection Engineering for Facilities. Where code requirements conflict, the most stringent code requirement shall apply.

5) Carpet: Shall be minimum of 2 yarn ply, modular tile conforming to ISO 2551, ASTM D 418, ASTM D 5793, ASTM D 5848, solution dyed, tufted, cut and loop pile, commercial 100% branded (federally registered trademark) nylon continuous filament. Vinyl composition tile (VCT) shall be minimum 1/8 inch thick, conforming to ASTM F 1066, Class 2, through pattern tile, Composition 1, asbestos free, with color and pattern uniformly distributed throughout the thickness of the tile.

6) Walls: All gypsum board shall achieve a score of 10, the highest level of performance for mold resistance under the ASTM D 3273 test method. All gypsum board shall be transported, handled, stored and installed in accordance with the GYPSUM ASSOCIATION – Guidelines for Prevention of Mold Growth on Gypsum Board (GA-238-03). Use impact resistant gypsum board in corridors, storage rooms, stairwells and for all gypsum board partitions on the warehouse side of the facility. Gypsum wallboard shall not be used below 8 feet above finish floor, as interior finish of the building envelope in the warehouse area, or on the warehouse side of the demising wall between the warehouse area and the administration area. The warehouse side of all other gypsum wallboard partitions shall be protected by a continuous crash barrier/guardrail system set at a minimum 4'-0" from the face of the partitions, to protect the partitions, and also provide a safe pedestrian circulation area. Exposed or plastic bagged insulation is not allowed as a finish material.

7) Ceiling Finishes: All ceiling finishes shall be minimum 5/8" painted gypsum board, except where stated otherwise. All gypsum board shall achieve a score of 10, the highest level of performance for mold resistance under the ASTM D 3273 test method. All gypsum board shall be transported, handled, stored and installed in accordance with the GYPSUM ASSOCIATION – Guidelines for Prevention of Mold Growth on Gypsum Board (GA-238-03).

8) Resilient Flooring: Resilient flooring shall be a minimum 1/8 inch thick, conforming to ASTM F1066, Class 2, through-pattern tile, Composition 1, asbestos free, with color and pattern uniformly distributed throughout the thickness of the tile.

C. INTERIOR SPECIALTIES:

1) **Toilet/Shower/Locker Accessories**: Furnish and install the items listed below and all other toilet accessories necessary for a complete and usable facility. All toilet accessories shall be Type 304 stainless steel with satin finish. Toilet accessories shall include the following:

a) **Glass Mirror/Shelf** - 18 inch by 24 inch glass mirror on stainless steel frame with shelf at each lavatory

b) Hands free liquid soap dispenser at each lavatory

c) Hands free paper towel dispenser

d) Waste receptacle- recess mounted at each lavatory/toilet area

e) Sanitary napkin disposal at each female toilet stall

f) Toilet paper dispenser- lockable multiple roll toilet paper dispenser at each toilet stall

g) Sanitary toilet seat cover dispenser- at each toilet stall

h) Grab bars- as required by ABA

i) Toilet Partitions- solid phenolic (finish 4), floor supported, overhead braced with three (3) hinges.

j) Lockers- double tier, 18" deep x 12" wide x 72" high, angled top, count as indicated on floor plan.

k) Bench- floor mounted, wood bench with steel legs.

l) **Shower Curtain Rod**- Curved Type 304 stainless steel, 1-1/4 inch diameter, heavy duty.

m) **Shower Curtain**- anti-bacterial nylon/vinyl fabric shower curtain, color white.

2) Signage: Provide mechanically attached interior signage as required by applicable codes and criteria and in compliance with Army Standards.

3) Bulletin Boards: Provide one bulletin board at each entry vestibule closest to the customer assistance desk. Bulletin board shall be 4'-0" high and 6'-0" wide. Bulletin boards shall have a header panel and shall have lockable, laminated glazed doors.

4) Fire Extinguisher Cabinets and Mounting Brackets: Furnish and install a fire extinguisher cabinets and mounting brackets as required by applicable codes and criteria. Furnish a list of installed fire extinguisher cabinets and mounting brackets (including location, type and size) to the Contracting Officer's Representative.

5) Crash Barrier/Guardrail System: Provide continuous, permanently fixed or removable crash barrier/guardrail system as required in the warehouse area, to protect personnel, structure and equipment from vehicular traffic. Crash barrier/guardrail system shall be bolted to warehouse floor, and shall be removable where necessary for equipment access. Crash barrier/guardrail system shall extend a minimum 44-inches above finish floor, and shall have a minimum of two rails, with the centerline of the lower rail set at 22-inches above finish floor.

6) Electric Water Coolers (EWC): Provide a minimum of one set each, of all stainless steel, wall mounted, bi-level, ADA, electric water cooler in the warehouse operations area and in the administration area. EWC shall be furnished with bottle filling station.

3.5.2. EXTERIOR DESIGN OBJECTIVES:

A. GENERAL: Provide durable and easily maintainable materials. Do not use exterior materials that require periodic repainting or similar refinishing processes. Material exposed to weather shall be factory pre-finished, integrally colored or provided with intrinsic weathering finish.

B. WALLS:

1) **Exterior Walls:** Exterior walls shall be full height pre-cast or tilt-up concrete, sandwich panel construction, concrete masonry unit (CMU) construction; or insulated metal sandwich panel construction with pre-cast or tilt-up concrete, sandwich panel or CMU wainscot. Where insulated metal sandwich panel construction is used, pre-cast or tilt-up concrete, sandwich panel or CMU wainscot shall be a minimum 8'-0" high around the warehouse operations area, and a minimum 4'-0" high around the administration operations area. Masonry units shall be tested for efflorescence. Efflorescence testing shall conform to the provisions of ASTM C 67. CMU construction shall comply with the provisions of ASTM C 1400.

C. ROOF SYSTEMS: Roof system shall comply with applicable criteria for fire rating. Minimum roof slope for membrane roof systems shall be 1/4 inch per foot. Membrane roof systems shall be fully adhered. Roof system shall be Underwriters Laboratory (UL 580 Class 90) rated or Factory Mutual Global (FM) I-90 rated. For climate zones 1-3, roofing materials shall be highly reflective, with aminimum initial solar reflective index of 82 (low-sloped roof) and 39 (steep-sloped roof).

1) **Roof Mounted Equipment**: For roof-mounted equipment, provide permanent access walkways and platforms to protect roof. Roof mounted equipment on membrane roof systems shall be completely screened by the roof parapet.

2) Roof access from building exterior is prohibited.

3) Personal fall arrest systems shall be required for workers servicing roof-mounted equipment. All necessary anchorages for attachment of personal fall arrest equipment shall be provided in accordance with applicable codes and criteria.

4) Trim and Flashing: Gutters, downspouts, and fascias shall be factory pre-finished metal and shall comply with SMACNA Architectural Sheet Metal Manual.

D) OPENINGS:

1) **Exterior Doors and Frames:**

a) **Main Entrance Doors**: Provide aluminum storefront doors and frames with Architectural Class 1 anodized finish, fully glazed, with medium or wide stile at all vestibules. Provide doors complete with frames,

framing members, sub-frames, transoms, sidelights, trim, applied muntins, and accessories. Framing systems shall have thermal-break design. Storefront systems shall be capable of withstanding area wind loads, thermal and structural movement required by location and project requirements, and shall comply with applicable codes and criteria.

b) Curtain Wall Systems: Curtain wall systems shall be capable of withstanding area wind loads, thermal and structural movement required by location and project requirements, and shall comply with applicable codes and criteria.

c) Exterior Insulated Hollow Metal Doors & Frames:**:** Provide insulated hollow metal exterior doors for entry to all spaces other than corridors, lobbies, or reception/waiting rooms. Doors and frames shall comply with applicable codes and criteria. Doors shall be minimum Level 3, physical performance Level A, Model 2 flush; A60 galvannealed. Frames shall be Level 4, 14-gauge, with continuously welded mitered corners and seamless face joints. Doors and frames shall be constructed of hot dipped zinc coated steel sheet, complying with ASTM A653, Commercial Steel, Type B, minimum A40 coating weight; factory primed. Fire-rated openings shall comply with applicable codes, and the requirements of the labeling authority. Door and frame installation shall comply with applicable codes and criteria. Provide metal eyebrow canopies. The canopy shall extend out above each pedestrian door. All doors shall have nylon brush-style weather-stripping to prevent the entry of insects and to protect against external weather conditions.

d) **Interior Insulated Metal Doors**: Doors shall be minimum Level 3, physical performance Level A, Model 2; factory primed. Comply with ANSI A250.8/SDI 100 and applicable codes and criteria. Doors shall be minimum Level 3 (Extra Heavy-Duty), Physical Performance Level A, Model 2 (Seamless); factory-primed. Interior insulated doors shall be constructed of the same material as exterior insulated hollow metal doors.

e) Electrically Operated Sectional Overhead Doors: Doors shall be industrial class, high-lift sectional overhead doors, electrically operated, with auxiliary hand chain override. In the open position, the horizontal portion of the door shall be aligned with the angle of the roof structural elements; and shall be no more than 6 inches below the bottom of the roof structural elements. Doors shall completely close the door opening in the closed position and make the full width and height of the door opening available for use in the open position. Provide a permanent label on the door indicating the name and address of the manufacturer. Door sections shall be formed from hot-dipped galvanized steel, and shall ensure a weather tight closure and alignment for full width and height of the door. Door components and methods of installation shall be designed in accordance with DASMA 102. Minimum design wind load shall be 20 psf. Maximum wind load deflection of the door shall not exceed the door height in inches divided by 120 and the door width in inches divided by 120. Doors shall be operable during design wind load when tested in accordance with ASTM E 330. Provide sections of height per manufacturer's standard. Door sections shall be insulated and shall provide a "U" factor of 0.14 or less when tested in accordance with ASTM C 1363. Interior of door sections shall be covered with steel sheets of not lighter than 20 gauge to completely enclose the insulating material.

(1) **Operators:** Provide operators of the type recommended by the door manufacturer. Electric operator shall be designed so that the motor may be removed without disturbing the limit switch timing and without affecting the manual operator. The manual operator shall be clutch controlled so that it may be engaged and disengaged from the floor; operation shall not affect limit switch timing.

(2) **Disconnects:** Provide an electrical or mechanical device that disconnects the motor from the operating mechanism when the manual operator is engaged. Provide a galvanized, endless chain operating over a sprocket, extend chain to within 4 feet of the floor, and mount on inside of building. The force required to operate the door shall not exceed 35 pounds. Each door motor shall have an enclosed, across-the-line type, magnetic reversing contactor, thermal overload and under voltage protection, solenoid-operated brake, limit switches, and control switches.

(3) **Control Switches:** Locate control switches at least 5 feet above the floor so the operator will have complete visibility of the door at all times. Control equipment shall conform to NEMA ICS 1 and NEMA ICS 2. Control enclosures shall be NEMA ICS 6, Type 12 or Type 4, except that contactor enclosures may be Type 1. Each control switch station shall be of the three-button type; buttons shall be marked "OPEN," "CLOSE," and "STOP." The "OPEN" and "STOP" buttons shall require only momentary pressure to operate. The "CLOSE" button shall require constant pressure to maintain the closing motion of the door. If the door is in motion and the "STOP" button is pressed or the "CLOSE" button released, the door shall stop instantly and remain in the stop

position; from the stop position, the door may be operated in either direction by the "OPEN" or "CLOSE" buttons. Pushbuttons shall be full-guarded to prevent accidental operation. Provide limit switches to automatically stop doors at the fully open and closed positions. Limit switch positions shall be readily adjustable. Provide a safety device on the bottom edge of electrically operated doors. The device shall immediately stop and reverse the door in its closing travel upon contact with an obstruction in the door opening or upon failure of the device or any component of the control system and cause the door to return to the full open position. The door-closing circuit shall be automatically locked out and the door shall be operable manually until the failure or damage has been corrected. Do not use the safety device as a limit switch. Each sectional overhead door shall be furnished with a "headache bar" on the interior and exterior side of the facility. Set bottom of each "headache bar" 6-inches below bottom of door head height and 4-feet from face of door. Each sectional overhead door shall be furnished with a canopy on the exterior side.

2) Exterior Windows: Provide insulated, high efficiency window systems, with thermally broken frames complying with applicable codes and criteria. Operable windows shall be furnished with locks, and fiberglass or aluminum insect screens removable from the inside. Windowsills shall be designed to discourage bird nesting.

a) **Exterior Glass and Glazing**: Material and installation shall comply with applicable codes and criteria.

b) Thermal Insulation: Provide exterior wall, floor, and roof/ceiling assemblies with thermal transmittance (U-values) required to comply with the proposed energy calculations for the facility. Insulation shall not be installed directly on top of suspended acoustical panel ceiling systems.

c) Exterior Louvers: Exterior louvers shall have bird screens and shall be designed to exclude wind-driven rain. Exterior louvers shall be made to withstand wind loads in accordance with the applicable codes. Wall louvers shall bear the Air Movement & Control Association (AMCA) International certified ratings program seal for air performance and water penetration in accordance with AMCA 500-D and AMCA 511. Louver finish shall be factory applied.

d) Clerestory Windows: Provide thermally-efficient, insulating, light-transmitting, fixed, fiberglass, structural composite sandwich panel systems.

3) **Interior Entrance Walk-Off Mat Systems**: Furnish and install permanent entryway systems at least 10'-0" (3 meters) long in the primary direction of travel. Acceptable entryway systems include permanently installed grates, grilles, slotted systems, or roll-out mats. Warehouse(s) entryway systems are not required at doors leading from the exterior to the loading dock or garage but shall be installed between these spaces and adjacent office areas.

E) HARDWARE:

1) **Non-Destructive Emergency Access System (NDEAS):** Furnish and install a Knox-Vault 3200 Series (Single Lock Model) mounted at the building exterior adjacent to the main entry.

2) Finish Hardware: All hardware shall be consistent and shall conform to ANSI/BMHA standards for Grade-1. All requirements for hardware keying shall be coordinated with the Contracting Officer. Hardware finish shall conform to ANSI/BHMA A156 18. Extension of the existing Installation keying system shall be provided. The Installation's keying system is «CIF_KEYING_SYSTEM» Locksets shall have interchangeable cores. Cores shall have no fewer than seven pins; cylinders shall have key-removable type cores. Disassembly of knob or lockset shall not be required to remove core from lockset. Locksets for mechanical, electrical and telecommunications rooms only shall be keyed to the existing Installation Master Keying System. Deadbolt locks shall be installed on mechanical, electrical and telecommunications rooms keyed to the Installation keying system. All locksets and exit devices shall accept same interchangeable cores. Plastic cores are unacceptable. Provide closers for all exterior doors, all doors opening to corridors and as required by codes. Exit devices shall be installed on all building egress doors.

3) Auxiliary Hardware*:* Provide wall or floor stops for all exterior doors that do not have overhead holder/stops. Provide other hardware as necessary for a complete installation.

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

3.5.3. INTERIOR DESIGN OBJECTIVES: Provide sustainable materials and furnishings that are easily maintained and replaced. Maximize use of daylighting. Provide interior surfaces that are easy to clean and light in color. Interior spaces should be structured to allow maximum flexibility for future modifications. At least 90% of materials must meet the General Emissions Evaluation unless otherwise specified.

A. Corner Guards**:** Provide mechanically installed, surface mounted, high impact resistant, integral color, snap-on type resilient corner guards, extending from floor to 6' above finished floor for wall and column outside corners in high traffic areas such as corridors, waiting areas, lobbies, conference and multi-purpose rooms. Factory fabricated end closure caps shall be furnished for top and bottom of surface mounted corner guards.

B) Chair Rail: Chair rails shall be mechanically installed in areas prone to high traffic, such as corridors and waiting areas.

C) Window Treatment: Provide horizontal blinds at all exterior windows. Uniformity of window covering color and material shall be maintained to the maximum extent possible throughout each building. Window sills shall be minimum ½-inch thick cast 100 percent acrylic polymer solid surfacing material. Uniformity of window covering color and material shall be maintained throughout the building.

D) Casework: Provide cabinets complying with AWI Quality Standards, Custom Grade. Countertops shall have waterfall front edge. Countertops at toilets and break room shall also have integral coved backsplash. All countertops shall be minimum ½-inch thick cast 100 percent acrylic polymer solid surfacing material with waterfall front edge, with integral coved backsplash for countertops in bathrooms, breakrooms and lactation rooms.

E) Bollard: Provide concrete filled, steel pipe bollards at doors and installed equipment locations in the warehouse areas not protected by crash barrier/guardrail system. Steel pipe shall have a minimum diameter of 6-inches, and not less than ¼-inches thick. Bollards shall extend a minimum 44-inches above finish floor.

F) Interior Doors and Frames:

1) **Insulated Hollow Metal Doors:** Comply with applicable codes and criteria. Doors shall be minimum Level 3, Physical Performance Level A, Model 2; factory primed. Provide insulated hollow metal doors at all interior doors in the warehouse area. Provide solid core wood doors into all offices.

2) Hollow Metal Frames: Comply with ANSI A250.8/SDI 100. Frames shall be minimum Level 3, 16 gauge, with continuously welded mitered corners and seamless face joints; factory primed. All door frames shall be hollow metal frames.

3) Fire-rated and Smoke Control Doors and Frames: Comply with applicable codes, criteria and requirements of labeling authority.

4) STC ratings shall be of the sound classification required and shall include the entire door and frame assembly.

3.5.4. EXTERIOR SPECIALTIES:

A. ACOUSTICAL REQUIREMENTS: Exterior walls and roof/floor/ceiling assemblies, doors, windows and interior partitions shall be designed to provide for attenuation of external noise sources such as airfields in accordance with applicable criteria, but no less than the following:

1) **Exterior Walls**: STC 50

2) Interior Partitions: STC 50

3) Office Doors: STC 25

4) Sound conditions (and levels) for interior spaces, due to the operation of mechanical and electrical systems and devices, shall not exceed levels as recommended by ASHRAE handbook criteria. Achieve maximum background noise levels from heating, ventilating, and air conditioning (HVAC) systems per 2011 ASHRAE Handbook, HVAC Applications, Chapter 48, Table 1; AHRI Standard 885-2008, Table 15. Provide acoustical treatment for drain lines and other utilities to prevent noise transmission into the interior of dwelling units

B) THERMAL REQUIREMENTS: Provide exterior wall, floor, and roof/ceiling assemblies with thermal transmittance (U-values) required to comply with the proposed energy calculations for the facilities. Insulation shall not be installed directly on top of suspended acoustical panel ceiling systems. See Paragraph 3.12 Energy Conservation for details.

C) MOLD AND MILDEW: The Designer of Record shall provide details in the design analysis and design showing steps taken to mitigate the potential growth of mold and mildew in the facility.

D) Bird Habitat Mitigation: The DOR shall provide details in the design necessary to eliminate the congregating and nesting of birds at, on, and in the entire facility. Common bird mitigation solutions include screens on openings in ducts and vents, avoidance of exposed beam systems where birds can roost, elimination of ledges, and provision of spikes on horizontal elements. Bird netting is not an acceptable form of bird mitigation and shall not be used.

E) Loading Dock Canopies: Provide metal eyebrow canopies to protect forklift drivers from the elements during inclement weather. Canopy to extend out above each vertical roll up door, including door provided for forklift access, at a height not to interfere with truck/trailer activity. Canopy shall extend at least 4'-0" past the edge of the loading platform. All doors shall have nylon brush-style weather-stripping to prevent the entry of insects and to protect against external weather conditions.

3.5.5. ELEVATORS/CONVEYING SYSTEMS:

A. ELEVATORS**:** Where required, provide elevator systems that comply with the most current editions of ASME A17.1 and ASME A17.2 in their entirety, and additional requirements specified herein. Elevator shall be "Machine-roomless Type", and shall have a minimum rated load capacity of 3500 lb (1588 kg), with interior dimensions sized to accommodate a fully extended Emergency Medical Services (EMS) gurney and four average size adults. Gurney size shall be based on the "STRYKER Power-PRO XT" gurney. Elevator cab enclosure (walls, wall trim, interior face of doors, ceiling and ceiling frame) shall have a stainless steel finish. Elevator floor shall have porcelain or quarry tile floor finish. Hoistway doors and frame shall have a stainless steel finish. Elevator interior lighting shall be LED.

B) ELEVATOR INSPECTOR: Elevator Inspector shall be certified in accordance with the requirements of the most current editions of ASME A17.1 and ASME QEI-1 and licensed in elevator inspection by the State where project is located. The Certified Elevator Inspector shall inspect the installation of the elevator(s) to assure that the installation conforms with all contract requirements. The Elevator Inspector shall be directly employed by the Prime Contractor and shall be independent of the Elevator System Manufacturer and the Elevator System Installer. The Elevator Inspector shall witness the acceptance inspections and tests, approve all results and sign and certify the successful results. The Elevator Inspector, after completion of the acceptance inspections and tests, shall certify in writing that the installation is in accordance with the contract requirements. The Elevator Inspector shall bring any discrepancy, including any safety related deficiencies, to the attention of the Contracting Officer in writing, no later than three working days after the discrepancy is discovered.

3.5.6. INTERIOR FINISH REQUIREMENTS

	FLOORS					BASE			WALLS			CEILING				
	Resilient	Porcelain OR Quarry Tile	Ceramic Tile	Caret Tile	Sealed Concrete	Resilient Base	Porcelain OR Quarry Base	Ceramic Base	Painted GYP- Board	Ceramic Tile	Laminated Glass	Painted GYP- Board	Acoustical Ceiling Tile	Painted Structure	Min. n	REFER TO NOTE
ADMINISTRATION AND ISSUE AREA																

	FLOORS					BASE			WALLS			CEILING				
	Resilient	Porcelain OR Quarry Tile	Ceramic Tile	Caret Tile	Sealed Concrete	Resilient Base	Porcelain OR Quarry Base	Ceramic Base	Painted GYP- Board	Ceramic Tile	Laminated Glass	Painted GYP- Board	Acoustical Ceiling Tile	Painted Structure	Min. n	REFER TO NOTE
VESTIBULES		•					•		•		•		•		10’	9, 11
QUEUING/ORIENTATION HALL	•					•			•				•		12’	
WAITING AREA	•					•			•				•		12’	
CHECK-IN COUNTER AREA	•								•				•		12’	8
ISSUE AISLE	•					•			•				•		12’	
ISSUE/TURN-IN COUNTER/SUPPORT AREA	•					•			•				•		12’	8
SPECIAL MOS ISSUE/TURN-IN	•					•			•				•		12’	8
CHECKOUT AREA	•					•			•				•		12’	3
FITTING ROOMS	•					•			•				•		8’	12
MALE EMPLOYE TOILET/SHOWER/LOCKER			•					•	•	•		•			8’	1,7,12
FEMALE EMPLOYEE TOILET/SHOWER/LOCKER			•					•	•	•		•			8’	1,7,12
CIF MANAGER				•		•			•				•		10’	
ASST CIF MANAGER				•		•			•				•		10’	
ADMIN AREA				•		•			•				•		10’	
TEAM ROOM				•		•			•				•		10’	
MULTIPURPOSE ROOM				•		•			•				•		12’	
PROPERTY BOOK OFFICER				•		•			•				•		10’	
PROPERTY SECTION				•		•			•				•		10’	
RECEPTION	•						•		•				•		10’	3
RECORDS HOLDING	•			•		•			•				•		10’	3
MALE TOILET (VISITOR)			•					•	•	•		•			8’	1,7

	FLOORS					BASE			WALLS			CEILING				
	Resilient	Porcelain OR Quarry Tile	Ceramic Tile	Caret Tile	Sealed Concrete	Resilient Base	Porcelain OR Quarry Base	Ceramic Base	Painted GYP- Board	Ceramic Tile	Laminated Glass	Painted GYP- Board	Acoustical Ceiling Tile	Painted Structure	Min. n	REFER TO NOTE
FEMALE TOILET (VISITOR)			•					•	•	•		•			8’	1,7
EMPLOYEE BREAK ROOM	•					•			•				•		10’	3
LACTATION ROOM	•					•			•			•			8’	3
JANITOR’S CLOSET			•					•	•	•		•			8’	2
MECHANICAL					•	•			•			•		•		6
ELECTRICAL					•	•			•			•		•		6
ELECTRICAL CLOSET					•	•			•			•		•		6
TELECOMMUNICATIONS	•					•			•			•				10
TELECOMMUNICATIONS CLOSET	•					•			•			•				10
FIRE PUMP ROOM					•	•			•			•		•		6
WAREHOUSE AREA																
KITTING AREA					•	•			•					•	32’	6, 8
SHIPPING AND RECEIVING STATION					•	•			•						32’	6, 8
LAUNDRY					•	•			•					•	32’	6, 8
MHE AREA/ SHIPPING AND RECEIVING					•	•			•					•	32’	6,8
FORKLIFT ACCESS RAMP					•											5
UNISEX TOILET			•		•				•	•		•			8’	1,7,8
WAREHOUSE SUPERVISOR	•					•			•				•		10’’	8
WAREHOUSE OFFICE	•					•			•				•		10’’	8
DRMO					•	•			•					•	32’	6,8
SECURE STORAGE					•	•			•			•			12’’	8
REPAIR ROOM	•					•			•				•		12’’	8

	FLOORS					BASE			WALLS			CEILING				
	Resilient	Porcelain OR Quarry Tile	Ceramic Tile	Caret Tile	Sealed Concrete	Resilient Base	Porcelain OR Quarry Base	Ceramic Base	Painted GYP- Board	Ceramic Tile	Laminated Glass	Painted GYP- Board	Acoustical Ceiling Tile	Painted Structure	Min. n	REFER TO NOTE
CLASSIFICATIO N ROOM	•					•			•				•		12''	8
RECYCLE STORAGE					•	•			•			•			12'	8
GENERAL PURPOSE STORAGE					•	•			•			•			12'	8
FORKLIFT CHARGING AREA					•	•			•					•	32'	6,8
RACK STORAGE AREA					•	•			•					•	32'	6,8

1. ALL WET WALLS IN TOILET ROOMS SHALL HAVE 4'-0" HIGH CERAMIC TILE WAINSCOT.

2. WALLS ADJACENT TO JANITOR'S SINK SHALL HAVE A 4'-0" HIGH CERAMIC TILE WAINSCOT.

3. ALL COUNTER TOPS SHALL HAVE A WATERFALL FRONT EDGE. COUNTER TOP IN RESTROOM, BREAK ROOM AND LACTATION ROOM SHALL HAVE A MINIMUM 4" INTEGRAL COVED BACKSPLASH.

4. CEILING IS PAINTED CANOPY STRUCTURE AT COVERED WALKWAYS.

5. WALL AND BASE ARE BUILDING EXTERIOR FINISH.

6. CEILING SHALL BE PAINTED STRUCTURE IF ALLOWED BY APPLICABLE CODE

7. CERAMIC TILE FLOOR FINISH REQUIRES DEPRESSED SLAB.

8. GYPSUM WALLBOARD SHALL NOT BE USED BELOW 8 FEET ABOVE FINISH FLOOR, AS INTERIOR FINISH OF THE BUILDING ENVELOPE IN THE WAREHOUSE AREA, OR ON THE WAREHOUSE SIDE OF THE DEMISING WALL BETWEEN THE WAREHOUSE AREA AND THE ADMINISTRATION AREA. USE IMPACT RESISTANT GYPSUM BOARD IN CORRIDORS, STORAGE ROOMS, STAIRWELLS AND FOR ALL GYPSUM BOARD PARTITIONS ON THE WAREHOUSE SIDE OF THE FACILITY. EXPOSED INSULATION OR PLASTIC BAGGED IS NOT ALLOWED AS A FINISH MATERIAL.

9. INSULATED STOREFRONT SYSTEM

10. COMPLY WITH THE REQUIREMENTS OF ANSI/TIA/EIA-569-B

11. ALL VESTIBULES SHALL HAVE FULL LENGTH RECESSED ENTRY MAT.

12. FLOOR MOUNTED 3'-0" WIDE X 1'-0" DEEP WOOD BENCH SEAT WITH STEEL LEGS IN EACH FITTING ROOM. EACH FITTING ROOM DOOR SHALL BE FURNISHED WITH A DOUBLE ROBE HOOK AND FULL LENGTH MIRROR, ON THE ROOM SIDE.

3.6. STRUCTURAL REQUIREMENTS

A. GENERAL: Design and construct as a complete system in accordance with APPLICABLE CRITERIA

B) ROOF

1) **Live Loads**: Design live loads shall be per the IBC but not lower than the following minimums.

2) Primary roof members, exposed to work floor (in addition to the uniform load):

3) Single panel point on lower chord of roof trusses or any point along primary structural members supporting roofs2,000 pounds

4) Floor slab - Uniform load 250 psf, Fork lift with lifting capacity of 5000 lb

5) Pallets with average weight of 1500 lb each will be stacked 6 high in pallets storage racks with the first pallet will be sitting on the floor. (Maximum pallet weight is 2500 lb). Slab shall be designed for all loads induced on slab by racking system.

6) Warehouse: The most stringent loading of the following: Administration 250 psf, Mezzanine 150 psf

7) Column Spacing Column spacing shall not be less than 25 feet in the long direction of building and 60 feet (in warehouse) in the narrow direction. Columns are to be spaced in such a way as to allow standard industrial shelving for palletized loading. Shelving shall be constructed in a back-to-back double row configuration with no interspersed single rows.

3.7. SEE PARAGRAPH 6.7 THERMAL PERFORMANCE – NOT USED

3.8. PLUMBING REQUIREMENTS

A. GENERAL:

1) **Plumbing system** shall be designed and installed in accordance with the International Plumbing Code (IPC). Fixtures shall be of the water saving type and approved for its use per the IPC. Hot water shall be provided for all lavatories. Refer to paragraph 5 for domestic water metering requirements.

2) Emergency eyewash stations Locate in accordance with OSHA standards 1910 and 1926. Water must be heated and a thermostatic tempering valve employed to provide water at the OSHA-required temperature. Provide a floor drain with a secondary waterless trap (similar to Trap Guard system or equal). Emergency eyewash system shall be provided with audible alarm with blinking light to indicate that the unit is in operation.

3) Floor drains Provide floor drains in toilets to facilitate proper maintenance.

3.9. COMMUNICATIONS AND SECURITY SYSTEMS

A. TELECOMMUNICATIONS SYSTEM: Provide telecommunications outlets per the applicable criteria based on functional purpose of the space within the building and in accordance with other provisions of this RFP.

1) **Voice and Data**:

a) **Workstation**: Provide voice and data connection capability to all workstations.

b) **Issue/Turn-in Station**: Provide each Issue/Turn-in station with one voice and two data connection.

c) **Projector**: Provide data connection capability at projector locations.

2) **Cable TV (CATV)**: All CATV outlet boxes, connectors, cabling, and cabinets shall conform to applicable criteria unless noted otherwise. All horizontal cabling shall be homerun from the CATV outlet to the nearest telecommunications room unless indicated otherwise. Provide 2 CATV outlets in Queuing/Orientation Hall and 1 CATV outlet in Employee Break room.

3) **Paging System**: A zoned paging system shall be provided throughout the facility and integrated with the telephone system. System may utilize mass notification amplifiers and speakers, but shall be overridden by the mass notification system if mass notification system is activated while the paging system is being utilized. System shall have a minimum capacity of eight zones. Facility shall be zoned per user requirements.

B) SECURITY SYSTEMS

1) **Intrusion Detection System (IDS)**: The IDS shall include empty conduits with pull wires and junction boxes at the control panels, balanced magnetic switches, and motion sensors. An empty conduit with pull wire shall be installed from each IDS control panel to the main communication room. Design Build Contractor shall coordinate with the Contracting Officer's Representative for the locations and connection points of IDS devices. The IDS control panels, balanced magnetic switches, and motion sensors will be GFGI.

C) MASS NOTIFICATION SYSTEMS (MNS): Provide MNS per the applicable criteria and integrate the building MNS into the installation's MNS.

3.10. ELECTRICAL REQUIREMENTS

A. GENERAL: Select electrical characteristics of the power system to provide a safe, efficient, and economical distribution of power based upon the size and types of loads to be served. Use distribution and utilization voltages of the highest level that is practical for the load to be served. The effect of nonlinear loads such as computers, other electronic equipment and electronic ballasts shall be considered and accommodated as necessary. Voltage drop shall not exceed the maximum allowed per ASHRAE 90.1. Provide surge protective device on service entrance equipment and branch panelboard for communications and related system per UFC 3-520-01.

B) POWER: Provided for all installed equipment requiring power including all Government Furnished Contractor Installed (GFCI) equipment and all Government Furnished Government Installed (GFGI) equipment. Power poles are not allowed. The following shall also be provided.

1) **Outlets**:

a) **General:** Provide 125-volt duplex receptacles per NFPA 70, in conjunction with the proposed equipment and furniture layouts, and as per other stated requirements elsewhere in the RFP.

b) **Occupied Spaces**: In addition to receptacles required elsewhere in the RFP provide one 125-volt duplex receptacle per wall in all normally occupied spaces.

c) **Corridors:** For housekeeping purposes provide a minimum of one 125-volt duplex receptacle per corridor. No point along the corridor shall be more than 25 feet from a receptacle.

d) **Lavatories:** Provide 125-volt duplex receptacles mounted adjacent to lavatories. Provide a minimum of one for every two adjacent lavatories. Each single lavatory shall also be provided a receptacle.

e) **Mechanical & Electrical Rooms**: Provide a minimum of two 125-volt duplex receptacles in each mechanical room in addition to NFPA 70 requirements. In addition, provide a minimum of one 125-volt duplex receptacle in each electrical room.

f) **Warehouse Area**: Provide 125-volt duplex receptacles within the warehouse area. No point along perimeter walls in the warehouse shall be more than 25 feet from a receptacle. If applicable, install receptacles on columns.

g) **Building Entrance**: Provide a 125-volt duplex receptacle on the exterior wall near each entrance door of the building.

h) **Queuing/Orientation Hall**: Provide 125-volt duplex receptacles within the Queuing/Orientation Hall. No point along perimeter walls in the Queuing/Orientation Hall shall be more than 25 feet from a receptacle.

i) **Issue/Turn-in Station**: Provide two 125-volt duplex receptacles or a 125-volt quadraplex receptacle for each Issue/Turn-in station.

2) **Equipment**:

a) **Battery Charging Station**: Provide a dedicated circuit with disconnect switch for each forklift battery charging station. Design Build Contractor shall coordinate with the Contracting Officer's Representative for additional information and requirements. Battery chargers are GFGI.

b) **Kitting Machine**: Provide a dedicated circuit with disconnect switch for each Kitting machine within Kitting Area. Design Build Contractor shall coordinate with the Contracting Officer's Representative for additional information and requirements. Kitting machines are GFGI.

c) **Baler Machine**: Provide a dedicated circuit with disconnect switch for each baler machine. Design Build Contractor shall coordinate with the Contracting Officer's Representative for additional information and requirements. Baler machine is GFGI.

3) **Metering**: Provide an electricity meter for serving the building in the standard unit of the measure. Where basewide energy and utility monitoring and control system exist, meter must be connected using the installation's advanced metering protocols. Meter configuration shall be complied with requirements of UFC 4-010-06.

C) LIGHTING LEVELS, FIXTURES & CONTROLS: Provided lighting levels shall be within +/- 10% of required lighting levels. All interior and exterior building lights shall be provided with Lighting Emitting Diode (LED) lighting fixture. LED fixtures shall have a Color Rendering Index of (CRI) of 82 or higher and Luminaire Efficacy (LE) shall have a minimum of 80 LPW.

1) **Daylighting and Lighting Control**: Provide automated lighting controls, including occupancy/vacancy sensors with manual-off capability, provided for appropriate spaces in accordance with UFC 3-530-01 and ASHRAE 90.1. Where the space having naturalize source, contractor shall maximize the use of automatic dimming controls For at least 90% of individual occupant spaces, provide individual lighting controls that enable occupants to adjust the lighting to suit their individual tasks and preferences, with at least three lighting levels.

2) **Warehouse Storage Area**: Lighting level shall be 15 foot candles. Each lighting fixture shall has integral occupancy sensor and automatically turns on to full brightness upon detection of occupant approaching. Lighting circuits shall be connected through lighting control panel with manual switch override-off for maintenance purpose. Lighting fixtures shall be mounted at the bottom of the roof frame about 1-6 inches.

4) **Issue/Turn-in Stations**: Lighting level in shall be 30 foot candles.

5) **Covered Shakedown/Hardstand**: Lighting level shall be 15 foot-candles. Lighting fixtures shall be provided with wet location fixtures. Manual light switch with photocell override-off shall be provided to control the lighting in this area. The photocell override-off is to ensure the lighting fixtures in this area could not be on during the daylight.

3.11. HEATING VENTILATING AND AIR CONDITIONING (HVAC) REQUIREMENTS

A. GENERAL:

All offices (including warehouse offices), Issue/Turn-In Areas, Classification, Repair Area, Secure Storage and public spaces shall be heated and air-conditioned. The user shall be provided with adjustable controls of +/- 2 degrees F with a set point of 75 degrees F for cooling and 70 degrees F for heating. Installation shall be in accordance with the International Mechanical Code (IMC). Toilets shall be continuously exhausted during occupied hours. Air conditioning for communications room shall remain active at all times. Communication rooms shall be maintained at 72 deg F 40% RH at all times.

B. HVAC DESIGN CRITERIA:

1) **Warehouse and storage areas** All warehouse and storage areas shall be heated and ventilated separate from the offices (including warehouse offices), Issue/Turn-In Areas, Classification, Repair Area, Secure Storage and public spaces. During cold weather, warehouse and storage areas shall be maintained at a minimum of 55 degrees F when occupied. During non-occupied hours, the temperature shall be maintained at a minimum of 40 degrees F for freeze protection. Air conditioning is not allowed in warehouse and storage areas. Installation shall be in accordance with the IMC. Only freeze protection is required in the fire riser room.

2) Split system air handling units (if used) shall be located in a mechanical room. Mechanical rooms shall be sized for ease of service, maintenance, and replacement of HVAC equipment. Design shall be such that equipment is not “trapped” in the space. Rooftop-mounted package equipment (if used) shall be accessible by means of a fully caged roof ladder located in a mechanical room as described above. Provide a lockable, full size roof hatch for the ladder.

3) Air conditioned space zoning shall be based on exterior envelope exposures. Where VAV systems are used, limit individual zones to a maximum of 2,500 cfm.

4) Air handling units shall run continuously during occupied hours. Similarly, outdoor ventilation air required by ASHRAE 62.1 shall be continuous during occupied hours.

5) Equipment located outside (on the ground) shall be enclosed in a security-screened equipment yard. Sound/noise shall be a consideration in the selection of all equipment.

C. TEMPERATURE CONTROLS:

1) **Refer to Paragraph 5 for temperature control information.**

2) Thermostatically controlled warehouse ventilation system Provide a thermostatically controlled warehouse ventilation system capable of exhausting stratified hot, stale air trapped below the roofline at a minimum rate of 4 cfm per square foot of under-roof-area open to the warehouse. Cfm rating shall be at no less than 0.125 inch of static pressure. Limit noise level (per exhaust ventilator) to 50 fan sones (measured at 5 feet

per AMCA Standard 301, installation A, tested at zero static pressure). Fixed exhaust volume (per ventilator fan) shall fall between 23,000 cfm minimum and 45,000 cfm maximum at 0.125 inch of static pressure.

Ventilators shall have a cfm to sone ratio of at least 800 (cfm/sones = 800+). Ventilator ratings, etc. shall come from regularly published data provided by the equipment manufacturer. Locate ventilators to maximize the sweep of fresh air through the warehouse and prevent short-circuiting of air between intake and exhaust points. Provide separate thermostat on/off control for each ventilator at a convenient single location.

For purposes of night cool down provide low-wall, rain-resistant, air intake, wall louvers with motorized dampers. Louvers shall be sized for 3 air changes per hour (based on warehouse under-roof volume only) to produce a net free area velocity of no more than 500 fpm. If excess airflow is necessary (because of fan sizing) to meet the minimum airflow requirement then louvers must be sized so as to not exceed the 500 fpm maximum. Locate the louvers so as to promote balanced airflow and prevent short-circuiting. Interlock fans/dampers so that operation of a single fan or any combination of fans will open all of the dampers. With all fans operating (and all dock doors and dampers open) the velocity through the free area of all louvers and dock doors shall not exceed 500 fpm.

To prevent back drafting of gas-fired appliances interlock ventilators to heating units so that they will not fire if ventilators are energized. Heating unit interlocks are not required for appliances whose combustion air supply does not communicate with the warehouse space.

3) Diffusion and ventilation Per 29 CFR 1910 and other applicable criteria provide for sufficient diffusion and ventilation of gases from forklift storage batteries to prevent the accumulation of explosive mixtures. Batteries will be charged “in place”.

3.12. SEE PARAGRAPHS 5.10 AND 6.12 ENERGY CONSERVATION

3.13. FIRE PROTECTION REQUIREMENTS

A. FIRE SUPPRESSION SYSTEMS:

1) **Fire suppression systems** shall be designed in accordance with the latest edition of UFC 3-600-01. Warehouse and storage areas shall be protected utilizing Early Suppression Fast Response (ESFR) type sprinklers. ESFR shall be designed and installed in accordance with NFPA 13. ESFR system shall be on a separate fire riser from the rest of the building. (Note: maximum roof slope for ESFR is 2/12.)

2) Fire pumps: The Contractor shall investigate the need for a fire pump. Fire pumps, if required, shall be installed in accordance with NFPA 20. Fire pumps shall be installed in a separate room with access from the exterior. Fire pump room shall have one hour separation from the rest of the building.

3) Water storage tanks, if required, shall meet the requirements of UFC 3-600-01 and NFPA 22. Water tanks must be supervised by the building's fire alarm system.

4) Department Connection: Department Connection (FDC) shall be provided in accordance with NFPA requirements.

5) Post Indicator Valve: Post Indicator Valve (PIV) shall be provided in accordance with NFPA requirements. PIV shall be supervised by the building fire alarm system.

B. FIRE DETECTION AND ALARM SYSTEMS:

1) **Complete System:** There shall be one complete supervised addressable fire alarm system for the building. This system shall consist of a fire alarm panel, a communication device, initiating devices and notification devices.

2) Software: All software, software locks, special tools and any other proprietary equipment required to maintain, add devices to or delete devices from the system, or test the fire alarm system shall become property of the Government and be furnished to the Contracting Officer’s Representative prior to final inspection of the system.

3) Fire alarm system: The fire alarm system shall be designed by a registered Fire Protection Engineer and installation shall be supervised by a National Institute for Certification of Engineering Technologies (NICET) level-3 (minimum) technician.

3.14. SEE PARAGRAPHS 5.12 AND 6.14 SUSTAINABLE DESIGN – NOT USED

3.15. SEE PARAGRAPH 6.15 ENVIRONMENTAL – NOT USED

3.16. SEE PARAGRAPH 6.16 PERMITS – NOT USED

3.17. SEE PARAGRAPH 6.17 DEMOLITION – NOT USED`

3.18. SEE PARAGRAPH 6.18 ADDITIONAL FACILITIES – NOT USED

3.19. EQUIPMENT AND FURNITURE REQUIREMENTS

3.19.1. FURNISHINGS – NOT USED

3.19.2. EQUIPMENT

A. GENERAL:

1) **Storage Shelving:** Provide built-in steel storage shelving in areas specified.

B) AUDIO/VISUAL EQUIPMENT:

1) **Bulletin Boards:** Furnish and mechanically attach one bulletin board at each entry vestibule closest to the customer assistance desk. Bulletin board shall be 4'-0" high and 6'-0" wide. Bulletin boards shall have a header panel and shall have lockable, laminated glazed doors.

2) Projector Mounting Kit: Furnish and install a low profile ceiling mounting kit for a GFGI projector in Multipurpose Room.

3) Projection Screen: Furnish and install a ceiling recessed mounted, motorized projection screen in the Multipurpose Room. Projection screen shall have a diagonal viewing area of minimum 108-inches.

4) Dry Erase Boards: Furnish and mechanically attach two (2) dry erase boards in the Multipurpose Room. Board dimensions shall be minimum 48" high and 96" wide.

C) FOOD SERVICE EQUIPMENT:

1) **Ice Machines:** Provide CFCI ice cube machine-dispenser at location shown on floor plan. Each ice machine shall be capable of producing a minimum 250 pounds of regular ice cubes in 24 hours, with 180 pound storage capacity. Provide floor drain for each ice machine.

2) **Electric Water Coolers (EWC):** Provide all stainless steel, wall mounted, bi-level, ADA, electric water coolers as required. EWCs shall be furnished with bottle filling stations.

3.20. FACILITY SPECIFIC REFERENCES - NOT USED