附件三、美國國會圖書館 Fort Meade Book Storage Facility 第 3 及第 4 模組規劃書

PROGRAM FOR DESIGN

LIBRARY OF CONGRESS BOOK STORAGE FACILITY - MODULES #3 & #4

at

FORT MEADE, MARYLAND

November 5, 2002

Architect of the Capitol

Alan M. Hantman, FAIA
Architect of the Capitol
United States Capitol
Washington, D.C. -20515

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ARCHITECTURAL/ENGINEERING CONSULTANT

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A . BACKGROUND AND PROJECT CONCEPT:

The Library of Congress (LOC) is in the process of warehousing books at the newly completed Phase 1 LOC Book Storage Facility at the U.S. Army Fort Meade Base. The architectural firm of Einhorn Yaffee Prescott is designing Module #2 for the LOC Book Storage Facility. This facility is located on a one hundred acre site that was transferred to the U.S. Congress by the U. S. Army in 1994. The newly built structure includes an office area, book processing area, loading dock facilities, circulation corridor, mechanical rooms and a 8,500 square foot book storage module. Module #2 which is currently under design, will have an 12,000 square foot storage module , an extension to both the circulation corridor and mezzanine that will directly connect to Module #1. The Library has a severe shortage of collections storage capacity at the Thomas Jefferson, John Adams and James Madison buildings in Washington, D.C. The facilities at Fort Meade are intended to relieve the capacity shortfall and to extend the life span of the collection by providing an appropriate environment. The Library of Congress intends to develop a book storage facility encompassing approximately 13 modules for a total of 210,000 GSF over the next several years.

The LOC Book Storage Facility Module #1 is designed to maintain a constant temperature of 50 degrees F with a relative humidity of 30%. The Library anticipates that these conditions will extend the life span of printed materials by 200 years. Module #2 will house books and other paper-based collections materials and will have the same environmental conditions as Module #1.

Modules #3 and #4 are to contain (2) 12,000 square foot modules; as well as space for two cold storage vaults, a loading dock with two bays, a processing area with a quarantine room, and other spaces to support not only Modules #3 and #4, but to provide access to the next group of storage modules (#5 - #9).

The US Army Corps of Engineers will be managing this project for the Architect of the Capitol. The Baltimore District will be handling the day to day tasks to ensure that the project is design in a timely manner and on budget.

B. ACKNOWLEDGMENTS AND APPROVALS:

This Program for Design was developed for use by the design consultants who will provide the construction documents and specifications for the new LOC Book Storage Facility Modules #3 and #4. The Program contains detailed information regarding the programmatic needs of the Library of Congress and technical requirements of the Architect of the Capitol.

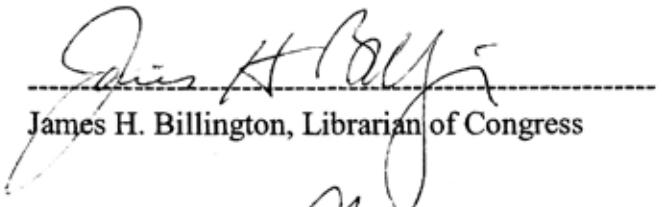
This Program was prepared in conjunction with the following staff of the Library of Congress:

Robert Browne	Safety Services Officer, Integrated Support Services
Steve Herman	Acting Chief, Collections Access, Loan Management Division
Steve Hersh	Office of Security
King Lee	Office of Security
Jon Netherton	Integrated Support Services, Acting Facilities Service Officer
Rick Parker	Safety Manager, Integrated Support Services
Ann Seibert	Head, Preventive Preservation Section
Linda Washington	Director, Integrated Support Services

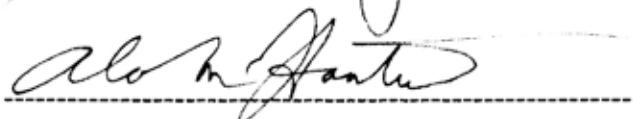
and the staff of the Architect of the Capitol:

Bruce Arthur	Director, Architecture Division
Stephen Ayers	Superintendent, Library of Congress
Andre Copeland	Project Manager, Architecture Division
Eric Goodman	Mechanical Engineer, Air Conditioning Engineering Division
Keith Adams	Mechanical Engineer, Air Conditioning Engineering Division
David Nguyen	Electrical Engineer, Electrical Engineering Division
Annette Kim	Director, Electrical Engineering Division
John Williams	Fire Protection Engineer, Fire Protection Engineering Division
Eric Schmidt	Fire Protection Engineer, EOFM Division
Scott Birkhead	Acting Chief of Design and Construction

This Program for Design is hereby agreed to by the Library of Congress and the Architect of the Capitol.



James H. Billington, Librarian of Congress — Date: 1/27/03



Alan M. Hantman, FAIA Architect of the Capitol — Date: 1/6/03

C. PROGRAM SUMMARY:

High Density Collections Storage Module #3	12,000
High Density Collections Storage Module #4	12,000
Cold Storage Vault #1	1,000
Cold Storage Vault #2	3,200
Loading Docks (2 @ 600 SF each)	1,200
Vestibule	2,000
Processing Area	6,000
Quarantine Area	400
Conference Room	240
Supervisor's Office	160
Administrative Area	600
Storage	600
Mechanical Room	1,200
Misc. Spaces (restrooms, kitchenette, breakroom)	800
Circulation Corridor	2,600
Mechanical Mezzanine	2,600
Total Program Summary:	46,600 GSF

The Library of Congress intends to warehouse archival materials in the form of 25% mylar (Class IV materials) and other paper based materials in Modules #3 & #4. These materials are typically books and flat paper based materials. They are stored in archival book storage boxes and map cases in a traditional storage arrangement similar to Module #2. The Library wants to store color photographs, digital masters, color negatives and black & white negatives in the two cold storage vaults (100 % plastic materials). These materials are stored in microfilm boxes on powder coated metal shelves. The Consultant is required to do a thorough code analysis for review and approval by the Library of Congress and the AOC at the 35%, 65% and 100% construction drawing stages. It is understood that the types of materials and how they are proposed to be stored will have an effect on code related issues.

D. PROGRAM REQUIREMENTS:

The Consultant must provide construction documents and specifications for a new 46,600 gross square foot addition to the existing LOC Book Storage Facility. In addition, Module #2's Circulation Corridor and Mechanical Mezzanine are to be extended into Modules #3 and #4 and must be designed to be consistent with applicable code requirements. The addition must be connected to the west wall of the second storage module. The design must match the materials used in Module #2 (concrete precast panels and manufactured wall panels). The construction phase of Modules #3 and #4 cannot adversely impact the operations of Modules #1 & #2. The design must include dust and fire protection for the existing collection and working environment. The design must maintain the existing environmental conditions in Modules #1 & #2 and must be compatible with the existing LOC security

systems on site.

It is understood that Modules #3 and #4 will require shelving that is dimensionally different from Module #1. This has a potential impact on the capacity of the storage module, circulation, fire code compliance, etc. Any requirement by the AOC or Library that impacts the code compliant nature of Module #1 and #2 due to the construction of Modules #3 and #4 will be confirmed, documented, reviewed, verified designed to mitigate the problem by the Consultant. Any adverse impact of the Module #3 & #4 project on Modules #1 and #2 must be approved by the AOC prior to commencement of construction drawings. The design program requirements for Modules #3 & #4 are as follows:

1. **Civil Engineering:**

- Indicate the footprint of the addition and alter contour lines as required by the design;
- Design a driveway and ramp to the new loading dock. Show connection to existing road;
- Show a new parking lot with spaces for 20 vehicles;
- Extend the turfed porous pavement fire lane to the southwest corner of the addition;
- Remove the existing fence on the west side of the facility;
- Design a new fence on the west side of addition to connect to the remaining fence;
- Maintain a twenty foot minimum distance between building and fence;
- Review and confirm that the existing water retention area is sufficient for Modules #3 & #4.
- Provide design of extension of existing water retention area if it is not sufficient to meet the runoff by applicable codes.

All civil engineering drawings must meet the Maryland Department of Environment Design criteria for storm water management and sediment & erosion control. The drawings must incorporate the existing site design. The Consultant must review the existing geotechnical reports for Modules #1 and #2. The Consultant must provide soil borings and a new geotechnical report Modules #3 & #4.

2. **Architectural:**

- Design a new office wing with an administrative area, a processing area and loading dock to provide access to Modules #3 & #4 and to future modules as part of the Master Plan for the LOC Book Storage Facility. Provide new entrance for this addition;
- Review codes to determine if a new primary egress stair with a canopy, at the new mechanical mezzanine, is necessary. Provide design of stair if required by applicable codes;
- Match the floor elevation with the floor elevations of Module #2;
- The west wall of the Module #2 is not designed to be the common wall in the Module #3, therefore design a separate wall to support Module # 3. The footing at the west wall has been design to accommodate the new wall of Module #3;
- Include in the design, building materials which reduce the use of volatile organic compounds (VOC's), especially those materials used in the storage module;

- Design steel bollards, guards and bases that protect the interior finishes from the work machinery;
- Provide a minimum of three doors in the each of the storage modules: an overhead door, motor operated with control buttons and a remote opener on both sides, a personnel door from the corridor (with door operator) to the module and an egress door at the south end of the module (verify code requirements);
- Design two cold storage vaults that will house 490,000 reels of microfilm master negatives as well as other materials and provide space for negatives. The cold storage vaults will have powder coated metal shelves for the microfilm boxes which are approximately 12" to 18" deep. Both cold storage vaults must be able to be accessed by standard hand truck. No fork lift access is required. It is anticipated that these cold storage vaults will contain 100% plastic material. Design staging area at both entrances into both cold storage vaults.
- Design a vapor barrier and insulation system that maintains the environment in the storage module without producing condensation inside the module. Plan the manufactured wall panel system with the appropriate insulation;
- Design a dedicated walking surface on the roof of the new mechanical room.

3. **Structural:**

- Design the structural systems needed for Module #3 and #4 to include a super flat floor (FMIN-100), precast concrete wall panels and long span steel joists at an inside height of 33". The FMIN-100 the minium flatness/levelness representing "superflat" construction, thereby ensuring that all points on the superflat floor will fall within +/- 5/16" of the finished floor elevation indicated on the plans;
- Design a fire wall as the bearing wall for the new storage modules' roof construction;
- Design steel column and joist system from roof above administrative and loading dock areas. Provide 10-6" clear height at all areas where manlifts transverse.
- Verify the capacity of the foundation and the west wall of the storage module # 2;
- Design an opening in the new precast concrete panels for the delivery of the shelving unit supports.
- Design and detail the building frame and components to withstand all appropriate vertical and horizontal forces such as seismic and wind.

4. **Mechanical:**

- Design a complete mechanical air handling system to maintain environmental conditions at 50 deg. F (+/-2.5) with a 30% (+/-2.5) relative humidity for the Storage Modules #3 & #4. Outside environmental conditions for design are Winter - 0 degrees F 30% RH and Summer - 95 degrees F DB/78 degrees F WB (50% RH). This system will interface with the existing central cooling and heating plant, and the building automation system(BACNet);
- Redundancy must be built into the design which will allow for failure of any one

package desiccant dehumidification unit (PDDU) and still maintain the required conditions in the modules #3 & #4. Heating water system must be reviewed and established so that adequate capacities are available to maintain design conditions in the case of a single boiler failure. Chilled water system must be reviewed and established so that adequate capacities are available to maintain design conditions in the case of a single chiller failure;

- Design a mechanical system for one cold storage vault to maintain environmental conditions at 30 degrees F (+/-3) and 25 % Relative humidity(+/-5) for digital masters, color negatives and color photographs;
- Design a mechanical system for other the cold storage vault to maintain environmental conditions at 35 degrees F (+/-3) and 30 % Relative humidity(+/-5) for black and whites negatives;
- Design staging area with 50- 55 degree F temperature at each vault for temperature acclimation;
- Provide a design for a separate air handling for the Processing and Quarantine areas. The remaining spaces can be under one air handling unit that provide 65 degrees F and 50 % RH.

The existing central cooling and heating plant was designed for expansion as storage modules were added. The Consultant should take this into consideration when developing the design concept. The design shall comply with the program requirements in the attached addendum. The Consultant shall provide all work as per the AOC Mechanical Engineering Design Standards and Criteria and shall meet all latest applicable federal, state and local codes.

5. **Electrical:**

- Design the electrical emergency system and normal power system for the new storage module #3 & #4 and modify the existing emergency and normal power systems in Modules #1 and #2 to accommodate the new loads. The normal power system shall be connected to the existing electrical switchboard in the electrical room in Module #1. Emergency power shall be connected to the emergency generator. Mechanical equipment will be connected to emergency power as required by AOC Air Conditioning Engineering Division;
- Design a new incoming primary electrical service, a normal power distribution system and the emergency generator power distribution system for the cold storage vaults, the administrative area, loading docks and the processing areas. Coordinate this work with the BG & E existing incoming primary electrical service. The normal power distribution system, the new emergency generator power distribution system must have sufficient capacity to handle the electrical loads of the next five storage modules #5 through #9 along with their supporting areas. Provide a new electrical room to house the above listed electrical equipment;
- Provide a new lighting system similar to the existing lighting system in Modules #1 and #2 for interior and exterior light fixtures;
- Design a UL Master Label lightning protection system to connect to the existing system in place;
- Design power and raceway systems for all other systems in this new module such as

telecommunications, data communications, fire protection, security, etc. and modify these existing systems in Modules #1 and #2 to accommodate the new work;
- Provide empty conduits and junctions with pull strings for connections to future modules;
- Provide exit signage as required by code;
- Design emergency lighting for Modules #3 and #4 as per applicable codes;

The Consultant shall provide all work as per the AOC Electrical Engineering Design Standards and Criteria and shall meet all latest applicable federal, state and local codes.

6. **Life/Safety:**

- The Consultant must design a code compliant building that meets the latest standards for high density storage modules by Code. Show the connection to the existing fire alarm system and sprinkler piping at the facility. Existing water lines and the sprinkler main have been capped from Module #2 for connection to the Module #3 and Module #4. The consultant must verify the adequacy of the existing water supply at the point of connection, or provide acceptable alternatives for the fire service in the design documents, including water tanks or towers adequately sized to meet sprinkler demand as documented by verifiable hydraulic calculations and capacity;
- Design fall protection for the roofs of both the new office area, loading dock, cold strogae vaults, mechanical mezzanine and Modules #3 & #4;
- Show water sensors in the storage module to detect leaks in the sprinkler system and roof;
- Design the connection to the existing fire pump;
- Design the connection of the existing sprinkler to the mezzanine and circulation corridor;
- Design a complete fire detection and alarm system to include ADA features and functionality. Design drawings shall include clearly articulated fire zones and separations; riser diagrams; wiring style; system calculations; and device placement (initiation and annunciation) throughout the Modules. Design fire zones in accordance with applicable building and NFPA Codes to coincide with rated fire separations and smoke divisions;
- Provide detailed schedules for door hardware (locks, code compliant special locking arrangements, panic hardware, fire rated hardware, etc.); interior finishes; wall ratings, etc.;
- Design facility fire hydrants to serve Modules #3 & #4 from the existing water main loop, with secondary water supplies, as neede to meet the total system demand;
- Design a complete smoke control system and address fire department accessibility to storage modules;
- Maintain a four hour separation between the cold storage vaults, Modules #2, #3 and #4.

A preliminary code meeting will be held with the Consultant, AOC and LOC to discuss life and fire safety issues.

7. **Security:**

- The Consultant must provide empty conduits with pull strings and junction boxes for future security equipment to be installed by others to the existing security room. This security

equipment includes motion detectors, camera (indoor and outdoors), magnetic locks and hinge alarms.

- LOC to provide schematic design of equipment layout to be incorporated into construction drawing set.

8. **Specifications:**

- The Consultant must provide all of the specification sections as required, as well as Division 1 which will be approved by USACE and AOC Technical Services Division;
- Incorporate specifications which call for materials that have small percentages of volatile organic compounds (VOC's). A list of prohibited materials, provide by the Library of Congress is attached;
- Provide language in specifications for hiring a concrete consultant for the review and inspection of the super flat concrete floor;
- Provide a section for the hiring of a commissioning agent to monitor the installation of the systems and to oversee the start up testing and balancing of the systems.

BOOK STORAGE FACILITY PROGRAM REQUIREMENT FORM #1

ROOM TYPE: High Density Collections Storage Module #3

TOTAL AREA (NSF): 12,000 SF (approximately)

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1. GENERAL SPACE CHARACTERISTICS:

Adjacencies - Adjacent to Module #2 (planned exterior west wall) and to circulation corridor.

Access - Access to corridor with personnel door and door for Order Picker, and Module #2. Egress to exterior from south wall. Access restricted to designated LOC personnel and AOC maintenance staff.

2. PHASING REQUIREMENTS:

Provide an opening (10'-0" x 16'-0") in the west or north wall of Module #3 for access of a flatbed tracker trailer for the delivery of shelving supports into each module. The contractor must install the shelving after the completion of the floor, roof and doors to the module.

3. ROOM CHARACTERISTICS:

Door Heights/Widths: personnel door 7'-0" X 4'-0", order picker doors 12'-0" x 6'-0" and egress door 7'-0" x 3'-0" (each module).

Room Height - 33'-0" clear (each module).

Room Dimensions - 57'-0" x 210'-6" approximately (each module).

Environmental: Temperature - 50 degrees F (+/-2.5), Humidity - 30% (+/-2.5).

Lighting: No natural light; artificial light level - ten to fifteen foot candles at floor.

Floor : Super flat concrete floor (FMIN -100 Floor Tolerance) and sealed with floor hardener. Floor strength: 4000 psi (27.6 MPa) 28 day compressive strength.

Ceiling: Roof decking, painted, with insulation (R-value = 5.4 at 40 degrees F at 75 degrees mean temperature and 1" thickness), vapor barrier (Perm Rating is equal to 0.015 0r less) and gypsum wall board ceiling for one hour fire rating.

Walls: Precast concrete wall panels, insulation (R-value = 22), vapor barrier (Perm Rating equal to 0.015 or less)and gypsum wall board.

Roof Construction: Design a structural system to support roof insulation and single ply roof membrane at Module #3. Slope roof to gutters along north and south ends. Incorporate existing west wall of Module #2 with the new roof. Design a new sheet metal cap along the existing parapet of the first module (west wall of storage module roof). Design of roof must not have any openings through roof. Use a white membrane color or have membrane painted white. Provide design for roof fall protection for each roof.

Security: Design the layout for conduit and junction boxes (for security equipment not in contract) at each door to storage module. Connect alarm contacts to doors and magnetic locks. Interconnect to the existing fire alarm system. Provide remote door openers on both sides of each door (personnel and order picker doors).

Water: Design connection to the existing fire sprinkler system.

Electrical: Design single dedicated outlets in aisles from ceiling down shaft for return air ducts. Provide duplex outlets in turnaround area for order pickers as required by code.

Telephone: Show telephone jacks at each aisle.

Water Detection: Show water sensor strip along length of each in-rack sprinkler line.

Fire Protection: Design a sprinkler system to meets the applicable codes.

4. SPECIAL REQUIREMENTS:

Prohibited Materials: Certain construction materials contain elements and compounds that shall be prohibited from use within any space associated with the storage of documents from the Library of Congress. See attached list of materials from the LOC.

5. FURNISHINGS:

Furniture/Movable Equipment - not in contract. Provide a planograph of shelves for the installer of the shelving units. LOC to provide a list class of materials, by size and type description of documents to held in storage module. The consultant will work with the LOC to develop a planograph for their review and approval by the 35% code compliance submission date.

Built-in Equipment - Guide rails and bollards must be shown in plan to keep order pickers from damaging equipment and shelving.

GENERAL NOTES:

1. Modules #3 and #4 are separate rooms to have a four hour fire wall between the two modules. The modules are to have independent bearing walls for the roof structural system for each module.

2. Module #3 must be designed with map cases at floor in each aisle. The map cases are to be stacked to maximum height of 5'-0".

BOOK STORAGE FACILITY PROGRAM REQUIREMENT FORM #2

ROOM TYPE: High Density Document Storage Module #4

TOTAL AREA (NSF): 12,000 SF (approximately)

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1. GENERAL SPACE CHARACTERISTICS:

   Adjacencies - Adjacent to Module #3 (planned exterior west wall) and to circulation corridor.

   Access - Access to corridor with personnel door and door for Order Picker, and Module #3. Egress to exterior from south wall. Access restricted to designated LOC personnel and AOC maintenance staff.

2. PHASING REQUIREMENTS:

   Show an opening (10'-0" x 16'-0") in the west or north wall of Module #4 for access of a flatbed tracker trailer for the delivery of shelving supports into each module. The contractor must install the shelving after the completion of the floor, roof and doors to the module.

3. ROOM CHARACTERISTICS:

   Door Heights/Widths: Personnel door 7'-0" X 4'-0", order picker doors 12'-0" x 6'-0" and egress door 7'-0" x 3'-0".

   Room Height - 33'-0" clear.

   Room Dimensions - 57'-0" x 210'-6" approximately.

   Environmental: Temperature - 50 degrees F (+/-2.5), Humidity - 30% (+/-2.5).

   Lighting: No natural light; artificial light level - ten to fifteen foot candles at floor.

   Floor : Super flat concrete floor (FMIN -100 Floor Tolerance) and sealed with floor hardener. Floor strength: 4000 psi (27.6 MPa) 28 day compressive strength.

   Ceiling: Roof decking, painted, with insulation (R-value = 5.4 at 40 degrees F at 75 degrees mean temperature and 1" thickness), vapor barrier (Perm Rating is equal to 0.015 0r less)and gypsum wall board for one hour fire rating.

   Walls: Precast concrete wall panels, insulation (R-value = 22), vapor barrier (Perm Rating equal to 0.015 or less)and gypsum wall board.

Roof Construction: Design roof structural to support roof insulation and single ply roof membrane at Module #4. Slope roof to gutters along north and south ends. Incorporate existing west wall of Module #3 with the new roof. Design a new sheet metal cap along the existing parapet of the first module (west wall of storage module roof). Design of roof must not have any openings through roof. Use a white membrane color or have membrane painted white. Provide design for roof fall protection for each roof.

Security : Design the layout for conduit and junction boxes (for security equipment not in contract) at each door to storage module. Connect alarm contacts to doors and magnetic locks. Interconnect to the existing fire alarm system. Provide remote door openers on both sides of each door (personnel and order picker doors).

Water: For fire sprinkler system only.

Electrical: Design single dedicated outlets in aisles from ceiling down shaft for return air ducts. Provide duplex outlets in turnaround area for order pickers as required by code.

Telephone: Show telephone jacks at each aisle.

Water Detection: Show water sensor strip along length of each in-rack sprinkler line.

Fire Protection: Design the fire sprinkler system that meets the applicable codes.

4. SPECIAL REQUIREMENTS:

Prohibited Materials: Certain construction materials contain elements and compounds that shall be prohibited from use within any space associated with the storage of documents from the Library of Congress. See attached list of materials from the LOC.

5. FURNISHINGS:

Furniture/Movable Equipment - not in contract. Provide a planograph of shelves for the installer of the shelving units. LOC to provide a list of the class of materials, by size and type description of documents to held in storage module. The consultant must work with LOC to develop a planograph for the review and approval by the 35% submission date.

Built-in Equipment - Guide rails and bollards must be shown in plan to keep order pickers from damaging equipment and shelving.

GENERAL NOTES:

1. Modules #3 and #4 are separate rooms to have a four hour fire wall between the two modules. The modules are to have independent bearing walls for the roof structural system of each module.

BOOK STORAGE FACILITY PROGRAM REQUIREMENT FORM #3

ROOM TYPE: Circulation Corridor

TOTAL AREA (NSF): 2,600 SF (approximately)

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1. GENERAL SPACE CHARACTERISTICS:

Adjacencies: Direct connection to circulation corridor in Module #2 (planned exterior west wall). Adjacent to processing area, vestibule, cold storage vaults and new storage modules #3 and #4. Access restricted to LOC personnel and AOC maintenance staff only.

Access Requirements: Access to storage modules (see storage module program requirements form). Design opening in the planned exterior wall of Module #2's corridor. Egress to exterior from west (provide canopy, lighting, concrete sidewalk to connect to planned side walk at Module #2 and concrete pad at exterior).

2. PHASING REQUIREMENTS:

Remove existing metal panel wall of Module #2. Provide a dust barrier inside of second storage module prior to the commencement of demolition work and leave in place until the Modules #3 and #4 circulation corridor is ready for occupation.

3. ROOM CHARACTERISTICS:

Door Heights/Widths: Overhead door to vestibule 6'-0" x 12'-0"; egress door 7'-0" x 3'-0"

Room Height: 12'-0"clear and 14'-5" floor to floor.

Room Dimensions: 115'-8" x 23'-6"(approximately). Design clear aisle width of 15'-0" and height of 12"0" for the man lift to be supplied by LOC.

Environmental: Temperature - 70 - 75 degrees F, Humidity - 50% (+/-3) RH.

Lighting: No natural light; Artificial: to meet AOC Electrical Engineering Design Standard and Criteria and local codes.

Floor: sealed concrete with floor hardener. Floor Strength: 4000 psi (27.6 MPa) 28 day compressive strength.

Ceiling: painted metal decking.

Walls: precast concrete wall panels and metal panel wall system with insulation, and vapor

barrier and CMU.

Water: Not required, except for fire sprinkler system.

Electrical: Design duplex outlets in corridor as required by code.

Telephone: Design telephone jacks as required by LOC and have one at personnel door to storage module.

Water Detection: not applicable.

Fire Protection: Design a fire sprinkler system that meets the applicable codes.

Security: Show a security closet (4' x 12' with fire rated, 3/4" thk. plywood on back wall) as connection point for underground PVC conduits that will connect to the existing Security Office in Module #1. Provide card readers at each door to in the circulation corridor. Provide remote door openers on both sides of each door (personnel and order picker doors). Egress door to have magnetic lock, alarm contact, card reader and fire exit hardware (refer to NFPA 101 for further applicable requirements).

4. SPECIAL REQUIREMENTS:

Prohibited Materials: Certain construction materials contain elements and compounds that shall be prohibited from use within any space associated with the storage of documents from the Library of Congress. See attached list of materials from the LOC.

5. FURNISHINGS:

Furniture/Movable Equipment: not in contract.

Built-in Equipment: Guide rails and bollards must be shown in plan to keep order pickers from damaging equipment and shelving. Design appropriate guards for any equipment under 10'-8" height.

BOOK STORAGE FACILITY PROGRAM REQUIREMENT FORM #4

ROOM TYPE: Mechanical Mezzanine

TOTAL AREA (NSF): 2,600 SF (approximately)

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1. GENERAL SPACE CHARACTERISTICS:

   Adjacencies: Directly above new Circulation Corridor. Adjacent to mezzanine in the planned Module #2 facility (exterior west wall) and to storage module.

   Access: Access to existing mezzanine. Egress stair down to exterior (provide canopy and concrete pad at exterior). Access is limited to AOC and LOC maintenance staff only.

2. PHASING REQUIREMENTS:

   Remove existing metal panel wall of the planned Module #2 facility. Provide a dust barrier inside Module #2 prior to the commencement of demolition work and leave in place until the Module's #3 and #4 mechanical mezzanine is ready for occupation.

3. ROOM CHARACTERISTICS:

   Door Heights/Widths: (2) egress doors 7'-0" x 3'-0"; roof hatch.

   Room Height: 14'-0" clear.

   Room Dimensions: 115'-8" x 23'-6" (approximately).

   Environmental: Temperature 65 - 80 degrees F, Humidity - 50% (+/-3) RH.

   Acoustical Protection: Design a wall and ceiling system with a STC Rating

   Lighting: No natural light. Artificial to meet AOC Electrical Engineering Design Standard and Criteria and local codes.

   Floor: sealed concrete. Floor strength to be 4000 psi (27.6 MPa) 28 day compressive strength.

   Ceiling: painted, fire rated GWB under the metal decking with vapor barrier and insulation.

   Walls: precast concrete wall panels and metal panel wall system with insulation, vapor barrier and GWB.

Roof Construction - Design steel joists to support metal decking, insulation and single ply roof membrane at the mechanical mezzanine. Slope roof to drains as required. Show connection to emergency roof drainage pipes in Module #2. Provide design of transition between existing gravel stop at west wall of Module #2 with the new roof. Use a white membrane color or have membrane painted white. Provide design for walk way pads and roof fall protection. Design roof fall protection on roof of mechanical mezzanine.

Security: Design a layout for conduits and junction boxes for security equipment at each door to a fire rated, egress stair to exterior. Door must have magnetic lock, alarm contact, card reader and fire exit hardware.

Water: Provide emergency eye wash station and fire sprinkler system.

Electrical: Design duplex outlets in mezzanine as required by code. Design electrical conduits to mechanical unit as required.

Telephone: Design telephone jacks as required by LOC and have one jack at door to egress stair to exterior.

Water Detection: not applicable.

Fire Protection: Design a fire sprinkler system that meets the applicable codes.

4. SPECIAL REQUIREMENTS:

Prohibited Materials: Certain construction materials contain elements and compounds that shall be prohibited from use within any space associated with the storage of documents from the Library of Congress. See attached list of materials from the LOC.

5. FURNISHINGS:

Furniture/Movable Equipment - not in contract.

BOOK STORAGE FACILITY PROGRAM REQUIREMENT FORM #5

ROOM TYPE: Processing Area

TOTAL AREA (NSF): 6,000 SF (approximately)

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1. GENERAL SPACE CHARACTERISTICS:

   Adjacencies: adjacent to circulation corridor, vestibule and administrative area. Adjacent to quarantine room.

   Access: Access to new entrance. Close to restrooms, break room and kitchenette. Access is limited to AOC and LOC maintenance staff only.

2. PHASING REQUIREMENTS:

   Not applicable.

3. ROOM CHARACTERISTICS:

   Door Heights/Widths: Doors to vestibule, circular corridor, administrative offices. doors 7'-0" x 3'-0". Double doors to vestibule and circulation corridor.

   Room Height: 10'-0" clear.

   Room Dimensions: variable - based on relationships to others rooms in program requirements.

   Environmental: Temperature 65 - 80 degrees F, Humidity - 50% (+/-3) RH.

   Acoustical Protection: see Ceiling.

   Lighting: Provide natural light - windows. Artificial lighting to meet AOC Electrical Engineering Design Standard and Criteria and local codes.

   Floor: Vinyl tile over sealed concrete. Floor strength to be 4000 psi (27.6 MPa) 28 day compressive strength.

   Ceiling: Provide acoustical tile ceiling with low sound transmission rate and fire rating.

   Walls: Gypsum wall board, painted and split face CMU similar to book processing are in Module #1.

   Roof Construction - Design steel joists to support metal decking, insulation and single ply

roof membrane at the mechanical mezzanine. Slope roof to drains as required. Show connection to emergency roof drainage pipes in Module #2. Provide parapet wall to be a minimum 3'-6" in height. Use a white membrane color or have membrane painted white. Provide design for walk way pads and roof fall protection.

Security: Provide card reader and alarm contact to door to quarantine room.

Water: It is not required, except for fire sprinkler system.

Electrical: Design duplex outlets as required by code.

Telephone: Design telephone jacks as required by LOC.

Water Detection: not applicable.

Fire Protection: Design a fire sprinkler system that meets applicable codes.

4. SPECIAL REQUIREMENTS:

Prohibited Materials: Certain construction materials contain elements and compounds that shall be prohibited from use within any space associated with the storage of documents from the Library of Congress. See attached list of materials from the LOC.

5. FURNISHINGS:

Furniture/Movable Equipment - not in contract.

GENERAL NOTES:

1. Design a quarantine room (400 square feet) adjacent to the Processing area. Design a two fire rated wall assembly for the quarantine room. Provide a double door to room from vestibule and a single door to Processing area. Quarantine Room is to handle shipments of donated papers and manuscripts from private estates. The donations are to be cataloged from this area and items which are not to stored in the modules are to be shipped to proper facility.
2. Design a separate air handling unit for the quarantine room and the processing area. The mechanical system must have return air exhausting directly to exterior.
3. Design a room to contain the vacuum system which has piping to the processing for three cleaning stations.

BOOK STORAGE FACILITY PROGRAM REQUIREMENT FORM #6

ROOM TYPE: Cold Storage Vault #1

TOTAL AREA (NSF): 1,000 SF (approximately)

1. GENERAL SPACE CHARACTERISTICS:

Adjacencies - Adjacent to Circulation Corridor and Vestibule.

Access - Access to corridor with cold storage door. Provide means of egress to exterior, only if vault is located at dead end corridor Access restricted to designated LOC personnel and AOC maintenance staff.

2. PHASING REQUIREMENTS:

Not applicable.

3. ROOM CHARACTERISTICS:

Door Heights/Widths: personnel door 7'-0" X 4'-0"(cold storage door) and egress door 7'-0" x 3'-0".

Room Height - 12'-0" clear.

Room Dimensions - 50'-0" x 40'-0" approximately.

Environmental: Temperature - 30 degrees F (+/- 3 degrees), Relative Humidity - 25% (+/- 5%).

Lighting: No natural light; artificial light level - ten to fifteen foot candles at floor.

Floor : Concrete floor sealed with floor hardener. Floor strength: 4000 psi (27.6 MPa) 28 day compressive strength.

Ceiling: Metal panel wall with insulation (R-value = 5.4 at 40 degrees F at 75 degrees mean temperature and 1" thickness) and vapor barrier (Perm Rating is equal to 0.015 0r less).

Walls: Metal Panel walls with insulation (R-value = 22), vapor barrier (Perm Rating equal to 0.015 or less) and gypsum wall board.

Roof Construction: Design steel joists to support metal decking, insulation and single ply roof membrane at the mechanical mezzanine. Slope roof to drains as required. Provide parapet wall to be a minimum 3'-6" in height. Use a white membrane color or have membrane painted white. Provide design for roof fall protection for each roof.

Security : Provide conduit and junction boxes for card readers (not in contract) at each door to storage module. Connect alarm contacts to doors and magnetic locks. Interconnect to the existing fire alarm system. Provide remote door openers on both sides of each door (personnel and order picker doors). Refer to NFPA 101 for further applicable requirements.

Water: For fire sprinkler system only.

Electrical: Show single dedicated outlets in aisles. Provide duplex outlets in staging area as required by code.

Telephone: Show telephone jacks as required by LOC.

4. SPECIAL REQUIREMENTS:

Prohibited Materials: Certain construction materials contain elements and compounds that shall be prohibited from use within any space associated with the storage of documents from the Library of Congress. See attached list of materials from the LOC.

5. FURNISHINGS:

Furniture/Movable Equipment - Provide powder coated metal shelves for microfilm boxes which are approximately 12" to 18" deep. Design a planograph of shelves for the installer of the shelving units.

Built-in Equipment - Guide rails and bollards must be shown in plan to keep hand trucks from damaging the shelving.

GENERAL NOTES:

1. Provide a staging room at entrance to both Vault #1 and Vault #2. Provide 50 - 55 degree F temperature in this room for acclimatization of materials before they go into circulation corridor.
2. Vault #1 is to contain color negatives and color photographs. The shelves are to be 7'-0" (height) by 12" (depth) and 36" (width). Design an open area for file cabinets as well.
3. Provide shelving for approximately 5,000 cubic feet of storage.
4. Vault is to be similar to a Balley Box, self contained and with its own mechanical system.
5. Design a two story space to contain both Cold Storage Vaults at lower floor and mechanical equipment space above in the mezzanine.

BOOK STORAGE FACILITY PROGRAM REQUIREMENT FORM #7

ROOM TYPE: Cold Storage Vault #2

TOTAL AREA (NSF): 3,200 SF (approximately)

1. GENERAL SPACE CHARACTERISTICS:

Adjacencies - Adjacent to Circulation Corridor and Vestibule.

Access - Access to corridor with Cold storage door. Provide means of egress to exterior if vault is located at dead end corridor Access restricted to designated LOC personnel and AOC maintenance staff.

2. PHASING REQUIREMENTS:

Not applicable.

3. ROOM CHARACTERISTICS:

Door Heights/Widths: personnel door 7'-0" X 4'-0"(cold storage door) and egress door 7'-0" x 3'-0".

Room Height - 12'-0" clear.

Room Dimensions - 40'-0" x 50'-0" approximately.

Environmental: Temperature - 35 degrees F (+/- 3 degrees), Relative Humidity - 30% (+/- 5%).

Lighting: No natural light; artificial light level - fifteen to twenty foot candles at floor.

Floor : Concrete floor sealed with floor hardener. Floor strength: 4000 psi (27.6 MPa) 28 day compressive strength.

Ceiling: Metal panel wall with insulation (R-value = 5.4 at 40 degrees F at 75 degrees mean temperature and 1" thickness) and vapor barrier (Perm Rating is equal to 0.015 0r less).

Walls: Metal Panel walls with insulation (R-value = 22), vapor barrier (Perm Rating equal to 0.015 or less) and gypsum wall board.

Roof Construction: Design steel joists to support metal decking, insulation and single ply roof membrane at the mechanical mezzanine. Slope roof to drains as required. Provide parapet wall to be a minimum 3'-6" in height. Use a white membrane color or have membrane painted white. Provide design for roof fall protection for each roof.

Security : Design a layout for conduit and junction boxes to the security equipment (not in contract) at each door to storage module. Connect alarm contacts to doors and magnetic locks. Interconnect to the existing fire alarm system. Refer to NFPA 101 for further applicable requirements.

Water: For fire sprinkler system only.

Electrical: Show single dedicated outlets in aisles. Provide duplex outlets in staging area as required by code.

Telephone: Show telephone jacks as required by LOC.

4. SPECIAL REQUIREMENTS:

Prohibited Materials: Certain construction materials contain elements and compounds that shall be prohibited from use within any space associated with the storage of documents from the Library of Congress. See attached list of materials from the LOC.

5. FURNISHINGS:

Furniture/Movable Equipment - Provide powder coated metal shelves for microfilm boxes which are approximately 12" in depth. Design a planograph of shelves for the installer of the shelving units.

GENERAL NOTES:

1. Provide a staging room at entrance to both Vault #1 and Vault #2. Provide 50 - 55 degree F temperature in this room for acclimatization of materials before they go into circulation corridor.
2. Vault #2 is to contain black & white film and digital masters. It must have space for at least six map cases (similar to map cases used in Module #2).
3. Provide shelving for 20,000 cubic feet of materials. The shelves are to be 7'-0" (height) by 12" (depth) and 36" (width).
4. Vault #2 is to be similar to a Balley Box, self contained and with its own mechanical system.
5. Design a two story space to contain both Cold Storage Vaults at lower floor and mechanical equipment space above in the mezzanine.
6. Flat film is stored in paper sleeves inside of paperboard document boxes, roll microfilm is stored in paperboard boxes (one roll per box) and the boxes are re-boxed with 12 boxes per tray.

BOOK STORAGE FACILITY PROGRAM REQUIREMENT FORM #8

ROOM TYPE: Loading Dock

TOTAL AREA (NSF): 1,200 SF (approximately)

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1. GENERAL SPACE CHARACTERISTICS:

   Adjacencies - Adjacent to Vestibule.

   Access - Access to vestibule with overhead doors. Provide means of egress to exterior with personnel door. Access restricted to designated LOC personnel and AOC maintenance staff.

2. PHASING REQUIREMENTS:

   Not applicable.

3. ROOM CHARACTERISTICS:

   Door Heights/Widths: Personnel door 7'-0" X 3'-0"(exterior door); exterior overhead door 10'-0" x 8'-0" (bay #1); exterior overhead door 14'-0" x 10'-0" (bay #2); interior overhead door 12'-0" x 8'-0" (bay #1); interior overhead door 12'-0" x 8'-0" (bay #2); 7'-0" x 3'-0"personnel (bay #2).

   Room Height - 10'-6" clear.

   Room Dimensions - 36'-0" x 33'-4" (Split dock into two separate bays - 36'-0" X 16'-8").

   Environmental: Temperature - 70 degrees F (+/- 3 degrees), Relative Humidity - 50% (+/- 5%).

   Lighting: No natural light; artificial light level as required by code for the type of space. Design light fixtures with explosive-proof switches.

   Floor : Concrete floor sealed with floor hardener. Floor strength: 4000 psi (27.6 MPa) 28 day compressive strength.

   Ceiling: Metal decking with vapor barrier and insulation.

   Walls: Split face CMU walls with insulation and vapor barrier.

   Roof Construction: Design steel joists to support metal decking, insulation and single ply roof membrane. Slope roof to drains as required. Provide parapet wall to be a minimum 3'-6" in height. Use a white membrane color or have membrane painted white. Provide design for

roof fall protection for each roof.

Security : Design a layout for conduit and junction boxes to the security equipment (not in contract) at each door. Show connection to alarm contacts and magnetic locks. Interconnect to the existing fire alarm system.

Water: Fire sprinkler system.

Electrical: Show duplex outlets as required by code.

Telephone: Show telephone jacks as required by LOC.

4. SPECIAL REQUIREMENTS:

Prohibited Materials: Certain construction materials contain elements and compounds that shall be prohibited from use within any space associated with the storage of documents from the Library of Congress. See attached list of materials from the LOC.

5. FURNISHINGS:

Furniture/Movable Equipment - Show an emergency eye wash/shower station.

Built-in Equipment - Guide rails and bollards must be shown in plan to keep fork lifts from damaging the walls.

GENERAL NOTES:

1. Design bay #1 of the loading dock for tractor trailers to back up against exterior overhead door with dock seal and canopy. Provide a two hour rated wall between other bay. Show a manual dock leveler. Provide interior overhead for access by forklifts and located battery chargers in this bay with the appropriate exhaust system.
2. Design bay #2 for a paneled truck to back completely into bay past the exterior overhead door). Provide bay with interior overhead door and a separate personnel door.
3. Show a four foot height from exterior to the floor at each dock in both bays.

BOOK STORAGE FACILITY PROGRAM REQUIREMENT FORM #9

ROOM TYPE: Vestibule

TOTAL AREA (NSF): 720 SF (approximately)

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1. GENERAL SPACE CHARACTERISTICS:

   Adjacencies - Adjacent to Circulation Corridor, Cold Storage Vaults and Loading Dock.

   Access - Access to exterior with egress door. Access restricted to designated LOC personnel and AOC maintenance staff.

2. PHASING REQUIREMENTS:

   Not applicable.

3. ROOM CHARACTERISTICS:

   Door Heights/Widths: personnel door 7'-0" X 4'-0"(cold storage door) and egress door 7'-0" x 3'-0".

   Room Height - 10'-6" clear.

   Room Dimensions - 36'-0" x 20'-0" approximately.

   Environmental: Temperature - 70 degrees F (+/- 3 degrees), Relative Humidity - 50% (+/- 5%).

   Lighting: No natural light; artificial light level - as required by code.

   Floor : Concrete floor sealed with floor hardener. Floor strength: 4000 psi (27.6 MPa) 28 day compressive strength.

   Ceiling: Metal decking with insulation and vapor barrier.

   Walls: Split faced CMU with insulation, vapor barrier and gypsum wall board.

Roof Construction: Design steel joists to support metal decking, insulation and single ply roof membrane at the mechanical mezzanine. Slope roof to drains as required. Provide parapet wall to be a minimum 3'-6" in height. Use a white membrane color or have membrane painted white. Provide design for roof fall protection for each roof.

Security : Design a layout for conduit and junction boxes to the security equipment (not in contract) at each door to storage module. Connect alarm contacts to doors and magnetic locks. Interconnect to the existing fire alarm system. Refer to NFPA 101 for further applicable requirements.

Water: For fire sprinkler system only.

Electrical: Show duplex outlets as required by code.

Telephone: Show telephone jacks as required by LOC.

4. SPECIAL REQUIREMENTS:

Prohibited Materials: Certain construction materials contain elements and compounds that shall be prohibited from use within any space associated with the storage of documents from the Library of Congress. See attached list of materials from the LOC.

5. FURNISHINGS:

Furniture/Movable Equipment - not applicable.

Built-in Equipment - Guide rails and bollards must be shown in plan to keep fork lifts from damaging the walls.

GENERAL NOTES:

1. Design storage room (600 square feet) with double doors from vestibule. Storage is for boxes and equipment to be used at facility.
2. Vestibule is to entrance to quarantine room.

BOOK STORAGE FACILITY PROGRAM REQUIREMENT FORM #10

ROOM TYPE: Office Area (Admin. Area, Conference, Supervisor's Office and Misc. Spaces)

TOTAL AREA (NSF): 1,800 SF (approximately)

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1. GENERAL SPACE CHARACTERISTICS:

   Adjacencies - Adjacent to Processing area and Quarantine Room.

   Access - Access to exterior with egress door. Access restricted to designated LOC personnel and AOC maintenance staff.

2. PHASING REQUIREMENTS:

   Not applicable.

3. ROOM CHARACTERISTICS:

   Door Heights/Widths: personnel door 7'-0" X 3'-0"(main entrance to addition) and double doors to Processing Area door 7'-0" x 3'-0"; .

   Room Height - 10'-0" clear.

   Room Dimensions - 30'-0" x 60'-0" approximately.

   Environmental: Temperature - 68 degrees F (minimum winter temperature) through 75 degrees F (maximum summer temperature), Relative Humidity - 50% (+/- 5%).

   Lighting: Design with windows and artificial lighting.

   Floor : Concrete floor sealed with floor hardener. Floor strength: 4000 psi (27.6 MPa) 28 day compressive strength.

   Ceiling: Acoustical tile ceiling under metal decking with insulation and vapor barrier.

   Walls: Split face CMU with insulation and vapor barrier.

   Roof Construction: Design steel joists to support metal decking, insulation and single ply roof membrane at the mechanical mezzanine. Slope roof to drains as required. Provide parapet wall to be a minimum 3'-6" in height. Use a white membrane color or have membrane painted white. Provide design for roof fall protection for each roof.

Security : Design a layout for conduit and junction boxes to the security equipment (not in contract) at each door in Office Area except doors to restrooms. Interconnect to the existing fire alarm system. Refer to NFPA 101 for further applicable requirements.

Water: Design plumbing for electric water fountain, sink, restrooms, janitor's closet and fire sprinkler system only.

Electrical: Show duplex outlets in all spaces as required by Codes. Provide GFI outlets at kitchenette and restrooms.

Telephone: Show telephone jacks as required by LOC.

4. SPECIAL REQUIREMENTS:

Prohibited Materials: Certain construction materials contain elements and compounds that shall be prohibited from use within any space associated with the storage of documents from the Library of Congress. See attached list of materials from the LOC.

5. FURNISHINGS:

Furniture/Movable Equipment - Design wall and base cabinets for kitchenette. Provide design for plumbing fixtures for 20 to 30 people.

Built-in Equipment - not applicable.

GENERAL NOTES:

1. Administrative Area must accommodate at least five workstations, security desk space for copier and fax machines as wells a vestibule for the main entrance door into addition.
2. Conference Room must accommodate at least 10 people and have an audio\video system. Contractor to provide conduits at ceiling and wall for system.
3. Supervisor's Office must have glass door and window to Administrative area. Provide 150 square feet of space.
4. Design the Women's Restroom that can accommodate twenty to twenty-five people and provide the necessary handicapped accessible fixtures.
5. Design the Men's Restroom that can accommodate twenty to twenty-five people and provide the necessary handicapped accessible fixtures.
6. The Kitchenette must have space for a refrigerator(not in contract) and handicapped accessible sink.
7. The Breakroom must be able to accommodate 20 people sitting down and 20 lockers (not in contract).

E. DELIVERABLES:

The Consultant shall prepare drawings and specifications for Modules #3 and #4 at the LOC Book Storage Facility at Fort Meade within a nine month time period. The design must meet all applicable codes, standards and criteria established in this program. The construction documents and specifications must be designed with three submissions (35%, 65% and 100%). However, the Consultant shall hold monthly meetings with the AOC and the Library/Consultant and/or as necessary during the development of the design and shall ensure that there has been sufficiently detailed discussions whereby the final design will be submitted in a format acceptable to the AOC. The design shall contain drawings as required to present the information and conform to the AOC A/E Design Manual. The Consultant shall confirm to the Library of Congress and the AOC the viability of the project schedule for Modules #3 and #4 based upon assumptions provided within. If based upon a thorough review of the Program for Design and the applicable codes, the schedule will need to be revised, the consultant shall notify the AOC in writing no later than one month after the Notice to Proceed.

A thorough preliminary code analysis shall be submitted for review at 35% completion of construction drawings and a final code analysis submitted at 100% construction drawings. Drawings and specifications of the 35 % submission shall be submitted for review comments fourteen weeks after the issuance of this task order, with a cost estimate. The AOC will retain a consultant to perform a Hazard Operability Study for the project at 65% completion. This consultant will review all completed work to assess the code analysis submittals, life/safety and fire protection issues. The 100% construction documents sets shall be submitted nine months after the issuance of the task order. The Consultant will provide a cost estimate in the format outlined in the AOC A/E Design Manual. Sixteen sets of drawings/specifications shall be provided, as well as Microstation CAD (dgn format) files for each submission. The design consultant will be responsible for the quality of their deliverable design products. A quality control certification by a senior architect and engineer will be provided as part of the submission to the AOC, as well as code verification by a certified code specialist. Focus shall be on the shelving storage layout (height, etc.) as it relates to the codes, the physical connection to the existing storage module, and coordination of established mechanical and air filtration systems.

The Consultant must provide deliverables by the following dates:

1.	Award	tba
2.	Notice to Proceed	tba
3.	Code Review	tba
4.	35%	tba
5.	Review	tba
6.	65%	tba
7.	Review Cuts	tba
6.	100%	August 1, 2003
7.	Back Check	two weeks after 100%
8.	Finals	two weeks after Back Check

F. CONSTRUCTION COST ESTIMATE:

It is estimated that the construction cost is approximately $12,000,000 with a 20% contingency of $2,400,000. All other soft costs are excluded. It should be noted that this budget does not take into account the impact that NARA standards may have on the design.

G. TECHNICAL POINT OF CONTACT:

Mr. Andre P. Copeland is the point of contact for this work and can be contacted at (202) 226-2530, FAX (202) 226-1981and E-mail Address: acopelan@aoc.gov.

Record drawings and specifications for Module #1 are available from the Record Management Division (Ben Myers 225-5581). The Consultant shall survey the existing facility before developing or submitting any submission or recommendation. Contact points within each jurisdiction shall be provided to obtain additional building information.

H. APPLICABLE CODES/STANDARDS:

The Consultant must apply the following Codes and Standards:

NFPA 101, Life Safety Code, 2000 Edition;
NFPA 232, Standard for the Protection of Records, 2000;
NFPA 22, Standard of Water Tanks for Private Fire Protection, 1998;
NFPA 24, Standard for the Installation of Private Fire Service Mains..., 2001;
1999 BOCA, National Building Code;
1998 International Mechanical Code;
1997 International Plumbing Code;
1999 Life Safety Code;
National Electric Code, NFPA 70;
Maryland Department of Environment Design;
AOC A/E Design Manual (latest issue);

and all referenced Codes contained within the above.

The consultant shall retain an independent code consultant and provide a certification letter to the Library of Congress and the Architect of the Capitol regarding the overall project and its compliance at each deliverable stage. Other applicable code requirements or standards, such as, but not limited to, the following and shall not supplant the applicable codes listed above:

NARA Standards
NFPA 909, code for the Protection of Cultural Resources, 2001

or any other standards requested by the Library and approved by the AOC prior to the commencement

of design.

I. PROPRIETARY ITEMS:

The following items which are used in Modules #1 and #2 are proprietary and must be specified for use for Modules #3 & # : the fire alarm system, the door hardware, and the shelving.

J. STORAGE MODULE AND #2 DRAWINGS:

Attached are architectural and site drawings of Storage Module #1 and #2 for reference use only.