6 OCT 1977

MEMORANDUM FOR: Director of Logistics

VIA: Acting Chief, Real Estate and Construction

Division, OL

STATINTL

FROM:

Chief, Headquarters Engineering Branch,

RECD/OL

SUBJECT:

Project CAMS Facilities Support

REFERENCE:

Memo dtd 23 Aug 77 to D/L fm D/ODP, subj Summary of Space and Utility Requirements

- 1. Pursuant to the ODP requirement for facilities support for Project CAMS, this memorandum addresses the proposed sites, construction plan, equipment purchases, and required funding for both interim and final CAMS systems assuming a Headquarters Building location. As stated in referent, the CAMS requirement is:
 - a. Interim CAMS In place upgrade within GC47 by March 1978. Uninterruptible Power Source (UPS) system is required.
 - b. Final CAMS Separate 6,500 sq. ft. of computer facility for two large Central Processing Units (CPU) and peripherals (e.g., IBM 370-168) within Metropolitan Washington area (MWA) by November 1979. UPS power is required.
- It is understood that the availability of funds resulting from the ongoing ODP technical and fiscal dialogues will ultimately determine the type of CPU to be provided. The major differences being whether chilled water is required for a Cooling Distribution Unit (CDU) and 415 Hz power is required for the CPU. Consequently, the following discussion presumes that both chilled water and 415 Hz power must be provided. Further, a Headquarters Building location has been assumed because of the many unknowns associated with other Government owned MWA locations and the high cost of duplicating the Headquarters CAMS communications links already available.

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3. Interim CAMS (GC47) --

- a. The availability of the physical site within GC47 is entirely controlled by ODP and is already environmentally conditioned space. To date, it is our understanding the "heat to air" load of the equipment to be removed approximates the load of the incoming new equipment; consequently, no change is anticipated in the existing air handlers. However, if a water—cooled CPU is selected, additional chilled water piping and manifold is required from the existing GC47 loop.
- b. Electrically, adequate 60 Hz power can be supplied from the GJ16 60 Hz UPS system. interim requirement for 415 Hz UPS power is to be supplied from the 60 Hz ODP UPS (Director's driveway) through the 415 Hz Teledyne frequency converters (made available by the startup of the new 415 Hz UPS in BCO5). It is tentatively planned to relocate these converters to potential sites nearer the GC47 area on either the basement or ground floor to compensate for the voltage drop due to line loss to GC47. Use of the converters is the most expeditious solution in the "interim requirement" time frame. It should be noted, however, that the total power now available from the 60 Hz UPS system (1,300 kVA) supplied from B Vault is the maximum available without a major new electrical vault [i.e., the combination of existing loads and all new additional machine electrical loads in GC03, 1D16, and GC47 (fed from B Vault) must be equal to or less than the existing power budget of 1,300 kVA.
- c. Funds for construction should be available as soon after the start of FY 78 as possible. Estimated costs are:

Modification and relocation of 415 Hz converters \$17,000

Backup 415 Hz motor generator set (provide 415 Hz power if converters fail)

Electrical work GC47

10,000

25,000

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Site preparation for converters 20,000

HVAC modifications/piping 10,000

Contingency 10 percent 8,000

Total \$90,000

4. Separate CAMS Facility •-

- It is presumed that Project SAFE and Project ADSTAR are viable programs and will be located as planned in the northeast corner of the ground floor of the Headquarters Building. It has been previously established that the south half of the Headquarters Building has reached electrical saturation. Therefore, the only potential Headquarters location is in the northwest corner on either the ground or first floor. The numerous OCR heavy Diebold type rotary power files throughout the northwest corner of the first floor eliminates a first floor selection. Therefore, on the ground floor, the proposed location is the interior side of G corridor and bounded by F and H corridors and the west end of the library courtyard (see attached building plan). This proposed site is the joint recommendation by HEB and Chief, Architectural Design Staff, LSD.
- b. The 6,500 sq. ft. requirement must be increased to approximately 7,000 sq. ft. to allow for electrical distribution panels, air handlers, etc. Further, it is estimated that an additional 2,000 sq. ft. will be required for the 60 and 415 Hz UPS systems required for CAMS (or a total of 9,000 sq. ft.).
- c. The total CAMS electrical load must be accommodated within a maximum of 300 kVA available from existing "D" Vault. (Note: Allowance has been made for 450 kVA for the anticipated SAFE user area electrical requirement to be served by D Vault.) Emergency backup power will be available when the second, or ODP, 2500 kW generator installation is completed

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(anticipated September 1979). However, when the SAFE system is on line in 1982 (with the installation of the third 2500 kW generator completed), there may be a marginal capacity condition where load shedding of some ODP systems may be necessary.

d. The preliminary cost estimates which follow are to be considered as budgetary estimates for the construction required in 1979:

9,000 sq. ft. site preparation (computer center and UPS		
systems @ \$90/sq. ft.	\$	810,000
60 and 415 Hz UPS systems instal	1ed	400,000
Architect-engineer design		50,000
Contingency 10 percent		126,000
TOTAL	\$1	,386,000

The following fiscal year split of the required funding would allow facilities design to commence in 1978:

FY 1978	\$ 50,000	Design
	\$ 50,000	
FY 1979	\$400,000 810,000 126,000	UPS hardware Site Preparation Contingency
	\$1,336,000	

If additional FY-78 CAMS money is available, advancing the \$400,000 for UPS hardware into FY-78 from FY-79 would permit earlier contracting for long lead UPS hardware.

5. The following preliminary CAMS milestones of a construction plan have been established assuming:

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- a. Headquarters location (northwest ground).
- b. The project is exempt from Congressional prospectus approval since this is directed expansion by Congress with attendant funding already authorized.
- c. No additional generator is required at this time.
- d. No electrical expansion required in D Vault or new vault.
- e. Funding is available in FY 1978/1979 as required.

Site Preparation

1 Oct	77	Transfer design funds to GSA
1 Jan	78	Final site selection
1 Feb	78	Advertise/award architect- engineer contract
1 Apr	78	Start design
1 Aug	78	Complete design
1 Oct	78	Transfer construction funds to GSA
1 Jan	79	Award construction contract
1 Jan	79 ·	Start vacating site (*Hq.)
1 Feb	79	Start CAMS site preparation
1 Aug	79	CAMS site preparation complete.

*See New Building Acquisition following

New Building Acquisition/Secondary Hq. Relocations

1	Jun	78	New	building	available
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1 Jan 79 Final Hq. secondary relocation site available

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UPS Site

1 Feb 78	Award UPS hardware contract
1 Feb 79	Start UPS site preparation
1 Jul 79	Complete site preparation/start test
1 Aug 79	UPS on line

- 6. The acquisition of new leased space (80,000 to 100,000 sq. ft.) outside of the Headquarters Building to satisfy a variety of Agency needs, including CAMS, is being addressed by the Logistics Services Division (LSD) and the Real Estate and Construction Division of the Office of Logistics and the General Services Administration (GSA). The timing of CAMS construction and all secondary move sequences, continues to be determined by the availability of this new space. Consequently, our efforts directed to completing the CAMS construction by 1 August 1979 are constrained by the GSA-CIA space acquisition cycle.
- 7. In summary, it appears that March 1978 for interim CAMS and November 1979 for a separate CAMS center are realistic goals assuming availability of funding and new space ready for Agency occupancy by October 1978. These estimates contained herein are considered budgetary estimates until additional ODP detailed planning has been accomplished to determine exact systems requirements and a final site selection has been completed. LSD should begin to integrate this CAMS requirement into the FY=78/79 move sequences and plan for the relocation of the present CAMS site occupants.



Att

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