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Construction of a Computer Facilities Building by the Social Security Administration: Justification and Alternatives. HRD-77-8; B-164031(4). November 17, 1976. Released November 22, 1976. 8 pp.

Report to Rep. L. H. Fountain, Chairman, House Committee on Government Operations: Intergovernmental Relations and Human Resources Subcommittee; by Elmer B. Staats, Comptroller General.

Contact: Human Resources Div.

Budget Function: Miscellaneous: Financial Management and Information Systems (1002).

Organization Concerned: Social Security Administration.

GAO investigated the need for the Social Security Administration's (SSA) proposed computer facilities building. The use of certain computer systems at the agency were analyzed to determine whether the present capacity of these systems could support a greater workload or tolerate a transfer of work among the systems to allow installation of new systems, alteration of current space, or other potential alternatives to the proposed construction. Findings/Conclusions: Analysis by use of a computer program designed to measure computer-capacity utilization and to evaluate production indicated that the 15 systems examined were capable of supporting more than twice the largest identifiable workload processed by the agency. Certain practices and procedures were believed to be major causes of the apparent underutilization of computers. SSA was acting to improve the operations and security of its computer facility. A detailed utilization analysis was planned, which should be instrumental in further identification of equipment needs. GAO will continue to monitor the activities associated with the analysis. (SW)

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**COMPTROLLER GENERAL OF THE UNITED STATES**  
WASHINGTON, D.C. 20541

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**RELEASED**  
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NOV 17 1976

The Honorable L. H. Fountain, Chairman  
Subcommittee on Intergovernmental Relations  
and Human Resources  
Committee on Government Operations  
House of Representatives

Dear Mr. Chairman:

In a July 17, 1975, letter, you requested that we look into certain allegations questioning the need for the Social Security Administration's proposed computer facilities building. It was alleged that substantial savings could be realized by expanding the current computer center, located on the second floor of the Operations Building at the agency's headquarters in Woodlawn, Maryland, and/or replacing some computers with equipment of higher capacity requiring less space.

We analyzed the use of certain computer systems at the agency to determine whether the present capacity of these systems could support a greater workload or tolerate a transfer of work among the systems to allow installation of new systems, alteration of current space, or other potential alternatives to the proposed construction. We also reviewed the history and development of the agency's headquarters expansion project, of which the proposed computer facility is a major component, to determine whether such alternatives had been considered.

As requested by your office, we are providing this summary of the major actions taken on these matters after your request. We have presented details of these actions to your office as the events occurred.

**DEFICIENCIES IN THE AGENCY'S**  
**OPERATION OF SELECTED COMPUTER SYSTEMS**

The agency processes most of the workload for its major programs on 17 large-scale computer systems. To analyze these systems, we obtained a commercial computer program designed to measure computer capacity utilization and to evaluate production management. We also hired a

consultant with experience in both the field of computer performance evaluation and in the use of the commercial computer program.

We measured the agency's use of the selected computers for the 4 busiest days of computer operations during September 1975, which agency records showed to be the busiest month between July 1973 and January 1976 for the 15 systems analyzed (appropriate data for 2 of the 17 systems was not available). Using the commercial computer program, we basically compared the capacity used by each system with the demonstrated potential capacity available during the 4 days selected for review. Our analysis indicated that the 15 systems examined were capable of supporting more than twice the largest identifiable workload processed by the agency.

While observing agency systems operations, we noted certain practices and procedures that we believe were major causes of the apparent underutilization of computers. Agency operations personnel we observed displayed an apparent lack of knowledge of equipment capabilities and an indifference toward completion of necessary tasks. Communication seemed to be lacking between operations personnel from one shift to the next. For example, we regularly observed these personnel stopping the systems while changing shifts.

From an organizational view, computer groups are generally each dedicated to one or very few major tasks, such as processing Supplemental Security Income or Health Insurance workloads. As a result, groups virtually never share work, even though one group may be extremely busy while an adjacent group is idle. In addition, the security system for the existing operation had certain weaknesses.

On March 18, 1976, we briefed the Commissioner of Social Security and his immediate staff on the results of our analysis. We agreed to the Commissioner's proposal that we make a similar presentation to the agency's technical staff at the operating level to facilitate more detailed discussion of our work. To help the technical staff to prepare for this second briefing, we gave the agency a draft summary of our analysis approach and findings on March 26, 1976 (copy previously provided to your office). The briefing took place on April 14, 1976.

By letter dated April 16, 1976 (copy previously provided to your office), the agency stated that it considers our analysis only an indicator of possible underutilization of computer equipment. Although it acknowledged that the

analysis deserved further indepth attention, the agency said our results were not conclusive enough to be used as a basis for making final decisions on equipment or facilities procurements. Nevertheless, as a result of our analysis, the agency planned to:

1. Contract immediately with an outside organization to further examine present agency utilization patterns and practices. (We have had continuing contact with the agency regarding this contract. The agency received a contract proposal for this work in late September 1976 from the MITRE Corporation, a Federal Contract Research Center which provides services only for the Government and other non-profit institutions on a selective basis.)
2. Initiate no further significant computer acquisitions, including those proposed in the agency's 1977 budget, until the contract study is complete. (The agency advised the Senate Appropriations Subcommittee on Labor, Health, Education, and Welfare of these plans on July 23, 1976.)
3. Finalize ongoing contract negotiations with an outside expert in the field of systems management, staffing, and development for long-term assistance. (Dr. Herbert Maisel, previously Director of the Academic Computation Center at Georgetown University and former member of the Supplemental Security Income Study Group, became a full-time agency employee on September 1, 1976. Besides working in the area of systems management, staffing, and development, he will serve as project officer for the consultant study discussed above.)
4. Initiate overlapping shifts for operations personnel to eliminate the stopping of equipment during shift changes and improve communications between employees on different shifts. (This change went into effect for about 350 operations personnel on June 28, 1976.)

The agency agreed with our observations on security weaknesses and promised in its April 16 letter to take immediate steps, including an assessment of the level of training and experience of present security personnel, to improve physical security. The agency has since advised us that it has (1) established new and more restrictive procedures for entering and leaving the computer area, (2) reduced the number of persons authorized access to the area and generally

restricted the flow of personnel traffic through the area, and (3) completed the technical specifications for competitive procurement of an automated access system. The agency also hired the MITRE Corporation to make a preliminary physical security evaluation of the computer facility. This 4-week evaluation was completed in July 1976. The agency also indicated that it will implement our suggestion of making a detailed security risk analysis, as provided for under National Bureau of Standards guidelines.

DISAGREEMENT ON WHETHER PROJECT  
ALTERNATIVES WERE ADEQUATELY CONSIDERED

By letter dated May 14, 1976 (copy previously provided to your office), we responded to the agency's April 16 letter. We noted that the agency apparently had not adequately considered the alternative of modifying and upgrading the existing computer facility. Specifically, we took issue with the agency's position that this alternative would also require expanding the computer area and would result in intolerable interference with mandatory daily operations. We concluded that the agency's estimates of the costs of a combined renovation-expansion approach designed to minimize such interference were considerably overstated. We suggested that before contracts were signed the agency should present to the House and Senate Public Works Committees, which authorized the project, complete details on these issues to enable the Committees to decide whether to reassess their decision on the project.

In commenting on our May 14 letter, the agency acknowledged that its planned indepth study of computer utilization might show that computer space should not be expanded and perhaps that it should be reduced. In the agency's view, however, the problem of computer operating efficiency had been exaggerated, particularly in terms of its effect on the need for the proposed facility. The agency was concerned that any action to delay or terminate construction of the proposed computer building might hinder construction of the other component of its headquarters expansion project, the Metro West Office Building planned for downtown Baltimore.

The agency added that it was in touch with pertinent congressional committees concerning the questions raised by our letter. The agency reaffirmed not only its prior cost estimates but also its contention that modifying the existing facility would entail a combined renovation-expansion approach, which, because of the cost and operational implications, would be of questionable feasibility.

To our knowledge, however, no feasibility or cost analyses of correcting the deficiencies in the computer area without further expansion have ever been prepared.

Our May 14 letter also pointed out that the Environmental Impact Statement, in describing project alternatives, did not mention the modification alternative, and thus appeared to violate Council on Environmental Quality guidelines. We therefore suggested that the agency, in conjunction with the Department of Health, Education, and Welfare and the General Services Administration, contact the Council to discuss supplementing and recirculating the final statement, as provided for in Council guidelines.

The agency responded that, after reviewing the content of the statement and the procedures followed in its preparation and submission and after discussing the subject with the General Services Administration, the agency concluded that there was no deficiency. According to Council personnel, as of early September 1976, neither General Services nor the agency had contacted the Council to discuss these matters, as we had suggested.

We gave the Council a copy of our May 14 letter and discussed with Council personnel our position on the project's environmental aspects. In August 1976, after reviewing our position as well as the agency's views as contained in its response to our letter, the Council advised us that:

"\* \* \* we agree with GAO's finding that the modification of the existing computer facility was evidently a meaningful alternative that was not explored. In general, we are seeking to work with GSA [the General Services Administration] to make maximum use of existing facilities and structures, a requirement before new construction is considered. This is an area where economic, social, and environmental benefits can often be made to work together. We regret that in this case a fuller exploration of these alternatives was evidently not carried out by the responsible agency."

DEVELOPMENTS SINCE OUR  
MAY 14 LETTER TO THE AGENCY

We provided the Public Works Committees, as well as other appropriate committees and pertinent agencies, with copies of our March 26 and May 14 letters and the agency's April 16 response. We also offered to discuss our views on the project

with the staffs of the Public Works Committees and help them analyze any additional information the agency might provide. In addition, we discussed our work with staff members of the House Ways and Means Committee's Subcommittees on Oversight and Social Security.

On June 10, 1976, at the request of the Senate Public Works Committee staff, we briefed interested congressional staff members on our review. We provided a chronology of our activities since the start of the review, discussed our observations concerning both the continued use of the existing facility and the use of present agency computer resources, and stated our conclusions. A major concern of the Senate Public Works Committee staff was the General Services Administration's opinion that delaying or terminating construction of the computer building would preclude construction of the Metro West Building under current funding arrangements.

Finally, we suggested that certain additional information apparently needed for decisionmaking might be developed if the scheduled award date for the primary construction contract could be extended. General Services later arranged to delay the contract award date for an additional 30 days.

On June 2, 1976, the Chairman, House Committee on Public Works and Transportation, directed General Services and the agency to present to the Committee details on the issues discussed in our May 14 letter before additional expenditures were made or new obligations entered into. Subsequently, agency and General Services officials met with the Chairman to discuss the project. By letter dated June 25, the Chairman advised General Services to proceed with the project since he was satisfied that its construction was urgently needed. Accordingly, the primary construction contract was signed on June 29 and site clearing for the computer building began on August 31.

#### UNRESOLVED ISSUES

We have noticed apparent inconsistencies between agency statements reflecting its planning (1) for acquiring large-scale computer hardware and (2) for constructing the proposed computer building to house such equipment. In its 5-year large-scale system procurement plan, the agency calls for acquiring and installing 19 such systems by fiscal year 1980, including 4 during each of fiscal years 1976 through 1979. The agency's long-range planners further forecast that the agency will require 6 additional large-scale computers--or a total of 25--by fiscal year 1980. According

to current construction schedules, however, the new computer building will not be completed until mid-1979.

The 5-year plan calls for some existing computer systems to be released as the new systems are acquired and installed. Neither this plan nor any other agency documents we reviewed indicate where the agency intends to install the new systems while the new building is under construction.

The agency apparently will continue to base its large-scale computer acquisitions on the 5-year plan, as modified by its commitment to initiate no significant computer acquisitions until after the consultant study of the agency's computer operations is completed. In a January 1976 letter to the Chairman, Subcommittee on Buildings and Grounds, Senate Committee on Public Works, regarding the need for a new electric power substation in the existing computer facility, the agency indicated that this plan represented its attempt to meet anticipated orderly and continuing workload growth. The agency told us in June 1976 that the Department of Health, Education, and Welfare continues to support the 5-year plan.

The agency will apparently have to decide to either suspend all large-scale computer procurements until the new building is completed or install the new systems temporarily in the existing facility. The latter action would necessitate correcting many of the deficiencies in the existing facility which the agency, in defending its decision to construct a new building, has contended cannot feasibly be corrected because of technical, economic, and operational considerations.

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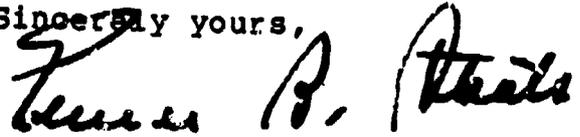
Since the construction contract for the agency's headquarters expansion project has been signed and site clearing for the computer center has begun, we plan no further work reviewing project alternatives.

As noted above, the agency is acting to improve the operations and security of its computer facility. The planned detailed utilization analysis will be instrumental in further identifying the agency's equipment needs. According to agency officials, if this analysis identifies a need for the agency to acquire any additional systems during the construction of the new building, it will also determine where and how such systems will be installed. Accordingly, as agreed with your office, we will continue to monitor closely the activities associated with that analysis and agency actions based on its

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results, particularly any major computer hardware acquisitions or installations. We will keep you advised of our progress.

Sincerely yours,

A handwritten signature in black ink, appearing to read "James B. Heath". The signature is written in a cursive style with a large initial "J" and "H".

Comptroller General  
of the United States