

**JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION
OF THE VIRGINIA GENERAL ASSEMBLY**

SPECIAL REPORT:

**Review of the
900 East Main Street
Building Renovation
Project**

**SPECIAL REPORT OF THE
JOINT LEGISLATIVE AUDIT
AND REVIEW COMMISSION**

**Review of the
900 East Main Street
Building Renovation Project**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



SENATE DOCUMENT NO. 55

**COMMONWEALTH OF VIRGINIA
RICHMOND
1994**

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March 11, 1994

The Honorable Stanley C. Walker
Chairman
Joint Legislative Audit and Review Commission
General Assembly Building
Capitol Square
Richmond, Virginia 23219

Dear Senator Walker:

Attached is a copy of the JLARC study, "Special Report: Review of the 900 East Main Street Building Renovation Project." This study, requested in September 1993 by the Senate Finance Compensation and General Government Subcommittee and authorized by the Commission, examines the problems that occurred in the renovation of the 900 East Main Street Building.

We wish to acknowledge the cooperation and assistance extended to our staff by the Department of General Services, its contractors, the proposed tenant agencies, the Governor's office, the Attorney General's office, and the Auditor of Public Accounts.

Sincerely,

A handwritten signature in cursive script that reads "Philip A. Leone".

Philip A. Leone
Director

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I. Introduction

The 900 East Main Building is a building complex overlooking Capitol Square in Richmond, Virginia. It has approximately 356,000 square feet of space. It consists of a west tower with fourteen stories built around 1926, and an east tower with six stories built around 1968. In 1989, the General Assembly appropriated approximately \$11,865,000 to purchase the building. After months of negotiations, the building purchase was concluded in February 1990. In 1990 the General Assembly appropriated an additional \$22,116,500 for renovations to the building.

The purpose of the renovation project was to renovate the building to provide space for State agency operations, including the Department of Information Technology and its computer operations. A decision was made by the Department of General Services (DGS) to perform the project in two phases. The first phase was to prepare for the renovation. This phase included abating asbestos in the building (which entailed removing, containing, or encapsulating asbestos with the intent of avoiding future asbestos disturbance). The second phase was to be the actual renovation work to make the building suitable for State agency tenants. Phase one asbestos abatement and demolition work occurred between June 1991 and October 1992. Phase two renovation construction work began in January 1993.

KEY ACTIVITIES OF THE 900 EAST MAIN PROJECT

As the time line in Figure 1 shows, there was overlap in terms of key phase one and phase two activities. The project began with an asbestos survey of the building. The asbestos survey apparently did not identify all of the asbestos in the building.

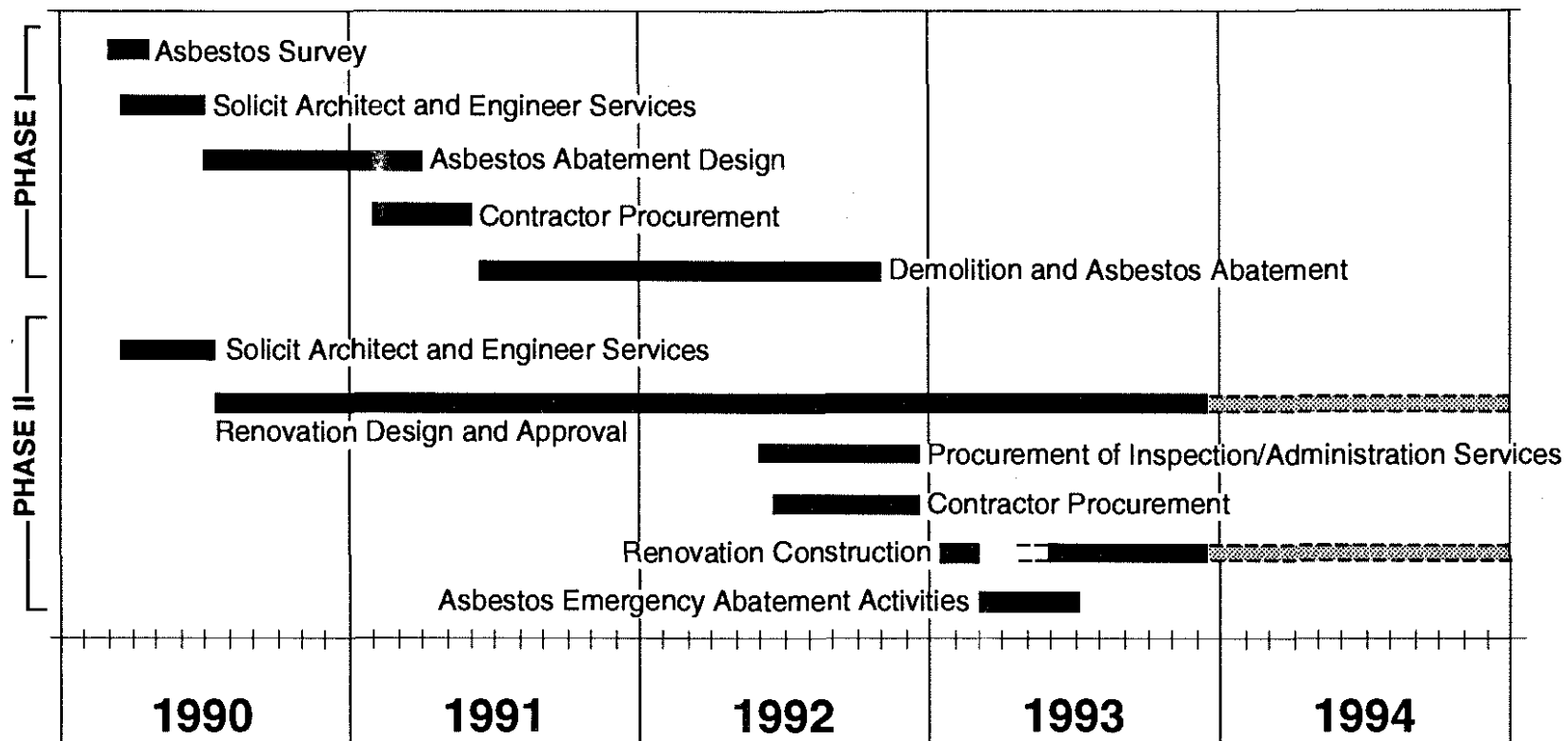
DGS solicited architectural/engineering (A/E) services simultaneously for the two phases of the project. DGS received responses from firms that proposed to do the first phase only, the second phase only, and both phases. The department selected different A/E firms for each phase.

Next, both asbestos abatement design and renovation design occurred. If asbestos abatement does not involve total removal of asbestos-containing material, it is helpful (if not essential) in the asbestos abatement design and execution to know what the renovation plans are for the building. As shown in Figure 1, the renovation design and approval for the building has been an on-going process that was still not complete as of November 1993.

Phase two renovation construction initially began in January 1993, but was halted in March 1993 when asbestos was unexpectedly encountered, creating an asbestos emergency. Construction work stopped for a month and a half, and proceeded at a substantially slower pace for another month, while additional asbestos abatement

Figure 1

Time Line for Phase One and Phase Two 900 E. Main Project



activities were underway. Construction work resumed at full work force levels as asbestos abatement activities were completed.

It is anticipated that the primary tenant, the Department of Information Technology (DIT), will move into the building between April and September of 1994. The other tenants are expected to move into the building by December 1994.

KEY PARTICIPANTS IN THE 900 EAST MAIN PROJECT

Key participants in this renovation project generally fall into three broad categories: Department of General Services staff; contractors; and State agencies to occupy the building.

The Department of General Services (DGS) is the representative of the State as owner of the building. DGS's role includes managing construction and renovation projects at and near Capitol Square. In this capacity, DGS provided oversight of the renovation of the 900 East Main project. Figure 2 shows an organization chart of DGS, which represents the various levels of DGS staff who were involved in the 900 East Main project.

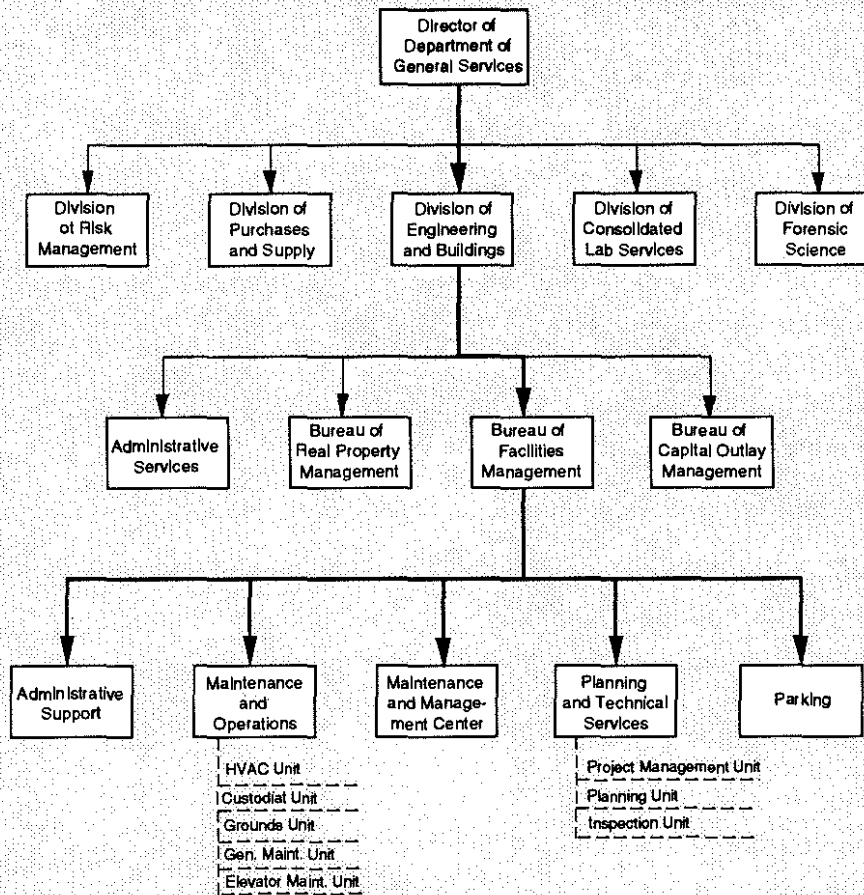
This project was carried out primarily by staff in the Division of Engineering and Buildings (DEB). However, within DEB, staff in the Bureau of Facilities Management (BFM) are responsible for overseeing the daily planning and implementation of the project, while staff in the Bureau of Capital Outlay Management are responsible for reviewing architectural designs and other oversight responsibilities at key points in the project. BFM staff with the most responsibility for managing this project are located in the Planning and Technical Services Unit. This unit of DGS employs project managers, some architectural and engineering staff, and a small inspection unit.

Key contractors on this project, for both professional and non-professional services, included:

- HDH: performed the initial asbestos survey; was the architect/engineer for the asbestos design work in phase one; was also the construction administrator/inspector for phase one work.
- Insulation Specialties, Inc. (ISI): the general contractor in phase one; the contract was to perform asbestos abatement work, demolition, and roof and window replacement.
- Cooper-Lecky (CLA): the architect/engineer for phase two; TDFB is Cooper-Lecky's engineering consultant.
- ANADAC: the contract administrator and construction inspector for phase two.

Figure 2

Organization of the Department of General Services



Source: JLARC staff graphic based on Department of General Services Organizational Chart.

- Armada/Hoffler: the general contractor for phase two.
- Professional Service Industries (PSI): the phase two monitor and inspector of asbestos work; hired as a result of the asbestos emergency.

There are four State agencies which will occupy the building:

- the Department of Information Technology (DIT);
- the Department of Criminal Justice Services (DCJS);
- the Department of Employee Relations Counselors (DERC); and
- the Virginia Council on Child Day Care and Early Childhood Programs (CDCEC).

DIT will occupy approximately seventy percent of the building space. Their operations will be located throughout almost all of the six floors in the east tower, and on the first three floors of the west tower. In addition, DCJS will have office space on floors five through fourteen in the west tower. The Department of Employee Relations Counselors and CDCEC are fairly small agencies and will use small amounts of space in the building. DERC will be located on the fourth floor of the east tower, and CDCEC will be located on the fourth floor of the west tower.

PRIOR REVIEWS

Several problems regarding the 900 East Main project have been made widely known, prompting several reviews of this project prior to JLARC review. These problems include asbestos problems, numerous change orders, cost overruns, and schedule slippage. These problems will be discussed in more detail in this report.

DGS contracted with ANADAC and PSI to perform a photographic survey of the asbestos situation, after the asbestos emergency was declared in March 1993. The survey was done by a licensed asbestos project designer and a licensed asbestos inspector. The report was issued to DGS on May 20, 1993.

DGS had its internal auditor conduct a review of the project. The audit was conducted between May and July of 1993. A management review and corrective action planning was initiated during the week of August 16, 1993. A draft version of the audit report was received by the Secretary of Administration's office on August 17, 1993.

A Richmond newspaper made inquiries into the matter, leading to the publication of several articles. The first article appeared on September 19, 1993.

The Governor ordered an investigation into possible mismanagement of the project on September 17, 1993. The review was conducted by the Governor's Executive Assistant (Chief Counsel and Director of Policy) and by the Secretary of Administration. Investigators provided written recommendations to the Governor dated October 27, 1993, and discussed the investigation with JLARC staff.

JLARC REVIEW

On September 29, 1993 the Compensation and General Government Subcommittee of the Senate Finance Committee requested JLARC to perform an independent review of 900 East Main Building issues. The JLARC chairman approved this special study and directed the staff to begin work immediately. The subcommittee requested that JLARC consider questions surrounding the cost, contracting practices, and management practices related to the building, and to report its findings by early December 1993. JLARC staff presented its preliminary findings to the Commission on November 8, 1993.

Research activities for this special study have included:

- two tours of the 900 East Main Building;
- interviews with DGS top management;
- interviews with DGS staff;
- interviews with the various contractors;
- interviews with the agencies to be located in the building;
- interviews with staff of the Attorney General's Office;
- interviews with staff of the Office of the Auditor of Public Accounts;
- a meeting with each of the Governor's investigators on this project;
- consultation with an independent building construction expert;
- document reviews, including project contracts, files, minutes from meetings, procurement materials, and architects' designs; and
- reviews of financial data.

REPORT ORGANIZATION

This report is organized into four chapters. The first chapter has provided a brief overview of the 900 East Main building, the key activities and participants on the project, the issues surrounding the project, and the research activities for this review of the project. The second chapter considers procurement issues, specifically how DGS obtains contracts for professional and non-professional services for renovation projects. The third chapter addresses the planning and management of the project. The final chapter places the study findings in the context of prior reviews and discusses actions the State can take to avoid similar problems to those encountered at the 900 East Main building.

II. Procurement of Professional and Non-Professional Services

When the State undertakes construction or renovation work on a building in the Capitol Square area, major contracts for both professional and non-professional services may need to be procured. The Department of General Services, through its Bureau of Facilities Management (BFM), has primary responsibility for the procurement of these services. On the 900 East Main Building, DGS contracted with four firms to provide non-professional services on the project, at a cost of \$24,707,244 including change orders approved as of December 1, 1993. Also, two firms were contracted by DGS to perform professional services at a total cost of \$3,088,231. Professional services are obtained through a competitive negotiation process. Non-professional services are awarded to the lowest qualified bidder.

Some of BFM's procurement activities in the past have appeared improper to certain DGS staff. DGS staff allegations of procurement impropriety appear to have led to a State Police investigation in the early 1990s. This investigation concluded that there was no evidence of illegal activity. However, certain DGS staff have continued to be critical of the management of the procurement function and to suggest that there is inefficiency and favoritism in the award of contracts.

In addition, the Department's own Division of Purchases and Supply (DPS) in 1990 and 1992, and the Auditor of Public Accounts (APA) in 1993, have issued reports that have been critical of the procurement practices of BFM. The 1990 and 1992 DPS reports found that BFM was not in compliance with the "Virginia Public Procurement Act" and DPS regulations in the areas of emergency procedures, change orders, contract administration, and records management. The 1992 DPS review noted:

There also appears to have been a deterioration in the effectiveness of BFM's Purchasing Unit due to the continued vacancy of the Administrative Services Chief position.

This position was allowed to remain vacant for more than two years (it was filled on November 16, 1993) despite known problems in the purchasing function.

The APA report noted that they "did not find any pattern of favoritism or any criminal violations of the State procurement laws, but did find the frequent use of certain vendors." In general, the APA found that: (1) State procurement policies are sometimes overlooked or violated in an effort to quickly respond to requests or deadlines, (2) large contracts are often signed without first being reviewed by the Attorney General's Office, and (3) there is no method for formally documenting how a vendor performed on a project.

JLARC staff have identified, through this review of procurement issues related to the 900 East Main Building, two procurement practices that leave the department particularly vulnerable to an appearance of favoritism. The first is the use of the

standing, or open-end contracts, which are awarded for the provision of multiple small projects over a period of time. The second is the use of a prequalification process to determine which firms are able to compete on a low-bid basis for a non-professional contract.

On the 900 East Main project, a firm with a standing contract performed the asbestos survey of the building. This firm was then awarded the asbestos design work after a competitive negotiation process. One concern with this is that a document from late 1989 indicates that a potentially less expensive option for the asbestos survey may have been available and was known to BFM management and staff, but was not pursued. Another concern is that in receiving the asbestos survey contract, the firm had an advantage in competing for the asbestos design work.

In phase two of the project, the DGS building committee determined that two firms were not qualified to bid on the work on the basis of references. One of these firms was owned by an associate of the Governor. The director of DGS personally conducted a review of the firm owned by the Governor's associate, and a lower-level manager conducted a review of the other firm and completed his review at a later date. Both firms were restored to the list of qualified firms, and the restoration of the firms to qualified status appears to have been appropriate. The negative references on the firm owned by the Governor's associate were verbal, apparently were made under a condition of complete anonymity, and were rebutted by positive, written references. However, the DGS director's personal intervention in this firm's potential disqualification provides an appearance that special attention may have been given for political reasons.

CONCERNS RAISED BY USE OF OPEN-END CONTRACTS

An open-end or standing contract is an agreement that delineates in general terms the types of services to be provided, the level of compensation, and the time period involved. Open-end contracts are sometimes used when services related to capital outlay or maintenance projects will be needed and an agency believes that a limited number of contractors could provide all needed services. Using open-end contracts prevents an agency from having to individually advertise for every small capital outlay or maintenance service it needs. Instead, a limited number of open-end contracts may be advertised and awarded on the basis of a competitive selection process. Open-end contracts are also useful for emergency projects or unforeseen projects.

The *Capital Outlay Manual* in Section 4.4 of Chapter VI addresses the use of open-end contracts for architect/engineer (A/E) services. These contracts are allowed when "multiple small projects over a specified period of time" are anticipated. The *Capital Outlay Manual* is specific in defining:

- when A/E services may be procured on the basis on an open-end contract (for capital design projects of less than \$500,000),

- what the maximum amount is that the contract may be written for (\$50,000 for any individual project order fee and \$100,000 in aggregate project fees), and
- what the maximum time period may be (one year from date of contract with the option to renew for one additional year if so stated in the request for proposals).

In contrast, there are no explicit, written guidelines for the use of open-end contracts for ongoing maintenance and non-professional capital outlay service needs. Some of these contracts have extended for several years and have exceeded \$100,000 for a single project.

In 1989, DGS awarded HDH Technical an open-end contract to provide asbestos-related services. On the basis of that open-end contract, HDH was retained in February 1990 to complete an asbestos survey of the 900 East Main Street building. This may not have been the most cost-effective means of having the asbestos survey completed and may have provided HDH with an advantage in bidding for the asbestos design contract.

Using the Open-End Contract May Not Have Been the Most Cost-Effective Alternative

It appears that there were two feasible alternatives for completing an asbestos survey of the 900 East Main Street building without procuring the work by invitation to bid. (DGS did not want to procure through an invitation to bid because of the time it would have taken to complete that process.) The first alternative involved selecting Environmental Laboratories Incorporated on a proprietary or a sole source basis. The second alternative involved selecting HDH Technical on the basis of its open-end contract with DGS. It appears that DGS may have been inappropriately influenced in making the decision between these alternatives, perhaps leading to a DGS failure to pursue a less costly alternative.

In January of 1990, HDH submitted a proposal to the 900 East Main Street project manager to perform an asbestos survey of the building for \$35,500. No documentation was found, in the project files from the period prior to HDH's proposal, as to why a proposal was requested from one firm only. HDH did have an open-end contract with DGS to provide some asbestos-related work. Upon receiving the proposal from HDH, the project manager provided the asbestos coordinator with a copy of the proposed memorandum of understanding for review. The project manager asked that the coordinator communicate "any reservations to our accepting the proposal for the Asbestos Survey" to him. The project manager's memorandum transmitting the request to the asbestos coordinator did not specifically identify any rationale for considering only HDH.

The DGS asbestos coordinator, however, was aware of a less expensive alternative that she considered to be appropriate. She accordingly sent information about that

alternative, which was to use Environmental Laboratories to complete the survey, to the project manager's supervisor.

The information sent by the asbestos coordinator indicated that Environmental Laboratories had completed a partial asbestos survey of the 900 East Main Street building for Stillbar Associates. In November 1989, the coordinator had received a letter from Environmental Laboratories (through Stillbar Associates) that indicated the asbestos survey could be completed by Environmental Laboratories for an estimated \$18,200. (The coordinator had collected this information at the request of the DEB director and had communicated the information directly to him.)

The coordinator believed that Environmental Laboratories could be hired on a proprietary basis since the company had already completed a partial survey of the building. The *Agency Procurement and Surplus Property Manual* defines a proprietary specification as "one that restricts the acceptable products or services to that of one manufacturer or vendor." A central question regarding these assumptions is whether services from Environmental Laboratories could have been appropriately procured without a competitive bidding process, as DGS in fact did in this case through alternative means by using the open-end contract. A manager within the Division of Purchases and Supply, when presented with the facts of the example, stated that while it is a matter of judgment, he believed that it would be appropriate to procure the services on the basis of a sole source procurement. The manager noted further that there have been other examples of such proposals being approved on the basis of a vendor having specific knowledge of a location.

The asbestos coordinator indicated that her recommendation to use Environmental Laboratories for the asbestos survey was based on assumptions that Environmental Laboratories:

- would have a better background and more experience with the 900 East Main building because of previous asbestos survey work in the building;
- could complete the survey quickly because a partial survey had already been completed;
- could limit its sampling to 518 bulk samples (as compared to 2,000 samples proposed by HDH) due to the work that had been completed previously, its knowledge of the building, and a more efficient sampling approach;
- could complete the work at less expense than other firms because a partial survey had already been completed and because of the knowledge of the building that had been gained in completing that survey; and
- could be procured on the basis of a proprietary specification given its unique knowledge of the building.

In response to the asbestos coordinator's comments, the project manager's memorandum noted that Environmental Laboratories' letter did not appear to be

detailed enough and that, given the project's time constraints, contracting with HDH seemed to be a more attractive alternative. The contract with HDH was signed in March 1990 for \$35,000.

No documentation was found in the project files to further explain DGS' decision to contract with HDH. Recent correspondence from the vice president of HDH states:

My recollection of the issue of the Commonwealth being able to hire someone else for this service at a cheaper price is that the then State Asbestos Coordinator told the DGS Project Manager that she knew someone who would do it cheaper without regard to the scope of services requested by DGS. . . . To the best of my recollection, the Project Manager asked if I had heard of the proposed offeror and I stated that I had not. Upon further investigation on my part, I was told by at least two other sources in the Richmond area that it was a very small firm with few employees and possibly only two individuals licensed to perform this type of work.

JLARC staff contacted Environmental Laboratories concerning the size of their staff during the time period in question and learned that HDH's sources were not correct. According to Environmental Laboratories, they had more than 20 employees, with four or five certified industrial hygienists licensed to perform asbestos work.

HDH's correspondence indicates that the DGS project manager may have consulted with HDH regarding the qualifications of a competing firm. The project manager states that he did not contact HDH nor initiate a discussion with HDH about this matter. If this type of "consultation" between HDH and a DGS staff member or manager did occur, it would be clearly inappropriate and may have influenced DGS' decision-making.

Open-End Contract May Have Provided HDH an Advantage in Developing the Asbestos Proposal

On March 15, 1990, DGS sent out a request for proposals (RFP) for architectural design of the asbestos abatement and renovation of the 900 East Main Street Building. HDH responded to that RFP in April after much of the asbestos survey work was complete. HDH was subsequently selected as the phase one architect to design the asbestos abatement. It appears that the knowledge HDH acquired in completing the asbestos survey may have assisted the firm in being selected as the phase one architect.

Conducting the asbestos survey of the 900 East Main Street building provided HDH personnel with first-hand knowledge of the building and the location of asbestos. The potential conflict of interest this created was recognized by DGS staff as evidenced by written and verbal requests made by the project manager to the Attorney General's Office on this matter. According to a memorandum prepared by the project manager, an assistant attorney general on March 23, 1990 stated that HDH "would not be in conflict of interest if it was awarded contracts for either or both asbestos abatement design and administration of asbestos removal."

Although allowing HDH to bid on the architectural design of the 900 East Main Street building may not have represented a conflict of interest, it did appear to assist HDH in preparing a proposal for asbestos removal design. An HDH principal, during an interview with JLARC staff, noted that completing the asbestos survey gave HDH an edge when they submitted the architectural proposal.

Previously Noted Findings and Recommendations Regarding Open-End Contracts

The propriety of the current use of open-end contracts by DGS was questioned by the APA in a June 30, 1993 report. The APA report noted instances of DGS managers using "standing [open-end] contracts when individual procurement was more appropriate." This use of open-end contracts was one of several problems the APA noted in recommending that all procurement responsibilities should be transferred to the DGS Division of Purchases and Supply.

The Governor's Chief Counsel raised similar concerns about DGS' use of open-end contracts in his report of October 28, 1993. In his report to the Governor, the Chief Counsel made the following recommendations regarding open-end contracts:

- (1) contracts should be limited to small jobs under \$25,000,
- (2) no contractor should be allowed to accomplish more than \$50,000 worth of work within one year of the date of the successful bid,
- (3) the nature of such contracts should be defined with a clear emphasis on the specific requirements necessary for the approval of their utilization, and
- (4) consideration should be given to awarding two contracts for the same work and using a bidding process at the time the specific service is required.

This review of the use of open-end contracts indicates that additional requirements for open-end contracts should be developed and implemented by DGS, added to the *Capital Outlay Manual*, and considered for inclusion in the *Code of Virginia*.

Recommendation (1). The Department of General Services should develop internal procedures that address requirements related to using open-end contracts to procure services for capital outlay and maintenance projects. These requirements should include:

- clear definitions regarding the types of services that may be provided under a standing contract,
- financial limitations for individual projects and for all work completed within the contract year,
- term limitations — not to exceed one calendar year,

- **competition provisions** — recommend that two or more contracts be awarded for the same types of services to allow for competitive bidding when the specific service is needed.

THE PREQUALIFICATION PROCESS NEEDS TO BE WELL-DEFINED

Prequalification is a process in which an agency or jurisdiction evaluates potential bidders to ensure that they meet minimum standards for providing a desired service. The objective of prequalification is to restrict bidding to those individuals or firms who are actually qualified to provide the desired service. Prequalification is not a means of restricting competition to a limited number of the most qualified bidders ("short-listing"). Instead, all qualified bidders should be prequalified and therefore allowed to compete for the contract.

Prequalification is provided for in the "Virginia Public Procurement Act." The *Code of Virginia* in Section 11-46. of that Act states that "prospective contractors may be prequalified for particular types of supplies, services, insurance or construction, and consideration of bids or proposals limited to prequalified contractors." No guidelines are given in the *Code* regarding how the prequalification process should be conducted except to note that "any prequalification procedure shall be established in writing and sufficiently in advance of its implementation to allow potential contractors a fair opportunity to complete the process."

The *Capital Outlay Manual* in Section 3.3 of Chapter X cites the reference to prequalification in the *Code of Virginia* and states that "intent to pre-qualify shall be filed with the Director of the Division of Engineering and Buildings." Otherwise the manual provides no guidance regarding how the prequalification process should be conducted. According to DGS staff within the Bureau of Capital Outlay Management, prequalification processes have been conducted infrequently by DGS and other State agencies. DGS' prequalification efforts for the 900 East Main building were not well-defined and were problematic. This appears reflective of the department's lack of guidelines and DGS's inexperience in using the prequalification process.

DGS' Prequalification Efforts Illustrate Underlying Problems with the Process

DGS staff conducted prequalification processes prior to accepting sealed bids for both the phase one and phase two construction contracts. Two explanations for this decision have been given: (1) the former DGS Director supported prequalification in order to send a message to contractors to use small business, women, and minority firms and (2) staff within the Division of Engineering and Buildings (DEB) recommended prequalifying firms because of the perceived complexity of the project.

Phase One Prequalification Process. In the phase one prequalification process, conducted in the first quarter of 1991, the building committee received submis-

sions from 24 prospective general contractors. The submissions were reviewed and evaluated by a three-member committee, consisting of one DGS/DEB representative, one representative of the asbestos design firm, and one member at-large from the building committee. A numerical scoring process was employed in which each of the three reviewers developed two scores, one from a prequalification evaluation form developed by the building committee (ten criteria, with 100 possible points) and one from an assessment of company responses to prequalification questions (18 questions, with 100 possible points). An average of the six scores was then computed. The review committee reportedly discussed and decided that any company with an average score of 75 or more would be considered qualified to bid. Those with a score of less than 75 would be disqualified.

The building committee determined that nine of 24 companies were qualified on the basis of this methodology. The project records reflect that at least three of the 15 disqualified companies wrote letters requesting an explanation of their disqualification. One company's vice-president met with the project manager about the disqualification. The project manager wrote a memorandum to the files on this meeting:

I advised them that a company not being selected is as much a function of not adequately completing the questionnaire as is the evaluation of the information that is provided I reviewed two or three of the questions and we discussed possible perceptions an evaluator not familiar with their company could conclude from the answers given. I further explained that much of the short fall of most bidders is due to not answering all questions in sufficient detail.

The vice-president of this company followed-up on the meeting with a letter to the DGS division director. The division director responded to the company's concern in a letter stating:

We are sorry that your firm was not selected for bidding on this project and that your debriefing with [the project manager] did not alleviate all your concerns This evaluation process, as with most, is indeed subjective; hence, with a committee we attempt to average the values given by individual members for specific criteria.

The responses of the DGS project manager and the division director to this company illustrate an important issue involved with prequalifications. The issue is whether the prequalification process accurately and effectively addresses the core question of whether or not a firm is qualified to perform the work. The DGS project manager and division director responses both indicated the subjectivity of the process. The project manager refers to the role of "possible perceptions" that an evaluator could have if not familiar with a company. Further, the use of the numerical cutoff as well as statements by both the project manager and the division director about firms being "selected" for bidding, confounded the purpose of the prequalification. The prequalification process was supposed to determine who was qualified to perform the work. It was not intended to be a selection process.

Phase Two Prequalification Process. In June 1992, the RFP for the prequalification of general contractors for the phase two renovation was issued. The RFP noted seven factors to be considered in evaluating the proposals. These factors included:

- past experience with comparable projects involving major renovations;
- past experience with comparable projects involving computer center construction;
- experience of its management staff;
- financial and bonding status;
- previous compliance with required schedules and budgets;
- experience in Critical Path Method schedules; and
- planned utilization of small business, women, and minority firms.

The first step in the prequalification process involved the entire building committee determining whether the responding firms met the seven factors delineated in the RFP. The committee originally planned to use numerical scoring similar to what was used for the prequalification of the phase one contractor. However, the DEB director, perhaps to avoid a recurrence of the controversy that the numerical ratings caused previously, instructed the committee to simply note whether the firm was "responsive" on each factor. This caused some confusion among building committee members regarding how an overall assessment of each firm should be made. For example, a firm might clearly meet the requirements of several factors, be questionable on others, and fail to meet the requirements of another. The building committee members did not know how to give an overall rating in that instance.

Although the project manager, on behalf of the building committee, argued for using a numerical rating system to address these concerns, this was not allowed by the DEB director. It is not clear what direction was provided regarding how the noted concerns were to be addressed, but some accommodation was made and the firms were evaluated. The building committee made an initial determination that nine of the 12 firms were qualified before proceeding to the next step in their process, which involved checking references.

The reference checks were completed by three members of the building committee. The following instructions were given to these committee members:

- a minimum of two references were to be called for each firm;
- if the first two references called made positive remarks, no additional calls were to be made;
- if however, one negative reference was given a third call was to be made.

No further instructions regarding how additional negative references were to be handled or how positive and negative references were to be reconciled could be found in the project documentation.

The building committee members, on the basis of verbal references given by individuals who were assured of anonymity, decided that two of the nine firms (Armada/Hoffler and Tiber-Thompkins) should be disqualified. This decision, which will be more fully discussed in the following sections, was subsequently overruled when DGS management concluded that the references were not substantiated with formal, written documentation and were therefore not legally defensible.

Problems Noted in the Prequalification Process. DGS' experience with the 900 East Main project points out a number of questions related to the undefined nature of the prequalification process. These questions include:

- When should prequalification be used and for what purposes?
- What factors should be examined to evaluate company qualifications?
- What methodology should be used to rate the firms; for example, a numerical score, a yes/no declaration, or a combination?
- How should conflicting ratings be reconciled?
- How should judgments be made regarding experience which is similar but not identical to the requested experience?
- How should references be solicited and documented to ensure they are valid and legally defensible?

Efforts Under Way to Address Problems with the Prequalification Process at State and Local Levels. The October 28, 1993 report by the Governor's Chief Counsel noted problems with the prequalification process used for the 900 East Main Street project. The following problems were noted in this report:

- determining the prequalification standards that firms are to be judged by has been inappropriately left to the discretion of the building committees;
- building committees have received inadequate direction in making prequalification decisions, because there are no established guidelines to rely on, and agency management has provided limited guidance regarding what is expected;
- the current prequalification system is characterized by unequal treatment of firms on different projects, the adoption of evaluation factors that are subjective, and inconsistent interpretations of those factors by committee members.

To address these problems at the State level, the report made the following recommendation:

Management should begin immediately to create a system that provides (a) clear direction, (b) uniform, objective criteria for pre-qualifications, (c) clarity as to the impact of the reviewers' decision and who will make the final decision, (d) a process whereby contractors may appeal prequalification decisions in a manner similar to those now provided for within the Division of Purchases and Supply, [and] (e) in any instance where the qualifications of any contractor are to be questioned, the reviewing committee should check with the Attorney General to assure that the decision is legally supportable

DGS management states that it will take action to improve the prequalification process after the findings and recommendations of the "Panel for the Establishment of an Effective Prequalification Program" are issued. Therefore, DGS management states that "DEB is not doing any prequalifications in the interim."

The panel was established in early 1993 to address inconsistencies in the various prequalification procedures used throughout the State. The primary impetus for the effort were problems experienced in prequalifying in several Northern Virginia jurisdictions. The panel members include: the chairperson, who is the Executive Director of the Virginia Contractor's Council; the DGS director of the Bureau of Capital Outlay Management; a former staff member of the Office of Attorney General; and 12 members who represent construction-related firms and organizations, county administration and school boards, a law firm, and an insurance company. The work of the panel is expected to be complete by early 1994.

According to the panel chairperson, the prequalification problems with which he is familiar involve local government. Contractors have complained that prequalification procedures used by several Northern Virginia jurisdictions are inconsistent, resulting in unnecessary confusion and frustration. Contractors are also concerned about whether financial statements submitted to public entities could subsequently become public information. Contractors would therefore prefer that evidence of bonding capability be accepted as the financial prerequisite for qualification in lieu of submitting financial statements. In general, contractors would like to have one consistent, fair procedure used throughout the State for both local government and State projects.

The panel's objective is to design a form listing the factors to be considered in prequalification, and a discussion paper clearly explaining how the prequalification process should be conducted and how prequalification factors should be evaluated. According to the panel chairperson, there are a variety of expectations among the panel members. The chairperson hopes that the form and discussion paper will be adopted by DGS, become part of the *Capital Outlay Manual*, and eventually become part of the "Virginia Public Procurement Act."

Although the panel chairperson appears to have high aspirations for the panel, he notes that there is diversity in opinion among the panel members which may affect the

final document. Some disagreement exists regarding what the prequalification guidelines should be, how specific the guidelines should be, and whether the prequalification provisions should be mandatory or voluntary. For example, some panel members would like to formulate a standard "scoring" procedure to develop what they believe would be a more objective evaluation process. Other panel members would prefer to allow more subjective latitude. All of the questions posed by this review of prequalification problems encountered by the 900 East Main project may not be addressed by the panel either. For example, the questions of how references should be solicited and documented and how disagreements among building committee members should be handled had not been considered by the panel as late as mid-November 1993.

There appear to a number of potential problems presented by the panel in terms of reaching a consensus on all of the issues important to the State. While the work of the panel should provide a good foundation for improving the prequalification process, DGS may need to tailor the process to address the unique interests of the State. DGS should ensure that the components of the recommendations made in the report of the Governor's Chief Counsel and answers to the prequalification questions posed in this report are incorporated into new guidelines and procedures.

Recommendation (2). The Department of General Services should place a high priority on establishing a prequalification system to be used by all State agencies when prequalifying firms for capital outlay projects. The prequalification system should include written guidelines which address the procedural requirements noted in the McFarlane report and the questions noted in this review. The prequalification system and a detailed explanation of its requirements should be incorporated into the *Capital Outlay Manual*.

POTENTIAL ARMADA/HOFFLER DISQUALIFICATION RECEIVED SPECIAL ATTENTION

One of the issues surrounding the 900 East Main project has been whether political pressure was applied to restore the Armada/Hoffler Construction Company (Armada/Hoffler) to the list of firms qualified to bid on the project. The majority owner of Armada/Hoffler was treasurer of the Governor's campaign in 1989 and has been cited in newspaper articles as a close associate of the Governor.

The Governor assigned his chief counsel and the Secretary of Administration the task of performing an investigation for the administration of issues surrounding the 900 East Main Building. The issues included an allegation that political pressure was applied upon DGS to qualify Armada/Hoffler. The use of a member of the Governor's Office and the cabinet secretary responsible for DGS as the investigators of this issue was problematic, as it was alleged that a meeting on the disqualification had occurred at the Governor's mansion, and it was alleged that the Secretary of Administration may have been involved in having the disqualification reexamined. The administration's investigation team found no evidence of political pressure on this issue, and reported this finding on October 21, 1993.

JLARC staff were required by the General Assembly to perform an independent review. For this report, the following question was considered: Was special attention given to the potential disqualification of Armada/Hoffler? In addressing this question, JLARC staff considered which State officials were involved in reviewing Armada/Hoffler's potential disqualification, why they were involved, and what actions they took.

Similar to the findings of the administration investigation, research for this report produced no concrete evidence of political pressure. Unlike the findings of the administration probe, which did not address this point, this review concludes that DGS paid special attention to the potential disqualification of Armada/Hoffler. This is illustrated by the contrast between the actions taken relative to the potential disqualification of Armada/Hoffler compared to the actions that DGS has taken relative to other firms that have been recommended for disqualification.

The owner of Armada/Hoffler states that he did not request special attention, and there was no evidence found during this review that he requested special attention. The DGS director has said that he initiated the contact of the owner of Armada/Hoffler, to inform the owner that there was a reference problem. From the perspective of Armada/Hoffler's owner, his firm was fully qualified to perform their proposed projects, and once informed there was a reference problem, he took appropriate action to ensure that written references were available to DGS.

The reason that DGS paid this special attention to Armada/Hoffler has not been determined with any certainty by this review. There are a number of apparent discrepancies in the statements that have been made as to what actions were taken with regard to the Armada/Hoffler disqualification and why.

DGS Management Gave Special Attention to Disqualification of Armada/Hoffler

In regard to the potential Armada/Hoffler disqualification, the DGS director personally took the following steps:

- called a colleague at the Department of Corrections to discuss Armada/Hoffler's work;
- went to the Department of Corrections to review and obtain materials on Armada/Hoffler's work;
- requested that the colleague at the Department of Corrections call the owner of Armada/Hoffler, and ask the owner of Armada/Hoffler to call the DGS director;
- received the references in-person from the owner of Armada/Hoffler; and
- instructed DGS staff to restore Armada/Hoffler to the qualified list.

Interest at the director level in the prequalification process does not appear to be unusual, based on information from the phase one prequalification process for the 900 East Main Building. The prior prequalification process occurred under a different DGS director. As previously mentioned, this process resulted in the disqualification of 15 of 24 firms. A DGS memorandum indicates that subsequent to the building committee's decision to disqualify a majority of the firms, this DGS director inquired about the process, and a report was provided to the director. However, the project record does not reflect any further evidence of action by this DGS director. In fact, the project record indicates that the concerns expressed by the firms that were being disqualified were addressed at lower levels of the organization. For example, the firm that requested a meeting on their disqualification met with the project manager, an individual several levels below the DGS director.

The phase two prequalification was conducted under the subsequent DGS director. The building committee initially determined that three of twelve firms should be disqualified, and then determined that two more firms, Armada/Hoffler and Tiber-Thompkins, should be disqualified on the basis of reference checks. At this point, the DGS director became personally involved in the potential Armada/Hoffler disqualification. This stands in contrast to how Tiber-Thompkins was handled in the process. Tiber-Thompkins, like Armada/Hoffler, had also been rated as qualified by the DGS building committee up until the reference check. However, the division director and the project manager, as well as project documentation, indicated that a review of Tiber-Thompkins was not initiated until after Armada/Hoffler was restored to the qualified list. The responsibility to review the Tiber-Thompkins disqualification was then assigned to the BFM director, a position three levels below the director. The BFM director states that the references of this firm were not obtained until several weeks later because of his busy schedule.

The prompt, extensive, and high-level attention that Armada/Hoffler's potential disqualification received suggests that this disqualification received special attention. It is difficult to conclude otherwise, when the director became personally involved and concluded his review by September 18, 1992 while an individual several levels below the director was assigned to review another firm and appears to have given this task a much lower priority.

Discrepancies Exist in Accounts of How Armada/Hoffler Disqualification was Handled

During the JLARC staff review, interviews were conducted and documents were reviewed to see if there was consistency in the accounts of how the potential disqualification was handled. Various discrepancies and inconsistencies between interview statements and documents were noted during the review. One way to illustrate what is problematic about these discrepancies is by considering four possible explanations of what occurred. These possible explanations include: (1) that Armada/Hoffler's potential disqualification was seen by DGS management as substantively different and less supportable than any other potential disqualification, (2) that the DGS director may have pursued the Armada/Hoffler matter because of convenience, based on the fact that he had

contacts at the Department of Corrections (DOC), and knew Armada/Hoffler was doing work for them, (3) that pressure was applied upon the DGS director by the administration to review the Armada/Hoffler matter, or (4) that DGS management was sensitive, on their own, to the fact that the owner of the company was an associate of the Governor's, and acted based on that sensitivity.

The information obtained during this review does not indicate that the DGS director's actions can be fully explained based on the substantive issue involved or based on the convenience of the director's contacts with the Department of Corrections. With regard to potential political pressure, it appears that conflicting accounts have been given as to the knowledge that the Secretary of Administration had of the Armada/Hoffler issue at the time, but that is all that is known. It is possible that the DGS director acted out of his sensitivity or concern about the potential disqualification of a company owned by an associate of the Governor, but this also cannot be definitively concluded. The remainder of this section explores the facts and discrepancies in relation to each of these possible explanations.

Explanation One. With regard to the first explanation, it does not appear that DGS management perceived that Armada/Hoffler's potential disqualification was substantively different from that of Tiber-Thompkins. The recollection of the DGS director in an interview with JLARC staff was that the review of the reference issues of Armada/Hoffler and Tiber-Thompkins occurred simultaneously. The DGS director did not indicate that there was anything different about Armada/Hoffler's reference problem as compared to Tiber-Thompkins' problem.

The division director at DGS indicates that all firms that were potentially to be disqualified were presented to the DGS director, but that the real concern was with Armada/Hoffler because they were highly rated in the building committee process, whereas Tiber-Thompkins was rated as marginal. This explanation does not stand up to scrutiny, however. After the controversy over the use of numerical ratings in phase one of the project, the division director had instructed the project manager not to use numerical ratings of the firms. Therefore, the building committee proceeded on the basis of a "yes-no" inventory of building committee conclusions as to whether a firm was qualified, on eight selection criteria. The results of this process with regard to Armada/Hoffler and Tiber-Thompkins were virtually indistinguishable. Both were rated overall as qualified based on the selection criteria. Both were rated overall as qualified by each of the five building committee members. A tally of the individual building committee yes-no ratings shows that the results were virtually indistinguishable (32 yes, 3 no, and 1 blank for Armada/Hoffler; and 31 yes, 2 no, and 3 blank for Tiber-Thompkins).

Another possibility is that the Armada/Hoffler disqualification was perceived as substantively different, because DGS management may have perceived that Armada/Hoffler was the only firm being disqualified on the basis of anonymous, verbal references. However, in interviews with JLARC staff, neither the DGS director, the DEB director, nor the BFM director indicated that they had this perception. The confidential report from the project manager that drew this matter to DGS management's attention stated that most references were given openly after assurances were provided that the information source would remain confidential. There was nothing in the confidential

report indicating specifically which firms received the references from confidential sources. The results reported in the confidential report were zero favorable recommendations and four unfavorable recommendations for Armada/Hoffler, and one favorable recommendation and four unfavorable recommendations for Tiber-Thompkins.

Explanation Two. The second explanation considered is that Armada/Hoffler's potential disqualification may have received personal attention from the DGS director because it was convenient for him to do so. The DGS director had formerly been employed by the Department of Corrections (DOC) and had contacts at the DOC. It is possible that the director personally checked into Armada/Hoffler, and not Tiber-Thompkins, because he knew that Armada/Hoffler was working on a job for DOC and he had a contact there whom he felt would give him a candid reference. However, this possible explanation alone is not consistent with the director's continued involvement in discussing the problem with the owner of Armada/Hoffler, and arranging to personally receive references from the company.

Explanation Three. A third possible explanation considered was whether pressure was applied upon the DGS director to review the Armada/Hoffler matter. This issue originated from a memorandum to the files by the project manager on the 900 East Main Building. In the memorandum, the project manager states that the DGS director advised him on September 11, 1992 that:

he is under no political pressure to include Armada/Hoffler in the general contractor selections for bidding. He was instructed by the Secretary of Administration to personally look into the matter and had done so.

The memorandum also states that on September 18, 1992, the division director told the project manager that the DGS director had met with Armada/Hoffler's owner at the Governor's mansion. The division director has stated, however, that he did not know where the meeting took place and thus never mentioned the Governor's mansion.

A September 29, 1993 Richmond newspaper article reported the content of this memorandum pertaining to the alleged instructions by the Secretary of Administration. According to the newspaper article, when contacted for a reaction the day prior to when the story appeared, the Secretary of Administration denied any involvement, and said that "Armada/Hoffler's name never came up." The newspaper story also indicated that the DGS director agreed with the Secretary on this point.

In a meeting with JLARC staff on October 13, 1993, the DGS director said that he told the Secretary that Armada/Hoffler was in the prequalification process and had problems with references. The DGS director said that he thought he told the Secretary about this prior to his activity in obtaining the references. In a meeting with JLARC staff on November 5, 1993, the Secretary of Administration said that it is possible that the DGS director told her something about the potential disqualification of Armada/Hoffler. The Secretary stated that she would not deny it, but could not recall it. The Secretary stated that she knew the owner of Armada/Hoffler; however, this situation would not

have made an impression on her because she deals with 13 agencies and through those dealings she knows many contractors.

JLARC staff also contacted the Capitol Police to inquire if they had any entries in their log books for the Governor Mansion indicating that the owner of Armada/Hoffler and the DGS director had visited the Governor during September, 1992. The suggestion that such a meeting was held was made in a DGS internal memorandum prepared by the project manager. The Capitol Police indicated that logs for September 1992 were no longer available. The logs were destroyed because such logs are only kept for one year.

According to the owner of Armada/Hoffler, he provided the DGS director with the references at a lunch meeting in Richmond at the Commonwealth Park Suites Hotel. According to the DGS director, he received the references in-person from the owner of Armada/Hoffler at the hotel (where the owner was staying) around 6:00 in the evening. The DGS director recollects that they had agreed that the owner of Armada/Hoffler would not come to the DGS director's office, because the building that DGS occupies would be locked at that time of evening. According to the DGS director, he did not "meet" with the owner of Armada/Hoffler; he only picked up the references from the owner in the hotel lobby.

Neither account is easy to reconcile with why the DGS director needed to pick up the references in person when a facsimile transmitting the references was sent to the director at 2:30 in the afternoon, with a comment "I will call you shortly to discuss." If those references were exchanged in person at lunch, then the necessity for the facsimile would be questionable. If the "meeting" occurred at 6:00 and was merely an opportunity for the director to receive the references and not a discussion, then the necessity for the meeting is questionable. One document in the DGS files that would appear consistent with the 2:30 P.M. facsimile is a memorandum of the project manager to the files. According to this memorandum, about 3:15 that afternoon (about 45 minutes following the facsimile transmission), the division director:

summoned me, by beeper, out of the seminar I was attending. He asked me to identify the titles of the persons I talked to about [Armada/Hoffler]; that [the DGS director] wanted to know the level of the persons that I talked to. I told him that if I said that, [Armada/Hoffler] would know who I talked to.

If this occurred, the request may have been made to help prepare the DGS director for a follow-up discussion with Armada/Hoffler, as was referenced in the facsimile.

Explanation Four. A fourth possible explanation is that DGS management was sensitive on its own to the fact that the owner of Armada/Hoffler was an associate of the Governor's, and may have acted on that sensitivity. This could explain why Armada/Hoffler's potential disqualification was given more attention than Tiber-Thompkins. One member of DGS management said that he had some political concerns about the potential disqualification, as he did not not "live under a shell" and knew who the owner of Armada/Hoffler was. This DGS manager speculated that the DGS director may have also had political concerns. No direct information was found to support or

refute this. The DGS director has said that he knew who the owner of Armada/Hoffler was, but had never met him before.

Conclusions. In summary, an assessment of the available information as to why Armada/Hoffler received special attention indicates that there are a number of discrepancies and inconsistencies in the accounts of this matter. It is therefore difficult to say with certainty why Armada/Hoffler received more attention than Tiber-Thompkins. If the newspaper account from September 29, 1993 is accurate, then the statements of the Secretary of Administration and the DGS director appear to have changed from denial of knowledge on the Secretary's part, to an indication that a briefing to the Secretary on the potential disqualification may have occurred or did occur. The statements of the DGS director and the owner of Armada/Hoffler as to the circumstances of their meeting (an evening exchange of reference letters versus a lunchtime meeting) are inconsistent, and difficult to reconcile with why a facsimile copy of the references was sent in the mid-afternoon from the owner to the DGS director. However, the discrepancies could be due to difficulties in remembering events accurately one year later. A member of the DGS management team has confirmed that the potential disqualification raised political concerns in his mind, and has speculated that it may have raised similar concerns in the DGS director's mind. While this appears plausible, it was not stated by the DGS director.

In spite of the conflicting explanations given about the reinstatement of Armada/Hoffler and Tiber-Thompkins, it appears that the reinstatement was appropriate. Excluding firms from bidding on projects solely on the basis of anonymous, verbal references that cannot be validated and are rebutted by positive written references is clearly inappropriate and exposes the State to potential litigation. As noted previously, in developing a consistent prequalification system, DGS should delineate how reference checks are to be made and what documentation of the references is required. DGS should establish standard, written guidelines for making and documenting reference checks which should be followed whenever reference checks are made by DEB staff. This should assist DGS in avoiding future litigation and in minimizing the need to overrule building committee decisions.

Recommendation (3). The Department of General Services should establish written guidelines which address how reference checks are to be made, documented, and evaluated to ensure that they are valid and legally defensible. These guidelines should be used by all Division of Engineering and Buildings staff when soliciting references for capital outlay or maintenance projects.

III. Planning and Management of the 900 East Main Project

The 900 East Main project suffered from flawed project planning and management. Planning problems included unrealistic assumptions about project costs and time frames, the decision to separate the project into two phases, and the Department of General Services' (DGS') difficulty in reaching agreement with tenant agencies. Management problems included DGS accepting phase one work as complete, when the goals and objectives of that phase had not been achieved, and allowing poor communication and coordination to persist throughout the project. DGS management problems contributed significantly to the costs and delays associated with the asbestos contamination of the building that occurred in March 1993. The management problems that surfaced during the 900 East Main project appear to reflect broader internal management problems within DGS' Division of Engineering and Buildings (DEB).

UNREALISTIC ASSUMPTIONS AND FLAWED PROJECT PLANNING LED TO IMPLEMENTATION PROBLEMS

Many problems encountered in the 900 East Main project can be traced to unrealistic assumptions and flaws in project planning. Unrealistic assumptions affected project planning, as did other factors including two project phases, disagreements regarding the primary tenant's needs, delays in plan development, and budgetary constraints. In addition, some early cost-cutting decisions on asbestos abatement required better planning of phase one demolition. Finally, phase two plans were not fully developed by the time potential contractors bid on the renovation contract, resulting in a higher likelihood of change orders and cost overruns.

Unrealistic Assumptions Affected Project Planning

Several unrealistic assumptions shaped the way the project was planned, and flaws in planning eventually led to problems in carrying out the construction. One of these unrealistic assumptions related to DGS' low budget estimate for the renovation of the 900 East Main Street building. According to Department of Information Technology (DIT) staff, the initial budget estimate was based on the assumption that DIT could occupy standard office space with minimal alterations, and did not take into account the extensive mechanical and electrical engineering and other needs that were required for a major computer center. Consequently, many more iterations of drawings and specifications were required than was initially expected. According to the phase two architect and DGS staff, DIT constantly requested changes, so that plans could not be finalized. Overall, the considerable number of iterations (including later changes intended to "cut costs") indicates that the project planning process was a reactive approach based on an unrealistically low budget estimate.

Another assumption that affected project planning was that DIT's time frame should be met regardless of the problems encountered on the project. According to DIT and DGS staff, a major reason why DIT was chosen to be moved to the 900 East Main building was that it was a State agency that was paying a relatively large monthly rent to a private building owner. DIT's lease at its current site was to expire on December 31, 1993. If DIT remained at this site past the expiration date, the required rent would double.

Given this situation, DGS staff attempted to find ways to "fast track" the project. One option explored by the former DGS project manager to meet a tight schedule was to have DIT move into the building before all renovation work would be completed. Detail work would have been completed after DIT had moved. This option may, at times, have been an appropriate course of action for State agencies occupying standard office space, but DIT staff rejected this option. In an interview with JLARC staff, DIT staff emphasized that they handle critical computer systems, such as those which support the State Police; and once they move, these systems must work correctly. According to DIT, these computer systems cannot be interrupted for days or weeks while construction is taking place or extensive changes to the electrical systems are being made. This constraint made successful "fast tracking" more difficult. But, according to monthly progress reports written by the former DGS project manager, DIT's December 1993 deadline was a pivotal assumption in project planning until the summer of 1992, despite problems that delayed phase two designs and ultimately rendered this time frame impossible.

Additional Factors Complicated Project Planning

Several factors that complicated project planning include: (1) the division of the project into two phases, (2) the inability of DGS staff and the phase two architect to reach agreements with the primary tenant on its needs, (3) delays in plan development which resulted in a need to accelerate later work activities, and (4) constant pressure to reduce costs to stay within budgetary constraints.

Division of the Project into Two Phases. DGS staff stated two reasons for why the project was divided into two phases (asbestos abatement and renovation design). One stated reason was the need to accelerate the project schedule so that renovation would be completed by December 31, 1993 (when DIT's building lease was to expire). The other reason was that it was difficult to find an architect with insurance for asbestos work. Therefore, DGS did not expect to find many architectural firms willing to bid on both asbestos work and full renovation.

Key conditions behind these reasons turned out to be different than expected, however. DIT's lease was eventually extended to January 31, 1995, if necessary. Further, when proposals for the architectural work were actually made, twelve architectural firms submitted proposals for work in both phases, compared to four for phase one alone and six for phase two alone. The firm that was eventually selected as the phase one architect had also submitted a proposal on phase two jointly with another architectural firm. This proposal was highly rated by the building committee initially, but the firms'

joint proposal was later eliminated because during their pre-bid presentation, they showed “little consideration and respect” to questions asked by building committee members and offended building committee members.

Dividing the project into phase one and phase two, with separate architects and contractors for each phase, increased the difficulty of coordinating project participants. Close coordination between phase one and phase two architects was especially essential for success on this project. But major problems in coordinating renovation plans occurred between the phase one and phase two architects, and in communicating where asbestos remained in the building during phase two construction. Personality clashes were reported to have severely hampered coordination, and, in some instances, to have made effective communication impossible. These clashes occurred between:

- the DGS project manager and other DGS staff,
- the DGS project manager and the phase one and phase two architects, and
- the phase one and phase two architects.

In hindsight, the former DGS Director told a Senate Finance subcommittee that splitting decision responsibility between phase one and phase two architects was a “strategic error.” One DGS manager stated that he will never again split future projects into phases.

Inability of DGS and Phase Two Architect to Agree with DIT on Its Needs. The 900 East Main project appears to have been far more complicated and difficult than anticipated by DGS staff, the architects, and the primary tenant agency (DIT). According to DIT staff, phase two architects and engineers did not initially understand DIT’s requirements. This resulted in unrealistic initial plans for their mechanical and electrical engineering needs and other needs, and several iterations of corrections in drawings and specifications.

According to the phase two architect and DGS staff, DIT constantly requested changes, so that plans could not be finalized. DIT staff, on the other hand, state that the vast majority of these “changes” were communicated to DGS long before they were incorporated into the drawings and specifications. Further, according to DIT staff, the phase two architect treated these changes as new, when in DIT’s view they were errors because the plans were not incorporating what DIT had previously asked for. DIT staff state that a major reason why plans could not be finalized was because the approval process for corrections and change orders was “overly bureaucratic,” with delays of six to seven months for corrections or changes. The approval process included phase two architects, the DGS project manager, DGS capital outlay staff, and DGS management. The phase two architect claimed that some of the approval delays were due to him not being able to enter the building and not having the necessary apparel or training to go through a contaminated site. The phase two architect also claimed that the large number of DIT participants in the process (representatives from all twelve DIT sections and a DIT electrical engineering consultant) led to contradictory change requests being sent to him. This took more time to sort out than would have been required had a comprehensive, consistent package of changes been provided.

Delays in Plan Development Resulted in Need to Accelerate Later Work Activities. According to monthly progress reports, schedule slippage appeared to occur in 1991 and to have gotten worse as time progressed. This was caused in part by planning delays and resulted in plans changing as well. As deadlines were approached or missed, the additional stress led to breakdowns of essential communication and coordination activity, as demonstrated in letters between DIT, the former DGS project manager, and the phase two architect. Because the phase two renovation designs were delayed and phase one was completed later than planned, the phase two general contractor was faced with a tighter schedule than originally planned.

Constant Pressure to Reduce Costs. Interviews with DIT and DGS staff, the phase one architect, the phase two architect, and monthly progress reports indicated that there was a constant pressure to reduce project costs, which affected the project planning process. For example, the decision to contain, rather than to remove, asbestos in the building was intended as one way to cut costs. Another example was a set of changes which DGS requested from DIT in 1991 to cut costs. These "cost cutting" changes appear to have contributed to the problems ultimately resulting in delays in phase two designs.

Better Phase One Planning Needed When Cutting Costs on Asbestos Abatement

At the suggestion of the phase one architect, encapsulation of asbestos was employed as a cost-saving approach. Encapsulation is an appropriate strategy when the plans for the renovation design are firmly set. However, both the phase one and phase two architects and DGS staff should have realized that the renovation plans were not complete. In fact, the asbestos design and abatement was "closed out" by DGS staff in late 1992, but renovation design plans have been continually changing as late as December 1, 1993.

Phase Two Plans Incomplete When Sent Out for Contractors' Bids

By the time prospective contractors were to place bids for phase two construction, final designs for the renovation had not been completed for about one-quarter of the building. This meant that candidates had to bid on prototypical building plans, knowing that these plans were not final and that change orders were likely. Owners (in this case, the State) have less control over the costs of change orders because these costs are not determined by competitive bid. A participant in the phase two construction as well as an independent building construction expert told JLARC staff that this degree of vagueness in plans is highly unusual.

DGS MANAGEMENT OF THE 900 EAST MAIN PROJECT

The JLARC staff review of DGS' management of the 900 East Main renovation suggests serious management problems on the project. In particular, (1) DGS appears

to have accepted phase one of the project as complete, although the objectives of this critical phase had not been achieved, and (2) the project suffered from inadequate DGS management of coordination and communication among project participants. Failure to achieve phase one objectives and inadequate coordination and communication appear to have significantly contributed to the problems that were encountered during phase two of the project, including delays and significant cost overruns.

Phase One Objectives Were Not Fully Achieved

Phase one of the 900 East Main project had three objectives. These were: (1) abatement of the asbestos in the building, (2) general demolition activities, including the demolition of most mechanical equipment and interior partitions, and (3) roof and window replacement. The JLARC staff review of project documentation and interviews with DGS staff and contractors suggests that phase one objectives were not fully achieved. Nevertheless, DGS accepted the work as complete. The lack of completion of the work to be performed in phase one appears to have significantly contributed to the problems that surfaced with asbestos in phase two.

Phase One Objectives on Asbestos Abatement Were Not Successfully Completed. JLARC staff review identified two apparent problems with asbestos abatement performed during phase one. Both stem from DGS' decision to leave some asbestos in the building, in an effort to reduce costs. These problems are: (1) phase two design changes created uncertainties that may have caused asbestos to remain in areas that were disturbed during phase two, (2) the location of remaining asbestos was not successfully communicated to the phase two general contractor.

Continual design changes complicated the strategy to leave asbestos after phase one. For example, design of plumbing, heating, and cooling systems was not completed prior to phase one's completion. This meant that some design changes affecting these systems involving demolition needs occurred while the abatement and demolition contractor performed work. However, because the design for phase two was not set, decisions were hampered in phase one about removing pipe insulation that contained asbestos, spray-on fireproofing, and other asbestos containing materials.

The DGS monthly progress report on 900 East Main for October 1992 indicated that phase one construction was 100 percent complete and all asbestos that could possibly be disturbed during phase two had been removed. However, the phase two construction administration firm (ANADAC) documented asbestos-containing materials identified in the building at the time of the March 3, 1993 asbestos emergency.

- Asbestos contained in insulation was not fully abated on exposed piping in phase one.
- Asbestos removal from chases in the east tower building was not completed.
- Ceilings were not removed and hidden mechanical systems not checked for asbestos-containing material in the west tower basement.

- East tower perimeter column encasements were known to contain asbestos fireproofing material and were sealed, but later disturbed in phase two when perimeter induction units were removed. The ANADAC report stated that “due to the poor workmanship exhibited during the installation of the foam seals, any attempt to demolish the induction units would have caused a release of friable asbestos”.
- Asbestos-containing floor tile and mastic were not completely removed in phase one, only those which had come loose.

In addition, the location of remaining asbestos does not appear to have been successfully communicated to the phase two participants. Ordinarily, an asbestos management plan showing the location of remaining asbestos and how to deal with it would be prepared by the asbestos abatement designer. According to a representative of the phase one architect/engineering (A/E) firm, an asbestos management plan is usually done at the completion of a project and provided to the building owner. However, since this project involved two distinct phases, it was necessary that the phase two participants be informed of the location of any remaining asbestos. Seemingly recognizing this, the phase one A/E firm had referenced the completion of an asbestos management plan at the end of phase one. This plan was to address the work completed by the phase one contractor. The plan was referenced in:

- the interview for selection of the phase one A/E firm,
- the pre-bid meeting for the phase one contractor, and
- a March 1992 letter to the project manager.

In an interview with JLARC staff, however, the phase one A/E's managing partner stated that an asbestos management plan was not prepared and provided, because it is a document for building occupants, not subsequent contractors.

According to the phase one A/E's representative, as-built record drawings that showed the location of remaining asbestos were provided by HDH to DGS as part of the close-out of phase one. According to the phase two architect, as-built drawings were not made available to either them or the phase two general contractor. Review of these drawings by a building construction expert, in consultation with JLARC staff, suggested that the drawings:

- lacked sufficient interior detail to identify asbestos above concealed ceilings or in isolated areas;
- were not dated and contained handwritten annotations, often illegible, whose author and date were unclear;
- contained contradictory information; and
- did not provide adequate information for the phase two general contractor to identify all remaining asbestos.

General Demolition and Roof Replacement Objectives Were Not Fully Met in Phase One. Participants in phase one did not complete all of the general demolition that was planned by DGS to be accomplished during that phase and the replacement of the roofs in the building appears to have been problematic. Phase one was to accomplish the demolition of all equipment in the building, according to the base bid and change orders two and three. However, in June 1992 a decision appears to have been made by DGS to move some demolition to phase two. According to an independent building construction expert consulted by JLARC staff, this seems to have complicated phase two work.

Daily inspection reports completed during phase one noted continual problems with the roof replacement. At the beginning of phase two, the phase two general contractor complained that the roof in the east tower leaked and appeared to contain asbestos. In meeting minutes dated January 19, 1993, the DGS project manager told the phase two general contractor that his firm was responsible for proving that the roof contained asbestos. In a meeting with JLARC staff, DGS management acknowledged the problem with the roof leaking. However, nearly 11 months after the issue was raised by the phase two general contractor, it has not been fully resolved.

DGS Poorly Defined the Scope of Work To Be Completed in Change Orders. Poor definition by DGS of work to be accomplished in phase one bid documents and change orders resulted in the original scope of work not being completed. The DGS internal audit noted that the development of phase one change orders were imprecise. This occurred because several additions to the base contract bid for phase one were based on unit prices for unspecified quantities of work. Thus, change order amounts were based on: (1) estimated quantities of materials the phase one contractor expected to encounter in the building and (2) line item unit prices provided during the bidding process for certain tasks. Tasks originally envisioned for phase one had to be prioritized in change orders. Some tasks were not completed because change order funds had been exhausted when the cost of tasks exceeded original estimates. For example:

Change order number two included work to remove asbestos containing skim coat wall plaster at a cost of \$4.25 per square foot. The contractor estimated the cost of this work in a schedule of values and certification for payment at \$33,846. However, the actual cost once completed was \$40,035, an amount 18 percent greater than the amount estimated in the original schedule of values. The removal of the original ceiling on floors 5 through 14 in the West Tower cost \$112,445, almost twice the \$58,696 originally estimated by the contractor.

On the other hand, a lower priority task involving ceiling insulation to be removed in change order number two was originally estimated at a cost of \$24,444. However, the contractor only completed \$445 worth of work, a two percent completion rate as noted in the schedule of values and certification for payment. Ten of 34 items on the final schedule of values were not completed.

The DGS internal audit of the project noted that DGS' use of unit prices and unknown quantities to obtain a total cost for change orders two and three contributed to problems in completing demolition and asbestos abatement with the funds available for these change orders.

DGS Accepted Phase One Work as Complete. Despite problems with the completion of phase one, DGS accepted the work from phase one as complete. This represented a management failure. The phase one contractor has stated that DGS set a funding limit of about \$2.8 million for phase one work, and that when this limit was reached, DGS declared phase one complete.

Several documents reviewed by JLARC staff indicate that phase one work was accepted as complete. For example:

The DGS internal audit of the project noted that "the Owner accepted constructively, if not actually, the condition in which the complex was left at the end of [phase one] work, including the presence of unabated asbestos."

* * *

In project meeting minutes from October 1992, the project manager noted that phase one was "100 percent complete and under budget." Further, the project manager noted that the phase one contractor "was very cooperative on this project Insulation Specialties Incorporated is highly recommended for consideration on future work for the Commonwealth and the Department of General Services." In November 1992 the project manager wrote the phase one contractor's bonding company that the contractor "was very cooperative" and that the project had been delayed "at no fault to [sic] the contractor."

Communication, Coordination Problems Contributed to Project Costs and Delays

The 900 East Main Street project suffered from significant communication and coordination problems that contributed to project delays and costs. These problems include: (1) poor communication between the DGS project manager and other project participants, (2) poor coordination between the phase one and phase two architects, and (3) inadequate provision for the known potential to encounter asbestos in phase two.

Poor Communication Hampered the Project Throughout. JLARC staff review of documentation suggests that the DGS project manager experienced communication problems both with staff within DGS and representatives of contracted firms. These problems were also mentioned in several interviews with DGS staff and with contractors and appear to have negatively affected the progress of the project. For example:

The completion of phase one of the 900 East Main project appeared to be complicated by an almost complete breakdown of communication by the phase one architect and the initial project manager. The project manager wrote memos to the file threatening to turn the HDH project manager's "enemies . . . loose on him" and complaining of "HDH backstabbing." DEB managers, including the DEB director, Bureau of Facilities Management (BFM) director, and planning and technical services chief were aware of these communication problems but did not take any formal personnel action to address these problems.

* * *

JLARC staff interviews and document reviews suggested that the initial DGS project manager took a very confrontational approach towards the phase two general contractor. According to the phase two architect, when the DGS project manager perceived the phase two architect's representative to be less than supportive during confrontations with the general contractor, the DGS project manager asked for the removal of the architect's representative.

* * *

The initial DGS project manager wrote memos to the file complaining of negative interactions he experienced with staff within DGS, including: fiscal staff, purchasing staff, Bureau of Capital Outlay Management review staff, the State asbestos coordinator, and his own supervisors. The confrontational attitude taken by the project manager towards other DGS staff appeared to have detracted from the staff support afforded the project from within DGS.

Coordination Between the Phase One and Phase Two Architect Appears Problematic. JLARC staff interviews and document reviews suggested coordination problems between the phase one architect and the phase two architect. The phase one architect complained of not receiving phase two design information in a timely manner to determine where asbestos might be encountered during phase two and to determine demolition to be performed in phase one. The phase two architect complained of receiving inadequate information about what demolition had been performed.

In addition, the phase two architect stated that its representatives did not participate in discussions whenever asbestos was mentioned, due to insurance and liability concerns. This complicated the flow of information between the two architects. Nevertheless, as suggested above, the close-out documentation, including the as-built drawings from phase one, did not provide adequate information regarding the location of remaining asbestos at the conclusion of phase one for phase two participants.

DGS was not successful in coordinating between the two architects. While the firms' mutual frustration may be understandable, it was incumbent on DGS to ensure a productive exchange of information between the two architects. This did not occur.

DGS Made Inadequate Provisions for Asbestos that Might Be Encountered During Phase Two. DGS was aware of the potential for encountering asbestos in phase two, but did not take steps to handle this contingency. Neither the phase one architect nor the phase one general contractor participated in phase two. Prior to the asbestos emergency, none of the participants in phase two were required to have expertise in asbestos issues. This may have meant that work continued longer than it should have after asbestos was initially suspected in phase two.

Project documentation reviewed by JLARC staff suggests that DGS was aware of the need to have asbestos expertise in phase two. At various times, DGS representatives discussed keeping either the phase one contractor or the phase one architect on retainer for phase two. However, no action was taken as a result of these discussions. For example:

A letter dated June 30, 1992 from the DGS project manager to the president of the phase one general contractor stated "this is to confirm our desire to extend your agreement on a stand-by basis beyond the scheduled completion date." In meeting minutes from June 17, 1992 it was noted that the phase one general contractor was to be retained to "address . . . any incidental asbestos contamination that may be uncovered in phase two." Nevertheless, the phase one general contractor's agreement was never extended.

Despite not having either principal phase one participant involved in phase two, DGS did not require any of the phase two participants to have asbestos expertise until the asbestos emergency occurred. The phase two architect continually disavowed any involvement in asbestos issues, stating a lack of expertise and liability insurance for asbestos-related work. The phase two construction administrator/inspector was not required to have an asbestos inspection capability until after the asbestos emergency was declared in March 1993. According to phase two participants, the phase two general contractor was told by the DGS project manager that, in terms of asbestos, "the building was clean." As a result of the absence of phase one participants from phase two and the lack of asbestos expertise among phase two participants, DGS did not appear to be adequately prepared to deal with the asbestos that was eventually encountered.

Incomplete Work on Phase One, Poor Communication and Coordination Led to Significant Cost Overruns and Project Delays

The management problems discussed in this chapter, DGS' acceptance of phase one as complete despite the objectives of the phase not being achieved, and poor communication and coordination, have had severe consequences. These are significant cost overruns and significant project delays on the 900 East Main project. Phase two

asbestos abatement had a cost of approximately \$7.1 million. This effort also caused a project delay of at least 116 days.

DGS Management Problems Heavily Contributed to the Phase Two Asbestos Emergency. DGS management problems appear to have contributed significantly to the asbestos emergency. There is general concurrence among the parties involved that the actual asbestos contamination occurred when the phase two general contractor's demolition subcontractor began demolishing areas thought to be asbestos free but which actually contained asbestos. DGS management problems appear to bear a large measure of responsibility for the asbestos contamination that resulted, because:

- asbestos had not been completely removed from the building, as originally planned;
- even the modified scope of work actually contracted for in phase one did not appear to have been completed, although DGS reports that it did not pay for work that was not completed;
- phase one documentation available to phase two participants did not adequately show the location of remaining asbestos;
- DGS did not ensure adequate communication between the phase one and phase two architects;
- DGS management failed to take action concerning the DGS project manager's problems communicating with contracted firms and with other DGS staff; and
- DGS did not make adequate provisions for having a contracted firm with asbestos expertise available during phase two (until the building had already been contaminated).

Emergency Asbestos Effort Cost About \$7.1 Million. The costs of the asbestos emergency actually exceed the total cost overruns on the project. This is because bids for several of the contracted firms were lower than expected, yielding project savings that were absorbed by the asbestos emergency. The total direct cost of the asbestos emergency is estimated by combining costs of:

- initial contracts issued for the asbestos emergency clean-up
- change orders issued for emergency asbestos clean-up
- potential costs of delay claims filed by the phase two general contractor
- pending change orders for additional asbestos clean-up.

A review of costs as estimated and provided by DGS staff indicate that the total direct cost of the asbestos emergency is approximately \$7.1 million. These costs are summarized in Table 1.

Emergency Asbestos Effort Caused a Work Delay of at Least 75 Days. JLARC staff interviews with project participants and review of documents suggest that

renovation work was delayed for at least 75 days, from March 3, 1993 until about May 17, 1993, at which time the emergency asbestos abatement was substantially complete. These delays have associated indirect costs, in addition to the direct costs already considered. These estimated indirect costs include:

- additional rent for the Department of Information Technology (\$1,124,544)
- premium prices paid for the early delivery of equipment (\$500,000) which could not be used when delivered due to the asbestos delay.

These indirect costs total approximately \$1.6 million.

Table 1
Direct Costs of
Emergency Asbestos Clean-Up in Phase II

	Amount	Contracted Firm
Contracts		
Asbestos abatement design/monitoring	\$118,425	Professional Service Industries
Change order no. 1	\$201,485	Professional Service Industries
Sampling/Monitoring/Testing	\$91,098	Armada/Hoffler
Additional abatement under separate contract	\$33,000	DGS annual agreement
Change Orders		
Change order no. 1 general contractor	\$880,000	Armada/Hoffler
Change order no. 2 general contractor	\$660,000	Armada/Hoffler
Change order no. 3 general contractor	\$2,970,000	Armada/Hoffler
Change order no. 7 general contractor	\$64,886	Armada/Hoffler
Change order no. 9 general contractor	\$133,162	Armada/Hoffler
Change order no. 2 inspection/administration	\$15,272	ANADAC
Change order no. 3 inspection/administration	\$19,711	ANADAC
Pending Costs (Estimated)		
Delay claims general contractor*	\$843,371	Armada/Hoffler
Pending asbestos abatement change orders	\$272,400	Armada/Hoffler
Buildback after abatement	\$813,110	Armada/Hoffler
Total	\$7,115,920	

*Delay claims by the general contractor are currently being negotiated. The actual amounts associated with these claims may be substantially less.

Source: JLARC staff analysis of project costs as estimated and provided by DGS.

The current "official" project schedule reflects a 116-day delay for occupying the building because of the asbestos emergency. Interviews with project participants, however, indicate that there is a potential for further delays. DGS has not yet finalized its completion date.

DEB INTERNAL MANAGEMENT NEEDS IMPROVEMENT

The JLARC staff review of the 900 East Main Street project suggested problems with internal management in the Division of Engineering and Buildings. These internal management problems do not appear to be unique to the 900 East Main Street project. Problems include direction of staff, organizational structure, and responsiveness to change.

DEB Management's Direction of Staff Needs Improvement

Review of the 900 East Main project suggests that DEB management needs to improve its direction of staff. Despite substantial evidence that the relationship between the project manager and various DGS staff and contractors was reaching a crisis stage, DGS management did not address this problem until nearly three years into the project. The former project manager's communication problems were not, until recently, raised in the formal performance appraisal process. Other DEB staff commented in interviews that the performance appraisal process is not useful in terms of providing feedback to employees and can at times seem capricious or arbitrary.

DEB may also need to reexamine its use of professional staff to ensure that workload is equitably and realistically distributed. Workload appears to vary significantly among staff within DEB. In some instances, employees reported being overburdened with job responsibilities. Other staff within DEB complained about not having enough responsibilities.

The JLARC staff review of project documentation indicates that the initial project manager on the 900 East Main Street project had numerous interpersonal conflicts with representatives of contracted firms on the project and with other DGS staff. DEB managers when interviewed stated that they received frequent complaints from contractors about the initial project manager's behavior and demeanor. Review of project documentation suggests that the project manager started having interpersonal conflicts and other communication problems in early 1991 with the phase one architect and the State asbestos coordinator. However, the problem was allowed to continue. The project manager was not removed from the project until March 29, 1993, after the asbestos emergency in phase two of the project had been declared.

JLARC staff interviews with DEB management revealed that no action was taken regarding the project manager's communication difficulties on his 1991 and 1992 performance appraisals. Other DEB staff interviewed suggested the need to improve DEB management's use of performance appraisals. For example:

One DEB staff member, who had worked more than ten years in the division, stated that he seldom received constructive feedback in the performance appraisal process. One year his performance appraisal was handed to him to complete; another year his evaluator stated that he would avoid biasing himself, by completing the evaluation without reviewing documentation of the employee's actual performance.

Other DEB staff stated that they do not have enough responsibilities and suggested that this was caused by DEB's use of contractors to perform work that could be accomplished by the division's staff. Examples of this work included drafting requests for proposal for professional services, providing technical assistance on the design of Capitol Square building projects, and the inspection of asbestos work in renovation projects. In discussing problems with discontented employees, DGS management noted the need to ensure that all employees have sufficient job-related responsibilities.

At the same time, some employees, who are performing critical tasks, seem to be overburdened with responsibilities. In particular, project managers seem to be overburdened with administrative tasks that could be performed by others. For example:

The current project manager has been responsible for the 900 E. Main renovation project for about eight months. Until receiving clerical assistance three weeks ago, he was responsible for all administrative tasks associated with the project. This included acting as liaison for various media inquiries and State investigations of the project, sending faxes, and gathering documents. This seriously detracted from his time spent on project-related responsibilities.

In addition, the project manager was responsible for follow-up on previous projects. The project manager noted in an interview that he had recently spent time responding to problems with a fire alarm from a project he had previously worked on. DGS finally addressed the project manager's multiple responsibilities by assigning him an assistant project manager on December 1, 1993.

DEB Needs to Reexamine Its Staffing Approaches

DEB's staffing of professional positions seem problematic. DEB has not clearly defined the qualifications for these staff. Moreover, DGS appears to have some difficulty in recruiting employees for key professional staff positions. At times, DGS has not adequately reallocated the responsibilities of positions that are vacant or which have been eliminated due to budget cuts.

DGS Recruitment Criteria for Professional Staff Needs to Be Better Defined. DGS does not have well-defined qualification criteria for professional staff. In particular, problems were noted with the qualifications required of project managers. For example:

JLARC staff review of the State applications and resumes of the project managers in BFM's project management and planning units noted a wide variation of education and experience among that unit's staff. To illustrate the range of variation among staff, the educational and experiential qualifications of various professional staff ranged from a high school diploma with less than five years of project management experience to a Bachelors degree in building construction and 21 years of construction experience.

In interviews with JLARC staff, DEB managers expressed some concern about their ability to recruit qualified professional staff. In particular, DEB managers noted concerns about the lack of a graduated pay scale for project managers. The lack of a graduated pay scale, coupled with State salary freezes, made it difficult for DEB managers to distinguish among various levels of performance by project managers, particularly to reward good performance.

DGS Recruitment for Key Staff and Provisions for Vacant Positions Appear to Be Problematic. DGS appears to have difficulty in filling important organizational positions in the Division of Engineering and Buildings and has not adequately reallocated the responsibilities of positions that either become vacant or are eliminated. The department's delay in filling some positions raises questions about the position's importance or the department's commitment to that function. For example:

The chief of the project management unit position (a grade 15) has been filled for only six months of the last two years, despite what DGS managers characterize as a much heavier and more complex workload in the unit. When the position was last vacated, it took nearly six months until it was filled in October 1993. Given that there are three other layers of management in BFM, the long delay in filling the position raises doubts as to the utility of the position.

* * *

The administrative services chief position in the Bureau of Facilities Management was vacant for over two years until filled on November 16, 1993. This left the bureau director to oversee directly purchasing, budget, and other administrative functions. This leads to questions about the importance DGS places on improving BFM's administrative functions.

Moreover, DGS does not appear to adequately cover for vacant or eliminated positions. The director of BFM was burdened with administrative oversight because no allowances were made to provide administrative help to BFM in the absence of an administrative services chief. Further, when the Bureau of Capital Outlay Management (BCOM) eliminated its asbestos management section due to budget cuts, no provisions were made to perform the duties accomplished by this unit. Instead, in 1991 the director of BCOM sent a memo to all State agencies advising them that BCOM would no longer review their capital outlay plans for asbestos-related issues. Interviews with BCOM staff

suggest that the bureau's architectural reviewers could perform an asbestos review with some additional training. The department, however, has not implemented this alternative for performing asbestos review.

DEB Organizational Structure May Need Revision

The Division of Engineering and Buildings allocates professional staff throughout three organizational units, has widely disparate spans of control in its two bureaus, and appears to suffer from internal conflict between various organizational units. These organizational issues suggest that DEB management does not utilize its staff in an optimal fashion. This means that DEB operations are not as efficient as they might be.

Current Allocation of DEB Professional Staff Does Not Maximize Use of Available Resources. Within DEB, professional staff are located in the Bureau of Capital Outlay Management's capital outlay review section, the Bureau of Facilities Management's project management unit, and the Bureau of Facilities Management's planning unit. All three organizational units contain a mixture of engineers and architects, but these staff do not work as a team. For example:

One former DGS staff member described the relationship between BFM's project management unit and BCOM's review staff as "sibling rivalry." Further, correspondence between the initial BFM project manager on the 900 East Main project and BCOM staff indicates unprofessional behavior and personal criticism between staff.

Rather than allocating already scarce professional staff among three organizational units, DGS should consider a team approach to utilizing these staff. Professional staff could be cross-trained to, at various times, perform project management, review, and planning functions. This would allow for a more efficient allocation of staff resources, by allowing each function to be performed by each professional staff member. A team approach would also be likely to reduce rivalry among staff, as DGS professional staff would gain a broader understanding of each of the unit's functions.

Bureau Directors' Spans of Control Are Highly Disparate. The JLARC staff review of the 900 E. Main project noted that the spans of control for the directors of BFM and BCOM are highly disparate. The BFM director has a much larger and more challenging span of control than the BCOM director. (The JLARC review did not encompass the Bureau of Real Property Management, which is the other bureau within the Division of Engineering and Buildings.)

The BFM director directly supervises eight subordinates and has four sections reporting to him, including two large complex sections: the planning and technical services section and the maintenance and operations section. The BFM director noted that this span of control can be taxing at times. In particular, the BFM director's span of control seems to be complicated by the prolonged delay, for budgetary reasons, in filling the vacant administrative support chief position, which supervises budget, purchasing, and clerical support in BFM.

On the other hand, the BCOM director has only one section reporting to him, the capital outlay review section. The BCOM director's span of control is four, although three of these are administrative staff, including the director's secretary. Another staff member reporting to the BCOM director is the "chief" of a one person section. The roles of the BCOM director and chief of the capital outlay review section are difficult to distinguish from one another, as two layers of management are assigned to supervise one organizational unit. The BCOM director's position appears to be a holdover from BCOM's previous organization, when the asbestos, energy, and maintenance sections also reported to the BCOM director. However, these three sections have been eliminated due to budget cuts, leaving the role of the BCOM director seemingly redundant.

The Department of General Services should consider creative alternatives to the current organizational structure in the Division of Engineering and Building. In reviewing DEB's organizational structure, the department should consider approaches that will maximize its use of available resources and appropriately distribute spans of control among DEB managers. The department should also ensure that the roles and responsibilities of each organizational structure are adequately defined.

Cabinet Secretary Inattention and DEB Resistance to Change

Several reports in recent years have identified management concerns within the Division of Engineering and Buildings, specifically within the Bureau of Facilities Management. These include:

- two reports (issued in 1990 and 1992) by DGS' Division of Purchases and Supplies, which raised concerns about BFM's procurement practices;
- a 1993 report by the Auditor of Public Accounts (APA), which raised concerns about BFM management and procurement practices; and
- a 1993 report by the DGS internal auditor on the 900 E. Main project.

The Secretary of Administration has not been attentive, and DGS officials have not been proactive, in addressing the problems that have been identified. For example:

The Secretary of Administration has stated that she was not aware of the asbestos emergency at the 900 East Main building until the newspaper reports in September, 1993, or about seven months after the emergency. The Secretary has also stated that she did not recall receiving the internal audit report prior to the newspaper reports, but that her office did receive a copy of the DGS internal audit report on August 17, 1993. The currently acting director of DGS, then deputy director, has stated that he wanted DGS management to release information about what had occurred, and they made a mistake in waiting for the Secretary's review of the report. The report of the Governor's investigatory team in October 1993 raised strong concerns

and admonished that change was needed in an agency over which the Secretary had responsibility for several years.

* * *

Both the 1990 and 1992 DGS Division of Purchasing and Supplies reports noted procurement problems within the Bureau of Facilities Management. Nevertheless, the administrative services chief position, which supervised procurement activities, was left vacant for more than two years from 1991 to 1993 due to budgetary concerns.

The Secretary of Administration's response to the JLARC staff report on the 900 East Main project (see Appendix A) indicates that a task force, undertaken at the Secretary's direction in 1991, addresses many of the issues in this report. The task force, however, focused on ways in which the capital outlay process might be expedited. The task force report does not address the issues of perception problems posed by DGS' implementation of open-end contracts, nor the potentially subjective quality of prequalification. With regard to expediting projects, the evidence suggests that to some extent, problems at the 900 East Main building occurred because of DGS efforts to "fast-track" the project, including bringing phase one to premature closure. Further, the Secretary's response concludes by stating that the task force report was "turned over to ... the Director of General Services in December of 1991, with the request that he act upon the report as was appropriate." There is no indication by the Secretary in her response that she indicated her priorities to the director, or followed-up with the director on this request.

Recommendation (4). The Department of General Services should provide training in conducting performance appraisals to all supervisory staff within DEB. The director of the department should hold all supervisory staff accountable for appropriately using the performance appraisal process to address performance problems and giving needed feedback to employees.

Recommendation (5). The Department of General Services should develop, consistent with the standards of conduct for State employees, a policy for progressively addressing employee performance, conduct, or behavior problems on a timely basis.

Recommendation (6). The Department of General Services should carefully assess the duties and responsibilities of all professional staff in the Division of Engineering and Buildings to ensure that workload is adequately and equitably distributed, as well as to ensure that all employees have sufficient job-related tasks.

Recommendation (7). The Department of General Services should develop clear guidelines for the qualifications required of its project manager positions. These guidelines should specify the educational background, professional work experience, and other qualifications minimally required of candidates in order for them to be considered for a project manager position.

Recommendation (8). The Department of General Services should develop opportunities for cross-training professional engineers and architects within the Division of Engineering and Buildings to perform review, planning, and project management functions so as to promote a team atmosphere among professional staff within the division.

Recommendation (9). The Department of General Services should consider revising the reporting relationships within the Division of Engineering and Buildings so as to ensure an equitable supervisory load between the directors of the Bureau of Capital Outlay Management and the Bureau of Facilities Management. The department may wish to examine its management structure in the division to determine if all of the present management positions are required to adequately direct the work of the division.

Recommendation (10). The Department of General Services should consider creative alternatives to the current organizational structure of the Division of Engineering and Buildings, to ensure that it: (1) maximizes its use of available staff resources, (2) appropriately distributes span of control between the division's managers, and (3) adequately defines the roles and responsibilities of each organizational unit.

Recommendation (11). The Department of General Services should assign a high priority to developing and implementing plans to address the management-related recommendations contained in this report, and in recent reports by the Auditor of Public Accounts, the Division of Purchases and Supplies, and the department's Internal Auditor. The department should report on its progress in addressing these recommendations to the Senate Finance and House Appropriations Committees prior to the 1995 session of the General Assembly.

IV. Conclusions

The findings of this report should be placed in context. It is clear that major renovation projects, such as the 900 East Main project, are inherently difficult. Many unexpected problems can arise in the course of demolition and renovation. Yet, the level of difficulty of these projects does not appear to fully explain the magnitude of the problems that occurred at 900 East Main. DGS staff, contractors, and other participants in the project have indicated in interviews with JLARC staff that the magnitude of these problems was avoidable.

Selected findings in this report are consistent with the findings of the Governor's review team and DGS's internal audit. All appear to agree that the events at 900 East Main were in part due to DGS management errors and performance by contracted firms. All agree that DGS should tighten up certain procurement procedures, including criteria for the prequalification process.

With regard to the asbestos problem, encapsulation of asbestos can be an appropriate strategy when renovation plans are firmly set. In this case, however, those plans clearly were not set at the end of phase one, and this contributed to the problems that occurred. DGS management has stated that it made a strategic error by not planning to remove all asbestos in phase one.

Given what has already taken place at 900 East Main, there are some actions the State can take to make the best of this situation. The State has already invested over \$5 million in tailoring the 900 East Main building specifically for DIT's unique requirements for operating a major computer center. Although considerable difficulty, expense, and delay was experienced in generating designs suitable for DIT, the State would be wasting its substantial investment if it were to change plans for relocating DIT at this late date. At the November JLARC meeting, JLARC staff noted that DGS management needs to relieve the current project manager of administrative matters that can be handled by others. In this way, the project manager can have more hands-on involvement with the management of the project itself. Since then, DGS has provided an assistant project manager position and a clerical position to assist the project manager.

The State can also take some actions in the future to avoid problems similar to those encountered at 900 East Main. DGS management should address the void that was left when the asbestos management unit at DGS was eliminated in 1991. DGS and the State should fully and systematically recognize the hazardous materials risks in renovating buildings. Subsequent to the asbestos emergency at the 900 East Main project, the project manager was transferred to another project, the Jefferson Building. Both the project manager and his supervisor indicate that at the project manager's insistence, a preliminary asbestos test was performed on the building. According to a BFM weekly activity report of April 9, 1993:

Preliminary asbestos testing by the A/E is positive and has raised concern that full survey testing may lead to extensive abatement work

that could seriously impact project completion milestones and allotted costs.

This has led to the identification of substantial additional asbestos work at the building. DGS management states that the additional survey work was furthered by their efforts, and that the incident suggests that the department is applying lessons learned from the 900 East Main building. A concern, however, is that the problem was not identified as a result of a systematic effort at DGS, but at the insistence of a single project manager who had been transferred from the 900 East Main building. It is not clear that major problems would not have occurred without the project manager's initiative.

The State should also recognize that higher risks, extra costs, and missed deadlines are likely when attempts are made to fast-track major renovation projects. When projects are rushed, there is a higher likelihood of change orders. Change orders are not addressed through a competitive bid process; they are negotiated with the contractor. Change orders tend to be costly and therefore are inefficient for the building owner.

Finally, DGS should substantially improve the effectiveness of the management of the Division of Engineering and Buildings and the Bureau of Facilities Management. Several DGS staff that have not been involved in making allegations against the department nonetheless perceive that there is a hostile work environment at BFM. The belief of these employees is that employees in the bureau have engaged in activities such as rifling through other people's desks and papers, and harassing and intimidating people, and that management has not found an effective way of addressing these problem behaviors.

Improvements also should be made in the organization of the division and the bureau: greater use of teams as functioning units; clearer allocation of responsibility; and more direct involvement of staff specialists with projects. Further, BFM needs to improve its recruitment, professionalism, training, and performance appraisal process. Training and team building appear essential to enhance capabilities and to improve morale.

Recommendation (12). Given the considerable investment the State has already made in tailoring the 900 East Main building to meet the requirements for a major computer center, the State should continue to carry out its plans for relocating the Department of Information Technology in this building.

Recommendation (13). DGS management needs to systematically ensure that adequate asbestos survey information is available for buildings that undergo renovation.

Recommendation (14). The Secretary of Administration and the DGS director should take appropriate action to address the hostile work environment and morale problems that exist in the Bureau of Facilities Management.

Appendixes

AGENCY RESPONSES AND RESPONSES FROM CONTRACTED FIRMS

As part of an extensive data validation process, the Secretary of Administration, the Department of General Services, the Department of Information Technology, and the Auditor of Public Accounts were provided an opportunity to comment on an exposure draft of the report. This opportunity was also provided to the various firms contracted by DGS to work on the 900 East Main project.

The responses received from the exposure process constitute the remaining pages of this report, as listed below. Page references in these responses relate to the exposure draft and may not correspond to page numbers in this final version of the report.

- **Appendix A:** Response of the Secretary of Administration
- **Appendix B:** Response of the Department of General Services (DGS)
- **Appendix C:** Response of the Phase One Architect/Engineer (HDH)
- **Appendix D:** Response of the Phase One Contractor (ISI)
- **Appendix E:** Response of the Phase Two Architect/Engineer (Cooper-Lecky)



COMMONWEALTH of VIRGINIA

Ruby G. Martin
Secretary of Administration

Office of the Governor
Richmond 23219

(804) 786-1201
TDD (804) 786-7765

December 7, 1993

Mr. Philip A. Leone
Director
Joint Legislative Audit and Review Commission
Suite 1100
General Assembly Building
Capitol Square
Richmond, Virginia 23219

Dear Mr. Leone:

I have reviewed the exposure draft of your report, Special Report: Review of the 900 East Main Street Building Renovation Project, which I received on December 4, 1993.

For your information and for the record, please find enclosed a copy of a 1991 report on the Commonwealth's capital outlay process that was undertaken, at my direction, by a Task Force composed of both public and private individuals. The Task Force was chaired by D.B. Smit, who, at the time, was Deputy Director of DGS. I especially call your attention to pages 9-11 and Attachment D of the report, sections dealing with bid and construction procedures.

I am submitting this document to you in response to the section of your report entitled, "Cabinet Secretary Inattention and DEB Resistance to Change" (pages 54-55). As you will see, the Task Force Report (completed in 1991) addressed many of the issues raised in your report. This document was turned over to Ray Patterson when he assumed his position as Director of DGS in December of 1991, with a request that he act upon the report as was appropriate.

Please feel free to call upon me if you have any questions about this report.

Sincerely,

Handwritten signature of Ruby G. Martin in cursive script.
Ruby G. Martin

RGM/ars

Enclosure

Capital Outlay Task Force Final Report

Foreword by the Honorable Ruby G. Martin

I have had the opportunity to participate with the Task Force on several occasions, including meetings with representatives from institutions of higher education and representatives from private industry. My involvement with the Capital Outlay Task Force has been a great learning experience.

The impetus for the Task Force Assignment is the perception that the Commonwealth takes too long to bring projects to completion and that the process itself wastes resources. During my participation with this task force, I was involved in the discussion of many issues that individually and collectively contribute to the cost of constructing facilities. To the extent that we can resolve these issues, we can produce savings for the Commonwealth.

Capital Outlay is a centralized process that has, in the past, not recognized the limits of the Commonwealth's resources until after institutions and agencies have spent a great deal of money justifying projects. For example, many more projects have been approved for preplanning than can be financed. (Debt financing analyses are helping us realize our limitations. Only 38 projects were approved for preplanning within the '92-94 budget process.)

Further, projects may be planned, reviewed and analyzed repeatedly or several years before they are approved for funding. The long time between preplanning studies and funding authorization leads to agency frustration and contributes to the perception that the process takes longer than it should.

Six-year capital outlay planning, proposed by Governor Wilder, will help resolve this issue. The six-year plan is a finance plan that should provide a means of scheduling capital outlay and provide institutions, agencies, and central review staffs with better information on when projects are scheduled for funding.

If the pace of project development is to be quickened, we truly need to examine the ways in which projects are developed and managed. If projects are to be expedited, we must continue to delegate more authority to agencies sponsoring projects. We must provide more responsibility for project development and review to those agencies and institutions who have demonstrated their ability. (At the same time, we must insure that the agencies who do not regularly develop capital projects can avail themselves of necessary expertise.) Central review agencies should shift from a regulatory to a service orientation. Central review agencies should continue to expand their role in training, technical assistance and post audit review.

Following this line of thought, I will add one recommendation to the Capital Outlay Task Force Report. I recommend establishment of a standing board or committee which will meet on an annual basis. The purpose of the committee is to assure that the capital outlay process reflects current conditions and is responsive to suggested changes from process "participants".

Master planning is another issue of concern to the Task Force. Master planning needs to be undertaken in a conscientious, consistent manner among state agencies and institutions. The Task Force has found that few agencies perform adequate master planning. The Task Force notes that master planning is the first step in a sound capital outlay process.

You will see many recommendations that represent the best thoughts of everyone involved in the capital outlay process. The Task Force and I have tried to reach as many capital outlay "participants" as we could. The report is a synthesis of the advice and guidance gleaned from these individuals. I hope it serves as a blue-print for improving this important state function.

Capital Outlay Task Force Final Report

May 18, 1991

The Capital Outlay Task Force was created by the Secretary of Administration at the behest of the Governor. The Task Force was charged with the task of examining the Commonwealth's capital outlay process and making recommendations for improvement. The primary goal of the Task Force was to search for ways to make the process more efficient.

Since its initial meeting, the Task Force has met with a number of "participants" in the capital outlay process, has collected a large amount of information from interested parties and has met with central agency representatives whose responsibility it is to direct the capital outlay process.

An interim report was presented to the Secretary of Administration on March 15, 1991. This report represents the Task Force's final report to the Secretary of Administration.

The Task Force initially chose to focus on the technical and cost review portions of the capital outlay process (from project conception to contract award). Later, the Task Force looked at bid and construction procedures. Consistent with guidance from you and the Governor, our objective is to seek efficiencies and process improvements in this area.

A summary of Task Force activities can be found in Attachment A.

Authority for Capital Outlay Process

Information regarding the capital outlay process for agencies and institutions of the Commonwealth of Virginia is contained in four primary sources: the State Code of Virginia; the Commonwealth of Virginia Capital Outlay Manual (COM), a publication of the Department of General Services (DGS); and instructions for Capital Outlay requests 1992-94 (DPB Instructions), adapted from chapter III of the Commonwealth Planning and Budget System Manual (CPBSM) and the General Provisions of the Appropriations Act. (In addition, institutions of higher education capital projects are subject to the State Council of Higher Education's (SCHEV) "Space Planning Guidelines.")

The Code of Virginia addresses two areas of the capital outlay process: Preplanning and Administration. Section 2.1-51.31 vests authority in the Director of the Department of Planning and Budget (DPB) to prepare and issue regulations for the preplanning of capital outlay projects. Section 2.1-483.1 mandates that DGS

provide assistance in the administration of capital outlay construction projects and Section 36-98.1 establishes the Department of General Services (DGS) as the building official for all state-owned buildings.

Tangential reference to the process is found in Section 23.9-9 which charges SCHEV with the responsibility of developing policies and guidelines for capital outlay programs of state-supported colleges and universities.

The Capital Outlay Manual (COM) is a comprehensive instructional guide for all aspects of the capital outlay process from project conception to project implementation. The manual is divided into twelve chapters. The most relevant chapters, for purposes of this report, are: Chapter IV, which deals with "Master Plans" and Chapter V, which outlines capital outlay procedures. Chapter V subsections include "planning", "submission and approval of project requests", and "project execution". Chapters IV and V are the subjects of a more detailed commentary in a subsequent section of this report.

The Commonwealth Planning and Budget System Manual (CPBSM) provides specific guidance on the submission and review of capital project requests. They cover five primary areas: definitions and criteria; capital project proposals; criteria and requirements for preplanning studies; submission requirements and the review and approval process; and preparing capital budget forms.

The General Provisions of the Appropriation Act defines capital projects and the conditions under which they may be developed. The General Provisions also require that projects conform to approved master plans.

ISSUES

The participants, in the capital outlay process, defined the issues of this report. Participants included private sector architects and engineers; state agency representatives; representatives from institutions of higher education; and private citizens with an interest in improving the process.

We have divided the issues into six areas: Master planning; Preplanning; Process/Timing; Technology; Cost and Organization; and Bid and Constructions Procedures.

Master Planning

The Task Force is concerned with the level of attention given planning, specifically master planning as defined in the Commonwealth's Capital Outlay Manual.

The capital outlay process must begin with sound comprehensive plans. Plans must reflect current and projected demographic and programmatic considerations and result in functional building configurations which are consistent with the requirements of the Virginia Uniform Statewide Building Code (UBOCA). This planning effort, in conjunction with a computerized maintenance management system (which provides information on the condition of buildings and manpower performance standards) will facilitate determination of multi-year building repair, renovation and new construction needs.

Existing agency and institution master plans are generally viewed as inadequate. Further, agency facilities managers say that resources are not made available to allow appropriate master planning. Funding should be provided for this purpose, or at a minimum for the building use portion of the plan. The building use portion includes current and projected usage through 2000; code requirements under which the Fire Marshal has reviewed the building and a survey of each major structure to determine the overall facility condition (ie. each major building component such as HVAC and electrical).

Finding No. 1: The Task Force believes that sound master planning is the first step towards an effective capital outlay process. Master planning requires an investment of time and money in the beginning of the process, but this investment is recovered through better informed decisions during the latter stages of the process.

Borrowing from recommendations provided (4-19-91 memo) by the Virginia Higher Education Facilities Management Group (VHEFMG), the Task Force endorses the following:

- Long-range planning is a continuous process.
- Good plans must be flexible so that they can address shifting priorities and changing needs.
- Master planning should drive the long-range capital outlay plan.
- Sound master planning (on the agency and institution level) is required to support the six-year plan from the bottom up.

Preplanning

Funding for preplanning: There are two issues related to funding of preplanning projects. First, agencies generally do not receive appropriations for the cost of preplanning studies. (They must absorb these costs from within their operating budget.) Second,

participants are concerned that too many projects are approved for preplanning.

There is agreement that agencies should receive an appropriation for preplanning projects. The Department of Planning and Budget is recognizing the need to fund both preplanning and detailed planning. A number of options are being considered (including providing funds from a central account to finance agency preplanning studies). DPB is considering this option as part of the six year capital planning process.

There is also consensus that far too many projects are approved for preplanning. We encourage the development of "wish lists", rather than realistic capital requests.

We also waste money on preplanning projects that will not be approved. For example, in developing the 1990-92 capital outlay budget, 181 capital project requests were approved for preplanning. Of these, 162 preplanning studies were actually completed, and of these, only 63 were approved for funding. The 99 projects that were not approved for funding represent an estimated \$4.8 million in preplanning expense that was not necessary (see Attachment C for details).

Finding No. 2: DPB should restrict approval of projects to a level consistent with funds likely to be available to finance the projects. (DPB agrees that too many projects are approved for preplanning.) Further, DPB should consider providing funds to the agencies for the cost of preplanning studies for general fund projects.

Preplanning too detailed: The Commonwealth Planning and Budget System Manual calls for an "order of magnitude" cost estimate at the preplanning stage. Preplanning should be "the development of needs and analysis of alternatives". Preplanning should not be a design document. It should be a means by which agencies and institutions justify their space needs. It should concentrate on the square foot needs of the requesting agency and press these agencies to justify their needs.

Participants believe that DEB and DPB require too much design detail at the preplanning stage of project development. DEB is criticized for relying on the System Cost Estimate methodology for estimating project costs at the preplanning stage. Agencies say that application of this methodology at the preplanning study stage is unnecessary, too costly and should not be used to establish the project budget. (DEB defends the methodology, citing its applications in the Department of Defense, at the same level of planning.)

The Task Force believes preplanning studies have become "too detailed because DPB uses preplanning cost estimates in developing

the capital budget. DPB attempts to get a budget estimate at an inappropriate stage of project development. This forces DEB to perform a detailed review (utilizing the System Cost Estimate methodology) which requires agencies to produce more detail. This produces confusion among the agencies and higher planning costs.

Finding No. 3: DPB and DEB should re-examine the objectives of preplanning. Detailed project estimates should not be produced at the preplanning stage. At a minimum, DPB could change the budget calendar so that the capital budget can reflect project cost estimates produced at the preliminary design stage.

Cost estimating procedures: Three separate cost estimates are required at the preplanning study level (one by the architect, one by an independent professional estimator and a third obtained or developed by DEB). Agencies complain that this is an unnecessary burden that slows the process, adds unnecessary costs and is inappropriate for the preplanning stage.

Finding No. 4: DEB has indicated that instructions have already been modified to eliminate the independent estimate.

Pre-design meetings: Agencies complain about DEB sending projects back for revisions (sometimes for minor changes). Some projects are returned several times (one project was returned for changes four times). Project returns add time to the review process and leads to misunderstandings between user agencies and central review staff.

Participants have suggested that pre-design meetings be held between DEB, user agencies and the architectural and engineering (A&E) firms (it has also been suggested that DPB be included). At the meeting, all parties would agree on the scope of the project and all parties would be apprised of DEB concerns related to the project and what is required in a review submittal. This should expedite the review process.

DEB agrees with the suggestion and has indicated that they do have such meetings on "problem projects". DEB agrees to hold more pre-design meetings in the future, but points out that the size and complexity of the project will dictate when meetings are required.

Finding No. 5: The Task Force believes that the pre-design meeting is a simple suggestion that has the potential to expedite the capital outlay process. DEB should exercise its judgment in initiating pre-design meetings whenever such meeting will expedite the capital outlay process.

The Task Force also realizes that multi-year planning of capital outlay (ie. the six year plan) will affect the capital outlay review process. Rather than forcing project review and approval into a few months time (see Attachment B), the six year plan will

permit a much smoother process of discrete projects developed and reviewed over the course of three biennia.

Process/Timing

Length of Process: The length of time needed to execute a capital project is a concern to everyone. Operating agencies tend to hold central agencies responsible for project delays. (DEB, for example has a goal to review projects within three weeks of receipt. Their average review time, due to the kinds of review and the numbers of staff available to do review, is about six weeks.) However, agencies bear responsibility, as well. (Agencies may not have the training or staff resources available to develop projects according to schedule.)

The process is, at least in part, to blame. The process produces periods of backlog where central agency staff are forced to deal with an overload of projects. Most participants agree that the "cycle" (ie., the capital outlay process - see Attachment A) must be initiated much earlier in the even numbered year preceding the legislative session at which capital programs will be considered.

Much of the scheduling problems, with the attendant glut of projects for DEB review teams, should be mitigated with the introduction of a six year capital outlay plan. The six year plan should (after the initial two years) more evenly distribute the capital outlay development and review work over a longer period of time and make the work load easier to manage.

There are other concerns that will not be addressed by the six year plan. For example, concern has been expressed over the change order process and the number of forms used to execute the capital process. Both the change order process and the number of forms are seen as cumbersome and inefficient.

Finding No. 6: The Task Force supports the development of the six year capital outlay plan. Future Task Force reports need to focus on the six year plan and its effect on capital outlay review process.

With regard to capital outlay forms, the Task Force recommends that DEB and DPB examine current paperwork requirements and consider alternatives for form reduction.

Technology

Should develop computer capabilities (ie., on-line capabilities, CAD, AM/FM...): Participants endorsed the greater use of computer technology. They pointed to the need for an information system that allows agency collection, filing and maintenance of site

building and utility drawings and specifications. They urged the use of Computer Aided Drafting and Automated Mapping/Facilities Management.

Central to this recommendation is the need to expedite the process by reducing the number of times information is manipulated and re-keyed. Participants point to the obvious time advantages of CAD and AM/FM.

Review agencies support this recommendation. In 1987, DGS and DEB made an investment in developing computer capabilities to serve the review professionals on staff. DGS is currently engaged in "Vision 95", an information management planning effort which will help DGS realize its vision as a major information provider.

For its part of Vision 95, DEB has identified several goals, including: purchase of CAD equipment; communicating electronically with the major agencies and institutions served; minimizing flow of paper (ie., electronic transfer of capital outlay documents). DGS will be exploring ways of obtaining resources and redirecting existing resources towards accomplishing these goals.

This effort will require commitment of additional resources. Further, this will require the guidance, support and commitment (of resources) from all agencies involved in the capital outlay process and the Council on Information Management. The Secretary of Administration may want to consider this effort as a priority project, should funds become available.

Finding No. 7: The Task Force supports DGS' (and DEB's) efforts. This is an area in which all participants agreed. Investment in technology will be paid back through a quicker, more effective process.

Cost and Organization:

Life cycle cost analysis: At least one participant endorsed the use of life cycle cost analysis. The implication is that the Commonwealth may be "penny-wise and pound-foolish" in selecting material for some projects. Some material, while more costly initially, may reduce the overall life cycle cost of constructing, maintaining and operating facilities.

DEB maintains that they are not "blind to life cycle costing". However, they cite examples where agencies have incorporated materials, in their plans, that were inappropriate (and too expensive) for the use or location of the facility.

Finding No. 8: The Task Force believes that much of the controversy surrounding the life cycle cost issue stems from the lack of building standards that are agreed to in advance of

project development. An understanding of the standards which the Commonwealth will support for specific types of facilities is needed.

The Commonwealth must have greater dialogue between agencies such as DGS, DPB, the State Council of Higher Education (SCHEV) and "user agencies" regarding acceptable construction standards. Also, master plan requirements must be met and master plans should be given greater scrutiny. For example, one suggestion is to allow SCHEV to review higher education master plans to ensure that plans are appropriate to mission.

The Task Force recommends that DPB and DEB develop a program and appropriate methodology by which realistic life cycle cost analysis can be made an integral part of the capital project development process. The objective is to obtain the lowest overall cost to the Commonwealth for the construction, maintenance, and operation of its facilities.

Further delegation of authority to agencies who have demonstrated capabilities: This concept is one that has the potential to speed the process. It is also universally endorsed by the user agencies. (Currently only one, the University of Virginia, has delegated plan review authority.) Central review staffs fear higher project costs and reduced quality control under a delegation of authority model.

Notwithstanding staff reservations about the approach, the University of Virginia believes it has benefitted from delegation of authority. "We (UVA) believe that this procedure (delegated authority) is working well and is achieving the objectives that we had in seeking it. These were, first of all, to accelerate the plan review process in order to bring projects to completion earlier, secondly, to provide a higher level of assurance that the University's standards and requirements, as well as code related requirements, were adequately reflected in construction documents. While the University now assumes the significant cost of the review process.....previously borne by DEB, our experience to date suggest that these additional costs are substantially offset by reduced inflationary effects upon our construction budgets achieved through more timely reviews and therefore an accelerated planning process. We strongly endorse further such delegations of authority to other adequately staffed agencies. We endorse, too, the suggestion...that the Task Force consider the idea of designating technically staffed agencies to assist smaller agencies within the area...." (April 6, 1991, William D. Middleton, Assistant Vice President, Facilities Management, UVA).

Participants have called for an organizational shift of responsibility to the agency sponsor. Participants believe the role of the central agency should become more service related and less regulatory. Responsibilities for central agencies will be oriented toward:

- Training for Agencies and Institutions.
- Being a resource for participating agencies and institutions.
- Providing assistance to small agency participants.
- Developing improvements to the process (eg. forms and procedures).
- Post audit review of projects.

Finding No. 9: There are examples (such as state personnel and procurement systems) where delegated authority gives agencies greater control and an expedited process. In these areas, central agencies develop rigorous standards that must be met to achieve delegated authority. If standards are not met, delegation is not granted or may be rescinded. Central agencies also invest a great deal of effort in training, providing technical assistance (particularly to smaller agencies who lack resources and the capabilities to achieve delegated authority) and monitoring compliance.

The Task Force believes that this model has the potential for expediting the capital outlay process. DEB should promote efforts towards delegation of authority beyond the single institution that now has delegated authority.

The Task Force also believes that DEB should examine the needs of the smaller agencies who are not frequently involved in the capital outlay process. These small agencies (or infrequent developers of capital outlay projects) routinely receive support from DEB in developing projects, and this support should continue. Another alternative is for Secretaries to designate technically staffed agencies within their areas to assist smaller agencies, when the need exists. Either of these alternatives, or a combination of the two, can assist the smaller agencies in addressing their capital outlay development needs.

Bid and Construction Procedures:

[The following comments were developed by the VHEFMG and provided to the Task Force at the request of the Secretary of Administration. The comments have been edited for inclusion in this report.]

In the opinion of the participants, there is a need to expand the methods of construction procurement that can be tailored to specific project demands in terms of timeliness, complexity, size and flexibility. Capital outlay construction procurement methods lack flexibility required to meet the programmatic needs of state

agencies and institutions.

While the sealed bid process represents the ultimate response to the need for competition from the private sector, it also represents the longest amount of time from the statement of need to occupancy of any of the available procedures. The construction management process is reserved for very large, complex projects and is not applicable to the majority of the capital outlay projects. The design/build process that is used by the state has been modified from the traditional process that is used in the commercial market and requires that the contractors invest substantial amounts of time and money with no return to the unsuccessful bidders. This process is limited to those projects that are simple in design and repetitive in nature such as, dormitories, warehouses, etc. Other than emergency situations, there are no other identified methods of procuring construction in the Commonwealth.

The changes introduced by the 1990 session of the General Assembly, pursuant to the recommendations of the Commission established to study alternative methods of financing facilities, offer an additional and welcome approach to both financing and construction; however, the recent drafts of the procedures that we have reviewed tend to emphasize central control and approval of the design and construction process. Virginia Tech is in the process of proposing a somewhat revised method of the state's design build that will generate interest from prospective design/builders (Attachment D). This method is being proposed for the construction of a pilot project that has been approved for alternative financing. It is possible there are other variations of that design/build process that is being proposed by Virginian Tech that would be effective in attracting competitive interest from the construction industry.

Finding No. 10: The Task Force concurs with the alternative construction process delineated in attachment D, based on approval at the preplanning study phase.

Competitively bid construction contracts, based on definitive plans and specifications, can cost more money on some projects, particularly when unexpected conditions generate a high volume of changes and claims. The kinds of projects best suited to alternative acquisition strategies should be carefully considered.

Some alternative ideas that may be useful, in special circumstances, as alternatives to sealed bidding. These alternatives include, two-step sealed bidding, source selection and pre-qualification. Each procedure has certain advantages.

Two step Sealed Bidding: In step one, there is a request for, and submission and evaluation of, a technical proposal (without pricing) to determine the proposal's compliance with technical

specifications. Step two is the submission of bids by only those firms that were determined to be technically acceptable under the step one evaluation. Award is made to the lowest conforming bidder. This method is most suited to facilities described by performance specifications, with allowance for many possible acceptable solutions. Examples include requirements for storage space of given dimensions that could be met with a variety of pre-engineered buildings, or equipment with stated capacities that could be provided by a variety of manufacturers.

Source Selection: When the basis for selection is price and other factors such as quality or delivery schedule, this method may be applicable. Offers are evaluated based on pre established technical criteria. Then price is considered. Award is made to the offeror proposing the best overall value. This method has been used for the procurement of multi-unit family housing projects and sophisticated electronic facilities.

Neither "Two-step sealed bidding", nor "source selection" are currently allowable under the Virginia Procurement Act.

Pre-qualification: Pre-qualify firms for projects which are urgent and complex. With appropriate approval, firms are pre-qualified upon pre-established criteria, then invited to submit proposals on the project. In some instances, a preliminary 35 % design is provided to the pre-qualified offerors for submission of their initial proposals. Proposals are evaluated, and best and final offers are submitted based on the 100% design.

"Pre-qualification" can and has been used by state agencies (eg. ODU and UVA).

Summary of Task Force Activities

- **January 7, 1991** - Task Force discussed the scope and focus of their review. The Task Force agreed to begin by soliciting comments from agency representatives and other "participants" in the capital outlay process.
- **January 23, 1991** - Task Force met with representatives from state agencies, institutions of higher education and representatives from private design firms to hear their recommendations for improving the capital outlay process.
- **Participant comment summaries** were shared with the Department of Planning and Budget (DPB), the Department of General Services (DGS) and the Department of Transportation (VDOT).
- **February 22, 1991** - Task Force met with representatives from DPB, DGS and VDOT to discuss participant comments, areas of concern and recommendations for improvement.
- **Participant comments** have been shared with the "Virginia Higher Education Facilities Management Group" (VHEFMG). VHEFMG's comments have been reflected in this report.
- **The Task Force Chairman** spoke with Mr. Alan Wurtzel, member of the Board of Visitors at Virginia Commonwealth University. Mr. Wurtzel's recommendations are also reflected in this report.
- **March 15, 1991** - Task Force completes "Interim Report".
- **April 8, 1991** - Task Force meets with representatives from VHEFMG. Discuss "Interim Report" recommendations and recommendations for bid and construction procedures.
- **April 19, 1991** - Task Force receives written recommendations from VHEFMG.
- **May 17, 1991** - Task Force meets with Mr. Alan Wurtzel, Mr. Mike Evans (representative, Virginia Society of the American Institute of Architects) and Mr. Michael Wagner (construction company President) to gain "private sector" perspective on the State's capital outlay process.

Attachment B

Division of Engineering and Buildings Review Calendar

Nov-Dec (Even Year)	DEB, when requested, assists DPB in revising and preparing instructions for agency submission of capital budget requests.
Jan-Feb (Odd Year)	DPB receives and reviews agency capital project requests. DEB is provided information copies. If requested by DPB analyst, DEB will review project cost and help determine if preplanning study is required.
March (Odd Year)	DPB issues letters to agencies authorizing preparation of preplanning studies. The agency may have the preplanning study prepared using an existing open-end A&E contract, by issuing a separate request for proposal for A&E services or by using the agency's own engineering staff. (No more than 1% of the studies prepared biennially are done in-house.) Completed studies are due to DEB by September 15 of odd year. DEB is provided information copy of each authorization letter.
Sep-Nov (Odd Year)	DEB review studies to determine if the technical approach or solution is reasonable and to validate that agencies' estimated project cost are reasonable. DEB looks for excessive cost features (eg. atriums, unnecessary architectural features) and compliance with State engineering, design standards. Where more costly materials or equipment are justified on basis of life cycle cost, DEB supports their inclusion and may recommend such items if not included in project. DEB makes a recommendation to DPB of the appropriate project cost. The recommendation can validate agency submitted cost or raise or lower the agency cost. Copies of the recommended project budget are provided to the House Appropriations and Senate Finance Committee staffs. The agency is not advised of the DEB reduction in the request, if it is less than 10%. If proposed reduction is greater than 10% DEB will meet with agency to try to resolve the difference.
Dec (Odd Year)	DPB finalizes Governors' budget

Attachment B

Jan-March
(Odd Year)

DEB responds to questions on projects or budget amendments as requested by House Appropriation and Senate Finance Committee staffs as regards projects submitted in the Governor's budget or by patrons.

Attachment C

Estimate of Unneeded Preplanning Expense

The total cost of preplanning for all agencies, in the Commonwealth has not been collected. However, for purposes of this paper, we have estimated preplanning costs based on the guidelines contained in the Department of Planning and Budget's "Commonwealth Planning and Budget System" manual. CPBS guidelines permit agencies to spend \$25,000 for preplanning studies for projects less than \$2.0 million in anticipated cost and \$50,000 for preplanning studies for projects anticipated to cost more than \$2.0 million.

Assuming all studies cost either \$25,000 or \$50,000, we compiled the following estimate (this may be a conservative estimate, as some projects are authorized to exceed the CPBS guidelines):

Total PP Studies Authorized and Received:	162
93 projects > \$2.0 million	\$4,650,000
69 projects < \$2.0 million	\$1,725,000
Total Preplanning Cost	\$6,375,000
Total PP Projects Budgeted	63
41 projects > \$2.0 million	\$1,025,000
22 projects < \$2.0 million	\$ 550,000
Total Cost for Budgeted Projects	\$1,575,000
Total Unneeded Preplanning Expense	\$4,800,000

Attachment D

**VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
UNIVERSITY OFFICE BUILDING
ALTERNATE CONSTRUCTION PROCESSES**

There are currently three approved procedures for the procurement of construction projects in the State of Virginia: sealed bidding; design/build; and construction management. Numerous other methods exist for procurement of design and construction services that are not utilized in the Capital Outlay program, such as Fast-Track and Turn-Key.

The majority of projects are procured using the sealed bid process. While this process has the advantage of detailing the exact needs of a project, it has a distinct disadvantage in that it requires the longest implementation time of all of the approved procedures. To some extent, the sealed bid process also offers reasonably dependable pricing but leaves the agency subject to the errors and omissions of the architect that are often difficult to resolve and can result in budget problems in the form of change orders.

The construction management process is appropriate only for projects that are of such magnitude and complexity that the sealed bidding process would require excessive time for development of bid documents.

The design/build process that is currently being used by the State contains requirements that are detrimental to effective competition. The process requires that more than one design/builder must submit a design proposal that meets the stated criteria. The design/builder's bid is submitted in a sealed envelope at the specified time along with a design proposal. The agency is then required to enter negotiations with each of the design/builders that have submitted an acceptable design proposal. Any changes that are required to meet the exact needs of the agency are identified. The design/builder then submits a cost change to his sealed proposal. After negotiations are completed with all of the design/builders, the sealed envelopes are opened and the cost change is applied to the proposal. The design/builder with the lowest price is determined to be the successful bidder.

The problem with this procedure is that the design/builder must invest significant resources in the design proposal and the subsequent contract negotiations without assurances that he will be the low bidder. While this is also true of sealed bidders, the

investment required is significantly less.

Virginia Tech is currently developing a construction procurement procedure for a pilot project that has been authorized under the alternate financing guidelines that are currently in the process of being developed by the Secretary of Finance. This procedure will be submitted in the near future to DEB and other involved agencies for their approval. Although the proposed procedure will be implemented, with appropriate state approval, by the Virginia Tech Foundation, we believe that it is possible to establish a similar procedure that could be used by the State in its procurement process. A brief outline is as follows:

1. A Building Committee will be established equivalent to the current requirements of the Capital Outlay Manual.
2. The Committee will develop a Request For Qualifications that will be similar to the current requirements for selection of Architects and Engineers but will add specific requirements relating to the experience levels, etc. of the building contractor.
3. Using the competitive negotiation procedures of the Procurement Act, the Committee will select a minimum of two and not more than three design builders.
4. The selected design/builders will then prepare a design proposal in response to a Request For Proposal that has been prepared by the Building Committee and that will outline the program, design criteria and construction budget of the project. The basis of selection will be determined in the RFP. Cost may be a consideration but does not have to be the sole determining factor. Upon submission of an acceptable proposal, each design/builder will be paid a fee that has been advertised in the Request For Qualifications statement. This fee is intended to offset some, but not all, of the costs of the design/builder in the preparation of the design proposal.
5. The Committee will then proceed to evaluate the proposals, making maximum use of any technical expertise that they choose to draw upon. The selection process will be that as described in the competitive negotiation provisions of the procurement Act. Selection will be based on the criteria as outlined in the RFP.
6. The agency would then enter into a two-part contract, similar to AIA Document 191 for design/build contracts. Part One would contract only for the preliminary plans and final development of the construction budget. The agency and the design/builder would negotiate changes as necessary in order to meet the budget needs of the project. Upon successful completion of Part One and a final construction cost is agreed upon, the agency and

the design/builder would enter into Part Two of the design/build contract for completion of the project.

7. Several submissions by the design/builder to the agency would be required as construction proceeded. After approval of the foundation plans, the contractor will proceed with construction while the architect is preparing plans for approval of the next step in the construction process. This process would continue until final completion is achieved.

As with all procedures there are advantages and disadvantages. The significant advantage of this process is reduced time for planning and construction which translates into a significant cost reduction, especially in inflationary periods. The significant disadvantage is that a successful project requires that the RFP be developed with extreme care in order that all of the design and program issues are fully covered. The process also requires technical expertise within the agency in order that proper evaluation of the contractor's submittals can be conducted.

This process should not be available to extremely complex projects such as research laboratories or buildings that would have a major impact to the overall aesthetics of a campus. It should be limited to simpler building types such as offices, classrooms, dormitories, warehouses, etc.



APPENDIX B

COMMONWEALTH of VIRGINIA

DEPARTMENT OF GENERAL SERVICES

RAYMOND D. PATTERSON
DIRECTOR

D. B. SMIT
DEPUTY DIRECTOR

December 10, 1993

202 NORTH NINTH STREET
SUITE 209
RICHMOND, VIRGINIA 23219

(804) 786-6152 VOICE/TDD
(804) 371-8305 FAX

Mr. Philip A. Leone, Director
Joint Legislative Audit And Review Commission
General Assembly Building
Richmond, Virginia

Dear Phil:

Thank you for the opportunity to review the Exposure Draft, "Special Report: A Review of the 900 East Main Street Building Renovation Project" received December 3, 1993. I appreciate the opportunity you afforded our staff, on December 6, 1993, to discuss our concerns. I see that a number of our concerns were incorporated into a subsequent exposure draft.

DGS agrees with thirteen of the fourteen recommendations in your report. In fact, we have initiated corrective action on Recommendations 1-7, 11 and 14. These actions are based on a report by our Internal Auditor and a subsequent report issued by the Auditor of Public Accounts. Our efforts include completing an assessment of the training needs of project management personnel, developing a training curriculum, re-engineering of processes used by the Bureau of Facilities Management, standardizing work procedures followed by project personnel, redesigning our approach to standing contracts and providing specialized procurement training. JLARC recommendations complement these efforts.

We are not in full agreement with Recommendation 8 concerning cross-training architects and engineers in the Bureau of Capital Outlay Management (BCOM) and the Bureau of Facilities Management (BFM). I will discuss this concern later.

While the recommendations are generally fine and welcomed, the report still contains some inaccuracies. Following are three examples that I bring to your attention:



Consolidated Laboratory Services • Engineering & Buildings
Executive Office Building, Room 209, Richmond, VA 23219

Mr. Philip A. Leone, Director
December 10, 1993
Page 2

Asbestos Survey

JLARC staff second guesses DGS for using HDH versus Environmental Laboratories for the asbestos survey. Staff criticizes HDH for taking 2,000 asbestos samples. Here are the important points lacking in the JLARC staff analysis.

First, Environmental Laboratories could not have performed an effective survey using 518 samples rather than the 2,000 samples used by HDH. It is not reasonable, according to our experts, to believe that 500 samples were adequate to survey two buildings of this age with seven and fifteen floors, varying architecture, and differing physical characteristics. An independent contractor in this field who is familiar with the buildings has stated that he believes 500 samples to be too low and that 2,000 samples more realistic. Further, the 500 samples listed are far too few when compared with the number of samples required by the Virginia Asbestos Survey Standards For Buildings to be Renovated or Demolished (VR 394-01-7) effective March 1, 1990.

Secondly, JLARC staff suggests that the survey work could have been awarded on a sole source basis. The Code of Virginia requires "Upon a determination in writing that there is only one source practicably available for that which is to be procured, a contract may be negotiated and awarded to that source without competitive sealed bidding or competitive negotiation." In this case, there were a number of firms capable of performing this type of work. Further, to construe the term "practicably available" to mean that firms who have provided services in the past are the only ones capable of providing services in the future is to undermine the cornerstone of the Virginia Public Procurement Act: competition.

Additionally, JLARC staff analysis of this issue is not consistent. The report suggests it would be appropriate to procure the asbestos survey on a sole source basis because a vendor "(had) a specific knowledge of a location." It then levels criticism because the successful Phase I architectural firm had an apparent advantage because it had done the asbestos survey. This is seemingly contradictory logic.

Third, the alternative used for acquiring the asbestos survey was a cost effective solution. The contract was awarded by competitive process. This information is given scant attention in the JLARC staff analysis.

Mr. Philip A. Leone, Director
December 10, 1993
Page 3

Cost of Emergency Abatement

The JLARC report states that "the direct cost of the asbestos emergency is \$7.1 million." However, the actual cost of the "emergency" was slightly less than 40% of the \$7.1 million figure. The remaining 60% was expended to more fully abate the building including additional demolition and insulation. Given the widespread presence of asbestos throughout the buildings, it was determined to be in the Commonwealth's best interest to proceed with removal of remaining asbestos rather than be faced with multiple emergency abatement problems for the life of the building.

Organizational Structure

The analysis in the report concludes that rotating staff between project management, planning and review is desirable. Recommendation 8 proposes cross-training the architects and engineers in the Planning and Technical Services Section in the Bureau of Facilities Management (BFM) with those in the Bureau of Capital Outlay Management (BCOM).

This analysis shows a lack of understanding of the purpose of each Bureau. BCOM is staffed by licensed architects and engineers engaged in reviewing plans for capital outlay projects on a statewide basis for compliance with the statewide building code and for cost savings. The mission of the Planning and Technical Services Section is to plan and manage DGS projects.

Although the architects and engineers in the units cited are in the same occupational category, the knowledge, skills and abilities required to perform review of statewide plans and designs are substantially different from the knowledge, skills and abilities needed to manage a project. Additionally, of the three licensed architects and one licensed engineer in the Planning and Technical Services Section, three are supervisors.

Closing

With hindsight, DGS would not have split design responsibility between Phase I and Phase II and would have planned for complete removal of asbestos in Phase I. However, there was good rationale at the time these decisions were made.

In the late 1980's, design responsibilities were traditionally split between specialists in asbestos design and conventional architect/engineer designers because the latter were unable to

Mr. Philip A. Leone, Director
December 10, 1993
Page 4

obtain liability insurance for asbestos design work. At the time design services were solicited for 900 E. Main, this was the conventional thinking.

Regarding removal of asbestos in Phase I, the decision to encapsulate in selected areas rather than to remove was driven by budget considerations. Specifically, the anticipated costs for Phase II renovations were high. Had we expended funds for complete asbestos removal in Phase I, we could not have awarded the Phase II contract based on the existing budget estimate. While this scenario ultimately did not prove fortuitous, the decision at the time was plausible and reasonable.

The problems in 900 E. Main need to be placed in perspective. Renovation projects in asbestos contaminated buildings are always difficult and unpredictable. While circumstances converged that resulted in the building contamination and increased costs, the management decisions at various stages were not made in a culpable or irresponsible manner. DGS is a sound and competent organization and should not be condemned by the problems encountered in the 900 E. Main project. This is one project from which lessons learned will be applied to avoid similar problems in the future.

Sincerely,

D. B. Smit
Acting Director

c: The Honorable Ruby G. Martin



P.O. BOX 230 SALEM, VA 24153 703-389-8282 FAX 703-389-1540

December 7, 1993

Mr. Philip A. Leone, Director
Commonwealth of Virginia
Joint Legislative Audit and Review Commission
Suite 1100, General Assembly Building, Capitol Square
Richmond, VA 23219

Re: 900 East Main Street

Dear Mr. Leone,

In response to your request for comment on the document titled Special Report: A Review of the 900 East Main Street Building Renovation Project I wish to offer the following:

- Page 1, para.2-** The comment that phase one asbestos abatement and demolition work occurred between June 1991 and October 1992 is misleading in that, without the exact date readily available, this work was appreciably completed some time prior to October 1992. Only punchlist items prepared in response to several DGS walk throughs were being addressed after approximately mid June.
- Page 1, para.3-** A protocol survey was performed according to the "Buildings to be Renovated or Demolished" standards. Without the knowledge of what has been alleged to have been overlooked I can state that HDH did not perform major destructive testing of the building's interior. I take exception to the statement that all the asbestos was not identified.
- Page 10, para.3-** I believe that the statement that a less expensive option was available to the Commonwealth for asbestos survey of this building has been taken out of context. At the time we were negotiating to perform these services it was apparent that more than just a survey was to be involved. To do it properly exact floor plans had to be drawn and measured drawings had to be developed to show sample locations and the location of any identified asbestos containing materials. The Commonwealth did not have any drawings of existing floor plans.
- My recollection of the issue of the Commonwealth being able to hire someone else for this service at a cheaper price is that the then State Asbestos Coordinator told the DGS Project Manager that she knew someone who would do it cheaper without regard to the scope of services requested by DGS and as outlined above or without regard to the mandates of the required protocol. To the best of my recollection, the Project Manager asked if I had heard of the proposed offeror and I stated that I had not. Upon further investigation on my part, I was told by at least two other sources in the Richmond area that it was a very small firm with few employees and possibly only two individuals which were licensed to perform this type of work.
- HDH utilized six persons on site to perform actual field work, one architectural draftsman, one computer technician, one word processor, one printing and binding person and a field supervisor to complete this project. To achieve this

amount of work with this amount of people HDH personnel were still required to work a significant amount of overtime.

If any DGS employee was aware of an existing partial survey and if one truly existed it certainly could have been incorporated into HDH's work effort and could possibly have significantly reduced the cost of the survey.

When HDH inquired of Mr. Barclay of Stillbar Associates if he had any previous documentation all he could produce was a limited amount of PCM and PLM samples taken in response to an asbestos release episode Stillbar had experienced some time prior to the time frame in question.

In conclusion, I do not believe that a quotation for the scope of services as provided by HDH on this project was in DGS's possession at the time the decision was made to go forward with the award of this project to HDH.

Page 13, para.2-

I believe the comments that HDH had an unfair advantage in acquiring the work for phase one design is taken out of context. Anyone doing a survey of any type, be it land or possibly timber, would certainly be more knowledgeable of the existing conditions than someone who had no previous experience with the project. I would think the Commonwealth could see that hiring someone with this knowledge would certainly save time and money. I would hope that the comments referring to this issue could be expanded somewhat so that the casual reader wouldn't be left to speculate about what "unfair advantage" could mean.

Page 14, para.2-

In regards to the use of open-end contracts, I believe they are a definite service to the Commonwealth and the taxpayers. They are utilized regularly by the private sector and local governments and have been very beneficial to many State agencies. An independent study by a qualified panel of users and suppliers of services should be implemented to provide recommendations.

Page 37, para.1-

A response to the claim by the phase two architect that he was not allowed on site because of the asbestos abatement work being done can only be that this is a total misrepresentation of the truth and the facts as they occurred during this very critical period in this project. The DGS project manager had initially directed that all correspondence and communication be directed through him. This was soon amended and we were asked that we communicate directly with the phase two architect and keep him informed. This was done as requested. Our project log files indicate that CLA and TDFB personnel were on site without restraint and often with the assistance of HDH on-site personnel. HDH provided CLA with CADD drawings, generated by HDH, of the building and offered a computer disk in autocadd 10. This offer was declined by CLA's project manager but, readily accepted by TDFB. Mr. Clemmons, Mr. Leckey, Ms. Adams and various other CLA personnel, as can be documented by daily sign-in sheets and meeting minutes, were on site many times throughout phase one activities. HDH has drawings hand marked by CLA personnel indicating areas they intended to disturb to facilitate their portion of this project. This type of communication and transfer of information flowed freely until April or May of 1992 when the basic work plus demolition change order work was appreciably complete. TDFB personnel such as, Mr. Simpson, Mr. Weaver and other engineers were also on-site without restrictions and usually with the assistance of HDH personnel. HDH field personnel actually physically marked various items that TDFB wished removed during phase one operations.

P.A. Leone
Dec. 7, 1993
Page 3

The only areas restricted to DGS, CLA or TDFB were under containment for asbestos removal purposes on any given day. Regulatory requirements and common sense should indicate that these areas were not available to anyone with the exception of the asbestos contractor's duly licensed personnel and the Project Monitor responsible for monitoring work activities.

Page 39, para.2-

We have twice met with JLARC interviewers and it appears that I have been unable to communicate several important factors: that the project at 900 East Main was completed on time, within budget and without major incident concerning any regulatory agency or the news media. I can not perceive how these interviewers can misunderstand the contract documents for phase one and the sequence of events that were addressed during phase one activities. The scope of work as outline in the base bid and alternates was completed in its entirety. However, the change order work that was added and governed by the line item unit prices, as described in the bid form, was an ongoing process that changed from time to time in an effort to accommodate the direction taken by the phase two design. DGS's project manager directed the implementation of the change order work. In fairness to all concerned, this portion of the project should be viewed as a major change in the scope of work of phase one. I feel it is unfair and very misleading when this document refers to the work in phase one as incomplete.

Although the points I have chosen to discuss in this letter do not encompass the entirety of my disagreement with some of the conclusions that have been reached in this document, I feel further investigation of these issues will lead to more understanding of the overall project. I appreciate this opportunity to represent my view of these matters. I hope my timely response to your request for comments will allow your use of this information in your final report. I believe JLARC staff has made an effort to gather as much information as possible. It would be a disservice to all involved if it is not accurately reported.

Please do hesitate to contact me if you have any questions or I can be of further assistance.

Sincerely,



Joe F. Hale, VP

**INSULATION SPECIALTIES, INC.**

(SUBSIDIARY OF CAUDLE-HYATT, INC.)

INSULATION CONTRACTOR AND DISTRIBUTOR

Phones: Hopewell 458-1555 — Richmond 748-9606

P.O. Box 1629 • One Westover Park • 501 Westover Avenue • Hopewell, Virginia 23860

FAX (804) 458-8521

December 8, 1993

Joint Legislative Audit & Review Commission
General Assembly Building
Suite 1100
Capitol Square
Richmond, Virginia 23219

Attention: Robert B. Rotz
Division Chief

RE: Exposure Draft
900 East Main Street Renovations

Gentlemen:

We appreciate the opportunity to offer comments on the draft chapter on the subject matter, pages 33 through 56.

We offer the following observations and clarifications for your consideration and edification.

Reference: Page 38, Lines 20 and 21

"DGS appears to have accepted phase one of the project as complete, although the objectives of this critical phase had not been achieved,"

The revised objective of phase one was in part to abate selectively as much asbestos as possible within the reduced dollar amounts allocated. The amount estimated originally for phase one was far more than that which was spent.

It was the combined assessment of the project monitor, phase one architect, owner's representative, DGS representative and the phase one contractor that the modified scope had been satisfactorily completed in September 1992. The full knowledge that asbestos remained in the building and that some undefined portion would have to be dealt with in phase two was accepted as a probability.

Observation:

We believe in the interest of fairness and accuracy that the term "original objectives" should replace the reference to "objectives" on line 21.

Reference: Page 39, Lines 3 and 8

"Phase One Objectives Were Not Fully Achieved", "with DGS staff and contractors suggests that phase one objectives were not fully"

Observation:

We believe in the interest of fairness and accuracy the term "original objectives" should replace the references to "objectives".

Reference: Page 40, Lines 5 through 18

"the phase two construction administration firm documented asbestos containing materials identified in the building at the time of the March 3, 1993 asbestos emergency:

- asbestos containing insulation was not fully abated on exposed piping in phase one,"

The combined assessment of the project monitor, phase one architect, owner's representative, DGS and phase one contractor was that all asbestos on piping exposed in September 1992 had been abated.

It is probable that over five months later and six weeks after demolition in phase two had begun that some pipes may have been rendered exposed that were not apparent to multiple entities at the conclusion of phase one.

Observation:

We believe in the interest of fairness and accuracy that consideration of when the referenced piping became "exposed" should affect conclusions as to whether the modified objectives of phase one were met.

- "asbestos removal from chases in the East Tower building was not accomplished in phase one change order number four,"

We have attached a copy of change order number four.

No asbestos removal from chases in the East Tower building was required by change order number four. We were to remove wiring, decontaminate and clean the electrical floor raceways/East Tower. To our knowledge the raceways were clean in September 1992. In the event they were contaminated in March 1993 it was probably from an external source. In any event, it is highly unlikely that the raceways in the floor contributed to the asbestos emergency but were likely recipients of debris from ill-advised demolition.

You will note that no additional money was paid for this service.

- "ceilings were not removed and hidden mechanical systems not checked for asbestos containing material in the West Tower basement,
- East Tower perimeter chases were known to contain asbestos fireproofing material and were sealed, but later disturbed in phase two, and
- asbestos containing floor tile and mastic were not completely removed in phase one, only those which had come loose."

These were three factors intended as cost cutting measures. HDH and DGS did not anticipate any disturbance in these areas that could not be reasonably dealt with in phase two.

Reference: Page 41, Line 20

"that was planned by DGS to be accomplished during that phase and"

In the interest of fairness and accuracy please insert "originally planned" in lieu of "planned".

Reference: Page 42, Lines 1 and 2

"general contractor complained that the roof in the West Tower leaked and appeared to contain asbestos."

The phase one contractor was not notified of any leak in the West Tower or notified of a complaint about asbestos problems. DeShazo Roofing did a total tear off of the roofs

and replaced all with non ACM roofing. A possible small leak on the East Tower was reported and the phase one contractor proceeded to look at the problem but by the time it was addressed was told no one could go in the building because there was an asbestos emergency. Meanwhile, the alleged "asbestos" on the roof was never confirmed.

Reference: Page 45, last line

"phase one as complete despite the objectives of the phase not being achieved, and"

In the interest of fairness and accuracy "the objectives" should read "original or hoped for objectives."

Reference: Page 46, Lines 16 and 17

- "even the modified scope of work actually contracted for in phase one did not appear to have been completed,

Observation:

This conclusion is not supported by any timely assessments of project status by the project monitor, phase one architect, owner's representative, DGS, BOCM or any phase one contractors.

The only observations that could possibly support such a serious indictment are flawed and the inexperienced observations five months after the fact by a phase two culpable party based on erroneous interpretations of phase one project documents.

The modified scope of work actually contracted for in phase one was completed to the full extent that DGS felt funds were available and confirmed by every entity involved in phase one.

Observations:

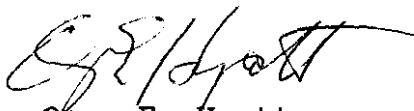
Please revise the JLARC conclusion to reflect that "the desired objectives were not achieved" in phase one due to the constraint of self imposed funding limits and uncertain areas of work in phase two.

Joint Legislative Audit and Review Commission
December 8, 1993
Page 5

If you have any questions or concerns, please contact the undersigned at (804) 748-9606.

Very truly yours,

INSULATION SPECIALTIES, INC.



Onza E. Hyatt
Vice President

OEH:bpd

Attachment

cc: Philip A. Leone

CONTRACT CHANGE ORDER

PROJECT NO: 194-15107

CHANGE ORDER # 4 DATE: 4/22/92

INSTITUTION/AGENCY: Department of General Services, Div. of Eng. & Bldgs.

APPROPRIATION TITLE: 900 East Main Street

PROJECT TITLE: Asbestos Abatement and General Demolition

TO: Insulation Specialties, Inc.
501 Westover Avenue
Hopewell, VA 23860

Gentlemen:

Under your contract dated May 8, 1991 for work at 900 East Main Street
you are hereby authorized to make the following changes: Richmond, VA

- 1) Floor tile and mastic removal/ First Floor, East Tower
- 2) Floor tile and mastic removal/ Mezzanine level, East Tower
- 3) Demolition and asbestos abatement of perimeter metal chases/ West Tower
- 4) ~~Demolition of electrical floor raceways/East Tower~~
*DECONTAMINATION AND CLEANING OF ALL W/F
AND REMOVE WIRING*

and to add to (deduct from) the contract, in accordance with the contract and specifications, the sum
of zero /100 dollars(\$ 0.00)

There will be an extension of seventyeight (78) days for contract completion.

The date of completion of the contract was 4/13/92 and now will be 6/30/92

CONTRACT COST SUMMARY

AMOUNT OF ORIGINAL CONTRACT	TOTAL ADDITIONS	TOTAL DEDUCTIONS	AMOUNT OF CONTRACT TO DATE
1,788,173.00	964,187.57	0.00	2,752,360.57

In approving this change order, the Owner, or his representative, certifies that expenditures made to accomplish the work covered by this change order will not result in total expenditures exceeding the total project cost on the approved G.S. Form E&B CO-8. In making this determination, the Owner cannot assume that amounts shown on the originally approved CO-8 for EQUIPMENT may be used for any purpose other than the purchase of movable equipment without prior approval of the Department of Planning and Budget.

DATE ISSUED:

DATE APPROVED:

[Signature]
Architect/Engineer
Date 4/23/92

[Signature]
Agency Representative
Date 4-22-92

DATE ACCEPTED:

Insulation Specialties, Inc.

[Signature]
Contractor
A. Bowen Nyatt
Vice President
Date 4/22/92

CONTINUED ON REVERSE SIDE OF FORM

COOPER • LECKY ARCHITECTS, PC

1000 POTOMAC STREET, NW, WASHINGTON, DC 20007
202/333-2310 Fax 202/333-6962

Principals

W. Kent Cooper
William P. Lecky
Robert J. Sangine
Roger L. Burns

8 December 1993

Mr. Robert Rotz
Joint Legislative Audit and Review Commission
Commonwealth of Virginia
Suite 1100, General Assembly Building, Capitol Square
Richmond, Virginia 23219

Re: JLARC Special Report:
Review of the 900 East Main Street Building Renovation

Dear Mr. Rotz:

As requested by Mr. Philip Leone in his letter of December 3, 1993, we were asked to review and comment on your draft report for the 900 East Main Street Renovation project. The report has been read by myself, Tom Simpson, and Charles Clements, our Project Manager for this job. Our comments are in two categories. The first deal with "big picture" issues, our view of what went wrong and what could be done in the future to head off similar problems. The second level of comments have to do with clarifications of specific facts or observations in the report.

- 1a. The budget was woefully mis-estimated as you point out in the report. This could have been eliminated early on if a pre-planning study had been undertaken as a first step. We were not commissioned to perform a formal pre-planning study per se, but we did undertake a fairly careful cost estimate during the negotiation phase of the project and uncovered major deficiencies in the budget. However, we were told funding had already been finalized for the project.

We do a lot of work for the Federal Government. Several years ago they set in place a policy that requires pre-planning studies on all projects of any size. They simply had been burned too many times going to Capitol Hill and requesting funding based on budgets put together by their staff. Perhaps a pre-planning study was DGS's intent originally, but they felt pushed to get underway because of DIT's schedule requirements. I don't know. What we do know is that the tight budget and tight time schedule seem to be at the root of almost every problem on this job.

- 1b. It is clear to us that something went seriously wrong with the level of service provided to the Commonwealth under phase one. This is only our personal opinion, but it seems that the State, involved-contractors, subcontractors, and the taxpayers, are suffering, unjustifiably, as a result of the problems that have stemmed from that service.

As an overall comment, the tone of your report seems to imply 95% of the responsibility for the problems incurred are due to mismanagement by the State, and 5% should go to other parties involved. Our feeling is that, yes, some things could have been managed better by the State, but that the real cause of the current problems stem from phase one deficiencies.

2. Detail comments are as follows:

- 2a. Page 36, Fourth Paragraph "According to DIT staff, phase two architects and engineers did not initially understand DIT requirements, resulting in unrealistic initial plans for their electrical engineering and other needs, and several iterations of corrections in drawings and specifications."

We have some problem with that comment since we were selected based on our previous design experience on several large computer facilities and we were the ones, in the very early stages, that pointed out the budgeting problems related to under-funding the computer room needs.

- 2b. Page 37, Second line. "delays were due to the phase one architect, who would not allow him (the phase 2 arch.) on site because of the asbestos abatement work being done at the time."

This seems to imply that the phase one architect kept us off the job. That isn't the case. We did not have the necessary apparel or training to go through a contaminated site.

- 2c. Page 37, Last two lines "These "cost cutting" changes from DIT appear to have contributed to the problems ultimately resulting in delays in phase two designs."

The changes referred to here were proposed by DGS to cut costs. They did not come from DIT.

- 2d. Page 38, Entire first paragraph. Please refer to your report.

The problems on 900 East Main did not result from lack of coordination between phase one and phase two architects. The asbestos that was abated on the job (or was supposed to be abated) occurred in very specific locations that had no bearing on the placement of partitions, doors and lights within the space.

- 2e. Page 38, Second paragraph. Please refer to your report.

We have several comments. (1) Final plans were in fact developed for more like 75% of the building. (2) The time constraint put on the job forced the development of prototypical plans because tenants hadn't been selected for the rest of the building. The point of doing the prototypicals was to get some competitive bidding into the process, and provide a basis from which change orders could be effectively negotiated. (3) This is neither desired or timely but it is not "highly unusual".

- 2f. Page 39, Second paragraph. Please refer to your report.

Again, we do not feel the strategy of DGS to leave some asbestos in the building was terribly wrong. Obviously, if money were not an issue, one would opt to take out any and all asbestos. But money was a problem. However, the main point here is that no problems would have occurred, if the phase one removal and abatement had been done effectively.

- 2g. Page 39, Last three lines. "However, because the design for phase two was not set, decisions were hampered in phase one about removing pipe insulation that contained asbestos, spray-on fire-proofing, and other asbestos containing materials."

I don't know who may have said this to you, but it is totally inaccurate. All of this material was to have been removed under phase one. It simply didn't get done. It's presence under phase two had nothing to do with coordination with our plans for the ultimate build-out.

- 2h. Page 40, Top two lines. "materials initially were not to be disturbed during phase two, but may have been disturbed due to design changes."

As with the item above, this simply is not true.

- 2i. Page 40, Line 6. "phase two construction administration firm"

We would suggest a parenthesis be added to identify the firm in question. (ANADAC) If that is the firm being referred to. There are three firms, including our own, that are performing construction administration services for the Commonwealth on this project.

- 2j. Page 40, Fourth "bullet" "East Tower perimeter chases were known to contain asbestos fire-proofing material and were sealed, but later disturbed in phase two"

This statement is incorrect. For clarification there are two types of vertical enclosures on the perimeter walls of the East Tower. One half of these enclose steel structural columns, the others enclose vertical piping. The vertical piping chases were determined by HDH to be asbestos-free. The column enclosures were known to contain asbestos fire-proofing material and were sealed, but later disturbed in phase two. The reason the asbestos was disturbed in phase two is because the material used to seal the chase came out when the HVAC units next to the chase were removed under phase two. This was known to be the design intent of phase two.

- 2k. Page 43, Second italicized paragraph. Please refer to your report.

This isn't quite accurate. Our project manager did not ask the State's project manager to be less confrontational with the contractor. Our project manager was simply viewed as not being supportive in dealings with the Contractor, and I was subsequently asked to remove him from the job. I could not concur with that request since Charlie had so much background on the job. I did agree to be the spokesman for Cooper•Lecky in future meetings.

- 2l. Page 44, Second paragraph.

The "backed away from the table" quote is somewhat misleading. I believe it is out of sequence and out of context. After the asbestos problem in phase two emerged (and this was long after HDH was off the job), PSI, a firm specializing in asbestos surveying and abatement, was retained by the State and we were asked to aid and assist in resolving the crisis. We were concerned about becoming involved in a sticky liability issue for work that was outside our scope and area of responsibility. We went to the State and agreed to help in whatever way we could, but asked that we be given a letter of indemnification relative to the asbestos problem, since as I said, this was clearly

outside our area of responsibility and expertise. The State denied that request. It was at that point that we "backed away from the table." If HDH produced as-built drawings, they were never made available to us.

- 2m. Page 45, Middle of the page. "The phase two architect was tacitly allowed to disavow any involvement in asbestos issues."

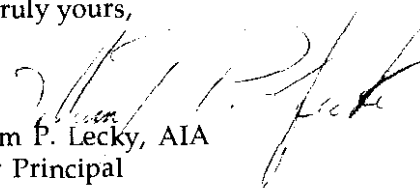
This suggests someone did us a favor. I can only point out again, this was never a part of our scope or our responsibility. In fact, when we offered reference and directive to the previous asbestos removal contract in our specifications, we were told to remove this material from our documents by the State -- and were given wording to substitute.

* * * * *

We appreciate the opportunity to review and comment on your report. Hopefully our observations and comments are helpful.

If you have any questions on any of this, please give me a call.

Very truly yours,



William P. Lecky, AIA
Senior Principal

WPL:mr

cc: Tom Simpson
Charles Clements

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