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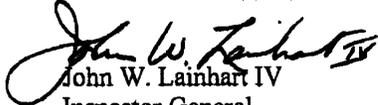
MEMORANDUM

TO: The Honorable Bill Thomas, Chairman
Committee on House Oversight

The Honorable Sam Gejdenson, Ranking Minority Member
Committee on House Oversight

The Honorable Bob Livingston, Chairman
Committee on Appropriations

The Honorable David Obey, Ranking Minority Member
Committee on Appropriations

FROM: 
John W. Lainhart IV
Inspector General

DATE: December 18, 1998

SUBJECT: Audit Report - Fire Protection Systems Do Not Adequately Protect The House
(Report No. 98-HOC-20)

This is our final report on the status of the fire protection systems within the House Complex. The objectives of this audit were to determine whether the Architect of the Capitol had effectively complied with the requirements of the fire codes and regulations and has taken adequate steps to ensure the safety of the occupants of the House Complex during a fire emergency. In this report, we identified a number of weaknesses in the fire protection systems and made specific recommendations for corrective actions.

Finding A of this report contains critical issues identified as a result of this audit. Since Finding B through D are more specific and provide detailed information on particular House building deficiencies, these three findings are confidential and are being distributed on a limited basis.

In response to our October 16, 1998 draft report, the Architect agreed with the general findings that the buildings in the House Complex are not fully protected by modern, state of the art fire protection systems. However, the Architect took exception with certain aspects and conclusions contained within the report. The Architect's response is incorporated in this final

report as well as Office of Inspector General comments addressing the Architect's response. The Architect's November 23, 1998 response is included in its entirety as an appendix.

Should you wish to discuss this matter further, I am available at your convenience.

cc: Speaker of the House
Majority Leader of the House
Minority Leader of the House
Members, Committee on House Oversight

FIRE PROTECTION SYSTEMS DO NOT ADEQUATELY PROTECT THE HOUSE

*Report No. 98-HOC-20
December 18, 1998*

RESULTS IN BRIEF

CONCLUSIONS

The fire protection systems within the House Complex¹ are deficient. Specifically, the House Complex has:

- Fire protection systems that are incomplete, inadequate, or absent. Such deficiencies are present in water-based and chemical extinguishing systems; fire alarm and detection systems; fire extinguishers; and fire doors. Examples of deficiencies include:
 - Unsprinklered areas in all buildings;
 - Sprinkler systems not being inspected, tested, or maintained;
 - Sprinkler systems installed improperly or lacked water;
 - Tamper and water flow switches inoperable or absent;
 - Inappropriate sprinkler systems installed in three kitchen areas;
 - No evidence that required testing of fire pumps is being conducted;
 - No indication fire alarm systems were ever tested beyond audible qualities;
 - Fire alarms inaudible in certain sections of three buildings;
 - Smoke detector planning, installation, activation, and testing is incomplete;
 - No indication highly pressurized carbon dioxide fire extinguishers were ever tested; and
 - Improper fire doors and associated equipment installed.
- Fire protection systems that contain sprinklers which the Consumer Product Safety Commission (CPSC) has identified as defective. The Architect of the Capitol (AOC):
 - Ignored compelling independent evidence and CPSC offers to test sprinklers;
 - Installed sprinklers that were banned by local jurisdictions; and
 - Relied solely on the manufacturer's information.
- Inadequate building emergency escape routes and action plans which could hinder evacuation in the event of fire emergencies. Examples include:
 - Limited exits and poor signage for building egress;

¹ The House Complex includes the House-side of the Capitol and the five House Office Buildings.

- Egress not protected by proper fire doors;
- Hallways blocked with furniture, recycle bins, and supplies;
- Useable exits always locked or locked during specific periods; and
- Comprehensive and coordinated evacuation plans do not exist.

These deficiencies exist because (1) the AOC has failed to provide and adequately maintain fire protection systems throughout the House Complex; (2) the AOC has taken a haphazard approach to planning, implementing, installing, and completing fire protection systems throughout the House Complex; (3) the AOC has ignored compelling industry information that Omega sprinklers, installed throughout the House Complex, are defective; and (4) fire safety emergency escape route strategies were improperly planned and implemented. As a result, the safety of Members, staff, and visitors has been jeopardized and these historic buildings have been left vulnerable to a fire that could cause damage, destruction, severe injury, and loss of life. Moreover, the Complex is not in compliance with the Occupational Safety and Health Act and those National Fire Protection Association (NFPA) standards that specifically addresses the safety and health of employees.

RECOMMENDATIONS

We recommend that the Committee on House Oversight designate a House entity to closely monitor the Architect of the Capitol's development and implementation of a comprehensive fire protection program for the House Complex. As part of this monitoring role, the designee should ensure that recommendations made in this report, and detailed in our fire protection survey reports of the House Complex, are included in the development of this comprehensive fire protection program.

Additionally, we recommend that the Committee on House Oversight, through its designee, monitor Architect of the Capitol actions to: develop a comprehensive plan to correct deficiencies in: (a) water-based and chemical extinguishing systems, (b) fire alarms, (c) smoke and heat detectors, (d) fire extinguishers, and (e) fire doors; connect building fire alarm systems to a central station service which conforms to the requirements of NFPA 72; develop and implement a comprehensive testing plan for each of the fire protection systems in accordance with NFPA standards; review the recommendations from the fire protection survey reports and incorporate them into the comprehensive plan; and coordinate the recall and replacement of all Omega sprinklers installed in the House Complex. Finally, we recommend that the Committee on House Oversight, through its designee: monitor Architect of the Capitol actions to: (a) replace revolving doors with Americans with Disabilities Act and OSHA compliant doors and install emergency exit hardware on exits that are closed or locked for security reasons, (b) continually ensure that exit routes are clear of recycling bins and trash, (c) review current signage and develop plans to improve the signing in each building, and (d) determine building occupancy loads for use in evacuation planning; monitor the Chief Administrative Officer actions to continuously ensure that exit routes are clear of furnishings; and ensure the development of individual office evacuation plans and a coordinated overall House Complex evacuation plan.

ARCHITECT OF THE CAPITOL RESPONSE

The Architect agrees with the general findings that the buildings in the House Complex are not fully protected by modern, state of the art fire protection systems meeting current codes. Specifically, the Architect agreed with the deficiencies identified with respect to maintenance and testing requirements. However, in addressing the specific findings and supporting information, the Architect disagreed with the draft audit report's tone, conclusions with respect to the magnitude of the problems, and reliance on Occupational Safety and Health Administration and industry standards used to evaluate the condition of the fire protection systems within the House Complex. The Architect's complete response is included as an Appendix to this report.

OFFICE OF INSPECTOR GENERAL COMMENTS

We are encouraged that the AOC agrees with the general findings of this report. However, we believe that the characterization of existing fire protection systems in the House Complex as deficient is appropriate. The purpose of this review was to determine the current state of fire protection within the House Complex. In order to make this determination, we contracted with a fire protection engineer to conduct a life safety evaluation of risk associated with a fire. All buildings within the House Complex failed this evaluation.

This report identified two instances of misleading statements, one by the former Architect and another by current AOC officials. We did not contend that these statements were intentional misrepresentations, but rather the statements could lead to false perceptions of the status of fire protection systems in the House Complex. In addition, AOC officials unambiguously stated that the specific fire protection systems were complete. However, this was proven to be untrue after independent verification. Also, for those initiatives identified by the Architect, that pertain to fire safety, actions were not taken until after the initiation of this audit including the reorganization of the Fire Protection Division and awarding a contract to augment existing staff to resolve fire protection problems. Furthermore, although we agree with the Architect that unless the House buildings are renovated, they do not have to comply with current standards, we believe the Architect does have a responsibility to limit the risk to the visitors, occupants, and structures of the House Complex.

The Architect relies heavily on the Capitol Police as a critical element of fire protection, when, in reality, the Capitol Police are not in a position to effectively augment the existing deficient fire protection system. Specifically, the Capitol Police lack the manpower, training, and proper equipment to supply the AOC with the presence implied in the Architect's response. We take exception with the Architect's statement that every House building includes fire alarms. Even though the buildings are equipped with fire alarms, an alarm may not be audible throughout every section of a building. For example, in the Ford building, the fire alarm can be heard clearly from the main hallway, but is not audible in many of the building's interior offices. Furthermore, the Capitol Police disagree with the AOC's assertion that the duress alarms act as part of the fire protection system. Capitol Police response to a duress alarm is much different

than that of a response to activation of a smoke detector. The Capitol Police have consistently stated they do not want offices using the duress alarms to report a fire or a medical emergency.

Although recent steps taken to improve the condition of the buildings may reflect an increase in attention to fire safety, it does not alter the low priority historically placed on fire safety issues by the AOC nor does it mitigate the cumulative deficiency, caused by this lack of priority, of fire safety throughout the House Complex.

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I. INTRODUCTION

Background

In January 1996, the Congressional Accountability Act (CAA) of 1995, (Public Law 104-1), extended the rights and protection of federal employment laws to Congressional employees. This was accomplished by providing Congressional employees and employing offices protection under 11 existing employment, civil rights, health, and safety-related statutes and regulations including the Civil Rights Act of 1964, Title 1 of the Americans with Disabilities Act, and the Occupational Safety and Health Act. On January 1, 1997, the Occupational Safety and Health Act portion of the law went into effect providing Congressional employees protection against physical, chemical, and other hazards in the workplace. The Occupational Safety and Health Administration (OSHA) adopts and enforces certain standards developed by the National Fire Protection Association to ensure the safety and health of employees. Therefore, with the enactment of the CAA and the subsequent adoption of the Occupational Safety and Health Act, the House Complex² should be in compliance with those standards which ensure the safety and health of employees.

The National Fire Protection Association (NFPA) is the sole national organization which develops and establishes standards for the fire protection community for the protection of individuals and property from the dangers of fire. For example, NFPA 101, *Code of Life Safety from Fire in Buildings and Structures*, addresses construction, protection, and occupancy features necessary to minimize danger to life from fire, including smoke and fumes. It also identifies the minimum criteria for the design of egress facilities to permit prompt escape of occupants from buildings and other considerations that are essential to life safety. NFPA 25, *Standards for Inspection, Testing, and Maintenance of Water-based Fire Protection Systems*, provides instructions on how to conduct inspections, tests, and maintenance activities, which if incorporated into a building maintenance program, enhance the water-based fire protection systems. NFPA 13, *Standard for the Installation of Sprinkler Systems*, provides a reasonable degree of protection for life and property through standardization of design, installation, and testing requirements for sprinkler systems based on sound engineering principles, test data, and field experience. It also provides the minimum requirements for the design, and installation of automatic sprinkler systems, including the adequacy of water supplies, and the selection of sprinklers, piping, and valves.

Objectives, Scope, And Methodology

The objectives of this audit were to determine whether the Architect of the Capitol (AOC) has effectively complied with the requirements of the fire codes and regulations and has taken adequate steps to ensure the safety of the occupants of the House Complex during a fire

² The House Complex includes the House-side of the Capitol and the five House Office Buildings.

emergency. Through fire protection surveys³ performed by contracted fire protection engineers, we assessed whether the AOC complied with both NFPA and OSHA codes and regulations on fire protection, including fire detection systems, automatic sprinkler systems, alarm systems, egress, and visible exit signage. (Copies of the resultant survey reports have been provided to the Committee on House Oversight and AOC separately.) In addition, we reviewed the adequacy of the House Complex fire safety management (planning, organizing, directing, and controlling).

We conducted our audit in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States. The audit was performed at the AOC, House Sergeant at Arms, Capitol Police, and other offices, as deemed appropriate, during the period June through September 1998.

Internal Controls

The AOC has not established adequate internal controls to ensure that fire protection issues are identified and corrective actions are taken in a timely manner. The internal control weaknesses we identified are described in the Findings and Recommendations section of this report.

Prior Audit Coverage

No prior audits were conducted of the Fire Protection Systems in the House Complex.

³ These surveys were conducted to evaluate existing fire protection systems and building exit capacities, perform risk analyses of existing fire protection systems, and review fire protection projects in various stages of completion. These surveys include assessments of the House-side of the Capitol, Cannon, Longworth, Rayburn, Ford, and O'Neill buildings and the two underground garages/work shops located at South Capitol Street and C Street and D Street (also known as squares 637 and 991). The resultant reports identify numerous NFPA and OSHA code deficiencies and areas of risk within the House Complex and present 281 detailed recommendations to rectify the problems identified.

II. FINDINGS AND RECOMMENDATIONS

Finding A: The Fire Protection Program For The House Complex Is Deficient

The fire protection systems within the House Complex are deficient. This condition exists because the AOC has failed to provide, and adequately maintain, fire protection systems throughout the House Complex. In addition, the AOC has ignored compelling industry information indicating that sprinklers installed in the House Complex are defective. As a result, the safety of Members, staff, and visitors has been jeopardized and these historic buildings have been left vulnerable to a fire that could cause damage, destruction, severe injury, and loss of life.

The CAA required that the AOC adhere to OSHA regulations. As a result, the AOC was compelled to address fire safety issues. However, the AOC's efforts have been haphazard and uncoordinated. For those systems that have already been installed, basic maintenance and testing have been neglected (see Finding B). Furthermore, partially installed systems provide a false sense of protection (see Finding B). This has occurred because fire protection has been given a low priority by the AOC, as illustrated by the following facts:

The AOC:

- Did not act on the recommendations of its internal Fire Protection Engineering Division;
- Reprogrammed fire protection funds for use in non-life safety projects;
- Delayed fire protection projects;
- Made misleading statements to the Congress, as well as to this audit team; and
- Ignored industry data on defective sprinklers.

Internal Fire Protection Engineering Division Recommendations Not Acted On. The AOC repeatedly did not act on the recommendations of its internal Fire Protection Engineering Division (Division). The Division is responsible for fire protection and life-safety systems throughout the entire Capitol Complex⁴. In this capacity, the Division performs risk analyses of the facilities to identify deficiencies and recommend corrective actions. Some additional responsibilities include training the Capitol Police on fire protection and reviewing design plans and drawings. Also, during actual emergencies, they provide on-site guidance to fire fighting personnel concerning available fire protection systems and vital building structural information.

Ten years ago, the Division had three fire protection engineers to carry out these responsibilities. Currently, however, the Division has only one fire protection engineer--a staffing reduction of more than 66 percent. The responsibilities thrust upon this downsized division are overwhelming considering the magnitude of the Capitol Complex and the AOC's new responsibilities related to implementing the CAA.

In a memorandum dated September 25, 1991, the Division requested an additional two field technicians to augment the existing staff of one fire protection engineer and one engineering technician. The memorandum stated that technological advancements of fire protection equipment increased the level of testing, calibration, and maintenance required for these systems.

⁴ The Capitol Complex includes both sides of the Capitol, all House and Senate Office Buildings, the Library of Congress, and the Supreme Court.

It noted that, although the electric and plumbing shops are capable of performing preventative maintenance, it would be nearly impossible for them to keep up with the increases in technology. As an example, the memorandum cited the new generation fire control panels which ostensibly require, "a much higher degree of experience in control panel microprocessors and fire alarm methodologies." Additionally, the memorandum raised comparable concerns relative to the changes in sprinkler technology. As such, the fire protection engineer reasoned that qualified personnel were necessary to address the increased sophistication of fire protection equipment. The proposed personnel would serve as a centralized maintenance and troubleshooting task force to address fire protection needs. However, the request for two additional field technicians resulted in the hiring of a fire protection engineer in June 1992, who subsequently resigned in February 1993 and was never replaced.

As a result, the Division is forced to rely on other AOC entities to implement its fire safety recommendations. In addition, these entities are responsible for installing fire safety systems as well as performing the required tests and maintenance for these systems. In order to provide assistance to the AOC, the Division provided detailed maintenance and testing instructions for the various fire safety systems and related equipment. These instructions were based on NFPA requirements. For example, in 1990, the Division provided detailed instructions for performing the following test and maintenance procedures for:

- Smoke Detectors;
- Kitchen Hood Fire Suppression System;
- Fire Alarm and Detection System; and
- Fire extinguishers.

However, the AOC has been remiss in implementing any of the Division's recommendations for testing and maintenance requirements. As a result, the AOC is not only ignoring its own internal fire expert, but it is also in violation of the respective OSHA and NFPA requirements (see Finding B).

The Division also made numerous requests to improve emergency evacuation signage which is in dire need of attention (see Finding D). For example, in December 1992, the Division prepared a detailed cost estimate for furnishing emergency evacuation signs throughout the House Complex. An updated cost estimate was submitted as recently as November 1997; however, the AOC failed to act on this recommendation until May 1998, through the reprogramming of \$80,000 for the design of emergency signage and lighting.

During the latter part of the audit on August 18, 1998, the Architect requested Human Resources transfer Fire Protection Engineering Division personnel to a new division under the direction of the Executive Officer. The Fire Protection Program, within the Fire Systems and Life Safety Office, will become analogous to a local fire marshal jurisdiction insofar as legally possible.

Fire Protection Funds Reprogrammed. In the past, the AOC has requested that fire protection funds be reprogrammed to non-life safety projects. Since 1991, \$997,000 has been reprogrammed from fire protection projects to other AOC projects. The AOC reprogrammed:

- \$350,000 in FY 1991 from fire protection improvements in the Longworth and Cannon House Office Buildings (HOBs) to repair and renovate parts of the Cannon HOB;
- \$364,000 in FY 1996 from the Rayburn Fire Sprinkler System to construct the House Resource Center;
- \$129,000 in FY 1997 from the Rayburn Fire Sprinkler System to renovate the Longworth cafeteria⁴; and
- \$154,000 in FY 1998 from the Rayburn Fire Sprinkler System to renovate the Longworth cafeteria.⁵

In contrast, funds were also reprogrammed into several fire protection projects--\$150,000 for fire pump replacements in the Capitol and Longworth building, and \$37,200 for electrical work associated with fire protection systems in the Longworth building. However, even with these added funds, fire protection projects in the House Complex netted a \$809,800 reduction in funding as the result of AOC reprogrammings. This willingness to reduce already scarce funds clearly illustrates the low priority that the AOC has placed on fire protection.

Fire Protection Projects Delayed. Since 1986 the AOC has been installing and upgrading fire protection systems in the House Complex--almost two years prior to a fire which gutted a portion of the then Speaker's Longworth suite. However, these projects have taken much longer to complete than originally projected because of the low priority assigned to them. The AOC began fire protection improvements in the Longworth building in 1986, and at that time anticipated that the project would be completed in 1990, with the building meeting or exceeding the fire code. However, due to delays in funding and lack of priority, the Longworth building fire protection project is still ongoing and the building still does not meet current fire code.⁶

The AOC also delayed the completion of fire protection projects by combining them with other building renovation projects. By combining fire protection projects with other renovation projects, the overall time to complete the joint project is extended while the building remains unprotected. For example, initial funding for the expansion of the sprinkler system in the Rayburn building was provided in FY 1996. At that time, the former Architect stated that the project could be done in four years. Then in 1998 the scope of the project was broadened to include the installation of new and upgraded telecommunications cabling throughout the building and now the expected completion date is 2002--two years later than originally projected. However, to date, installation of the sprinkler expansion project has not been started.

Furthermore, other projects delayed by the AOC could adversely impact fire protection within the House Complex. For example, the delayed installation of ovens in the Rayburn Cafeteria resulted in a potential fire hazard. The Capitol Police, during a routine, after-hours security sweep discovered this hazardous situation. Upon entering an unlocked door to the Rayburn cafeteria, the Capitol Police found that the ovens were left on at 500 degrees and one of the oven doors had been propped open with cardboard. The ovens had been left on because they take too long to heat up each morning and the door was propped open because it was broken. New,

⁵ Some of the money reprogrammed to the Longworth cafeteria renovation was to be used for the sprinkler and fire rated exhaust systems in the cafeteria.

⁶ In 1988 the former Architect stated that at completion "the building will meet or exceed the present D.C. building code with one exception, viz., the enclosure of the stairways."

replacement ovens were purchased and delivered six months ago, but the AOC has not installed them. Even though the AOC was unaware that these ovens were creating a fire hazard, the delayed installation left the Rayburn building vulnerable to fire. The existence of this hazard emphasizes how delays in other projects can affect the need for basic fire protection throughout the House Complex.

Misleading Statements Made. During a review of historical documents, we discovered that, in the 1996 Legislative Branch Appropriations House testimony, the former Architect made misleading statements, pertaining to the adequacy of fire protection within the House Complex. Specifically, in House testimony pertaining to the installation of sprinkler systems, the former Architect stated that Rayburn was the only building that did not have a completed sprinkler system. However, we have determined that, even today, all other HOBs are also without a completed sprinkler system.

Likewise, during the course of this audit, AOC officials misrepresented the status of ongoing fire protection projects. For example, we were informed that the fire protection systems in the Cannon and Longworth buildings were complete. However, after physically inspecting the sprinkler systems, we determined that one system was not even connected to a water supply. An average person would assume that when an assertion is made that a sprinkler system is complete, it would necessarily require that it be connected to a water source (see Finding B). Furthermore, the same held true for the smoke detection systems in the HOBs. It was determined, only after physical inspection, that they, too, were not complete and in fact some smoke detection devices had not been fully wired to a source of electricity. The presence of inoperable systems creates a false sense of safety. This, coupled with the lack of adequate egress, (escape route used to exit the building) and emergency signage in the buildings, exposes the House to undue risk of loss of life and property in the event of a fire (see Finding D).

Industry Information on Defective Sprinklers Ignored. The AOC has ignored compelling evidence that the Omega sprinklers (Omegas) installed throughout the House Complex are defective (see Finding C). Furthermore, the AOC relied solely on information relayed by the manufacturer, Central Sprinkler Corporation (Central). The AOC did this in spite of Central being a defendant in a class action lawsuit filed by the Consumer Product Safety Commission (CPSC). This lawsuit was filed because the Omegas were found to be defective.⁷

Central has alleged that Omega failures are limited to steel piped sprinkler systems, therefore, claiming that testing of Omegas connected with copper or plastic pipes is unnecessary. Similarly, AOC officials, until recently, asserted that they were unconcerned about Omegas because the HOBs' sprinkler systems are primarily copper piped systems. This ignores compelling evidence that Omegas originating from all types of sprinkler systems have failed to activate.

For example, Underwriters Laboratory (UL) has urged that Omega sprinklers installed in all types of piping systems, including copper and plastic, be tested. Other laboratories have tested

⁷ Subsequent to the completion of audit work, CPSC and Central announced, on October 14, 1998, the nationwide recall of approximately 8.4 million Omega fire sprinklers. This recall announcement resolves the lawsuit filed by CPSC against Central in March 1998.

Omeegas in copper and plastic piped systems and found that failures occurred. These laboratories stated that it would be imprudent, bordering on reckless, to disregard the inherent risk of relying on Omeegas based solely on the types of pipes employed. These testing results have been highly publicized in the fire protection industry for at least two years and, yet, have gone unheeded by the AOC. In order to avert a potential disaster, the AOC needs to immediately address the Omega problem.

Conclusion

Our review has concluded that the AOC's fire protection program for the House can only be categorized as deficient. In order to ensure the safety of Members, staff, and visitors to the House Complex, it is our belief that the House needs to take a proactive role in the fire protection program for the House Complex.

Recommendation

We recommend that the Committee on House Oversight designate a House entity to closely monitor the Architect of the Capitol's development and implementation of a comprehensive fire protection program for the House Complex. As part of this monitoring role, the designee should ensure that recommendations made in this report, and detailed in our fire protection survey reports of the House Complex, are included in the development of this comprehensive fire protection program.

Architect of the Capitol Response

The Architect agrees with the general findings that the buildings in the House Complex are not fully protected by modern, state of the art fire protection systems meeting current codes. Specifically, the Architect agreed with the deficiencies identified with respect to maintenance and testing requirements. However, in addressing the specific findings and supporting information, the Architect disagreed with the draft audit report's tone, conclusions with respect to the magnitude of the problems, and reliance on OSHA and industry standards used to evaluate the condition of the fire protection systems within the House Complex. The Architect's complete response is included as an Appendix to this report.

Office of Inspector General Comments

We are encouraged that the AOC agrees with the general findings of this report. However, we believe that the characterization of existing fire protection systems in the House Complex as deficient is appropriate. The purpose of this review was to determine the current state of fire protection within the House Complex. In order to make this determination, we contracted with a fire protection engineer to conduct a life safety evaluation of risk associated with a fire. All buildings within the House Complex failed this evaluation. The fire protection engineer used NFPA standards to measure the risk of each building as it existed at the time of the evaluation. NFPA is the sole national organization which develops and establishes standards for the fire protection community for the protection of individuals and property from the dangers of fire. Consequently, it is the only yardstick by which to measure the condition of fire protection within the House Complex.

This report identified two instances of misleading statements, one by the former Architect and another by current AOC officials. In the response to this report, the Architect claims that these allegations are without foundation and there was no intent to mislead. We did not contend that these statements were intentional misrepresentations, but rather the statements could lead to false perceptions of the status of fire protection systems in the House Complex.

The AOC also claims that the audit team was not misled, the allegation is not supported by specifics, and is rebutted by written material. In June 1998, the AOC provided documentation describing the status of sprinkler systems. However, on July 30, 1998, the audit team, including our contracted fire protection engineer, asked several high-level AOC officials, including the AOC's fire protection engineer and the Superintendent of the House Office Buildings, about the current status of the fire protection systems in the Longworth and Cannon buildings. These AOC officials unambiguously responded that the systems were complete--no qualifications were given. Since these projects have been ongoing, we believed the official's assertion and presumed that they had completed the projects. This belief was reaffirmed when, at our request, AOC officials scheduled a test of the sprinkler system in the Cannon building. However, contrary to our expectations, when we met AOC staff at the scheduled test time, we found that the sprinkler system was not complete and, therefore, could not be tested.

In his response, the Architect enumerates various life safety initiatives that the AOC has undertaken during his tenure. However, for those initiatives that pertain to fire safety, actions were not taken until after the initiation of this audit (June 1998). For example, the reorganization of the Fire Protection Division was not initiated until July 1998. Likewise, the contract with Gage-Babcock and Associates to augment existing staff to resolve fire safety problems was not initiated until July 1998 and did not become effective until September 1998. Similarly, until August 1998, the AOC had neglected to train its evening laborers and custodial personnel in evacuation procedures. The OIG agrees that these initiatives represent improvements. However, it does not alter the low priority historically assigned to fire protection.

The Architect believes that the report is fundamentally flawed because its conclusions do not give any consideration or credit to the fact that the AOC has been working to upgrade life safety systems to levels that are over and above those applied to the AOC through the CAA. The Architect further states that neither the Act nor the laws applied through it require the AOC to constantly or completely renovate House buildings to comply with the latest version of fire protection standards. The Architect concludes that, in general, if 50 percent or more of a building is renovated, it then must be fully compliant with current codes, but this is a threshold House renovations have never reached. Although the OIG agrees that the House Complex is not required to meet the latest fire protection standards, we believe that the AOC does have the responsibility to limit the risk to the visitors, occupants, and structures of the House Complex. In addition, as stated in the report, OSHA adopts and enforces the NFPA standards to ensure the safety and health of employees. Therefore, with the enactment of the CAA and the subsequent adoption of the Occupational Safety and Health Act, the House Complex should be in compliance with those standards which ensure the safety and health of employees.

Furthermore, the Architect states that there is no law that requires the AOC to upgrade the fire protection systems of the House. The Architect also states that the provision for sprinklers is a

desired rather than required goal. Although the report never implies that sprinklers are required by OSHA, Congress has appropriated funds expressly for this purpose. For example, the FY 1986 Legislative Branch Appropriations Act included the Longworth Electrical and Fire Protection Improvements project to alleviate life safety concerns through the installation of fire and smoke signal systems and sprinkler piping. Likewise fire protection systems for Cannon and Rayburn were included in other Appropriation Acts. The enactment of Appropriations, which funds all AOC fire protection projects, places the responsibility for implementing these projects squarely on the AOC.

The Architect states the Capitol Police's on-site presence should be recognized as an important element in the existing fire protection system. The Architect further states the 24-hour on-site presence of the Capitol Police makes an uncontrolled fire in the House Office buildings highly unlikely. Additionally, the Architect states that every House building has fire protection systems including, at a minimum, Capitol Police and AOC presence, and fire and duress alarm systems. The Architect relies heavily on the Capitol Police as a critical element of fire protection, when, in reality, the Capitol Police are not in a position to effectively augment the existing deficient fire protection system. Specifically, the Capitol Police lack the manpower, training, and proper equipment to supply the AOC with the presence implied in the Architect's response. To provide the level of assistance implied, the Capitol Police would have to be trained as a fire brigade. However, both the Sergeant at Arms and Capitol Police stated that they are not a fire brigade. This is evidenced by high incidents of smoke inhalation suffered by Capitol Police during fires in the House Complex. These incidents of smoke inhalation also demonstrate that the Capitol Police lack the appropriate training and equipment. Although their commitment to protecting the House Complex is admirable, they cannot be expected to overcome the lack of adequate fire protection systems.

We take exception with the Architect's statement that every House building includes fire alarms. Even though the buildings are equipped with fire alarms, an alarm may not be audible throughout every section of a building. For example, in the Ford building, the fire alarm can be heard clearly from the main hallway, but is not audible in many of the building's interior offices. Furthermore, the Capitol Police disagree with the AOC's assertion that the duress alarms act as part of the fire protection system. Capitol Police response to a duress alarm is much different than that of a response to activation of a smoke detector. The Capitol Police have stated they do not want offices using the duress alarms to report a fire or a medical emergency. The Emergency Evacuation Procedures, issued by the Capitol Police, clearly states, "In case of smoke, report to Capitol Police at 5-0911." It does not instruct individuals to activate the duress alarm.

The Architect's response also implies we ignored the critical role of the Capitol Police as described in the Capitol Building Emergency Preparedness Program. We acknowledge the Capitol Police have a role in fire protection. However, we disagree that the Capitol Police have sufficient training and resources to provide the level of service implied by the Architect. Although the Capitol Police serve a principal role in the event of a partial or complete evacuation of any Capitol building, the plan does not address the expansive fire protection responsibilities for the Capitol Police as suggested by the Architect.

Although recent steps taken to improve the condition of the buildings may reflect an increase in attention to fire safety, it does not alter the low priority historically placed on fire safety issues by the AOC nor does it mitigate the cumulative deficiency, caused by this lack of priority, of fire safety throughout the House Complex.



Washington, DC 20515

November 23, 1998

The Honorable John W. Lainhart IV
Inspector General
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Lainhart:

This is in response to the Audit Report, Fire Protection Systems Do Not Adequately Protect the House (Report). The following comments are submitted regarding the findings contained in the Report. We have reviewed the Report item by item and responded with the facts as we see them to correct misunderstandings and give a more balanced overview of this critical subject.

I was appointed Architect of the Capitol (AOC) in January 1997, the same month the Occupational Safety and Health Act provisions of the Congressional Accountability Act (CAA) became effective for this office. Since that time I have established significant initiatives for improving life safety systems and conditions in the Capitol Complex. Although there is no legal obligation to continually retrofit historic buildings as codes are changed, I am committed to installing enhanced fire protection systems in the House complex beyond those required by law.

We agree with the general findings in the Report that buildings in the House complex are not fully protected by modern, state of the art fire protection systems meeting current codes. However, in view of the fact that there is no legal requirement to continually retrofit buildings to meet current codes, as discussed hereinafter, it is disingenuous to characterize all existing fire protection systems in the House complex as "deficient" unless they are being compared to standards applicable to a recently completed building. In my judgment, that is not a reasonable standard to use. We have reviewed the Report from this perspective, not disagreeing with observations in the Report regarding specific deficiencies, especially with respect to maintenance and testing requirements.

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I would like to note at the outset that the surveys referred to in the Introduction to the Report, stated as given to the AOC, were never made available to us for our review, with no reason given for withholding this information. Furthermore, the finding that “the AOC made misleading statements to the Congress, as well as [the] audit team” is without foundation. The allegation is based on a five-second colloquy between former Architect of the Capitol George M. White and the Chairman of the Subcommittee on Appropriations in support of a request for funding to install sprinklers in the Rayburn building. The context of the colloquy and the written associated budget justification make it abundantly clear that no intent to mislead was present. The charge that the audit team was misled is not supported by specifics and is rebutted by the written material officially transmitted to the audit team. Such unfounded allegations undermine the credibility of a report that has otherwise much good information.

A. Commitment to Life Safety Issues

I would like to affirm that the high priority I place on life safety considerations for the entire Capitol Complex is second to none. This has been clearly demonstrated by many initiatives I have taken, including the following:

- I informed Congress that I intended to shut down the U. S. Botanic Garden Conservatory because of its potential danger to visitors and our employees, an action unprecedented in the history of this Agency.
- During the first two months after assuming this position I directed this Agency to review its FY 98 budget and determine by category the priorities that represented the true needs of the Capitol Complex - with the first category being life safety.
- In April 1997 I presented to the Appropriations Committee my overview of those issues in the form of budget discussion areas.
- In the first budget prepared under my direction, FY99, life safety issues were formally grouped and separately identified for the first time as true priorities, not just funding requests for separate projects.
- The Capitol Police Board, of which I am a member, has created a working task force with our Agency to follow up on each life safety incident on campus to assess the cause, what our joint response was and should have been, any system and program deficiencies, and to provide documentation of actions taken.

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- I have directed the development of a plan to meet work load requirements to address life safety issues in the complex and to allow us to stay abreast of current best practices in facility management. To this end, this Agency is utilizing professional fire protection consultants to expand our resource base for the design of a fire and emergency management system, which will address a comprehensive life safety program, including a complex-wide information and communication center as well as ADA requirements in fire alarms, signage and emergency lighting.
- I have realigned our fire protection and life safety functions to strengthen their role in our organization so that my high priority on such issues will be effectively implemented.

In the context of these realities and the following in-depth review I find that it is both disturbing and unfounded for the Report to state that the AOC places a “low priority” on fire protection. To the contrary, the record would support a finding that the AOC under my direction for less than two years has made life safety a high priority and acted accordingly. This of course does not mean that all is being done that should be done. A significant issue that the Report highlights, which needs to be addressed, is to assure that appropriate maintenance, inspection and testing is performed on a regular basis and that these processes should be well documented. Full implementation of our computer assisted facilities management (CAFM) program will help rectify shortcomings in these areas along with new funding to retain outside vendors on an annual basis to perform these functions. This issue was also raised months ago in a meeting with the Committee on House Oversight when we indicated that we would seek funding for this work.

B. Compliance Criteria

The Report also points out inadequacies in other life safety areas, and the response indicates that corrective actions have either been initiated through our ongoing efforts in these areas, or will be initiated as expeditiously as possible. Elements of the Report are indeed constructive in that regard.

A fundamental flaw of the Report, however, is that its conclusions do not give any consideration or credit to the fact that this Agency has been working to upgrade life safety systems to levels that are over and above those applied to this Office through the Congressional Accountability Act. Neither that Act nor the laws applied through it require that the House buildings under our care be constantly or completely renovated to comply with the latest version of fire protection standards that are frequently being updated. In general, if 50% or more of a building is renovated, it then must be fully compliant with current codes, but this is a threshold our

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renovations have never reached. Notwithstanding this general principle, when House buildings are significantly altered or renovated, such work is performed in compliance with appropriate codes and standards, or better (e.g., smoke detectors).

As you know we are subject to inspection by the Congressional Office of Compliance, an Agency created by Congress to oversee our compliance with the CAA. The Office of Compliance has noted some deficiencies in our programs but has never advised us that the Congressional Accountability Act requires a program to bring all existing buildings continually and entirely into compliance with the latest edition of constantly updated fire safety standards. With our strong interest in improved safety, however, this Office has proactively initiated improvements in fire protection systems in House buildings to meet more state-of-the-art standards, even when such action is not strictly required. As an example, we agree with comments in the Report that protection of all spaces by automatic sprinkler systems is highly desirable. However, the Report fails to note that the provision of automatic sprinklers is a desired rather than required goal, and the assumption of the Report that OSHA requires all House buildings to be sprinklered is simply incorrect. Because of the high priority I place on life safety issues, I welcome and am prepared to act aggressively on constructive criticism that is realistic, well informed and balanced.

C. Scheduling of Life Safety Projects

It has been the policy of this Office to implement life safety improvements in a manner that does not unduly disrupt the operations of the House because the House is adequately protected by a combination of existing systems and administrative support of Capitol Police and AOC staff. This Agency cannot significantly accelerate these improvements without the commitment of the House not only in the area of augmented appropriations but particularly in its willingness to accept the dislocations that this work brings to its operations. Access to all spaces impacted by this work is necessary so that walls can be drilled and chases created, hazardous materials abated, conduits pulled, plaster work and painting done, furniture moved, etc. The Report rightly points out that this work is “ugly, expensive and messy.”

As you may know, in order to activate the systems installed in any defined zone of the House office buildings or the Capitol, all spaces in that zone need to be completed. Segments of that zone that are otherwise ready for activation may appear to be done in a “haphazard” manner because we have often been unable to work in contiguous areas critical to House operations. We are working with the CAO to coordinate the construction of fire protection projects with equally disruptive telecommunications projects so that the work of Members and committees is only disrupted once for all necessary work. With a lack of temporary relocation space much work is of necessity done during recesses, which slows up the progress significantly. A higher

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priority by all concerned is therefore necessary if we are to move ahead with the installation and activation of these systems more quickly.

D. Report Conclusions

I am happy to note the Report's observation that "at the time of our inspections fire protection and life safety upgrades were occurring in most buildings." Importantly, the Report also acknowledges that our historic and unique buildings require alternative approaches to achieve significant life safety upgrades. Moreover the first response protection afforded uniquely to occupants of Capitol Hill buildings because of the on-site presence of the U. S. Capitol Police should be recognized as an important element of the existing fire protection system. None of these crucial observations, however, was reflected in the conclusions of the Report. An uncontrolled fire in a House building is highly unlikely because of the 24-hour on-site response capabilities of the Capitol Police and the AOC. Every House building has fire protection systems including, at a minimum, substantial Capitol Police and AOC presence and duress and fire alarm systems and in some cases smoke detectors, automatic sprinklers, digitized voice annunciators, visual alarms and other devices. The Capitol Building Emergency Preparedness Program, which was provided to the audit team, makes this point clear but has been ignored in the Report.

In summary is a list of specific actions planned or taken before, during and after the audit:

- A. The AOC has been engaged in on-going discussions with Central Sprinkler Corporation, the manufacturer of the Omega sprinkler heads since the potential of a defect was identified a year and one-half ago, and will aggressively seek replacement sprinkler heads to address this problem at the earliest possible time, either through the Consent Decree negotiated by the Consumer Product Safety Commission with Central Sprinkler or through other means, whichever is more advantageous to the government. (On-going)
- B. The AOC will be activating the automatic sprinkler systems for completed floors for the Cannon House Office Building. This decision is a direct result of matters brought to my attention by the Report. (On-going)
- C. The AOC is currently engaged in studies of egress paths, exit signs, and emergency lighting in all buildings in the House Complex including tunnels and areas of assembly. The study undertaken by private sector consultants specializing in these issues will provide corrective options using NFPA standards. (On-going)

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- D. The AOC made a decision in July, 1998, to reorganize the fire protection and life safety elements of the organization. The reorganization has strengthened and centralized AOC oversight of life safety programs for which priorities have been heightened, particularly in monitoring the action of AOC operating units. (Completed)
- E. Additional resources will be sought to enable the Superintendents of the Capitol and House Office Buildings to coordinate more effectively with the newly realigned Fire Safety Division to correct any deficiencies. (In process)
- F. The alleged \$809,800 reduction in fire protection funding ignores the fact that a significant portion of the reprogramming was for fire protection enhancements in important public assembly projects assisted by these funds. Reprogramming did not delay any fire protection projects, and they were approved with the understanding that such funds would be replenished.
- G. Replacement of the ovens in the Rayburn cafeteria is in process. (Target completion date is November 25, 1998.) The Report completely misconstrues the facts surrounding this matter. The AOC had no notice of the CAO contractor's unsafe practice, which was not the result of a defective oven. Equipment inspection would not have revealed this practice. Oven replacement was a routine maintenance item, scheduled to avoid disrupting food service.
- H. The design of a sprinkler system for the Rayburn building (by J. Posey & Associates) with construction contract award planned for FY99 is in process. As remodeling occurs in the Capitol, we are also placing sprinklers in the renovated spaces. However, without full zone and panel completion (due to inaccessibility to key spaces), they are not and cannot be activated. (In process)
- I. Our plan for sprinkler installation in the Rayburn building is to coordinate the earlier installation of alarms to permit the activation of sprinklers on a floor-by-floor basis. Funds for the accelerated alarm installation will be requested for FY2000. (In process)
- J. The AOC will continue with our overall program of a Complex-wide emergency management system capable of both tone evacuation signaling and voice reproduction for emergency messaging. The enhanced fire alarm and detection systems are currently being installed in House office buildings which are continually updated with audio evacuation signaling systems, thereby providing state-of-the-art evacuation signals which are purposefully unique to fire evacuation. (In process)

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- K. Testing will be pursued to assure that alarms controlled and activated by the Capitol Police will be audible to all occupants or visitors of the Capitol. It should be understood in this regard, however, that pull stations activated by occupants in the Capitol do not activate a general audible alarm in the building to avoid the potential for malicious disruption of House Chamber operations. (On-going)
- L. The AOC signed a contract on July 20, 1998, with fire protection consultants, Gage-Babcock and Associates, Inc., to augment our existing staff for the timely resolution of fire and safety problem areas and tasks. To date seven task orders have been issued ranging from identifying the location, type and quantity of all Omega Sprinklers complex-wide to the identification of refuge areas and designs to facilitate egress from the buildings. (On-going)
- M. Testing and maintenance procedures have been less than satisfactory but a program will be developed to increase these activities to an acceptable level during FY99 and to seek proposals for a testing and maintenance contract for FY2000. Full implementation of our CAFM program will help to rectify shortcomings in these areas along with new funding to retain outside vendors on an annual basis to perform these functions. (On-going)
- N. In addition to the required exit signage effort, the AOC has embarked on a comprehensive review and redesign of all way finding and informational signage. Currently the way finding signage consultant is preparing an overall program and schematic design for the complex-wide signage effort. (Target completion date is on or before June, 1999.)

These are only some of the actions and initiatives taken to correct existing and potential fire protection problem areas as well as enhance systems and program quality and execution for the continued safety of Members, Congressional staff and visitors. An objective reader of the Report will note that most of its recommendations are being acted upon or have been completed by the Agency. A balanced picture of fire protection and life safety issues in the House Complex can only be achieved by taking into account the actions and initiatives set forth in this response. The subject of the Report is too important and complex to be distracted by fault-finding or finger-pointing instead of forging a broad consensus to permit us to accelerate the installation of enhanced fire protection systems that we all believe the House complex must

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have. We look forward to working cooperatively with you and the Oversight Committee to achieve this objective.

Sincerely,

A handwritten signature in black ink that reads "Alan M. Hantman". The signature is written in a cursive style with a large, sweeping initial "A".

Alan M. Hantman, AIA
Architect of the Capitol