

STATEMENT OF STEPHEN T. AYERS, AIA, LEED AP ACTING ARCHITECT OF THE CAPITOL

Regarding the Renovation of the Cannon House Office Building and the East House Underground Garage

**Committee on House Administration,
U.S. House of Representatives**

May 6, 2009

Mr. Chairman, Congressman Lungren, and members of the Committee, thank you for the opportunity to testify today regarding two important projects for the House of Representatives: the renovations of the Cannon House Office Building, and House Underground Garages. As part of its Fiscal Year 2010 budget, the AOC is requesting funding to begin the planning process for the renovation of Cannon Building, as well as construction funding for the renovation of the East House Underground Garage.

The AOC's Fiscal Year 2010 budget request reflects the massive challenge of addressing the need to preserve the functionality of the historic infrastructure on Capitol Hill, while recognizing the need for fiscal responsibility. Our Fiscal Year 2010 budget has been structured around four focus areas. They are:

- **Solving the Deferred Maintenance and Capital Renewal backlog;**
- **Following the Capitol Complex Master Plan process;**
- **Meeting Federally-mandated and Leadership energy goals;**
- **Managing and caring for the AOC work force.**

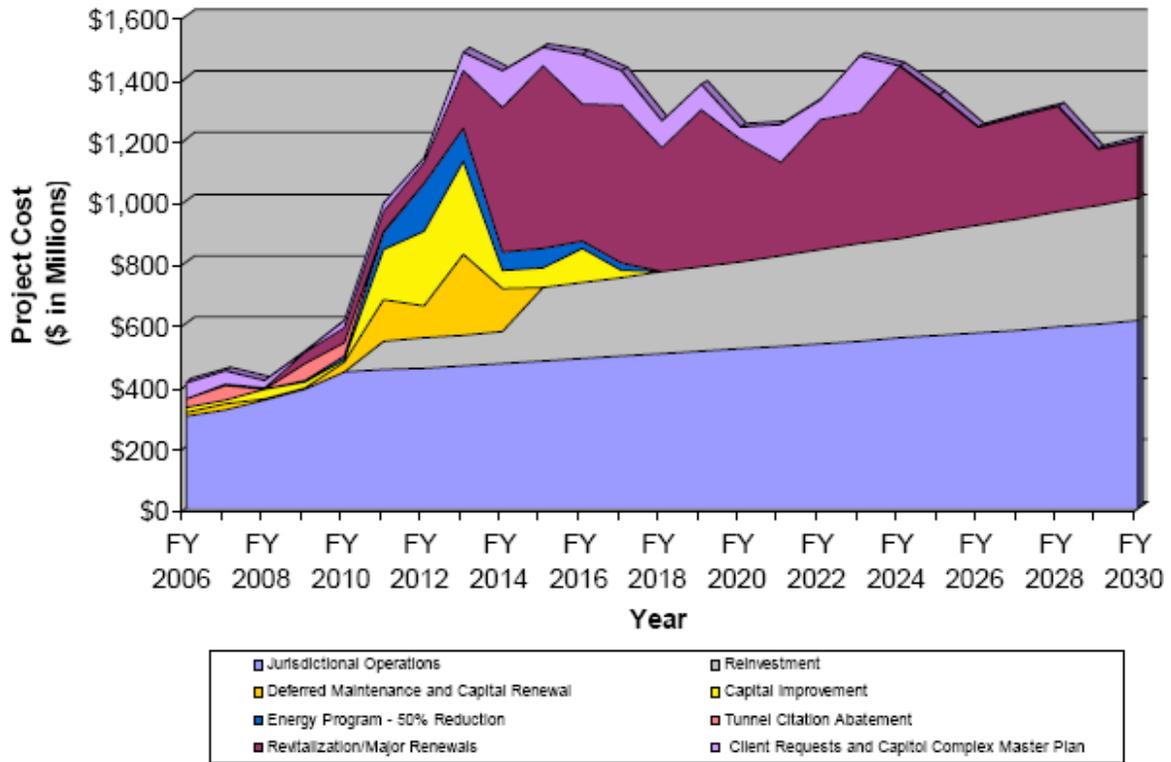
We continually work to manage the backlog of Deferred Maintenance and Capital Renewal projects, and have put into place a process by which to prioritize these projects. Not only do we face the challenge of the upkeep of aging buildings, we need to keep pace with new facility maintenance and building technologies, as well as increased security requirements.

Last year, the Cannon House Office Building reached its 100th anniversary. This building, like most on the Capitol campus, is historic and iconic and requires extensive maintenance in order to ensure that it continues to serve as a functioning, professional working environment for years to come.

The following chart — the “bow wave” chart — clearly shows that ongoing facilities requirements and new mandates have created a significant increase in resource requirements.

Long Term Demand (2009)

(\$ in Millions with inflation)



Our FY 2009 budget request, and subsequent appropriation, was a significant step in buying down a portion of the bow wave. This includes addressing stringent, modern-day fire and life-safety standards, and abating Office of Compliance citations to improve safety conditions throughout the complex. Life-safety projects are very high priorities for our Agency. However, we must continue to work on and to invest resources in projects that will prevent our critical facilities from further deterioration and failure. If we continue to delay Deferred Maintenance and Capital Renewal projects, the bow wave will move out and costs will increase over the long run.

We continue to invest our resources in the areas that have an “immediate” urgency rating: Deferred Maintenance and Capital Renewal projects. We continue to refine the data on which our planning is based. For example, for the past five years we have conducted independent Facility Condition

Assessments throughout the Capitol complex. These assessments identify the most critical issues in the facilities, and the objective data collected during this process helps us to identify the urgent needs that must be addressed expeditiously. Specifically, the data continues to show that “immediate” and “high” urgency Deferred Maintenance and Capital Renewal requirements will increase dramatically over the next several years. If these conditions are not addressed within a reasonable amount of time, they will continue to deteriorate to the point where they can, and will, impact Congressional operations.

The Facility Condition Assessments also are used to determine a Facility Condition Index based on the backlog of Deferred Maintenance work. The Facility Condition Assessments and Facility Condition Indexes are used to predict the positive effect of investment and the negative effect of deferring work. Our assessments are showing that, at current funding levels, Capitol complex facilities are trending toward a “poor” rating. Projects are also evaluated based upon an objective set of criteria. These criteria include:

- Preservation of historic or legacy elements or features of buildings or entire historic structures;
- Fire and life-safety, code compliance, regulatory compliance, and statutory requirements;
- Impact on mission including client urgency, and accommodation of new or changed missions;
- Economics, including value, payback, life cycle costs, and cost savings;
- Physical security, including protection of facilities and people;
- Energy efficiency and environmental aspects;
- Conditions of facilities and their components;
- Urgency to correct deficiencies.

As we developed our FY 2010 budget, we considered more than \$350 million worth of projects, and are requesting \$168.8 million for projects. This prioritized list includes 36 projects; 32 of which are categorized as being of “immediate” urgency. The remaining four are categorized as “high urgency.” An additional 85 projects remain on the deferred list. Of particular note are two “high urgency” renewal projects: the Whole Building Renewal of the Cannon House Office Building, and the Interior Renovation of the East House Underground Garage. The following is a more detailed discussion of both of these important projects.

History of the Cannon House Office Building

The Cannon House Office Building was completed and occupied in 1908, making it the oldest Congressional office building. The original building featured 397 offices, one for each of the representatives in the 61st Congress, and 14 committee rooms. By 1913, the House had outgrown the office space in the building, so to create more office space, the roof was raised and a fifth floor was added to the building. In 1932, the suites and office spaces were remodeled in conjunction with the construction of a second office building.

Over the course of the next 30 years, several improvements were made to the building, including the replacement of elevators, and the installation of air conditioning in the 1930's; the construction of an adjacent car garage in 1955, and a reconfiguration of the office suites in 1966. A complete, or whole-house, renovation of the building has never been accomplished, and several components of Cannon Building's building systems date back to its construction.

Cannon House Office Building Today

The Cannon Building currently provides office space for members of the U.S. House of Representatives and their staffs, committee hearing rooms, space for Congressional support services, and a carry-out restaurant. The attic contains space for offices and storage, and the basement contains offices, service areas, storage, and electrical/mechanical rooms.

The AOC completed a thorough Facility Condition Assessment of the Cannon Building, which we updated in March 2009. The assessment found that the building has been well maintained. However, major systems throughout the building are nearing the end of their useful life and need to be replaced. Major deficiencies have been identified in heating, ventilation, and air-conditioning (HVAC) systems, plumbing, mechanical equipment, life-safety and fire protection systems, electrical equipment, and exterior stone. Several building components such as windows, doors, lighting, and insulation need to be upgraded to comply with Federal energy consumption standards. Also, various aspects of the building need to be upgraded to comply with current accessibility requirements. Lastly, there are several historic preservation requirements throughout the interior and exterior of the building.

As we plan for the whole building renewal of the Cannon Building, there are several major building systems on which we specifically will be focusing much-needed attention. For example, the white marble exterior of the Cannon Building is in relatively good condition, but there are several areas where we have found significant deterioration, which needs to be repaired and preserved. A recent survey of the building's exterior identified numerous modillions, which hang below the cornice and roof balustrade, that have cracked and require repair. Each winter season, these cracks widen, causing some modillions to be at risk of falling from the building.



Deteriorated Modillion

The windows throughout the Cannon Building were last replaced in the mid-1960s, and are single-glazed, painted wood and metal. Many do not operate as intended, and water and mold damage has occurred in several offices because of leaking windows. The windows are not insulated, do not seal well, and are the source of significant energy loss.

The majority of the Cannon Building's heating/ventilating/air conditioning (HVAC) systems were installed between 1936 and 1966. Most of these systems are now outdated, have faulty components, require constant repair, and have reached the end of their useful life. Due to the age of the components and the lack of modern controls, it is impossible to control temperatures and indoor air quality inside many Members' suites and offices. In fact, many of the HVAC components are so old we can no longer obtain parts needed to complete repairs, and there is no question that they are very energy inefficient compared to modern systems.

Much of the plumbing in the Cannon Building is at least 40 years old, and components of the system are at the end of their useful life; leading to leaks and service outages. Components of the hot water system are very old; resulting in unexpected outages in recent years. For example, in December 2008, an eight-inch diameter hot water pipe failed beneath the basement floor. To fix it, we had to shut off the building's heat for four days. Fortunately, it was unseasonably warm at the time. The storm water system is original to the building and is failing in several areas, and the resulting leaks have damaged several areas inside the building. A failure in one of the main storm

water leader pipes several years ago resulted in flooding behind the walls in a Member's suite. The repairs took more than four weeks, which disrupted work in his office significantly. Much of the plumbing throughout the Cannon Building requires complete replacement.

Several components of the Cannon Building's electrical system require modernization to meet current requirements, and to comply with modern code requirements. Existing emergency power systems are not adequate to meet current requirements. Lastly, the building does not have a lightning protection system.

Most importantly, the renovation of the Cannon Building will offer an excellent opportunity to improve important fire protection and life-safety systems. The renovation would address key safety issues such as egress routes, fire suppression systems, fireproofing for structural components, smoke control systems, firestops for floor and wall penetrations, fire alarms, and smoke detectors.

I have highlighted only a handful of the building components that have reached the end of their expected lives, and need to be updated as part of the renovation of the Cannon Building. Repairs are required to avoid disruption of key services and the corresponding impact on Members of Congress and their staffs. Once building components reach this stage, we see a dramatic increase in the occurrence of disruptive and costly problems such as water leaks, power outages, restroom closures, and indoor air quality problems.

I want to assure you that the AOC will continue to respond quickly to repair any problems that arise, but the negative impact on Congressional operations will be unavoidable, and will likely grow exponentially. If the major deficiencies in the 100-year-old Cannon Building are not addressed expeditiously, system failures could render parts of the facility unusable.

[The Cannon House Office Building Renewal Project](#)

For these reasons, I recommend we begin the planning for a phased renewal of the Cannon Building, starting in Fiscal Year 2011. The Architect of the Capitol's FY 2010 budget request includes \$5 million to begin the planning of the renovation project. This will enable us to estimate the costs of the design and construction phases. The Cannon Building renewal project is planned as a multi-year renovation project, and will correct issues identified by the Facility Condition

Assessment. Each phase of construction will be designed as a stand-alone project in terms of facility infrastructure and operations to minimize disruption to occupants and operations. The project design will include a plan for temporarily housing offices which are displaced during the work.

Preliminary phasing plans suggest we will need up to 60,000 net square feet of swing space in which to relocate offices displaced during the renovation. The following swing space options were proposed and evaluated:

- Lease and fit-out available space in Federal Office Building (FOB) 8;
- Construct a temporary facility on Lot 1, or on the roof of a House Underground Garage;
- Construct a temporary facility in the Rayburn Building courtyard, Cannon garage roof, or in the lawn area between the Cannon Building and First Street;
- Fit-out of existing space in Capitol complex buildings.

In the first two options described above, committee staff currently housed in the Cannon, Longworth, and Rayburn House Office Buildings would be relocated to the swing space. This would avail rooms in the existing House Office Buildings which then would be configured to accommodate Members' offices that are displaced during the renovation. In the third and fourth options listed above, it would be possible to house Members' suites in the swing space. At this time, we are pursuing the Federal Office Building 8 option. This option appears to best meet Members' needs while being the least costly, least disruptive, and least time consuming.

Federal Office Building 8

Federal Office Building 8 was built for the Food and Drug Administration in 1965. The General Services Administration now owns and manages the facility, and will begin a renovation of the building this year; converting it into a modern, efficient office building. At the conclusion of the renovation, scheduled for summer 2012, approximately half of the building (~200,000 usable square feet) will be leased by the House of Representatives for use as swing space, and to accommodate future growth. The proposed design will provide a flexible, high-quality work environment, including offices, committee rooms, conference rooms, administrative functional areas, and support spaces. FOB 8 will provide the quantity and quality of space needed to support Congressional

offices dislocated as a result of renovations to the Cannon Building and future renovation projects, as well as accommodate additional space requirements for the House of Representatives.

House Underground Garages

The second high urgency renewal project I would like to highlight is the Interior Renovation of the East House Underground Garage.

The House Underground Garages were built in 1968 to provide parking for Members of Congress and their staffs. The garages consist of multi-level parking areas, ramps between levels, associated offices, egress stairways, and roof top plazas. They are constructed of cast-in-place, reinforced concrete with a main structural system of perimeter load bearing walls and interior concrete encased structural steel columns. The exterior is covered in stone, and the rooftops are landscaped.



Deteriorated Garage Concrete

The House Underground Garages have been identified by the Facility Condition Assessments as having serious deficiencies. They are rated “poor” in terms of their Facility Condition Index, and they are nearing the end of their useful lives. The major deficiencies identified in the assessments include: concrete floor slabs that contain high chloride levels which cause corrosion of embedded reinforcing steel; delamination of slab concrete; deteriorating expansion joints; and code deficiencies for mechanical, electrical, plumbing, hazardous materials, and fire prevention systems.



Spalling Garage Roof

Subsequently, we have been working to address these deficiencies and rehabilitate the garages. We requested \$37.6 million in the Architect of the Capitols Fiscal Year 2010 budget request for required renovations in the East House Underground Garage. Funding for the West House Underground Garage is being considered for submission as part of the Fiscal Year 2012 budget.

Plans include replacing concrete floor slabs, reinforcing expansion joints, and upgrading mechanical, electrical, and fire prevention systems.

Each garage will take approximately two years to rehabilitate. During this time, the garages will need to be vacated. Phasing the interior renovation of each garage to allow a portion to remain operational during construction would create circulation and safety concerns and lengthen the renovation period. Consequently, to accommodate Members and staff who will be displaced during construction, we are planning to lease temporary parking spaces.

The renovation will prolong the life expectancy for the garages, provide safe structures, return their conditions to reliable levels of facility maintenance, and avoid the high cost of total replacement. For instance, the deterioration of the concrete parking decks has progressed to the point that five inches of the 10-inch thick concrete decks must be removed and replaced. If the deterioration is allowed to progress further, this less-costly repair will no longer be possible, and the decks will have to be removed and replaced in their entirety. This would significantly increase the cost and lengthen the schedule of the projects.

Conclusion

The renewal of the Cannon House Office Building and the House Underground Garages are high urgency projects that are required in the near term to avoid building system failures which will negatively impact the work environment for Members of Congress and their staffs. The conditions of critical building systems in each facility continue to degrade at an increasingly rapid rate. Plumbing breaks, rain leaks, electrical problems, spalling concrete, hot water outages, and heating and air conditioning issues will become increasingly more common and severe.

As the rate of degradation increases, so does the scope of repairs. Failing systems cause collateral damage to other components of the building. This, in turn, will increase the projects' scopes and costs. Some failing building systems, such as the House Underground Garage concrete decks that can be repaired now might require complete replacement if repairs are deferred much longer. The AOC will continue to maintain the aging infrastructure, but in the most urgent cases, impact on Members of Congress and their staffs will become unavoidable.

In addition to correcting the failing building systems I have described, the renewal of the Cannon Building and House Underground Garages will provide the opportunity to significantly improve the energy efficiency of the buildings, integrate sustainable design features, accommodate modern technology, address safety and security shortfalls, and create a more adaptable infrastructure. These changes will better support congressional operations and improve the quality of the work environment.

Mr. Chairman, I want to thank you and the Committee for your continued interest and support of our efforts to maintain and preserve the Capitol complex. Our goal is to provide a high quality, comfortable, efficient, and safe work environment for Members of Congress and their staffs.

We look forward to working closely with the Committee and our House and Senate Oversight Committees to attain this goal, as well as to address the backlog of maintenance and repair projects, and to continue to protect and preserve the U.S. Capitol for generations to come.

Thank you.