

Statement of Thomas J. Carroll III
Acting Architect of the Capitol



Architect of the Capitol

Statement before the Committee on House Administration
United States House of Representatives

September 10, 2019

Chairperson Lofgren, Vice Chairperson Raskin, Ranking Member Davis, and members of the Committee, I appreciate the opportunity to testify today and to provide an overview of the Architect of the Capitol's (AOC) Cannon Renewal Project. The Committee's continued interest in and support for this project is essential to the AOC's efforts.

The need for this project is well documented. The Cannon House Office Building is the oldest congressional office building outside of the U.S. Capitol and has not received a comprehensive infrastructure upgrade since the 1930s. Many of the building's systems are original, dating back to 1908 or earlier. The AOC, with the support and cooperation of Congress and our legislative branch stakeholders, recognized the importance of correcting serious safety, health, environmental and operational issues impacting members, staff and constituents. When completed, the Cannon Renewal Project will provide an updated workplace for the next century to serve the needs of the U.S. House of Representatives and support congressional operations. The updates will improve the functionality of the building for both members and staff, making it far more efficient, comfortable and safe, while retaining the historic grandeur of the building.

Studies for developing this project began in 2009. During the early planning phase of the project, we accepted that it would be extremely complex and involve stringent schedule, logistical and budgetary parameters that are inconsistent with many industry standards and best practices. While the AOC's mission to Serve, Preserve and Inspire thrives on balancing the needs of our aging infrastructure while mitigating the impact on congressional operations, this project involves unprecedented challenges that we have and will continue to overcome.

First and foremost, the project centered around the practical inability to completely relocate all 142 member offices, three hearing rooms and the essential services working within the building. Construction of this magnitude rarely occurs in an occupied building, yet we believe that we developed a workable plan to address this unique situation. The result is a rigid, 10-year renewal process where each phase is aligned to begin and end between the two-year congressional move cycles.

To support this plan, an initial Rough Order of Magnitude (ROM) estimate was prepared by the AOC and provided to Congress by the Government Accountability Office (GAO) in 2009. At that time, the GAO said that the project's scope and cost estimate were expected to change and that the expected accuracy of such a planning stage estimate is generally plus or minus 40 percent. However, this ROM was used to formally establish a firm \$752.7 million project budget.

The 2012 project design was subsequently developed within this budget while building in as much flexibility as possible to address likely unforeseen conditions, such as hazardous materials that are found in older facilities across campus and expected future design alterations that commonly occur as a part of all renovation projects. As the project progresses, and we continue to address any identified issues and incorporate lessons learned, we continue to refine and update this estimate while investigating ways to control costs.

Again, the AOC welcomed the challenges of this project. The project team worked diligently to prepare for construction to begin in 2015 on the initial two-year phase. Congress fully funded the project budget for this work, which included upgrading the building's utilities and infrastructure systems in the basement and areas of the courtyard. This foundational work included adapting the systems to completely isolate each wing so that each of the four subsequent phases could simultaneously occupy a completed wing and vacate an adjacent wing for construction.

This was the lynchpin phase, and I commend the project team for its foresight in the planning and design and the team's hard work to complete it on time and within budget.

Renewal of the building's occupied spaces began in 2017 with the largest and most complex phase of all the project phases. This was the first opportunity to test our logistical plan to relocate members and staff in conjunction with the congressional move cycle. The move cycle occurs in the post-election recess period to ensure that the new Congress is fully operational on January 1. The 30-day window proved to be a difficult process, but many stakeholders, such as the Chief Administrative Officer of the House, came together to assist in the effort. The renewal project team was supported by the AOC's House Office Buildings jurisdiction, AOC's centralized support services, as well as the Cannon Renewal's Executive Working Group (EWG).

Established in 2016, the EWG is comprised of the Speaker's Office, the Committee on House Administration, the House Committee on Appropriations Subcommittee on Legislative Branch, the Office of the Clerk, the Chief Administrative Officer of the House, the House Sergeant at Arms and the U.S. Capitol Police. The EWG meets regularly to receive project updates and to assist with high-level decisions impacting the project's progress. This group is critical to the renewal's success.

The EWG closely monitored Phase 1, as it contained the largest project impacts to the building and to building occupants. This phase included the relocation and renewal of 31 member offices, two of the building's three historic committee hearing rooms, the renewal of the Cannon Rotunda as well as the beginning of the construction for a completely new fifth floor that will be constructed during each successive phase.

Throughout Phase 1, construction work occurred around the clock, with activities including demolishing and rebuilding the fifth floor, conserving the exterior stonework and rehabilitating the individual office suites. To the extent possible, the Cannon Renewal team works to minimize the noise impacts of jackhammering, grinding, sawing, hammering, scraping and drilling activities. We know that this is disruptive to congressional activity and office operations, and we appreciate everyone's support and patience.

Changes in any infrastructure project are inevitable and driven by the need to address unforeseen conditions, code updates, design flaws and/or required scope additions. Changes can be minor, but some are disruptive to the overall project schedule and cost. This is particularly true when working on historic renovations. The unique characteristics of each historic project, including archaic construction materials, hidden details and outdated construction techniques, require innovative thinking and creative approaches that are not obvious at first glance and can not be anticipated in the design. While there may be some ideas that can be used from project to project, specific details differ greatly.

As you are aware, there was limited original documentation on Cannon, so surprises in the original structure were bound to arise. Unforeseen site conditions such as the unexpected need for hazardous material removals and more extensive exterior stone restoration were significant. Complications installing new ducts and conduit in the basement impacted constructability. And numerous scope changes, including code-driven updates and stakeholder requests, were persistent throughout the two-year phase.

Normally, many of these issues could have been identified and prevented by a thorough pre-construction destructive investigation. This was impossible to accomplish while members were still in their offices, which meant it could not be done until the wing was vacated and construction began. This was a great challenge during the past two years, however, we believe that we have now uncovered the majority of those construction and design surprises and we are better prepared to mitigate similar issues in the future.

To the extent possible, we incorporated Phase 1 design and construction changes into the remainder of the project to minimize time delays and premium costs associated with change orders. Implementing a new change management process and more aggressive schedule management will more quickly identify the schedule impacts of changes and better control acceleration costs. Projects need to be agile enough to respond to emerging requirements, but must also be disciplined enough to protect against unnecessary impacts to the schedule and budget. The AOC needs this Committee's support as an integral member of the EWG to ensure these efforts are successful.

In addition, because the schedule for each phase of this project is tied to the move processes associated with each two-year congressional election cycle, very little schedule flexibility can be given to accommodating changes. I intend to ask the EWG to work with the project team to consider options to ease the scheduling constraints. From adjusting how the phases are aligned with the move cycles, to potentially combining work spanning future phases, the project team stands ready to evaluate and assess the impact of all options.

As mentioned earlier, the 2009 estimate must be updated to better reflect project realities. The project's overall cost will increase. To address this, a detailed analysis of the project's working estimate is ongoing. And the Integrated Cost Schedule Risk Analysis (ICSRA) final report, performed per GAO guidelines, is expected later in the fall. The project team will utilize the results of these two work products to recommend a revised program budget to the EWG. Until the ICSRA is completed and the final report is issued, it is imperative that we refrain from making assumptions on the future funding need.

Additional lessons learned arose as the project transitioned from construction to our facility operations mission. A large part of understanding the operations of the newly constructed wing includes ongoing communication with and feedback from impacted members and staff. The AOC's House Office Buildings' service center manages the work orders received and then routes them to the Cannon Renewal's project team for review. The project team determines if the issue is the responsibility of the project contractor or if it is in the purview of general facilities maintenance performed by the AOC.

Thus far, input from offices generally falls into three categories: temperature adjustments, light fixture modifications and general repairs. General repairs are those typically associated with punch-list and warranty work on construction projects. This work also includes the testing, or commissioning, of the HVAC systems. It wasn't possible to test the systems prior to occupying the offices, so

simulations were made. This is not a best practice, as simulations cannot mimic the exact conditions to address potential problems the testing seeks to identify, but was a necessary modification to adhere to schedule constraints. The testing schedule for future phases is another area the project team and the EWG will consider as we seek additional improvements from lessons learned.

Feedback related to temperature adjustments and light fixture modifications have shown that the Cannon team must improve our pre-move-in education for member offices to ensure they know how to use the new systems. AOC staff has visited all of the new office occupants to offer an instructional tutorial on the thermostat controls and we have disabled new light fixture motion detectors in Phase 1 offices upon request. We will continue to work with these offices and plan to be better prepared for the new offices that will be moving in following the completion of future phases.

From the first studies, through design, construction and operations of the new infrastructure, the Cannon Renewal Project continues to redefine how the AOC addresses our aging infrastructure and will combat ever-increasing operational and capital needs across campus. Our commitment to our unique mission to Serve, Preserve and Inspire is deeply rooted in our interdependent relationship with Congress and our legislative branch stakeholders. We look forward to working with you, and we greatly appreciate your continued support.