

Architect of the Capitol
Combating Fraud, Waste, Abuse & Mismanagement



Evaluation of Cannon House Office Building Renewal (CHOB r) Project's Construction Materials

OIG-AUD-2024-05

August 01, 2024

NDA 5274 Notice

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Results in Brief



Evaluation of Cannon House Office Building Renewal (CHOBr) Project's Construction Materials

AUGUST 01, 2024

OBJECTIVE

Construction reviews are included in the Architect of the Capitol (AOC) Office of Inspector General (OIG) audit and evaluation plan. As such, the AOC OIG contracted with Sikich to conduct an evaluation of the CHOBr Project's construction materials. Project materials were selected as the subject of this evaluation as they represent a higher risk of non-compliance and fraud within the construction industry. The risks include, but are not limited to, the AOC accepting materials without performing inspections, the contractor using unapproved material substitutions, and the contractor having discrepancies between test and inspection results or the contract requirements and materials installed.

The objective of this evaluation was to determine whether the materials used for Phase 4 of the CHOBr Project complied with contractual requirements and to assess the quality of the work performed.

EVALUATION RESULTS

We determined that the materials used for Phase 4 of the CHOBr Project complied with contract requirements, and the quality of the work performed was also compliant with contractual standards.

To achieve the objective of our evaluation, we evaluated the CHOBr Project's policies, procedures and processes in place to review

and accept materials installed. In addition, we conducted site visits with a subject matter expert, to determine whether work was done in accordance with the contract requirements.

We found the CHOBr Project's internal controls and oversight for Phase 4 materials were operating as planned. We confirmed, through onsite inspection, that the materials installed and used in Phase 4 were compliant with the contract specifications.

Overall, we observed that the CHOBr Project has incorporated improved processes to ensure the quality of construction materials is maintained throughout the project and meet specified contractual requirements. These processes are overseen and validated by independent parties throughout each phase of the CHOBr Project (e.g., Construction Manager as Constructor, Construction Manager as Agent and the AOC). Therefore, we conclude that with the various forms of inspections and oversight of construction materials installed, the CHOBr Project has reduced its level of risk for non-compliance and fraud.

MANAGEMENT COMMENTS

The AOC provided comments on July 23, 2024, see Appendix E. In its management comments, the AOC concurred with the OIG's observations and underscored its commitment to delivering a successful product to its customer.



Inspector General

DATE: August 01, 2024

TO: Joseph R. DiPietro, P.E.
Acting Assistant to the Architect of the Capitol and Chief of Operations

FROM: Christopher P. Failla, CIG, CFE 
Inspector General

SUBJECT: Evaluation of Cannon House Office Building Renewal (CHOB) Project's
Construction Materials (Report No. OIG-AUD-2024-05)

The Architect of the Capitol (AOC) Office of Inspector General (OIG) is transmitting Sikich's¹ final report for its evaluation of the Cannon House Office Building Renewal (CHOB) Project's Construction Materials. Under contract AOCSSB22A0007 monitored by my office, Sikich, an independent public accounting firm, performed the evaluation in accordance with the Council of the Inspectors General on Integrity and Efficiency's (CIGIE's) Quality Standards for Inspection and Evaluation (Blue Book), December 2020.

Our evaluation concluded that the construction materials installed for Phase 4 of the CHOB Project complied with contract requirements and the quality of the work performed was also compliant with contractual standards.

In response to our official draft report (Appendix E), management concurred with the OIG's observations and underscored the AOC's commitment to delivering a successful product to its customer and ultimately benefit the taxpayer.

We greatly appreciate the assistance provided throughout the evaluation. Please direct questions to Sharmaine Carter, Senior Auditor, at 202.538.1830 or sharmaine.carter@aoc.gov.

Distribution List:

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¹ Effective December 14, 2023, "Cotton & Company Assurance and Advisory, Limited Liability Company (LLC)" amended their legal name to "Sikich Certified Public Accountants (CPA) LLC" (herein referred to as "Sikich").

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INTRODUCTION

Objective

This report presents the results of Sikich's¹ evaluation of the Cannon House Office Building Renewal (CHOBr) Project's Construction Materials. The Architect of the Capitol (AOC) Office of Inspector General (OIG) and Sikich have performed multiple audits and evaluations of various aspects of the CHOBr Project. Project construction materials were selected as the subject of this evaluation as it represents a higher risk of non-compliance and fraud within the construction industry. The risks include, but are not limited to, the AOC accepting materials without performing inspections, the contractor using unapproved material substitutions, and the contractor having discrepancies between test and inspection results or contract requirements and materials installed.

The objective of this evaluation was to determine whether the materials used for Phase 4 of the CHOBr Project complied with contract requirements and to assess the quality of the work performed. To accomplish the objective of this evaluation, we selected a judgmental sample of Definable Features of Work (DFOW) for inspection.² We performed site visits with a subject matter expert (SME) to determine whether work was done in accordance with the contract requirements. Additionally, we interviewed the Contracting Officer's Representative for the Construction Manager as Constructor (CMc) contract, the CHOBr Architect and Engineer (A/E), and the Construction Manager as Agent (CMA) to gain a better understanding of the review and approval process for material installation and the roles and responsibilities of the various parties involved (see Appendix D for roles and responsibilities of each party).

We conducted this evaluation in Washington, D.C., from September 2023 through April 2024, in accordance with the Council of the Inspectors General on Integrity and Efficiency's (CIGIE's) *Quality Standards for Inspection and Evaluation* (Blue Book), December 2020. Those standards require that we sufficiently and appropriately support evaluation findings and provide a reasonable basis for our conclusions. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our evaluation objective.

Background

The AOC awarded the CMc contract for the CHOBr Project on October 25, 2012. The CHOBr Project consists of five distinct phases (i.e., 0 through 4). The scope of this contract includes:

- Design assistance and pre-construction services, as well as additional contract options during the preinstallation phase (Option 0)
- Four option periods of staged construction, each addressing roughly one of four building wings

² Installation work is categorized into components or Definable Features of Work.

- Closeout option

Under this contract, the CMc is responsible for replacing or upgrading all major building systems, including completely modernizing the systems to meet all applicable codes. The budget for the contract is awarded by phase to cover labor, materials, allowances, contingencies, overhead costs and profits. The Phase 4 budget is \$253.7 million as of September 2022.³

CHOBBr Project Materials Review and Approval Process

The CMc and its subcontractors (“CMc construction team”) create a package called a “submittal” for materials to be installed in each phase of the CHOBBr Project per the project specifications. A submittal includes information such as product data, drawings, schedule, and certifications. Once the CMc construction team prepares a submittal package, the CMc uploads the submittal to eBuilder for the CHOBBr A/E to review and approve (see Figure 1). The CHOBBr A/E reviews the submittal against the project specifications to determine whether the information submitted is in accordance with CHOBBr contract requirements. The CHOBBr A/E then either: (1) approves a submittal, (2) approves the submittal with notes, (3) requests the CMc construction team to revise and resubmit the submittal or (4) rejects the submittal. Once the CHOBBr A/E approves a submittal, it is forwarded to the AOC for review and approval. Upon AOC approval the materials are ordered, delivered to the CHOBBr Project construction site, and prepared for installation.

Prior to the installation of any materials, the AOC, CMA, CMc construction team, and CHOBBr A/E, as applicable, conduct preparatory meetings to ensure the A/E has approved submittals for the planned work. During these meetings, the CMc construction team provides an overview of how it plans to install materials in accordance with the approved submittals. Following the preparatory meetings, the AOC, CMA, and CMc hold weekly Quality Control (QC) and Quality Assurance (QA) meetings to discuss project updates and any issues identified through the daily inspections.

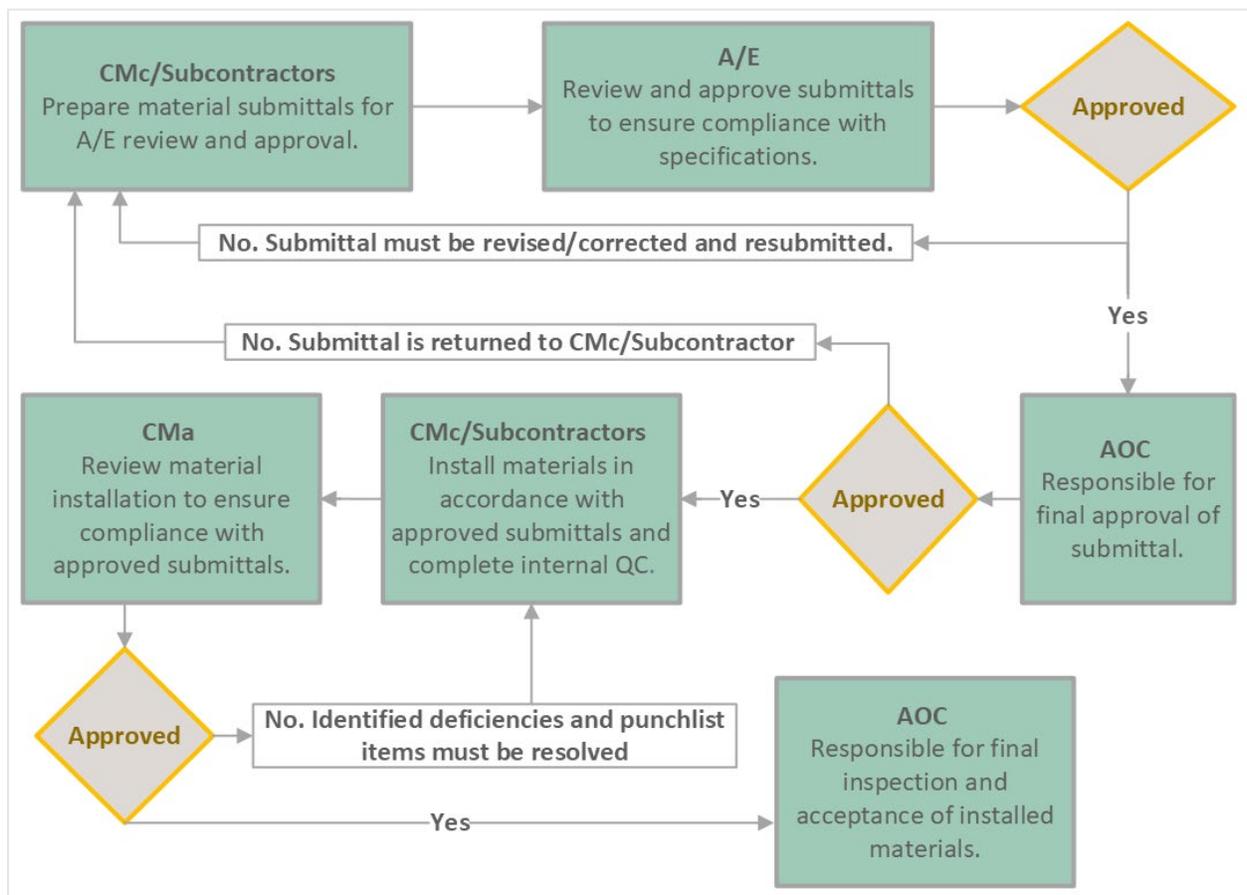
CHOBBr Project “Sample Suite”

The approved submittals are initially used to construct a “sample suite,” which is the model used for the rooms or suites that are similar in nature. The CMc’s independent QC team inspects the completed installed work within the sample suite to ensure it is in accordance with approved submittals. The QC team compiles a list of deficient items identified during their inspections for the CMc construction team. Additionally, a weekly “Sample Suite” meeting including the QC/QA teams is utilized to exchange information, quality concerns and progress of the sample suite, and to establish understanding of contractually required workmanship benchmarks. Once the CMc construction team addresses the deficient items, they notify the CMA that an area or room is ready for the AOC’s and CMA’s inspection.

³ The CHOBBr Project budget was last updated in September 2022, \$205 million of the budgeted amount has been obligated as of March 2024.

The CMA is responsible for providing QA on the project. Prior to performing their inspections, the CMA ensures that the CMc construction team has resolved all deficient items identified by the CMc’s QC team. Subsequently, the CMA and the AOC perform their inspections to identify deficient items overlooked during the QC inspection or additional items determined to be noncompliant with contractual requirements. The CMA and the AOC prepare a list of deficient items, referred to as a “punch list.” Once the CMc construction team has addressed the punch list, the CMA and the AOC conduct a final inspection of the sample suite and either identify additional deficiencies or approve the work as installed. AOC is responsible for final acceptance of all submittals and material installations. The CMc construction team uses the work approved in the sample suite as their guide for material installations and quality of workmanship for the work required to complete the phase.

Figure 1: Materials Review and Approval Process



Review of Internal Controls

We evaluated the AOC’s internal controls related to the Phase 4 submittals and determined that internal controls are operating as planned. Specifically, as part of our evaluation, we interviewed project personnel from the AOC, CMA and CHOBr A/E to get an understanding of the policies, procedures and processes in place to review and accept materials installed for the CHOBr

project. We validated the policies and procedures by selecting a sample of DFOWs for inspection and ensured that the installed work was compliant with the contractual requirements.

Criteria

To evaluate whether construction materials for Phase 4 of the CHOBr Project were installed in accordance with contractual requirements, we relied on relevant criteria from the following sources:

- Contract No. AOC13C2002, awarded to the CMc for the CHOBr Project issued October 25, 2012.
- CHOBr Phase 4, Procurement and Contracting Requirements – Volume 1 to 5, December 17, 2021.

EVALUATION RESULTS

We determined that the construction materials used for Phase 4 of the CHOBr Project complied with contract requirements, and the quality of the work performed was also compliant with contractual standards. Specifically, we evaluated the CHOBr Project’s policies, procedures, and processes in place to review and accept materials installed and reviewed 40 selected sample items for inspection. Apart from one item not used on-site, we were able to confirm that the materials installed and used for the CHOBr Project were compliant with the contract specifications.

During our evaluation, we obtained the project specifications and the listings of 346 approved submittals and 241 DFOW items for Phase 4. We reviewed the DFOW listing and judgmentally selected a sample of 20 items. We reviewed the list of approved submittals, to identify the specific submittal related to each of the 20 sampled DFOW items. We ensured our sample covered different contract specifications and subcontractors, as well as contained a variety of materials ranging from doors to fan coil units. The purpose of this sample was to ensure the materials inspected on site aligned with an approved submittal.



Figure 2: First Floor Sample Suite

Specifically, our testing of the materials focused on two approaches. First, we tested for existence, by sampling items within the approved specifications, and then confirming that they were properly installed on the project (see Figure 2 and Appendix B: Materials Selected for Inspection “Initial”). Second, we tested for completeness, by judgmentally selecting an additional 20 items identified on-site, and ensured that these items were included in approved specifications (see Figure 3 and Appendix B: Materials Selected for Inspection “On-Site”).



Figure 3: Courtyard

We observed that the CHOB_r Project team has a strong oversight process in place to review and approve installation of materials. Certain aspects of the oversight process can be attributed to improvements the CHOB_r project team made in response to a lessons learned session following the completion of Phase 1. As discussed in the OIG's previous evaluation of the CHOB_r project's construction inspection approval process, the lessons learned highlighted the following weaknesses, which can be attributed to material installation:

- Poor documentation and communication between CMc and AOC quality inspectors regarding identification and remediation of punch-list items
- Insufficient program management software to track work deficiencies
- An inefficient scheduling process for quality inspections
- An insufficient QA workforce to properly oversee scope of work and deficiencies found

In response to the identified weaknesses, the AOC increased the frequency of engagement between the AOC and CMc, incorporated a new project management software to track QA activities, and hired additional QA inspectors. The AOC also increased its inspection workgroup to 10 full-time inspectors, compared to the seven inspectors in Phase 1. We observed the AOC's oversight efforts during our site visit (see Figure 4).

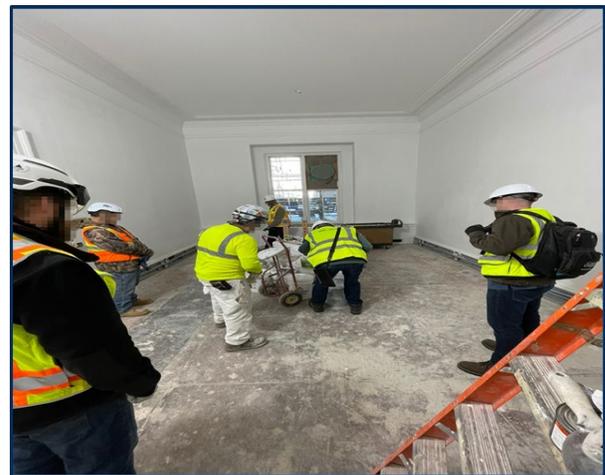


Figure 4: CMc QC Inspection

Conclusion

As mentioned, the installation of project materials has historically had a higher risk of non-compliance and fraud within the construction industry, primarily due to inadequate inspections or routine oversight. However, we found the CHOBr Project's internal controls and oversight related to the Phase 4 submittals are operating as planned. The CHOBr Project has incorporated improved QC/QA activities, which are conducted by independent parties within the project — CHOBr A/E, CMc construction team, CMA and the AOC. Therefore, we conclude that with the various forms of inspections and oversight of construction materials installed, the CHOBr Project has reduced its level of risk for non-compliance and fraud. As a result, we determined that the materials used for Phase 4 of the CHOBr Project complied with contract requirements, and the quality of the work performed was also compliant with contractual standards.

Sikich CPA LLC

July 31, 2024

APPENDIX A

Scope and Methodology

The scope of our evaluation was construction materials installed for Phase 4 of the CHOBr Project. Construction for Phase 4 of the CHOBr Project began in January 2023, scheduled for completion by October 2025. To determine when the sample suites for the phase would be ready for acceptance, we obtained a copy of the Phase 4 schedule as of December 2023. Phase 4 of the CHOBr Project has two sample suites: the first is located on the first floor and the second is located on the fifth floor. Per the provided schedule, the sample suite on the first floor would be ready for the AOC's acceptance in the first week of February 2024, whereas the sample suite on the fifth floor would not be ready for acceptance until the last week of July 2024.

Based on discussions with the CHOBr Project team, we learned that since the first-floor sample suite is near completion, certain materials sampled might be behind closed walls in the sample suite; however, other rooms in the building (i.e., first floor through fifth floor) were in varying degrees of completion, and we could inspect the same material in other rooms. Additionally, while the fifth-floor sample suite would not be ready for AOC's acceptance until July 2024, we could inspect the items installed to date. We made the determination to conduct our site inspection on February 20th and 21st.

We obtained the project specifications and a listing of 346 approved submittals for Phase 4. Each specification can have multiple submittals. For instance, the CMc construction team can prepare separate submittals for product data, certifications, schedule, drawings, etc. The CMc uploads all submittals to E-Builder, which we received access to review and locate the submittals for Phase 4. The material installation work is broken down into components or DFOWs. We obtained the DFOW listing for Phase 4; in total, the listing contained 241 DFOW items. We reviewed the DFOW listing prior to our site visit and judgmentally selected a sample of 20 items.

Our testing of the materials focused on two approaches. First, we tested for existence, by sampling items within the approved specifications (DFOW items), and then confirmed that they were properly installed on the project (see Appendix B: Materials Selected for Inspection "Initial"). Second, we tested for completeness, by judgmentally selecting an additional 20 items identified on site (Courtyard and various floors of the building) and ensured that these items were included in approved specifications. Most of these items selected on site represented low-dollar items purchased in bulk and installed throughout the project (see Appendix B: Materials Selected for Inspection "On-Site").

We were able to locate and inspect 16 of the 20 DFOWs selected prior to our site visit. We learned that one⁴ of the items was not used on-site; the remaining three items⁵ were stored off-site and only brought on site when the project is near completion. The AOC assisted us in

⁴ Appendix B: Sample No. 8.

⁵ Appendix B: Sample Nos. 1, 2 and 20.

obtaining photographic evidence to demonstrate that the items complied with contractual requirements.

Based on our understanding to speed up the submittal review and approval process, most submittals for Phase 4 materials were submitted for review at the beginning of Phase 4. The one item not used for Phase 4 had been used in a prior phase of the CHOBr project and erroneously included in the Phase 4 submittal review process.

For the 20 on-site items, we were able to use the material descriptions to locate approved submittals for the items inspected and determine that the items inspected complied with contractual requirements.

APPENDIX B

Materials Selected for Inspection

Sample No.	Sample Selection	Description of Item
1	Initial	Wood Door Restoration
2	Initial	Wood Window Restoration
3	Initial	Scaffolding
4	Initial	Structural Steel (COS Angles)
5	Initial	Structural Steel - Terracotta Wall Posts
6	Initial	Metal Fabrications - COS Angles
7	Initial	Sheathing
8	Initial	Crystalline Waterproofing
9	Initial	Firestopping (Mech/Plumbing)
10	Initial	Wood Window Restoration
11	Initial	Access Doors and Panels
12	Initial	Gypsum Board
13	Initial	Common Work Results for Plumbing
14	Initial	Hangers and Supports for Plumbing Piping and Equipment
15	Initial	Sleeves and Sleeve Seals for HVAC Piping
16	Initial	Hangers and supports for HVAC Piping and Equipment
17	Initial	Variable Air Volume System - A
18	Initial	Fan Coil Units
19	Initial	Hangers and Supports for Electrical Systems
20	Initial	Lighting Restoration and Repair
21	On-Site	Variable Air Volume System - B/C
22	On-Site	Support Steel - Cold Formed Steel
23	On-Site	Firestop Sealant
24	On-Site	Non-structural Metal Framing
25	On-Site	Electrical Hangers and Supports
26	On-Site	Exterior Gutter Area

Sample No.	Sample Selection	Description of Item
27	On-Site	Precast Concrete Lintels
28	On-Site	Sound Abatement Material
29	On-Site	Elastomeric Firestop Sealant
30	On-Site	Firestop Pillow
31	On-Site	Electrical Black Boxes
32	On-Site	Rigid Insulation
33	On-Site	CMU Grout
34	On-Site	Drywall Plaster
35	On-Site	Paints/Finishes
36	On-Site	Member Bathroom Tiling Material
37	On-Site	Light Fixtures for COS Beam
38	On-Site	HVAC Ductwork for Bulkhead
39	On-Site	Firestop Sealant
40	On-Site	High Voltage Transformers

APPENDIX C

Notification Letter



Office of Inspector General
Fairchild Bldg.
499 S. Capitol St., SW, Suite 518
Washington, D.C. 20515
202.593.1948
www.aoc.gov

United States Government

MEMORANDUM

DATE: September 07, 2023

TO: Chere Rexroat, RA
Acting Architect of the Capitol

FROM: Christopher P. Failla, CIG
Inspector General 

SUBJECT: Announcement Memorandum for Evaluation of the Cannon House Office Building Renewal (CHOBr) Project's Construction Materials (2023-AUD-006-E)

This memorandum serves as notification that the Office of the Inspector General (OIG) is working with the independent audit and accounting firm, Cotton & Company Assurance and Advisory, LLC, to initiate the evaluation of CHOBr Project's construction materials. The objective of the evaluation is to determine if the materials used for Phase 4 of the CHOBr Project comply with contract requirements and to assess the quality of the work performed.

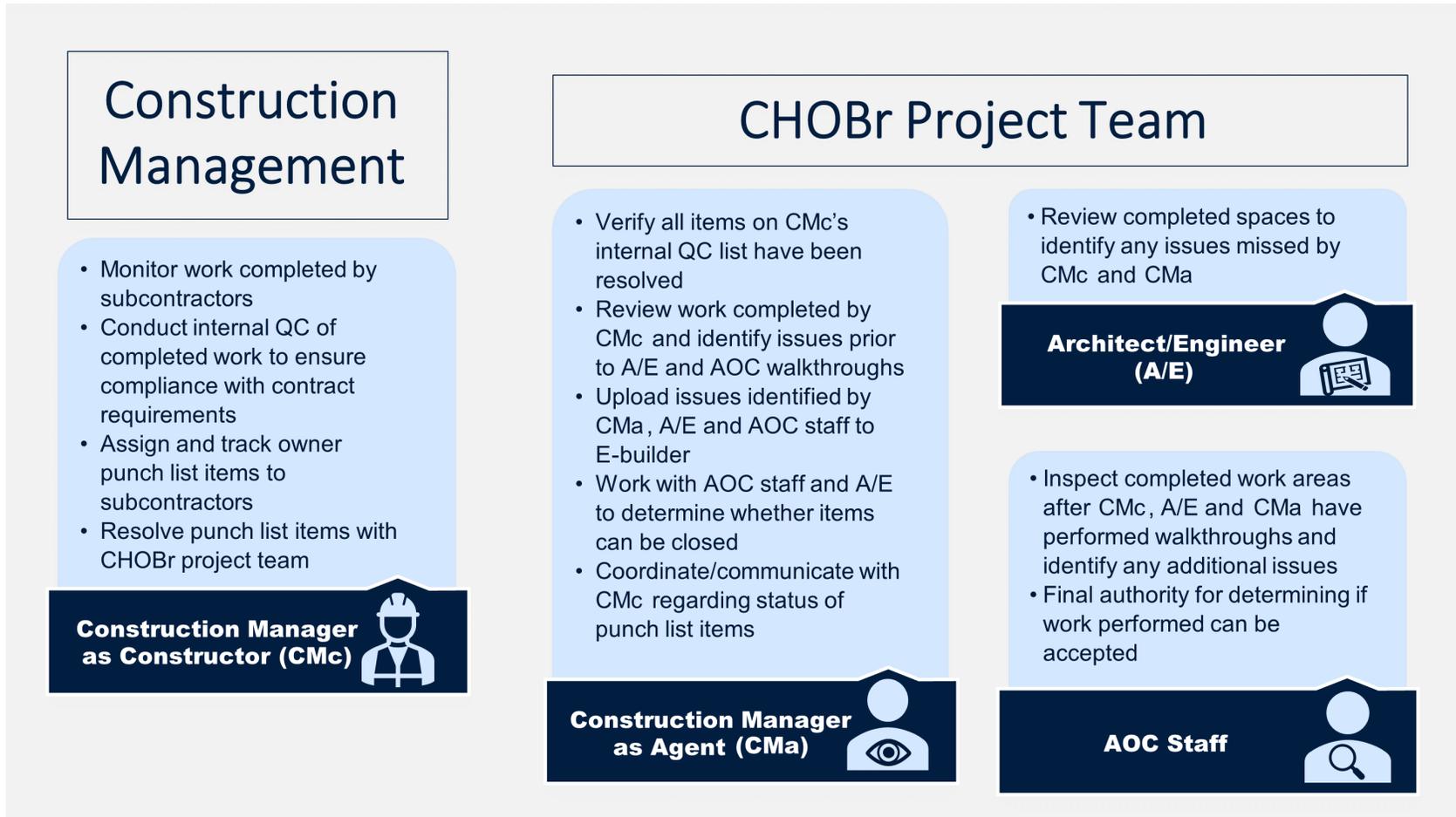
We will contact your office to set up an entrance conference in the next few weeks. If you have any questions, please contact Sharmaine Carter, Auditor at 202.538.1830 or sharmaine.carter@aoc.gov.

Distribution List:

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APPENDIX D

Roles and Responsibilities



APPENDIX E

Management Comments



Architect of the Capitol
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Washington, DC 20515
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www.aoc.gov

United States Government

MEMORANDUM

DATE: July 23, 2024

TO: Christopher P. Failla
Inspector General

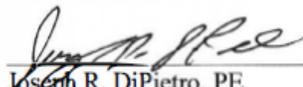
FROM: Joseph R. DiPietro, PE
Acting Assistant to the Architect of the Capitol

SUBJECT: Official Draft for the Evaluation of the Cannon House Office Building Renewal (CHOBr) Project's Construction Materials (2023-AUD-006-E)

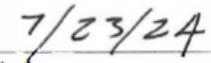
Thank you for the opportunity to review and comment on the Office of Inspector General (OIG) official draft of the subject evaluation report.

The Architect of the Capitol (AOC) is pleased the OIG observed that the CHOBr Project team incorporated improved processes into the Project. Additionally, the OIG's observation that the Project team ensures that the quality of materials is maintained throughout the project and those materials meet specified contractual requirements underscores our commitment to delivering a successful product to our customer and ultimately benefit the taxpayer.

Respectfully,



Joseph R. DiPietro, PE
Acting Assistant to the Architect of the Capitol



Date

Doc. No. 240709-18-01

ACRONYMS AND ABBREVIATIONS

A/E	CHOBBr Architect and Engineer
AOC	Architect of the Capitol
Blue Book	CIGIE's Quality Standards for Inspection and Evaluation
CHOBBr	Cannon House Office Building Renewal
CIGIE	Council of the Inspectors General on Integrity and Efficiency
CMA	Construction Manager as Agent
CMc	Construction Manager as Contractor
CMc construction team	CMc and Subcontractors
CPA	Certified Public Accountants
DFOW	Definable Feature of Work
LLC	Limited Liability Company
OIG	Office of the Inspector General
QA	Quality Assurance
QC	Quality Control
SME	Subject Matter Expert