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Summary: The Construction Projects audit was included in the Arizona State University (ASU) FY 2020 audit plan approved by the Arizona Board of Regents (ABOR) Audit Committee and ASU senior leadership. The audit focused on the design and effectiveness of controls governing the construction process including compliance with relevant ABOR and ASU policies. This audit is in support of ASU’s mission of effective management of financial resources and focus on efficient operations at all levels of the university.

Background: The Capital Programs Management Group (CPMG) in coordination with the Office of University Architect (OUA) is responsible for the oversight of design, renovations of facilities and infrastructure, new construction, and managing consultants and contractors. There are three project execution teams for construction projects consisting of project managers from CPMG and design managers from OUA. Construction projects may be initiated and funded by the various units and departments of ASU or initiated by senior leadership for university and infrastructure projects. The general sequence of construction projects includes the project request, review by a Work Induction Board to determine whether the project is assigned to Facilities Management or CPMG and OUA, assignment of projects to a project team and a project manager and design manager, scope and budget development, approval of funding, selection of design professional and contractor, design phase, construction phase, and project closeout.

The project delivery methods approved by ABOR include JOC, Construction-manager-at-risk (CMAR), Design-build (DB) and Design-bid-build (DBB); however, ASU primarily uses only the JOC and CMAR methods. There are various requirements related to construction projects established by both ABOR and ASU. ABOR policy 3-804, Professional Services and Construction Services Procurement, includes requirements for the project delivery methods, the ARFQ and JOC programs, selection committees, subcontractor selection, contract negotiations and execution, bid security, performance and payment bonds, payment retention, and progress payments among other subjects. The contracts for each of the project delivery methods have been developed by a tri-university group, which incorporate the requirements of ABOR policy.

CPMG and OUA work closely with Purchasing & Business Services and Financial Services to facilitate compliance with ABOR policy and manage the construction projects. CPMG and OUA have also established a process improvement team to develop a comprehensive manual of processes and procedures and implement a new project management system, PMWeb. As of the beginning of the audit, the Project Status and Project Data entry pages had been completed but the budgeting, and documentation tracking and repository functionality were still in progress.
Audit Objective: The objectives of the audit focused on the design and effectiveness of controls governing the construction process including compliance with relevant ABOR and ASU policies. Specifically, the following areas were assessed:

- Verify procurement and capital project processes are performed in accordance with the requirements of ABOR Policies
- Assess the adequacy of training provided to CPMG and OUA employees related to contracts
- Verify construction projects are properly authorized and adequately funded
- Ensure design professionals and contractors are properly selected based on project delivery method
- Ensure proposals and change orders are calculated in accordance with the contracts, substantiated and properly approved
- Verify appropriate fiscal controls are in place for the payments to the design professionals and contracts
- Assess the adequacy of the oversight and the management of projects in accordance with the contracts
- Ensure closeout of projects is completed in accordance with the contracts
- Identify opportunities for improvement

Scope: The scope of the audit focused on construction projects under $10 million in cost and completed during fiscal year 2019 and 2020.

We did not assess application controls for PMWeb based on the current implementation status of the application. Key functionality is still in process of being designed, configured and implemented by the project team. As a result, controls have not been sufficiently established and could not be tested.

Methodology: Our audit consisted of tests of procedures necessary to provide a reasonable basis for expressing our opinion. Specifically, audit work consisted of interviews with the leadership and staff of the Capital Programs Management Group, the Office of University Architect, Purchasing & Business Services and Financial Services, review of ABOR Policies, ASU policies and contracts for design professionals and contractors, observation of work processes, review of documented policies and procedures and substantive tests included in the following areas:

- Verifying ASU policies and contracts align with ABOR Policy 3-804, Professional Services and Construction Services Procurement
- Selecting five consultants from the 2019 Job Order Contracting program and performing the following:
- Verifying the accuracy of the Sharepoint site to the RFQ submittals
- Reviewing the composition of the Selection Committee and the short list and final selection of contractors, and agreeing to the Notices of Intent to Award
- Verifying contracts were completed
- Assessing the adequacy of training for contracts and verifying appropriate employees hired since January 2019 have completed training and the related quizzes
- Selecting six construction projects completed during 2019 or 2020 (three conducted under the JOC and three under the CMAR delivery method) with funded budgets between $808,670 and $9,372,564 and performing the following procedures:
  - Verifying the authorization and funding for each project by reviewing the project request and the applicable Project Approval Documents (PADs) and Project Approval Requests (PARs) for scope and appropriate approval, and tracing to the project budget and confirming account setup in the financial management system by Financial Services
  - Assessing the selection of the design professional through the ARFQ or RFQ process and the selection of the contractor through the JOC or RFQ process for the CMAR delivery method for each project through:
    - Reviewing the composition of the Selection Committee and the short list and final selection of design professionals and contractors, and verifying notification to Purchasing
    - Examining the proposal for scope, costs and timeline and the Request for Requisition for appropriate approval, and recomputing costs according to the contracts
    - Verifying required insurance and bonds were obtained at applicable phases, and Project Authorization Form, JOC Request Form, or contract were appropriately approved and issued with purchase order
    - Examining the change orders from design professionals and contractors for scope, costs and timeline and the Request for PO Modification for appropriate approval, and recomputing costs according to the contracts
  - Reviewing all payments to the design professional and contractor for each project by:
    - Examining the invoices and payment applications for required supporting documentation and appropriate approval
    - Recomputing invoice and payment application amounts to verify accurate and according to contractual terms, and agree to purchase and change orders
    - Confirming retention withholding was appropriate
    - Confirming not to exceed costs were tracked and accurately billed
Determining whether payments were issued timely according to the contracts

- Assessing administration of projects in accordance with contracts by examining deliverables, required documentation, and achievement of milestone dates through:
  - Verifying project deliverables, meeting minutes, lists of key personnel, contractors and suppliers, contracts for subcontractors, safety plans, daily logs, monthly updates, and progress schedules were obtained as required
  - Confirming Notices to Proceed for subphases and Change Directives were issued to design professionals and contractors as required

- Verifying closeout of projects was timely and completed according to the contracts by:
  - Confirming required documents were obtained before final payment was issued
  - Examining the Certificates of Substantial Completion and punch list, and the Certificates of Final Completion for approval
  - Verifying Project Closeout Request was completed and appropriately approved

Conclusion: Overall, the Capital Programs Management Group in coordination with the Office of University Architect has implemented an effective management structure including a Board to evaluate project requests, project execution teams consisting of staff from both units and a team lead, horizontal teams to provide training across the units, and a process improvement team. The project managers and design managers are encouraged to work collaboratively with the design professionals and contractors to address issues and deficiencies in a timely manner and to provide flexibility related managing the multiple design methods and contracts. While processes have been implemented to guide project execution, further improvement of project execution and CPMG/OUA oversight is necessary to ensure achievement of performance expectations under the contracts, accurate and timely payments, and alignment with ABOR policies. A new project management system was purchased in 2018; however core functionality is still being implemented. This system could enhance many of the process issues that are occurring as a result of manual procedures and improve compliance with the terms of the contracts and payment accuracy.

Overall, we tested 6 projects that had combined payments of $19.2M as part of this audit of which $800,000 (4%) related to payments that had one or more error resulting in an overpayment, underpayment, unsupported payment, or prepayment. It was also noted that approximately 30% of the number of payments were not made timely as defined by state statute. The existing processes for proposals, change orders and payment
applications are distributed across multiple groups without specific procedures and verifications being clearly defined and coordinated by each function introducing significant risk of incorrect invoicing.

- Existing processes for the review of proposals and change orders are not effective in ensuring the charges for fees, bonds and insurance, and sales tax are in accordance with the contracts and costs are accurate and substantiated. Testing identified instances of incorrect fees included in proposals and change orders, instances were rates related to general conditions, and bonds and insurance exceeded allowable rate thresholds as well as instances where fees were not returned for deductive change orders resulting in overpayments.

- Controls to ensure accurate payments to design professionals and contractors are not consistently performed including ensuring adequate documentation and support for allowances and contingencies. Testing identified multiple instances of contingency or other line item payments made without appropriate documentation, overpayments related to “not to exceed” costs due to lack of tracking or reconciling, inappropriate reimbursement of general supplies, and inappropriate payments effectively representing “prepayments” to the contractor. In addition, instances were noted where retention amounts were not withheld appropriately and a final payment being made without the certification by the design professional.

In addition, closeout processes are not effective in ensuring required documentation is obtained to support the closeout of the project. Testing identified instances where the Certificate of Substantial Completion was not obtained even though final payment had been made, as well as instances where the form was not approved by the appropriate ASU representative confirming contractor duties had been fulfilled. This is compounded by CPMG not requiring the Certificate of Final Completion.

Project documentation is not consistently obtained or retained with the project in a consistent manner to ensure project execution is occurring as intended. Pervasive exceptions were noted related to meeting minutes, contracts for subcontractors, safety plans, daily logs, monthly updates, and progress schedules. Notices to Proceed for subphases are not issued to design professionals and review of change orders indicate work is regularly performed without evidence of a Change Directive. In addition, achievement of milestone dates could not be verified due to the inconsistencies in documentation and extensions to timelines not being documented on the change order or Request for PO Modification.
It was also noted, that existing processes related to the selection of design professionals under the ARFQ program and retention on payments related to JOC projects are not compliant with ABOR Policy 3-804.

Management Response: As mentioned above, CPMG and OUA have recently (Q4 2019) undergone a significant organizational restructure of the project and design management teams in order to better control and manage the delivery of capital projects. The implementation teams now include members with specific roles designed to support the project and design management staff. For example, Team Leads provide oversight in critical areas that require controls such as payment application processing, change order requests and quarterly auditing of project close outs.

In addition to the support roles that were embedded within the teams, a horizontal support team was commissioned to provide training, continuous process improvement and operational support. This horizontal support team has been tasked with the implementation and administration of the department’s new project management software (PMWeb). This ensures that configuration of PMWeb will support our business practices and aid in providing critical controls. A project implementation timeline of implementing full functionality of PM Web will be provided to leadership by Thursday November 5th, 2020.

CPMG and OUA will continue to abide by ABOR guidelines as we will continue to collaborate with Tri-University stakeholders to affect policy changes for the better.

The control standards University Audit considered during this audit and the status of the related control environment are provided in the following table.

<table>
<thead>
<tr>
<th>General Control Standard</th>
<th>Control Environment</th>
<th>Finding No.</th>
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<tbody>
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<td>Reliability and Integrity of Financial and Operational Information</td>
<td></td>
<td>Opportunity for Improvement</td>
<td>2</td>
</tr>
<tr>
<td>• Proposals and change orders include required information, are substantiated and calculated in accordance with the terms of the contracts, and properly approved.</td>
<td></td>
<td>Opportunity for Improvement</td>
<td>3</td>
</tr>
</tbody>
</table>
the terms of the contracts.

- Project expenditures are tracked and evaluated against the project budget.
  
  Reasonable to Strong Controls in Place
  
  Effectiveness and Efficiency of Operations

- Project managers, design managers, and other appropriate staff of CPMG/OUA are provided with training on the requirements of the various contracts.
  
  Reasonable to Strong Controls in Place

- Construction projects are properly authorized and adequately funded.
  
  Reasonable to Strong Controls in Place

- Documentation required by the contracts to manage and monitor progress are obtained during construction of the projects.
  
  Opportunity for Improvement
  
  5 16

- Documentation required by the contracts for closeout are obtained before final payment is issued.
  
  Opportunity for Improvement
  
  4 15

Safeguarding of Assets

- Insurance and bond requirements are verified to ensure appropriate coverage exists for construction projects.
  
  Opportunity for Improvement
  
  6 18

Compliance with Laws and Regulations

- CPMG/OUA policies and procedures for the procurement of professional and construction services comply with the requirements of ABOR Policy 3-804.
  
  Opportunity for Improvement
  
  1 9

- The selection of contractors for the Job Order Contracting (JOC) program is in accordance with the requirements of ABOR Policy 3-804.
  
  Reasonable to Strong Controls in Place
  
  We appreciate the assistance of the staff of the Capital Programs Management Group, the Office of University Architect, and Purchasing & Business Services during the audit.

Lisa Grace, Executive Director, University Audit and Advisory Services
Sadie Petterson, Assistant Director, University Audit and Advisory Services
Audit Results, Recommendations, and Responses

1. Processes were identified that do not align with ABOR policies related to professional and construction services for construction projects.

Condition: Existing processes do not align with ABOR policy 3-804 related to the selection of design professionals under the ARFQ program, and retention on payments under the JOC program.

- For four of five projects, documentation did not evidence that the design professionals were selected on competency and qualifications only.
  - For two projects, the proposals submitted for the procurement were obtained (dated) from the design professionals before the selection committees identified the short list and made the selection of the design professionals
  - For two projects, only a notification of the selected design professional with the proposal was submitted by the program manager; the short list was not documented
- Retention was withheld from progress payments for construction services for all three projects procured under the JOC program.

Criteria: ABOR has established specific policies related to the professional and construction services including guidelines for the selection of design professionals under the ARFQ program, and for retention on payments under the different project delivery methods.

- Policy 3-804 B.2 allows for the procurement of professional services for $500,000 or less under an ARFQ program; however, the policy requires the selection of the final list and the order of preference of Offerors to be based on demonstrated competence and qualifications only. Additionally, the university and selection committee “shall not request or consider fees, price, man-hours or any other cost information at any point in the selection process.”
- Policy 3-804 F.1 specifies the requirements for withholding retention on progress payments; however, 3-804 F.2.a stipulates that “there shall be no retention for JOC construction service contracts.”

Cause: CPMG indicated that in some instance an estimate is obtained from a design professional to develop the budget before the selection process. Additionally, retention has been withheld on progress payments in the same manner as the other project delivery methods to ensure the documents required at closeout are obtained from the contractors. CPMG was unaware of the restriction for projects procured under the JOC method.
Effect: The processes related to the selection of design professionals under the ARFQ program, and retention on payments under the JOC program do not align with ABOR policies.

- Obtaining a fully developed proposal including cost information from one Offeror could influence the decision making of the members of the selection committee and lead the design professional to assume they will be selected for the project.
- By withholding retention, contractors were not paid according to ABOR policies.

Recommendation: CPMG should revise the current processes for the ARFQ program to ensure that selections are based on demonstrated competence and qualifications only. CPMG should establish processes to develop estimates without involvement of the design professionals considered in the selection process. Additionally, selections made by the project managers for contracts under $50,000 should evidence that a shortlist was identified before a proposal was negotiated.

CPMG should discontinue withholding retention for JOC construction service contracts; however, the final payment should not be made until the Certificate of Final Completion is issued and required documents are obtained from the contractors.

Management Response:

The current process for selecting consulting services through the ARFQ has been revised. The JOC selection process has also been revised to mirror the ARFQ selection process. New selection processes will go into effect Q4 2020. See Appendix A.

Design phase estimates will be developed and provided to PMs and DMs through either in house historical cost databases (PMWeb) or third party estimators available through the ARFQ.

- Short term – CPMG estimating or third party estimating firms. The will be effective Q4 2020.
- Long term – PMWeb cost data for initial estimating purposes will be available Q4 2021.

Withholding retention is a standard industry business practice. It assures the owner that the contractor will satisfy its obligations and complete the construction project.

- CPMG will no longer withhold retention on JOC progress payments but will use the final payment as leverage. This will be effective Q4 2020.
- CPMG will discuss potential policy changes regarding best practices for withholding retention on JOC progress payments at the Tri-University quarterly meeting.
2. Reviews of proposals and change orders require improvement to ensure charges are accurate, include required information and documentation, and substantiate the processing of payment applications.

Condition: Existing processes for the review of proposals and change orders are not effective in ensuring the charges for fees, bonds and insurance, and sales tax are in accordance with the contracts, and costs are accurate and substantiated. Specifically, testing identified the following:

- Proposals and change orders from contractors are not recomputed to verify charges.
  - The fee charged by one contractor (7.38%) exceed the allowable rate for overhead and profit (7.25%) on the proposal as well as two subsequent change orders (immaterial impact)
  - Instances in which the rates for general conditions and/or bonds and insurance exceed the allowable percentages for change orders without justification or could not be determined given the format
  - Instances in which deductive change orders did not return fees, bonds and insurance, and/or sales tax including one return of contingency for $56,872 (represents an overpayment)
- Detailed breakdowns of general conditions, work to be self-performed by the contractor, labor rates, and the subcontractors to be used were not consistently provided in proposals and change orders from contractors.
- Cost support is not required from subconsultants and is only required from subcontractors for change orders. Additionally, where support was provided, there were the following instances:
  - Instances in which charges provided by the subcontractors were less than the cost included in the change order by the contractors. Some instances were explained during the audit as allowances but were not identified as such for tracking on the pay applications.
  - One change order included a charge from subcontractor of $1,455 for sales tax in addition to sales tax from the contractor resulting in an overpayment (represents an overpayment)

Criteria: The contracts specify maximum rates for overhead and profit for JOC projects, include requirements for calculating the charges on change orders, and specific information that is to be included in the proposals. Additionally, best practices include recomputing calculations and supporting documentation to verify that charges are accurate.

Cause: CPMG has not developed templates for recomputing the proposals and change orders or a checklist of the required information and documentation that is to be included
with the proposals and change orders. Sometimes project managers rely on the percentages displayed on the proposals and changes orders, which are not always calculated on the same base costs as outlined in the contracts.

Effect: If there are no templates or checklists to follow, project managers may develop their own procedures and inadvertently overlook calculations and requirements, which increases the risk of overcharges on projects. Additionally, the costs are listed only as lump-sum line items on the payment applications so any overcharges would not be identified in the review process for payments.

Recommendation: CPMG should develop templates for recomputing the proposals and change orders and checklists of the required information and documentation to be included to ensure consistency across reviews. Estimates should be required from both subconsultants and subcontractors for all proposals and change orders to facilitate the recalculation of the change orders, ensure the charges are accurate and agree to those submitted by the design professionals and contractors, and identify any not to exceed costs such as allowances for tracking on the payment applications.

Additionally, CPMG management should review the specific exceptions identified to ensure overpayments are recovered.

Management Response:

CPMG and OUA will conduct reviews of over payment instances with all parties and provide proper documentation as required. This will be conducted in Q4 2020.

- If an overpayment is verified, CPMG will address over payment with the contractor per the contract requirements.

For contractor and design professional base proposals, the DocuSign requisition forms will include fields for the PM/DM to confirm that fees do not exceed the maximum contract thresholds. This will be effective Q1 2021.

- Standard “detailed fee breakdown” templates will accompany all vendor proposals. These will be available Q1 2021.

For contractor change orders, a standard cost event proposal form will be developed to accompany all cost events as a cover sheet. This will be available Q1 2021.

- The cost event proposal form will identify:
  - Scope of work
  - Reason for cost event
  - Justification for cost event
o Pricing methodology as stated in the agreement
o Funding source for cost event
o Changes to schedule
o Increase or decrease to general conditions

- A cost event estimate calculator (Excel) will accompany all contractor change order proposals. This will be available Q1 2021. See sample in Appendix B.
- A standard cost event template log in PMWeb to track owner contingency and contractor contingency will be developed. This will be available Q3 2021.

3. Reviews of payments to design professionals and contractors require improvement to ensure they are accurate, include required documentation, and paid in accordance with ABOR policy and state statute.

**Condition:** Existing processes for the review of payments to design professionals and contractors are not effective in ensuring the payment applications are accurate, supporting documentation is sufficient, and payments are timely. Specifically, testing identified the following:

- Not to exceed costs including reimbursable expenses, allowances, and contingencies not identified as such on invoices/pay applications and/or not tracked and reconciled with final payment.
  - Two instances in which the final payment was made with a balance remaining on the contingency, for $38,726 and $97,735 (a contingency log was provided for the $38,726 verifying it was not an overpayment; however, there was no support for the $97,735)
  - One instance in which allowances from a change order totaling $6,500 were not identified as such on the pay application
  - One instance in which the full change order was submitted as a not to exceed cost but no documentation was submitted for payments
  - One instance in which a change order included a 'Misc as needed' line but no documentation was submitted for payments
  - One instance in which the balance of the reimbursable line of $1,166 was reallocated to another expense line and paid in full on final pay application without documentation
- Inadequate or no documentation of reimbursable expenses, inappropriate reimbursable expenses, and requests for reimbursable expenses submitted later than 60 days.
  - Mileage reimbursements not substantiated and paid at a rate higher than allowed
  - Reimbursement of general supplies consisting of a hardhat, vest and tape measure
  - One contractor repeatedly exceeded the timeline for submitting requests
• The following required documentation not consistently submitted with invoices/pay applications:
  o Invoices from subconsultants to design professionals
  o Conditional Waiver & Release on Progress Payment forms from contractor
  o Subcontractors’ Payment Applications and Conditional Waiver & Release
     on Progress Payment forms (not required under JOC until 2019 program)
  o Project Spreadsheet form from design professionals and contractors related
     to the Supplemental Requirements for projects over $2,000,000

• Payments to design professionals not paid in 30 days, and payments to contractors
  not certified by the design professional in 7 days and/or subsequently paid in 14
  days as required by ABOR policy and state statute

• Other erroneous items including:
  o Change orders included in and paid against on the pay application, but
     reversed on later pay applications when the change orders were determined
     to not be appropriate or covered by the allowance/contingency (represents
     a prepayment)
  o One instance in which full payment of sales tax of $188,739 less retention
     was made on 1st pay application (represents a prepayment)
  o One instance in which $10,798 of general conditions was reallocated to
     sales tax line
  o One instance in which retention was underwithheld by $23,442 due to a
     calculation error
  o One instance in which the final payment made to the contractor without
     certification by the design professional

Criteria: Progress and final payments should be reviewed and recalculated for accuracy
and be supported by documentation, including receipts for not to exceed costs, to ensure
design professionals and contractors are not overpaid, and payments are accurate and
authorized. Payments on not to exceed costs including contingencies should be tracked
and compared to change orders to reduce the risk of duplicate payments. [Section 7.11.1
of the General Conditions for the CMAR contract requires contractors to submit detailed
monthly reports indicating how the construction contingency was used in the reporting
period.]

Additionally, ABOR policy and state statute requires progress payments to contractors to
be approved and certified in seven days from the date of submission, and paid on or
before 14 days after certified and approved. For the final payment, ABOR policy specifies
that retention of payments longer than sixty days after final completion requires a specific
written finding of the reasons justifying the delay in payment.

Cause: The payment applications are reviewed by several functions (design
professionals, project managers, Capital Planning Services and Financial Services) but
procedures have not been developed that define the responsibilities and timelines of each
function in the review, and detail the required documentation for the different payment types (design professional/contractor, progress/final payment, and project delivery method).

Additionally, it was noted that CPMG considered a payment timely if it was paid in 21 days, even when the design professional approved and certified the payment before the allowed 7 days.

**Effect:** Without a comprehensive and detailed review process, there is an increased risk of incorrect payments given the complexity and variations on the requirements for the different payment types. Project managers and project teams may use different approaches to the review. For many of the instances, CPMG had to consult with the design professional or contractor to determine the outcome of the variance due to the lack of documentation maintained in the project file.

**Recommendation:** CPMG should develop procedures that specify the responsibilities and timelines of each function in the review and detail the required documentation for each payment type to ensure payment applications are processed consistently and timely. The procedures should include tracking of not to exceed costs and comparing the contingency log to the change orders, specify requirements for reimbursable expenses, and validating changes in the Scheduled Value between payment applications. Payment applications should also be stamped to document the date of receipt.

During the audit, it was noted that there is a lack of updated and documented procedures for various processes within CPMG. CPMG management indicated they have been developing a comprehensive manual of processes and procedures along with fully implementing the PMWeb project management system. CPMG should continue with these goals including building out the functionality of PMWeb.

Additionally, CPMG management should review the specific exceptions identified to ensure any overpayments are recovered.

**Management Response:**

CPMG will develop a comprehensive process to review and document the workflow of payment applications and ensure that they are stamped with date of receipt. This will be developed by Q3 2021.

- Specific and relevant checklists for DP invoices will be developed, reviewed, and rolled out in Q3 2021. See sample in Appendix C.
- Specific and relevant checklists for Contractor payment applications will be developed, reviewed, and rolled out in Q3 2021. See sample in Appendix C.
The CMAR’s required Construction Contingency usage and status monthly report (per CMAR 7.11.1) will be functional in PMWeb by Q4 2021. The CMAR will log into PMWeb and complete a contingency form that will be transmitted to the Project Manager for review, which can then be accepted or returned with comments.

4. Closeout processes require improvement to ensure closeout is properly authorized and required documentation is obtained before final payment.

**Condition:** Closeout processes are not effective in ensuring that documents are issued or obtained as required by the contract, and closeout of projects is authorized. Specifically, testing identified the following:

- Instances in which the Certificate of Substantial Completion was not retained in the project file, was not signed by the University, or was not signed by an Assistant Director
- The Certificate of Final Completion is not used by CPMG even though the contracts specify processes dependent on the certificate
- The operational documentation for closeout is generally obtained but the financial documentation specified in the contacts for final payment has not be required as a process including:
  - An affidavit that indebtedness has been paid or otherwise satisfied by contractor
  - A certificate evidencing insurance is in effect and will not be canceled for 30 calendar days
  - Consent of Surety to final payment
  - Unconditional waivers of lien from all subcontractors, material suppliers, or others having provided labor, materials and equipment
  - Budget Reconciliation including satisfactory audit of the general conditions (specific to CMAR contract)

**Criteria:** The contracts outline specific steps and timelines for the closeout process including the Certificate of Substantial Completion, a punch list of the remaining items to be completed, required closeout documents, the Certificate of Final Completion, and the Final Payment. Additionally, CPMG requires the Certificate of Substantial Completion to be signed by an Assistant Director.

Sections 7.7 and 8.2.1 of the JOC contract and section 7.4.2 and 7.9.1 of the CMAR contract indicate the issuance of the Certificate of Final Completion is contingent upon the completion of the punch list and the receipt of required closeout documents, and that final payment shall be made within 60 days of the issuance. Additional items exist in the contracts that are measured on the date of final completion.
Sections 8.2.2 of the JOC contract and 7.9.2 of the CMAR contract specify the key documents that are required from the contractor before final payment is issued.

**Cause:** Although CPMG has procedures for the closeout process, they have not been consistently followed and do not address all of the requirements of the contracts. The Certificate of Final Completion and some of the closeout documents have not been required by CPMG management.

**Effect:** Contractors have not been held to the requirements of the contracts and final payments have been issued without required documentation. This increases the risks to the university in resolving issues that may arise once projects are completed and limits the ability to obtain required documentation.

**Recommendation:** CPMG should strengthen the closeout processes by formalizing procedures for completing the Certificate of Substantial Completion including obtaining the appropriate approval. In addition, they should utilize the Certificate of Final Completion as intended in the contracts and update the procedures to include all required documentation. A verification of the documentation should be performed by management before the final payment.

CPMG management indicated they have been developing a comprehensive manual of processes and procedures along with fully implementing the PMWeb project management system. CPMG should continue with these goals including building out the functionality of PMWeb to facilitate closeout processes.

**Management Response:**

CPMG and OUA will build a tool within PMWeb that triggers closeout documentation process and checklist, inclusive of a workflow assignment requirement for Team Leads to sign off on a final budget reconciliation and audit of general conditions. Implementation of this tool will be available in Q4 2021.

- The workflow will require all items identified in the PMWeb closeout matrix such as the following:
  - Insurance remains in place for 30 days after Final Completion
  - Consent of Surety Form signed
  - Unconditional lien waivers from subcontractors, material and equipment suppliers
  - Collection and completion of contractual closeout documents
  - Review by Team Lead and project team for general conditions audit and final budget reconciliation
CPMG and OUA will build a Final Completion Certificate in concert with industry standard AIA documents. The approved workflow record described above will trigger the issuance of the Final Completion Certificate. This document will be available Q2 2021.

Temporary measures for closeout process are in place now, using a checklist located in PMWeb, and using Excel to document collection of specified items. OUA and CPMG have assigned closeout procedures to the project management support staff embedded within each Implementation team. A temporary measure for Team Lead sign off will be implemented by end of Q4 2020.

5. Documents required by the contracts for oversight and management of progress during the projects are not consistently obtained or retained in the project files.

**Condition:** Documents required by the contracts for oversight and to manage progress during the projects are not consistently obtained and retained. Specifically, testing identified the following:

- Instances in which meeting minutes, contracts for subcontractors, safety plans, daily logs, monthly updates, and progress schedules were not found in the project file or were only obtained with the closeout documents
- Notices to Proceed for subphases are not issued to design professionals and change orders included work that had already been completed without evidence of a Change Directive
- Achievement of milestone dates could not be verified due to the inconsistencies in documentation and extensions to timelines not being documented on the change order and/or Request for PO Modification. The number of days required to complete additional work was at times indicated but without start and completion dates.

**Criteria:** The contracts require specific documents to be submitted by or provided to the design professionals and contractors as work progresses on projects.

**Cause:** CPMG has not required these documents to be obtained during the progress of work or developed a procedure to ensure the documents are retained in the project file. In some instances, the design professional or contractor indicated the documents had been provided by email or on a USB drive. Notices to Proceed for subphases have not been used and Change Directives may be informal and are not required to be retained. The Request for PO Modification does not have a designated field to indicate whether change orders include an extension and to specify the start and end dates.
Effect: These documents are required to be obtained as the projects progress to ensure the scope and timelines are met. The ability of project managers to provide oversight and manage the progress may be limited if they are not kept apprised of issues. Additionally, if project files are not complete and kept up to date, new project managers may have difficulties in taking over a project if needed.

Recommendation: CPMG should identify critical documents to the projects and develop procedures to ensure they are obtained during the projects, in addition to fully implementing the PMWeb project management system as the central repository for documentation.

Procedures for written notices to proceed for subphases and change directives should be formalized, and the Request for PO Modifications should have a designated field for extensions to the timelines.

Management Response:

CPMG and OUA will develop a checklist of all documents that PMs and DMs are required to obtain and retain per the contracts. This will be available Q2 2021.

- The checklist will be reviewed at the kick off meeting and the project team (PM, DM, Contractor, Design Professional) will identify all critical documents applicable to the project. This will be effective Q2 2021.

A notice to proceed template for design professionals to proceed with design phases will be developed. This will be available Q2 2021.

A change directive template for design professionals to proceed with additional services or changes to original design proposals will be developed. This will be available Q2 2021.

Requests for PO Modifications to DP contracts will be accompanied by a standard detailed breakdown template. This will be available Q2 2021.

- The detailed breakdown template will identify:
  - Scope of services
  - Reason for additional services
  - Justification for additional services
  - Cost breakdown by phase or task
  - Hourly breakdown
  - Funding source for additional services
  - Changes to schedule
  - Increase or decrease to construction administration phase

- An Additional Services Calculator (Excel) will accompany all consultant change
order proposals. This will be available Q2 2021.

6. Processes managed by Purchasing related to the procurement of design professionals and contractors for construction projects require improvement to ensure that documents are obtained and meet the requirements of the contracts.

**Condition:** Purchasing processes are not effective in ensuring that documents are obtained and meet the requirements of the contracts. Specifically, testing identified the following:

- Instances in which evidence of insurance specified under the contracts was not obtained, or did not meet the minimum limits and/or requirements for additional named insured
  - Proof of builders risk insurance was not obtained at the time of procurement for three of six (50%) contractors, and proof of other required insurance was obtained from one contractor after the procurement of preconstruction services
  - The minimum limits for specific coverage was not met by two design professionals, and an exception for specific coverage was given to another design professional but was not documented
  - Neither the design professional or the contractor for one project added the City of Phoenix as an additional insured

- Evidence of increases in the amounts for builders risk insurance and the performance and payment bonds is not required for subsequent phases of GMP or change orders
- One instance in which the ASU forms for the performance and payment bonds were not used by the contractor
- Certification forms related to the Supplemental Requirements for projects over $2,000,000 are not consistently obtained from design professionals, contractors, and subs

**Criteria:** The contracts include requirements for insurance, performance and payment bonds, and certain certifications when projects are over $2,000,000, all of which are managed by Purchasing. Some of the specifics of the requirements include:

- Builders risk insurance that provides coverage for 100% of the insurable value of work
- Higher minimum limits for projects in the City of Phoenix as well as the City being named as an additional insured
- Performance and payment bonds equal to 100% of the contract price using the ASU forms attached to the contracts
**Cause:** Review of the certificate of insurance and bonds as well as approving exceptions is completed by the buyers; however, some buyers may not be aware of the specific requirements if they are new or have not been trained. Additionally, Purchasing & Business Services has not required certain exceptions to insurance be documented, or evidence of increases in the amounts for builders risk insurance or the bonds.

The Certification forms for projects over $2,000,000 are collected by Purchasing & Business Services but only to be provided to another department/staff, which has not filled.

**Effect:** The risks of loss to the university is increased if the design professionals and contractors do not fulfill their contractual requirements and the review process does not identify inadequate coverage or amounts. No oversight of the Certification forms negates the intent for obtaining the forms and invalidates the requirements.

**Recommendation:** Purchasing & Business Services should improve the review processes for insurance to ensure that certificates of insurance are obtained for all coverage, and minimum limits and other requirements are in accordance with the contracts. Additionally, exceptions to coverage should be documented to evidence that the requirement was evaluated.

Purchasing & Business Services should consult with Risk Management Services and the Office of General Counsel to determine if evidence of the increases for builders risk insurance and the performance and payment bonds should be obtained at a minimum for subsequent phases of GMP. Purchasing & Business Services should also work with CPMG to determine which function should have responsibility for the certification forms and develop processes for coordinating the collection.

**Management Response:**

It is important to note that the COI does not guarantee that coverage is in place for the duration of the agreement so the lack of a copy does not inherently increase the risk profile. While it is best practice to obtain a copy at contract inception, and is part of our process, the contract itself dictates what insurance is required. Contractors are therefore legally obligated to meet our requirements.

Purchasing & Business Services recognizes the findings and management has already provided a more robust training to the Buyers on September 24, 2020. We have also worked with Risk & Emergency Management on new COI guidance and training for all teams. This training included COI requirements based on the contractual requirements and location of the work. Management will also work with the Buyers to develop a communication to contractors detailing the contractual COI requirements at the beginning.
of a project, and another at GMP to include collecting evidence of Builder's Risk. The expected completion date is December 31, 2020.

Purchasing & Business Services is working with our Diversity Manager to determine the current Supplemental reporting needs. The Diversity Manager is working with CMPG directly to ensure appropriate reporting is obtained retroactively for fiscal year 2020 with an expected completion date of November 13, 2020. The Diversity Manager and Management will then work with CPMG on streamlining the reporting process, form requirements, and coordination of collection with an expected completion by March 31, 2021.
Appendix A:

ARFQ Selection Committee (ASC) Requirements

- The committee must include a minimum of three (3) voting members, to include at least one (1) DM and an FDM AD or above.
- Can include the End User.
- A Committee Chair (Chair) must be assigned to provide the Selection Committee Summary. The Chair to be either the DM or PM of the subject project.
- The ARFQ Buyer is a non-voting committee member.

ARFQ Consultant Selection Process

1. ASC Chair will complete the Selection Committee Authorization Form and send to ARFQ Buyer.
2. ARFQ Buyer will review and approve the Selection Committee Authorization Form and issue Evaluation Disclosure Form to ASC.
3. ASC Chair will schedule the selection meeting with ASC members.
4. ASC Chair will run a query for firms that meet the requirements of the project.
   a. Query Tutorial - #1 for Excel Pivot Table or
   b. Query Tutorial - #2 for Excel Worksheets
   c. Refer to ARFQ Column Dictionary
5. ASC will evaluate current statements of qualifications and experience on file with the University, and any other additional information requested
   a. may conduct interviews with at least three (3) but no more than five (5) Offerors regarding the Procurement and the relative methods of furnishing the required services and, if possible, shall select, in order of preference, one or more final lists of the Offerors deemed to be the most qualified to provide the Services required
   b. shall base the selection of each final list and the order of preference on demonstrated competence and qualifications only
6. ASC Chair must confirm the highest ranked firm license at AZ State Board of Technical Registration.
7. ASC Chair will draft Selection Committee Summary and submit, along with the query, to the ARFQ Buyer.
8. ASC Chair will contact firm for proposal and provide to assigned DM/PM to process a requisition.
9. Upon receipt of the requisition, the ARFQ Buyer will issue the ARFQ Standard Form Agreement and Project Authorization.

If you any questions, or need a contract issued prior to the REQ, contact the ARFQ Buyer.
Arizona State University
Construction Projects Audit
October 16, 2020

ANNUAL RFQ
Selection Committee
Authorization

Date: 

To:  
Jacki Ahern  
ARFO Buyer  
Purchasing and Business Services

Project # and Name: Annual RFQ

The following are proposed members for the Selection Committee* for the above project:

<table>
<thead>
<tr>
<th>Voting Member Name</th>
<th>Affiliation</th>
<th>If Applicable Identify As**</th>
<th>Job Title</th>
<th>Phone No.</th>
<th>If Not ASU - List Email</th>
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* As per ABOR 3-904, a selection committee for the procurement of construction services shall not have more than seven (7) members and shall include at least one (1) person who is a senior management employee of a licensed contractor and one person who is an architect or an engineer who is registered pursuant to A.R.S. 32-121. These members may be employees of the university or outside consultants.

<table>
<thead>
<tr>
<th>Non-Voting Member Name</th>
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<th>Job Title</th>
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<th>If Not ASU - List Email</th>
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</thead>
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<tr>
<td>1  Jacki Ahern</td>
<td>ASU</td>
<td>TA</td>
<td>Senior Buyer</td>
<td>480-727-5179</td>
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** Identification Key:
ARCH = Architect  
DP = Design Professional  
GC = General Contractor  
TA = Technical Advisor

☑ Approved  ☐ Not approved:  
Buyer to re-submit new proposed member for the name(s) struck out

Jacki Ahern, Senior Buyer  
Date

Revision: September 30, 2020

Page 24 of 28
## Appendix B: Draft

### PROPOSAL/ESTIMATE FOR CONTRACT MODIFICATION - GC CONTRACT

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<th>T&amp;M</th>
<th>Revisions/Comments</th>
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* Estimate time extension and justification

General Contractor name: 
Sub-contractor name(s): 
Signature & Title of preparer: Date: 10/9/2020
Appendix C: Draft

Arizona State University | Facilities Development and Management
DRAFT CHECKLISTS
10/14/2020

Design Professional Invoice Checklist

☐ The standard ASU template is used by the DP
☐ Invoices from subconsultants are included in the documentation
☐ The critical, high-level math has been verified by ASU
☐ The DP is not requesting prepayment or overpayment
☐ Supplemental Requirements form is provided and complete
☐ The DP has been paid by ASU within 30 days of receiving a properly itemized invoice

Pay Application Checklist

☐ The standard ASU template is used
☐ The DP has responded to the Pay Application within 7 days of receipt
☐ The Contractor has been paid by ASU within 14 days of the DP’s certificate of approval
☐ The critical, high-level math has been verified by ASU
☐ There are no prepayments in the form of premature Change Orders, full sales tax, math errors, etc.
☐ The Contractor is not requesting overpayment
☐ Subcontractors’ PaymentApplications are provided and complete
☐ Conditional Waiver & Release on Progress Payment form is provided and complete
☐ Supplemental Requirements form is provided and complete
☐ Not-to-Exceed costs including reimbursable expenses, allowances, and contingencies are identified
☐ Backup documentation is provided for any/all Not-to-Exceed costs
☐ All reimbursable expenses are appropriate, documented, and submitted within 60 days
☐ Mileage reimbursements are at or below the allowable rate and documented
☐ Any reallocation of a reimbursable line item to a different line item has backup documentation
☐ Conditional Waiver & Release on Progress Payment form is provided and complete
☐ The Final Invoice has been reviewed to ensure that the balance of the contingency has been resolved
☐ For CMAR, is the Construction Contingency consistent with the latest monthly report (per 7.11.1)
Distribution:

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Jamon Hill, Executive Director Supply Chain, Deputy CPO
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