



Construction Project Management Advanced Placement

COURSE 409A
APPA INSTITUTE FOR FACILITIES MANAGEMENT
Jeffrey Gee, AIA
Swinerton Management & Consulting




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MANAGEMENT & CONSULTING





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The Construction Phase....



Where we fix what we missed during design!







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Program

- Collective wisdom
- Immediate take-aways
- Case Studies
- Current Issues





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Credit(s) earned on completion of this course will be reported to American Institute of Architects (AIA) Continuing Education Session (CES) for AIA members.

Certificates of Completion for both AIA members and non-AIA members are available upon request.



- This course is registered with AIA CES for continuing professional education. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material of construction or any method or manner of handling, using, distributing, or dealing in any material or product.

Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.



Course Description

- This session is a hands-on session for those in the professional and that have had experience in managing construction projects at universities and colleges
- Actual project situations are used to illustrate project situations for group discussion
- Actual case-studies are used for group problem solving


Learning Objectives

- Discuss and share lessons learned on construction related issues that occur at universities and colleges
- Take advantage of expertise from around the country
- Learn from others
- Promote and foster group interaction

Current Issues


- Complete "current issues" sheet:
 - Your name
 - Description of problem/issue
 - Desired advice from the group



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Take Away #1

- *"Documentation is like sex – when it's good, it's very good, and when it's bad, it's better than nothing."*



• Dick Brandon, Author

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Multiple Choice #1

A university just opened bids for a recent project. The lump sum, low bids were read out loud and taken under advisement. The low bidder had a written bid of \$2,500,000, but the math on the components of their bid equaled \$2,450,000. The bid form clearly states that in the event of a conflict between the written word and the math, the math governs.

What should the university do?

- a) Determine that the bid is non-responsive, and award to the next lowest bidder.
- b) Award the contract at the written amount.
- c) Award the contract at the mathematically correct amount?
- d) Re-bid the project
- e) Do something else.


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Multiple Choice #2

The low bidder on a project is within budget, with the next lowest bidder being \$500,000 more. In evaluating the low bid, it appears that their subcontractor listing is incomplete. The bid form requires that all sub trades where the subcontract is greater than 1/2% of the total value be listed. It appears that as many as 5 subcontractors are missing.

What should the college do?

- A) Talk to the low bidder and ask that they list the missing subcontractors.
- B) Determine that the bid is non-responsive.
- C) Reject all bids and start over.
- D) Other


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Multiple Choice #3

The university has a project under construction with Contractor A. They just awarded another construction contract to Contractor B for a project immediately next door to Contractor A. A Notice to Proceed has been issued to Contractor B for a start date of September 20. Unfortunately, Contractor A has just informed the university's project manager that he will not be able to complete his underground utility work by September 20 – and the work is in the way of Contractor B. Compensable delays for Contractor B are \$5,000/day of delay.

The University's project manager should:

- A) Immediately issue a new Notice to Proceed with a start date of September 27
- B) Ask Contractor B to forgive him
- C) Issue a change order to Contractor A to accelerate the work
- D) Negotiate a change order with Contractor B


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Multiple Choice #4

The university is implementing construction in an occupied science building one floor at a time. Hazardous materials are being abated by a separate contract managed by the university. The strategy is that one floor at a time will be vacated, hazardous materials abated, then turned over to the contractor for construction. Professor Smith is very unhappy with the disruption to his research and has refused to move. His refusal to move has impacted the construction schedule.

Are the contractors entitled to compensable delay?


Yes
No

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Multiple Choice #5

During excavation work for the foundations of a new library, some artifacts are being dug up. The debris looks like old bottles, some broken china, and other utensils of unknown origin.




Should the university's project manager stop the work?

A) Yes
B) No

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Multiple Choice #6

The contractor is in month 10 of an 11 month construction schedule and is looking to finishing the project and moving off of the site. At the weekly construction meeting, the university's project manager has asked the contractor for a change order proposal for a substantial amount of added work. Everyone is in agreement that this work is additional scope.



Can the contractor decline to provide a quote?

A) Yes
B) No

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Multiple Choice #7

Construction is underway on a new university project. As always, time is critical as the new building needs to open in alignment with the academic calendar. The number of workers on site is low, and construction progress is painfully slow. The subcontractors are constantly complaining to the University's Project Manager that they are not being paid, but no Stop Notices are being filed.

What should the University's Project Manager be doing to help ensure that the project is completed in time for classes?

A) **Review the contractor's schedule with a critical eye**
B) **Encourage the subcontractor's to file Stop Notices**
C) **Pay ahead for work not yet completed to help with cash flow**
D) **Replace the Contractor's Project Manager**
E) **Other**

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Multiple Choice #8

The campus has five summer renovation projects that are to be built this summer. At an average construction cost of \$5 million each and only 7 weeks to complete, these projects are often referred to as "summer sprints." General contractors have been prequalified to bid these projects, and all projects are public bid – lump sum/low bid. Over a period of three weeks, all five projects are bid. One general contractor is the low-bidder on four of the five projects, and does not want to withdraw any of his bids. Each project is critical to the academic program.

What should the University's Project Manager and Team do to ensure that these projects are completed on time?

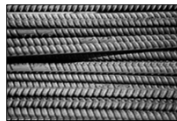
- A) Prioritize paperwork for these projects
- B) Have the architects and engineers respond quickly
- C) Make sure that the faculty have their requests for added scope ready
- D) Make sure that the Project Manager's 3-week vacation occurs in the beginning of the 7-week schedule

Multiple Choice #9

Earlier this year, the University bid a project utilizing lump sum, low bid. A construction contract was awarded to the low bidder, along with a Notice to Proceed. Three months after the work has started, the Contractor has submitted a change order request for \$30,000 increase in the cost of reinforcing steel for the foundations. In his request for a cost adjustment, the contractor submitted articles from ENR, newspapers, etc. on the escalating cost of certain construction materials, along with letters from rebar subcontractors throughout the state indicating cost increases in materials.

What should the university do?

- A) Pay the requested increase.
- B) Acknowledge the request, but say no.
- C) Split the difference.
- D) Find a different subcontractor.
- E) All of the Above
- F) None of the Above



Multiple Choice #10

Great care has been expended by the construction team to make sure that the punch list has been completed and that the quality of the project has met the intent of the plans and specifications. While the punch list is being finalized, the university is moving in faculty and staff. The elevator cab has been damaged and the architect has added repairs of the cab to the contractor's punch list. The contractor is refusing to correct the work, claiming that it was caused by the movers.

The university's project manager should:

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Multiple Choice Answers

- 1 C
- 2 B
- 3 D
- 4 A
- 5 A
- 6 A
- 7 A, B and possibly D and E
- 8 A and B
- 9 ?
- 10 C




Details



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Take Away #2


- *"You'll never have all the information you need to make a decision. If you did, it would be a foregone conclusion."*
- Anonymous



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Case Studies


- Small group efforts
- Description of case study in workbook
 - Develop strategy for resolution
 - Report to the large group



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Preparation for Case Studies

Do you have feelings of inadequacy?





Case Studies

- **Case Study 1:** The problem with the mechanical system
- **Case Study 2:** Obtaining the schedule
- **Case Study 3:** Responding to the RFT's
- **Case Study 4:** On-Site Teamwork?
- **Case Study 5:** The Run-away Materials Testing Lab Fees
- **Case Study 6:** The Uncooperative Local Utility Company and the Potential for Delays



Case Studies

- **Case Study 7:** Project completion being held up by a subcontractor
- **Case Study 8:** Subcontractors not being paid
- **Case Study 9:** Is the CMAR at risk for everyone?
- **Case Study 10:** What happens when a Design-Build Team makes a bad decision



Take Away #3



- Current Issues



Almost Finished.....



This concludes The American Institute
of Architects Continuing Education
Systems Course



Thanks!!



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