The Commissioning Process for Delivering Quality Constructed Projects

Detailed Topic Agenda

On-Demand Topics
Available Beginning September 8, 2020
*Items shown in italic font will take place during live sessions with instructors Sept 21-23. Related guided discussions and Q&A will also be included during live sessions.*

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<th>Topic #</th>
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<td>Introduction and Course Orientation</td>
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| 2       | Overview of the Commissioning Process (CxP)  
  - What is the ASHRAE Guideline 0 commissioning process?  
  - Current best practice  
  - What is a quality delivery process?  
  - Benefits of the commissioning process  
  - What occurs in each phase of project delivery? |
| 3       | Pre-Design Phase Commissioning Tasks (Part 1)  
  - Developing the owner’s project requirements (OPR)  
  - Owner’s workshop: preparation and participants, nominal group technique, procedures and results |
| 4       | The Owner’s Project Requirements Workshop  
  - Executing an OPR workshop  
  - Determining which questions to ask – project success criteria  
  - *Live Session Class activity: OPR workshop in action* |
| 5       | Pre-Design Phase Commissioning Tasks (Part 2)  
  - Planning the CxP effort  
  - Commissioning plan fundamentals, key milestones, structure  
  - Evaluating the benefits of pre-design phase involvement  
  - The CxP as a strategic quality plan |
| 6       | *Live Session Class Workshop: Defining CxP Needs* |
| 7       | Developing the OPR Document  
  - Review of key OPR concepts  
  - Typical information required to develop needs  
  - Steps in document creation  
  - *Live Session Group Activity: discussion of example document* |
8 CxP Activities in the Design Phase
   • Pre-design meetings
   • Design checklists
   • Basis of design development
   • CxP design review process
   • CxPlan update

9 Live Session Design Review Workshop
   • Group workshop using the four steps of a CxP design review procedure

10 Commissioning Specifications
   • Format options
   • Types of requirements: contractor participation; maintainability; checklist implementation; shop drawings, training, and systems manual; testing and verification
   • Live session specifications activity

11 Commissioning Process Checklists
   • Purpose, goals
   • Use in all project phases
   • Construction checklists: development, tracking methods, verification, statistical sampling
   • Live session checklist work session

12 Systems Manual and Training
   • Systems manual (role in all phases)
   • Training (role in all phases)

13 Construction Phase CxP Tasks
   • Pre-construction activities (pre-bid, workshops, partnering)
   • Cx meetings and coordination, role of the CxA
   • Tracking commissioning activities
   • Cx schedule
   • Testing
   • Commissioning reports
   • Benefits/issues log

14 Commissioning Process Tests
   • Developing test protocols
   • Confirmation of readiness
   • Implementation steps
   • Documentation
   • Live session group workshop

15 Integrating CxP with Contractor Efforts
   • Quality processes
   • Overlaps and gaps
16 Acceptance Phase, First Year of Operation, and Beyond
• Training
• Systems manual
• Project CxP report(s)
• Warranty review and seasonal testing
• On-going commissioning

17 Electronic and Web-Based Commissioning Tools
• Computer tools for site tracking
• Electronic systems manuals

18 Analyzing the Benefits of Commissioning: Case Studies
• Scope of commissioning
• Detailed cost analysis
• Benefits and lessons learned

19 Special Topics in the CxP
• Review of LEED Cx process
• Review of existing building Cx process