The Commissioning Process for Delivering Quality Constructed Projects

Daily Agenda: In-person Courses

MONDAY

7:30  Registration / Check-in
8:00  Welcome and Introductions
8:30  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?
11:15  Pre-Design Phase Commissioning Tasks (Part 1)
      • Developing the owner’s project requirements (OPR)
      • Owner’s workshop: preparation and participants, Nominal Group Technique (NGT), procedures and results
12:00  Lunch
1:00  The Owner’s Project Requirements Workshop
      • Executing an OPR workshop
      • Determining which questions to ask – project success criteria
      • Class activity: workshop in action
3:15  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
4:15  Workshop: Defining CxP Needs
5:00  Daily Adjournment

TUESDAY

8:00  Workshop Reports
8:15  Developing the OPR Document
      • Review of key OPR concepts
      • Typical information required
      • Steps in document creation
      • Review of example document
9:45  CxP Activities in the Design Phase
    •  Pre-design meetings
    •  Design checklists
    •  Basis of design development
    •  CxP design review process
    •  CxPlan update

10:45 Design Review Workshop
    •  Group workshop using the four steps of a CxP design review procedure

12:00 *Lunch*

1:00 Design Review Workshop continues

1:30 Commissioning Specifications
    •  Format options
    •  Types of requirements: contractor participation; maintainability; checklist implementation; shop drawings, training, and systems manual; testing and verification

3:00 Commissioning Process Checklists
    •  Purpose, goals
    •  Use in all project phases
    •  Construction checklists: development, tracking methods, verification, statistical sampling, checklist work session

4:00 Systems Manual and Training
    •  Systems manual (role in all phases)
    •  Training (role in all phases)

4:55 *Daily Adjournment*

5:00 University of Wisconsin CxP Certification Exam Review (part 1, for 1 hour)

**WEDNESDAY**

8:00 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

9:30 Commissioning Process Tests
    •  Developing test protocols
    •  Confirmation of readiness
    •  Implementation steps
    •  Documentation

10:30 Test Development Workshop
11:20 Integrating CxP with Contractor Efforts
   • Quality processes
   • Overlaps and gaps

12:00 Lunch

1:00 Electronic and Web-Based Commissioning Tools
   • Computer tools for site tracking
   • Electronic systems manuals

1:30 Acceptance Phase, First Year of Operation, and Beyond
   • Training
   • Systems manual
   • Project CxP report(s)
   • Warranty review and seasonal testing
   • On-going commissioning

2:00 Analyzing the Benefits of Commissioning: Case Studies
   • Scope of commissioning
   • Detailed cost analysis
   • Benefits and lessons learned

2:45 Special Topics in the CxP
   • Review of LEED Cx process
   • Review of existing building Cx process

4:00 Course Adjourns