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CERTIFIED COMMISSIONING MANAGER

CCM TRAINING PROGRAM

ONLINE PROFESSIONAL COURSES LED BY THE WORLD'S TOP SPECIALISTS

ONLINE TRAINING BY KRISHNAJI PAWAR

LEED AP(BD+C),GSAS CGP,GCP,ISO 14001

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MODULE

06 - A

Predesign Phase CXA Process

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CERTIFIED COMMISSIONING MANAGER - CCM TRAINING OVERVIEW

Previous lectures in this course discussed commissioning's benefits for the owner, design professional, and contractor. Engagement of the commissioning authority early in the predesign or design phases of the project is more valuable than during construction.

Learning Objectives

- Introduction
- Benefits of Early CxA Participation
- Selecting the Commissioning Authority
- The Advertisement
- Owner's Project Requirements (OPR)
- Commissioning Plan
- Communications Plan
- Project Budget
- Commissioning Authority Agreement
- Selection of the Design Professional & Agreement
- Pre-Design Phase Overview
- Commissioning Meetings
- Which building systems are to be commissioned?

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INTRODUCTION

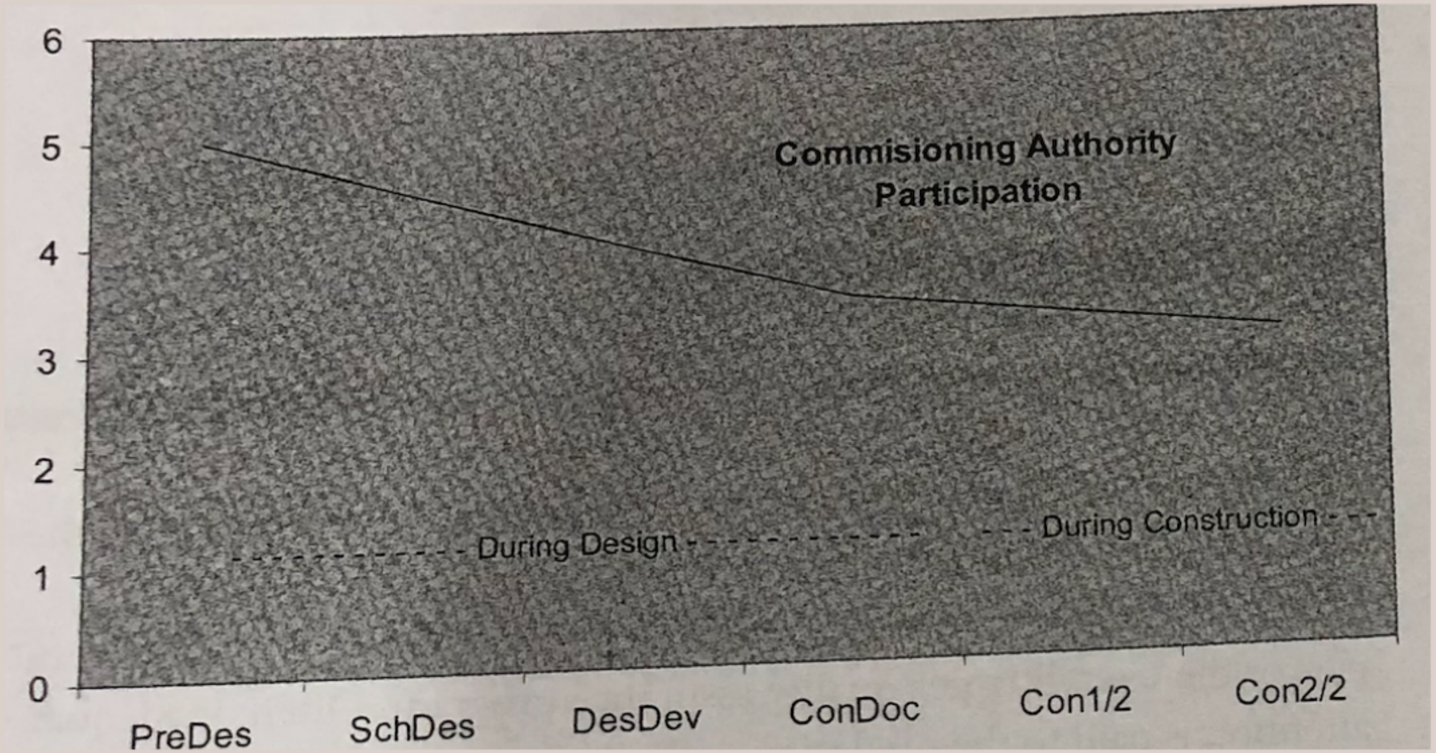
- The predesign phase of a new building project is likely to be the one that has had the least formality heretofore—at least formality in the sense that the predesign phase is an important part of the overall, larger quality assurance program.
- Often, inadequate attention is paid to the predesign period for a new building project.
- When owners recognize the value of developing a comprehensive commissioning quality assurance program, they soon begin to realize the importance of developing a predesign process.
- Previous lectures in this course discussed the benefits of commissioning. for the principal participants in the process: the owner, design professional, and contractor.
- It is also important to recognize the increased value of engaging the commissioning authority early in the predesign or design phases of the project versus only during the construction phase.

BENEFITS OF EARLY COMMISSIONING AUTHORITY PARTICIPATION

- Figure 1 shows how adding the commissioning authority to the project will likely benefit all participants.
- The graph's vertical scale is arbitrary; the horizontal scale shows predesign, schematic design, design development, construction documents, the first half of construction, and the second half. Figure 1 shows the extent to which commissioning authority input will improve project outcomes.
- Due to the CA's experience commissioning similar buildings and systems, the earlier the CxA's involvement in predesign and design activity, the more likely the design details will be improved (hence, commissionability).
- We recommend involving the commissioning authority in predesign.



F1.BENEFITS OF EARLY COMMISSIONING AUTHORITY PARTICIPATION







SELECTING THE COMMISSIONING AUTHORITY



The majority of commissioning authority considerations relate to the facility's successful operation for all occupant types and modes of operation. These considerations are based on the CA's many years of experience as an operating engineer and commissioning authority and include the following areas:

- Access for operation and maintenance
- Site-related issues involving adjacent facilities
- Operational costs versus first costs
- problems often encountered during the construction process, and
- Available support from local utilities and support service vendors.

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SELECTING THE COMMISSIONING AUTHORITY +

Consequently, as with all building commissioning activities, the process of selecting the proper commissioning authority for a project is crucial to the success of the building commissioning program as a whole. The selection process includes:

- using a Request for Qualifications to solicit commissioning services
- applicants for the project,
- screening the applicants to select finalists to be interviewed
- interviewing the selected finalists,
- selecting the project best suited to the task at hand



THE ADVERTISEMENT

The selection process starts with developing an advertisement to be placed in the local or regional journal of commerce or other appropriate publication, soliciting qualified candidates to respond to the request for qualifications for the project.

The advertisement is intended to serve two purposes:
(1) To induce qualified firms to respond, and
(2) To discourage unqualified firms from responding,

which would result in nothing more than a waste of their time responding and a waste of the owner's time reviewing and screening out unqualified applicants.





OWNER'S PROJECT REQUIREMENTS (OPR) [DESIGN INTENT DOCUMENT]



- Set Goals for Performance:
  - Energy Performance
  - Environmental Performance
  - Comfort
  - Operating Cost
- Determine how Performance vs. Goals is to be Measured

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OWNER'S PROJECT REQUIREMENTS (OPR)+





- The simpler owner's project requirements are replacing this terminology.terminology (OPR).
- When complete, the PR outlines a project's functional requirements and expected use and operation.
- After commissioning, the owner can set the project's quality assurance benchmark with the commissioning authority's help.
- The building commissioning quality program is based on process and discipline.
- The owner, the commissioning authority, the owner's operations and maintenance staff, and the facility's users should all contribute to the OPR process.
- The predesign programming team benefits from a design professional who has already been chosen.
- The process needs a leader with a positive attitude toward process and discipline and a track record.
- The owner must be careful when choosing a CxA who will introduce this discipline.
- Distribution of an outline or draft OPR before the second workshop may boost productivity.
- After surveys, interviews, and workshops, the conclusion An OPR document begins with a skilled analytical writer organizing and recording the project's most important considerations.

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VERIFY THAT OWNER'S REQUIREMENTS ARE ACHIEVED



- in Design
  - –Verification of Goals in Documents
  - –Coordination between Design Disciplines
- in Construction
  - –Procurement of Equipment and Materials
  - –Installation
- at Start-Up and Testing
- in Operations

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