

Managing a Successful Mechanical System project

Following design – what next?

Construction Procurement

- Deciding which procurement strategy is best
 - Lowest price or greatest value?
- Reviewing the bids/proposals
- Selecting the best contractor for the project

Other decisions early in the project

- How much inspection is required and who is the best qualified to perform the inspections
- Who should review the material/shop drawing submittals
- Is commissioning required and who should do the commissioning?

How much inspection is required and who is the best qualified to perform the inspections

- Can this be done in-house?
- Should the design engineer be involved in the construction inspections
- Should this work be done by an independent construction management firm

Who should review the material/shop drawing submittals

- Should the design engineer review the submittals?
- Should the construction manager review the submittals?

Is commissioning required and who should do the commissioning?

- Based on the complexity of the mechanical system, a decision needs to be made as to how much commissioning is required and who should do commissioning
- A/E commissioning
- Construction manager commissioning
- Construction contractor commissioning

A/E commissioning

- Advantage of having someone familiar with the design doing the commissioning
- Advantage of having someone that can make adjustments to the design if corrections are necessary
- One party to depend on for system operation

Construction manager commissioning

- Independent review of the system
- Can determine if operational problems are related to design or construction
- Needs to be able to work with the design engineer if problems are found

Construction contractor commissioning

- Small project
- Projects that are not too complex

Progress of work

- Submittal and shop drawing reviews are early in the project
- Responding to Requests For Information (RFIs) is ongoing throughout the entire project
- Construction inspection throughout the project
- Commissioning – also throughout the project

Pre-close in inspection

- Anything that will be concealed by finished construction needs to be inspected prior to installation of the finishes
- Pressure testing of ductwork
- Pressure testing of mechanical piping systems
- Inspection of insulation

Final inspection

- Final inspection by someone other than the person charged with the day to day administration/inspection of the construction work
- Correction of final inspection defects and omissions

Final Commissioning

- Verification of all operational features of equipment
- Verification that everything is installed in accordance with the contract
- Verification that everything is operating as per the design
- Verification that all conditions in the original scope are met with the construction

Closeout documentation

- Operation and Maintenance manuals
- Training on the equipment
- Warranty information
- As-built drawings
- Testing records and commissioning results

SE Regional Archives

