Bulletin No. JM 10
File: Job Management

Bulletin

Controlling Project Costs Caused by Third-Party Commissioning Agents

INTRODUCTION

Mechanical contractors have been subject to scope-of-work "creep" by third party commissioning agents. They may require activities that are beyond the original bid scope and design of the project. This impacts the mechanical contractor's cost and potentially has schedule implications. In addition, pricing the cost of working with a third party commissioning agent at bid time can be difficult if the scope of the commissioning agent's work is not understood.

How does a mechanical contractor minimize the potential for cost increases and schedule impacts due to scope creep by the third party commissioning agent? How does a mechanical contractor price the cost of third party commissioning accurately?

PRE-BID IDEAS—GET THE PRICING RIGHT AT THE BEGINNING

1. If the plan documents call for third party commissioning, find out (by the RFI process, if necessary) who the commissioning agent is and what is included in their scope of work. Request specifics regarding the commissioning process the commissioning agent intends to follow.
2. Request a copy of any and all forms that the commissioning agent may request from the mechanical contractor, including any required record keeping or any other data capture system.
3. Pay particular attention to:
    a. Duct and piping pressure testing requirements
    b. Assembly testing
    c. Duct cleaning
    d. Hydro testing, flushing, cleaning and fill requirements for hydronics systems
    e. Operation and maintenance formatting and assembly requirements
    f. Testing and balancing requirements above industry standards
    g. Cost of chemicals, process fluids, fuels, and disposal
4. Depending on the commissioning agent's processes and scope, the project manager's work may be accelerated at the front end of the project when your staff is busy with procurement, submittals and pre-planning. There will also be time and scope demands during the close-out

phase. Both time periods can mean that project staff, who may already be dealing with demanding phases of the job, will be doubly burdened.

5. If the third party commissioning agent has not yet been selected or if the scope of the commissioning agent's services are not clear, consider adding an allowance for commissioning support in the bid.

6. Regardless of how clear the scope of commissioning services may be, it may be wise to break out commissioning assistance as an additional cost to the base bid, listing the allowance or cost separately.

7. Consider the following language to be added to your scope/bid letter:

"Our pricing assumes that the drawings and specifications prepared by the designers integrate their detailed review of manufacturer's installation, operation and maintenance information for the specified equipment, and that those requirements are evident in the plan and section views of the equipment, as well as any associated installation details. If there is no basis of design equipment, the contractor qualifies that there may be added costs associated with installation requirements unique to the equipment that have not yet been researched or identified by the design and construction team."

And/or:

"Our pricing assumes that any associated latent construction activities required to properly install and operate systems, if not rendered in plan, section, or detail, will be provided by others. For example: concrete and roofing work of any kind, curb leveling, structural reinforcement, or line voltage wiring, fire alarm devices, or interlocks, etc. –-not shown on the project documents, but required to meet manufacturer's installation, operation and maintenance requirements— will be provided by others customarily assigned those responsibilities."

POST AWARD IDEAS – LIMIT THE POSSIBILITY OF SCOPE EXPANSION

1. Request a kick-off meeting with all interested parties shortly after award to review the commissioning plan for the job. The interested parties should include the construction manager (CM), design engineer, electrical contractor, controls contractor and commissioning agent.

   During the kick-off meeting (and in addition to detailing the commissioning plan):

   a. Verify with all parties that the contractors are to comply with the scope of work, not to re-engineer the job to the commissioning agent's desires. To the greatest extent possible, verify that the commissioning agent understands the system design and the contractor's scope of work.
   b. Seek input on how the commissioning agent and CM want the contractor to communicate issues related to complying with the bid scope of work.
   c. Develop an understanding among the parties regarding how the CM and commissioning agent will communicate with the owner, if necessary, when proposed actions are not in the scope of work.
   d. Review the timing of jobsite visits. Plan for visits at strategic times related to the construction schedule to identify corrections to the work at times related to the work activities.

Waiting until the job is in start-up phase to identify corrective actions is disruptive and expensive.

e. Request that the commissioning agent pay particular attention to the control and equipment interface – right after submittal approval and before construction starts.
f. Address commissioning as a separate activity in the construction schedule so as not to compress these activities with start-up and punch out.

2. Have the commissioning agent review all samples, models and mock ups, and approve them before construction begins.

DURING CONSTRUCTION – IDEAS TO MINIMIZE THE RISK OF DOWNSTREAM ADDED COST AND SCHEDULE IMPACT

1. Require your vendors and suppliers to provide equipment submittals tightly edited for the project and so identified. If they do not, then do so yourself. You will probably learn some interesting things.

2. If possible before equipment release, but shortly thereafter, require your vendors and suppliers to provide equipment installation/operations Manual (IOM) information edited for the project. If they do not, then do so yourself; you may learn a great deal. Either way, your foreman (or delegate to journeyman) should read the IOM and compare it to the design, reviewing impacts with the design engineer or project manager as he/she sees fit. There may be change orders; or there may be multiple, easier ways to meet a requirement; or there may be options available on the equipment that finesse certain issues. If you are substituting procedures, there is a potential major risk that needs review.

3. Distribute equipment IOMs to the other trades early in the project. There may be impacts on others and they need to review and respond to their own requirements. Don't get stuck with a roof tap unit (RTU) condensate drain pan that pools when the general contractor doesn't level the curb.

4. Direct the PM, design engineer or service technician to search the temperature control proposal and submittals and equipment submittals for excluded or missed line voltage interlocks, fire alarm interface, and equipment with field wiring performed by others. If you have the resources to initiate this effort early in the project, you may be able to negotiate a deal with the electrical contractor. You may or may not get paid … but this should minimize rework and ease start up complications.

5. Execute the manufacturers' installation checklists to the extent you are responsible and as modified for the job. File in an accessible location.

6. Keep up with internal documentation to give evidence of quality assessment/ quality control (QA/QC) on pipe and duct assemblies: Pressure test reports, as-built drawings, photographs. These will probably be required at the end of the project, and if the commissioning agent comes looking during construction, it discourages scrutiny.

7. Consider the commissioning impact related to temporary use of the permanent mechanical equipment during construction. Are there maintenance requirements that will become an issue for the commissioning agent later? Discussing these issues in advance may save costs later and, depending on the scope, may identify change order opportunities.