

## Hospital Engineering

# TRENDS



### Construction Phase Site Visits

by: J. Patrick Banse, PE

One part of an engineering consultant's full service design responsibilities is to provide construction administration (CA) services after the project is designed, bid and negotiated and the construction contract is signed. These CA services normally include checking of shop drawings, attending OAC construction meetings, answering construction related questions (RFIs) and performing construction phase site visits or project job observations. But just what is a job observation and what is its purpose? Who benefits and how? What is the value gained by contracting for these services? This article will attempt to answer these questions.

#### Contractual Relationships and Obligations

It may be helpful to first explain contractual relationships and obligations. The construction contract is an agreement between the contractor and owner. The design services contract is an agreement between the architect and owner. The architect and team have no contractual relationship with the contractor. The architect and consultant team are representatives of the owner. Contractual agreements between architect and owner, consultant and architect or consultant and owner contain explicit language regarding the construction administration duties and obligations of the consultant, but in general include job observations and site visits at intervals appropriate to the stage of the contractor's operations or as otherwise agreed. The contract will also contain explicit wording as to what is not included, such as exhaustive or continuous onsite inspections to check the quality or quantity of the work.

It is important to keep in mind that by contract, job observations are not inspections. Inspections are the responsibility of other agencies, such as local building inspection departments and state agencies, including the fire marshal and health department. Contract language states that during visits to the site, the consultant shall not supervise, inspect, ensure, warrant, guarantee and/or be responsible for the means, methods and sequence of the construction of the project or assume responsibility for safety at the job site.

So what is the purpose? The purpose of construction phase site visits is to become generally familiar with the progress and quality of the work for the consultant's part of the project and to determine in general if such work is proceeding in accordance with the contract documents. The purpose is also to inform the architect and owner about what was observed. Timely communication among design team, owner and contractor helps ensure the contractor's schedule is not adversely affected. The value then is in consistency and clearness of that communication.

As the normal CA service has observations at monthly or semi-monthly intervals during construction, the consultant can only observe and document the status of construction at those intervals. If the consultant observes something wrong or not in compliance, the consultant cannot stop work nor direct the contractor. His/her obligation is to inform the owner and general contractor. The consultant has responsibility for what is in the documents as they were prepared under his/her direct

supervision. The contractor's responsibility is to build what is in the documents which form a part of their contract (hence the name contract documents). Another consultant responsibility is to ensure the owner is getting what he paid for and what is in the documents.

## **Job Observation Report**

There are several uses for a job observation report. The report can contain a variety of information such as noted deficiencies, construction progress, applicability and verification of construction (labor and materials) for pay requests. It can also document field decisions made with the contractor and owner representatives. However changes to the documents can be made only through formal issuing of revisions such as a request for proposal (RFP) or a construction change directive (CCD).

It's important to explain these items in more detail. When a job observation is performed, it must be documented in writing quickly as construction is ongoing and continuous. It must be distributed timely, usually within three days of the site visit. Usual distribution is to the architect, owner and contractor. The observation must state the following: what is observed, installed and ongoing and what is installed but not in compliance (deviations from the documents). Minimum stages of observation must occur at underground utility rough-in prior to cover up, in wall rough-in, beginning of large duct/pipe work above ceiling, above ceiling prior to cover up and after completion (punch list).

There are several opinions regarding the observation. One is to document only that which is deficient. Another says document what is seen and identify what is deficient. Depending upon the consultant's role and expectations of the client, the best value for the owner is to document everything, installed and deficient, as a means of communication to the architect and owner.

Consultants, as part of their services, are sometimes asked to verify pay requests. A draft pay application is prepared by the contractor toward the end of the month and sent to the architect. The task then is to verify that the requested amounts (for Divisions 15 and 16 in the case of MEP consultants) is verifiable based upon the walkthrough and observation. This observation will either support or modify the request and then advise the

owner whether to accept (or how much to accept) the contractor's pay request.

When deficiencies are documented, they assist the owner in understanding what is being installed versus what the documents contain and require and what he paid for or owns. It helps the consultant, architect and owner in determining whether the building will function correctly and contain all features designed so it is code compliant and safe for its occupants, visitors and patients. It also serves as a tool to bring issues to the table in construction meetings.

The deficiencies noted should be addressed in writing as to corrective action by the contractor within 30 days of the issuance of the report. The corrective action and date should be identified and generally included in the OAC meeting minutes so the progress can be monitored and issues promptly addressed. When a commissioning agent is contracted by the owner and is actively involved through the construction phase, the deficiencies noted should be included and integrated in the commissioning agent's deficiency log, which is an ongoing active document. Items on the log must be cleared before any commissioning activities can begin.

Consultant site visits will, at the end of the project, recommend acceptance of the project to the owner. When state agencies, such as the fire marshal and health department, are required to sign off on the project, the consultant will attend these walkthroughs as system testing is likely to occur. Their input will generally resolve questions and issues generated by the authorities having jurisdiction and keep the project schedule going forward.

The project job observation is an important part of the consultant's responsibility in servicing the owner and architect. Contractual agreements should be clear regarding CA services to ensure the client's expectations are met. The site visit and documentation help the project to be built in accordance with the documents and aid in the commissioning of the project, making certain design intent is met for system functionality and operation. No project is complete without proper CA services.



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## **Hospital Engineering Trends**

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