Engineering 429

Term Project

of

Construction Claims Analysis

South Beach Marina Project

by

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I. Introduction

The act of construction is inherently strife with difficulty. Problems with design, materials, weather, and labor will cause increased costs, delays to durations, and, if not handled effectively, can cause a construction company to go out-of-business. Construction Management offers all parties in the construction project an on-going view of the project; however, even in projects with a proactive Construction Manager, problems to the project can cause friction between all parties and eventually cause the parties to end in litigation. A Claim analyst reviews the project records, creates a logical interpretation of the events, provides an analysis of the work method and performance, and assesses blame for failure. Claims analysts work for either/any side of the argument; therefore, using differing methods of analysis can come up with widely differing conclusions. Although this interpretation may differ from one analyst to another depending on their allegiances, the analysis is still very helpful in identifying potential problems in construction jobs. One such analysis was made by Jacobs Associates for the San Francisco Redevelopment Agency. The following is a report of the issues involved, the resulting analysis and determinations provide by Jacobs Associates, and observations of procedures used in both the construction and the claims analysis.

To begin to understand the processes of claims analysis we must first look to our project and make some statements about how it compares to the rest of the construction world. The project is the South Beach Marine (Contract II – On Shore). The contractor was Valentine Corp. of San Rafael, California. Jacobs Associates was retained by McCutchen, Doyle, Brown and Enersen on behave of the San Francisco Redevelopment Agency ("Agency"). The project consisted of a permanent promenade along the waterfront from Pier 40 to the south breakwater (approx 1150 lft.) including a new reinforced concrete edge deck, parking area, irrigation and landscaping, paving, sewer and water supply, two access brows to the harbor berthing system, public restrooms, utilities and miscellaneous furnishings. The contract was signed May 27, 1986 for a total contract value of $2.33 million dollars (US). The work was broken into to parts Stage I (duration 120 cds) and Stage II (duration 150 cds). This project would rate as average for

a municipal project not related directly with transportation. In 2003 dollars based on 2% inflation a year the project value would be about $3.26 million dollars. Projects of this nature tend to be rather bland. Although, problems do happen, these types of projects are completed everyday with out claim or litigation. This project would not be considered a difficult or high risk job.

The problem with this project occurred shortly after the Notice-to-Proceed (NTP). The Agency determined that a redesign of the edge of deck was necessary due to problems with the original design; consequently, forcing Valentine to stop work to wait for the redesign. Further problems arose with other changes; two of the major issues involved were the public restroom and onshore sewer/water system. The contractor claimed that the introduction of these changes by the Agency affected the timely completion of the project as well as impacted its productivity.

I. Analysis

Jacobs Associates developed a report for the Agency that assessed entitlement, the issues of the claim and provide a summary of damages in dollars. Any analysis would begin by gathering and categorizing data. The Job Contract, Foreman's Daily Reports, Costing Reports, CPM schedule documents, and correspondence provide excellent sources of data. The analyst would work with the client to identify what the client believes the issues to be. The client would provide a "road map" of the job with the analyst. Because each job/company is inherently different, the analyst must become familiar with the job and learn what issues were difficult or problematic for the client. Then the analyst typically scans the source documents for supporting data. This step allows the analyst to "get a feel" of the information, asking himself what can he/she learn from the data. Next the analyst builds a picture of the job by recreating the job in the form of an "As-Built" schedule.

An as-built schedule takes documents provide by either/or any of the applicable sides and shows graphically, how the job work was performed. Typically, Foreman's Daily Reports,

Costing Reports, CPM schedule documents, and correspondence provide the data for the as-built schedule. As-built schedules are crucial documents for the claims analyst because they provide him/her with a picture of the job. Some of the information, regularly found on an as-built schedule would be days work happened by work activity or trade or location, number of men per activity, pour dates, resource availability, holidays, rain days, work stoppages or down times, delays, relationship lines between activity types, significant dates, critical and non-critical activities and delays, and notes related directly to time related activities. A partial as-built schedule is provided in Appendix 1.

Once the as-built schedule is created it is compared with the "As-Planned" schedule. The as-planned schedule is often the CPM schedule. However, the as-planned and as-built schedules may not look at all like each other. The as-planned schedule can be very misleading, because preliminary schedule tend to be incomplete or lack enough detail for analysis. In jobs where there are issues not identified in the as-planned schedule, such as redesigns, weather delays, equipment delays, change orders (COs), and excessive requests for information (RFIs) the as-planned schedule maybe resequenced or even ditched in favor of a collapsed as-built schedule. The collapsed as-built schedule is a typical as-built schedule where all unplanned or unmitigated delays or incidents are removed from the schedule which offers an as-planned interpretation of the work.

Possibly, the most important part of the analysis is then to learn the contract. What are the requirements on each of the parties? What are the implications provide for in the contract for failure to comply with the contract? Using this information and the data from the as-planned and the as-built schedule the analyst can begin to paint a picture of the job. The analyst must ask some of the following questions:

- Where is there inconsistent/illogical manning?
- Were the resources adequately available?
- Were there issues that were unavoidable?
- Did the contractor or subcontractors meet the requirements of the contract?
- Did the owner place uncontracted burden on the contractor?

- Where there mitigating circumstances to the issues at hand?
- Was there malevolent action taken on any side?
- What were the contributing factors to the issues at hand?

Clearly, we see some very interesting questions being asked. It is the job of the claims analyst to weigh each of these issues and provide an argument for the clients side of the issue. In most cases the claims analyst is arguing for either additional/less money and/or time.

In the case of Jacobs Associates and the South Beach Marina Project, Jacobs Associates was retained to evaluate the contractor's claim of a lack of time to complete the project. Jacobs used Construction Reports prepared by field representatives of the Agency to create an as-built schedule and develop an opinion of the contractor claimed that time extensions granted were not sufficient to cover the time lost as a result of the suspension of work and changes made by the Agency.

During the project several Change Orders were made by the Agency which provided time extensions.

Change Order	**Description**	**Time Extension Granted**
2	Change to Waterfront Edge	55 days
4	Additional Time Extension for Changes to Waterfront Edge	42 days
5a	Demolition Work Required Under CO #2	14 days
5b	Formwork and Stripping Required under Change Order #2	13 days
6	Miscellaneous Additions/Deletions	14 day
TOTAL		**138 days**

However, the contractor believed that there were a total of 166 days of delay occurred as a result of delays attributable to the Agency. Jacobs Associates was in agreement with this fact and recommended to the Agency that the 166 days of time extension be granted.

Typically, the claims analysis happens after the job is completed such as on this project; however, this is not always the case, in some cases a claims analyst is brought on a project to mitigate problems while the job is actively progressing. This type of action is much more likely to happen on very large jobs. Because of the risk involved in high value jobs, like bridges or tunnels, or in multi-phase projects like airports, transit systems, and large scale multi-building facilities often claims representatives are brought in to evaluate and mitigate project problems before the problems become so large and complex that this risk for either side is beyond their ability to cope with it.

II. Identifying Issues and Observations

The next phase of the claim is to identify what issues are affected by the analysis and what the resulting damages are. Jacobs Associates identified several issues at hand in the South Beach Marina Project.

1. Delay, Labor and Equipment – no other reimbursement – because of lack of sufficient explanation of entitlement.
2. Field Overhead – reimbursable - $12 K
3. Home Office Overhead – reimbursable - $900 per day of delay
4. Loss of Productivity – reimbursable – 16 kmh
5. Relocation of Temporary Brow – reimbursable
6. Miscellaneous Items
    a. Profit – reimbursable
    b. Bond – reimbursable

The exact details of the dollar values are unimportant to the issues at hand, some of the applicable values were provide above. What is important however, is to realize what the effected by problems on a project can be. A week of down-time due to an out-of-commission crane may not seem that important, however its' effect can be felt throughout the project.

So the question then becomes, how does one go about avoiding claims?

1. *Keep lines of communication open between all parties involved*. Many times issues that may not seem all that important at the time may have long lasting effects and are not reported or investigated. Let all sides know when problems exist or make all sides aware of changes that maybe necessary before they become problems.
2. *Keep up-to-date records*. More often then not, problems with construction jobs come from poor record keeping. Slow progress, manning issues, supply issues, and scheduling issues can go unidentified if there is poor record keeping.
3. *Be open about problems*. Often contractors keep problems close to there vest rather than trying to mitigate the problems before they get out of hand.
4. *Work as a team*. Often owner-contractor-subcontractor relationship is adversarial. Neither side of the contract wants to work with the other to progress the project without incident. This ill will can cause even small avoidable issues to be blown well out of proportion.
5. *Understand the other side of the argument*. Owners are notorious about trying to low ball contractors, consequently, contractors are notorious about trying to milk a contract for every penny. If both sides understand the other sides point of view they should be able to negotiate around problems.

Because construction is not an exact science their will be delays, changes to contracts, redesigns, and so-forth. The real trick to it all is to be able to deal with these issues dynamically. Use the tools that you have effectively. Good Construction Management can be the difference between profit and loss; consequently, good problem mitigation can be the difference between bankruptcy and ENR's top 100 project list. Use the recourses available to you, such as Jacobs Associates. Hire professional mitigators and analysts to identify problems and solutions before they become out of hand.