



STUART & ASSOCIATES

Construction Management, LLC

Building San Diego Since 1979

"Execution is the Chariot of Genius"

William Blake

3334 Fox Place San Diego CA 92117
(858)761-5441 (858)273-0162

University of California, San Diego
Facilities Design & Construction
10280 N. Torrey Pines Rd. Ste. 470
La Jolla, CA 92037

Attention: Marcialene Holcomb, Senior Director, Project Management
James Gillie, Senior Director, Construction Services
John Sturla, Principal Architect

Introduction

The University of California, San Diego (UCSD), has contracted Stuart & Associates Construction Management, LLC to conduct a project evaluation on the Shiley Eye Center and Ratner Children's Eye Center.

The Shiley Eye Center project will construct a two-story, 12,163 square foot addition to the existing facility consisting of examination rooms, a waiting area and a 2nd floor shell for future offices. The main structure is steel frame and cast-in-place architectural concrete for the waiting area and a portion of the 2nd floor.

The Ratner Children's Eye Center project will construct a single story, 1,530 square foot floor addition to the existing facility consisting of examination rooms, waiting area and offices. The structure is steel frame.

On Monday, May 14, 2007, Stuart & Associates met with James Gillie, Marcialene Holcomb, and John Sturla at the UCSD Facilities Design & Construction offices. Stuart & Associates was asked to analyze the feasibility of continuing with the 3rd floor addition. It is our understanding the University's user of the facility has requested the 3rd floor addition be revisited based on the recent availability of limited funding and their anticipated clinical needs as well as projected cost escalations.

Information Analysis

- The project start date was October 30th, 2006 with a completion date of November 12th, 2007 according to the Primavera Systems Update #5 with the data date of May 1, 2007. The Work is to be completed in two (2) phases. Phase 1 shall be completed within **365** days after written Notice to Proceed. Phase 2, Landscape Maintenance, shall commence after completion of Phase 1 and shall be completed within **180** days, for a total of **545** days. The current schedule shows a negative nine work days of total float, translating into about two work weeks behind schedule. Based upon the actual progress on the current schedule the anticipated completion of Phase 1 is November 13, 2007.
 - The baseline project schedule indicates that the Ratner and Shiley Buildings are independent and do **NOT** have any shared milestones or linked activities. The critical path is created from each building's activities after they are updated for actual completion.
 - The Shiley Eye Center Expansion portion of the project consists of two stories with the contractual provision for a future 3rd floor secured by a base bid alternate #6 to increase the foundation and moment frames.
 - Architect's supplemental instruction #12, issued on February 5, 2007, included fireproofing and revised furring for larger columns. The contractor's cost was submitted for approximately \$XXX,XXX, which included 15 calendar days, for \$XX,XXX in anticipated extended overhead general condition costs. The contractor is procuring new cost estimates for Fireproofing that are substantially lower than those submitted on February 5, 2007.
 - On February 27, 2007 Facilities Design & Construction issued Bulletin #13 proposal:
 - Subject: 3rd Floor Steel Framing.
 - Drawings/Specifications:
 - S3.4 Roof & 2nd Floor Framing Plan
 - S3.5 Roof/3rd Floor Framing Plan
 - S4.1 Braced Frames & Details
 - S6.0 Structural Details
- These structural drawings are the skeleton of the 3rd floor.

- On March 13, 2007 the contractor submitted a cost of \$XXX,XXX which included the following direct costs plus mark-up. The contractor requested 19 calendar days of additional time to perform the work required by Bulletin #13.
 1. \$XXX,XXX Steel
 2. \$XX,XXX for Duct
 3. \$XX,XXX for Plumbing
 4. \$XX,XXX for extended overhead

On Thursday, May 17, 2007 the contractor provided Stuart & Associates with the following steel sequencing for Bulletin #13:

New detailing of column connections	2 weeks
Review time by arch/eng	2 weeks
Scrub time	1 week
Fabrication	4 weeks
Field correction to existing columns	2 weeks
Erect 3 rd floor steel	2 weeks

This indicates two months for the fabrication through erection of the 3rd floor, which is an industry acceptable time frame for this work.

- On April 2, 2007 the Facilities Design & Construction issued:
 - Subject: Bulletin 14, 3rd Floor Addition, Architectural Shell.
 - Drawings: A0.00, A0.01, A2.12, A2.13, A2.14, A3.01, A3.02, A3.03, A6.02, A7.01, A7.02, A4.11, A8.02, A8.03, A8.11, A8.12, A8.14, M3.2, M3.4, P0.1, P4.3, P4.4, P4.6
 - Brief Description: The Architectural Supplemental Instruction #14, dated March 28, 2007, is the exterior and interior finish for the 3rd floor. They include an upgraded continuous exterior glass façade and skylights in addition to the original plans.

The contractor has provided some verbal quotes, although no cost analysis has been performed to date.

- On May 9th, 2007 Stuart & Associates attended Weekly Construction Meeting #24. At this meeting the project manager for the university returned the shop drawings for Bulletin #13 back to the contractor **“UNREVIEWED”**. This action has stopped progress on the 3rd floor addition and increases its cost significantly each day because the 2nd floor structural steel continues to be erected without the necessary retrofit work being performed in a timely manner.

Recommendations

Option I: Complete 3rd Floor Addition

- Immediately direct the structural engineer of record to review and approve the structural steel shop drawings per Bulletin #13, including the connection details to the 2nd floor. **One week total for engineer review in lieu of five weeks as estimated by contractor’s schedule.**
- Immediately issue approved shop drawings for field correction to existing columns to the contractor. The work can proceed concurrent with the Baseline Schedule activities and the fabrication of 3rd floor steel.
- Review the structural steel cost estimate for industry standards, and immediately issue a unilateral change order, (i.e. Field Order) to the contractor for the steel, 2nd floor connections, including itemized erection costs.
- Review Bulletin #12 and negotiate a price based on a three quote process, and then issue a unilateral change order, (i.e. Field Order) for this work immediately.
- At Shiley Building Activity 10500, Layout of Building Walls, issue a stop work order for 30 calendar days. This will take advantage of the contractor’s two week current delay and allow the shop drawings to proceed. The Ratner Building will assume the critical path and will be concurrent work with the stop notice for the Shiley portion. This will delay the overall completion of the project; however, this action should help mitigate subcontractor claims for working out of sequence.

- Stuart & Associates' cursory review of Bulletin #14, dated April 2, 2007, for the additional architectural shell, indicates some design features that are cost and time prohibitive based on the user's limited funds. Therefore the University, Architect, and the contractor should immediately engage in a negotiated valued engineering estimate based on available funding.
- Monthly updated CPM analysis of the critical path activities is essential to avoid unnecessary cost and schedule impacts.
- The Project Team, UCSD, CO Architects, Shiley/Ratner staff members, Contractor and key subcontractors should attend a one-day partnering workshop by Ventura Consulting.

Option II: Structural Steel Column 2nd Floor ONLY

- Immediately direct the structural engineer of record to review and approve Bulletin #13 for the connection details to the 2nd floor. **One week total for engineer review in lieu of five weeks as estimated by contractor's schedule.**
- Immediately issue approved shop drawings for field correction to existing columns to the contractor.
- Review the structural steel cost estimate for industry standards, and immediately issue a unilateral change order, (i.e. Field Order) for 2nd floor connections.
- Revise Bulletin #12 to include the 2nd floor connections and negotiate a price based on a three quote process, and then issue a unilateral change order, (i.e. Field Order) for this work immediately.
- At Shiley Building Activity 10500, Layout of Building Walls, issue a stop work order for 30 days. This will take advantage of the contractor's two week current delay and allow the shop drawings to proceed. The Ratner Building will assume the critical path and will be concurrent work with the stop notice for the Shiley portion. This will delay the overall completion of the project; however, this action should help mitigate subcontractor claims for working out of sequence.

- This will allow **all** structural columns to be readily accessible and will not require costly retrofit work when the 3rd floor addition is completely constructed.

Summary

Unfortunately, the opportunity to implement the 3rd floor addition without taking advantage of the costs already expended by Alternate #6 has been seriously jeopardized.

Continued delay will only increase costs for both proposed options and ultimately the entire project. The cost for the retrofit of the existing roof steel to accommodate the new 3rd floor steel will escalate four times if not performed during this phase of construction.

The contractor's daily rate for compensable delay was secured at bid time at \$X,XXX per day. This rate is in our opinion reasonable, and the University would financially benefit from its implementation of extended overhead for the two or three months rather than cut the roof apart for a costly retrofit at a later date.

If the recommendation proposals by Stuart & Associates are executed with special emphasis on scheduling and a concerted effort by the project team members to work together rather than in opposition, the 3rd floor addition can be accomplished in a timely manner.

A one week submittal review by the Structural Engineer, combined with expedited steel fabrication by the contractor and a value engineering Bulletin #14, Architectural Shell, can facilitate a 3rd floor completion near the end of the year with an estimated construction cost under a million dollars.

William D. Stuart,
President
Stuart & Associates