



the collaboration chronicles

# Physical Sciences Complex

University of Maryland  
College Park, MD

By Sue Klawans | Based on interview with Bob Martinazzi, University of Maryland

10,000

s.f. added after design completion

<1%

Unforeseen changes

84%

Contingency unspent

## INSIDE:

■ project information

■ successes

■ lessons learned

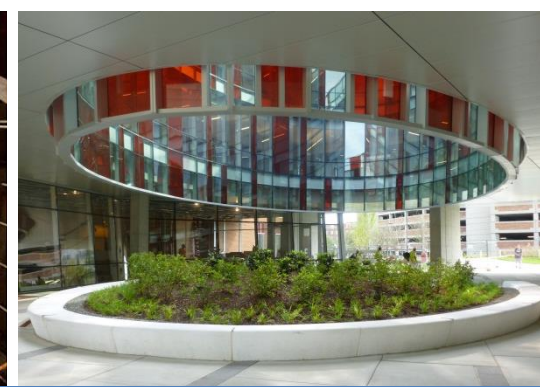
■ insights into:

cooperation

integration

innovation

■ interview excerpts



## PROJECT INFORMATION

### PROGRAM

- University Physical Sciences Building
- 160,000 s.f

### TEAM / BUDGET / SCHEDULE

- Architect: HDR
- Construction Manager: Gilbane Building Company
- \$99M construction cost
- 39 months construction schedule

### CHALLENGES

- Maintain campus operations and safety
- Relocate electrical service with no shutdowns
- Addition during construction of a 10,000 s.f. sub-basement

## SUCSESSES

- ✓ Design proceeded while the University pursued grant funding. After excavation had started, the University won a grant in excess of the need. The project team agreed as one to enable the Physical Sciences Department to gain another 10,000 s.f. of lab space for its premier programs, recognizing it meant accepting risks associated with redesign while under construction. This would not have been possible without the leadership of the University's project manager and the capability and collaboration of the project team.
- ✓ Relocation of electrical service with no disruption
- ✓ Successful use of incentives resulted in a \$99M project with less than 1% in unforeseen changes. Techniques: constructability reviews, Interdisciplinary Document Coordination, thorough bid process and excellent management of design and user groups.
- ✓ Schedule certainty: Lean scheduling and proactive team lookaheads resulted in a project completed with no schedule delays
- ✓ Safe site management of a busy student traffic corridor eliminated risk to students/staff
- ✓ Collaboration technology platform enabled communication and coordination

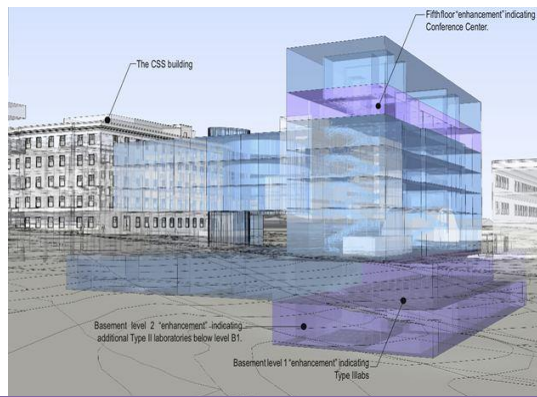
## LESSONS LEARNED

### DOs

- ✓ Hold partnering and teambuilding sessions within the owner organization and with the whole team
- ✓ Enable mutual trust and teamwork from day one
- ✓ Make timely decisions
- ✓ Intensely collaborate and engage: owner organization, architect and construction manager
- ✓ Use technology to improve communication and decision-making

### DON'Ts

- ✗ Don't let issues fester. Solve them and move on.



## INSIGHTS INTO:

### PROJECT PLANNING AND EXECUTION METHODOLOGY

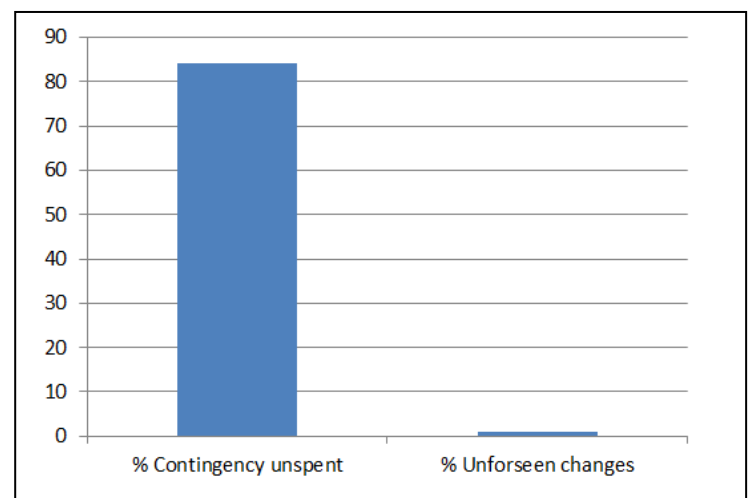
- The University's project leader incorporates lessons from his Navy career in a successful project planning and execution process, requiring:
  - A foundation of mutual trust
  - Teamwork requires input and participation from the working level up to the highest level
  - An effective planning process delivers results
  - Make decisions and move forward
  - Invest in people: Know your people, know yourself, honesty at all times

### DEVELOPING A HIGH PERFORMANCE OWNER TEAM

- Partnering sessions and teambuilding included all levels and all stakeholder departments of the organization, from the Deans to the day-to-day users
- Town Halls to keep everyone informed, show respect for feedback – example: project schedule designed around need for weekend research to continue
- Invite people to understand the process: Chair of Physics department at the Construction Manager's safety meeting
- Clearly articulated schedule for design so that at end of DD, no more changes

### THE VALUE OF INCENTIVES

- The University incented the Construction Manager to provide value and return savings. Construction Manager Gilbane provided detailed constructability reviews and Interdisciplinary Document Review during design phase. The project team used the results to collaborate and generate more complete bid documents. As a result, there were less than 1% in unforeseen changes.
- The early relocation of a major electrical service was critical



**BOB MARTINAZZI, UNIVERSITY OF MARYLAND****Q: Do you think collaboration can add value to a project?**

Yes. Collaboration is essential. *It's all about the people. People and process get you to success.*

**Q: How did you get started in developing your collaborative approach?**

I learned from my Naval career that we must start with a *foundation of mutual trust*. It has to be there, and you have to keep building on that trust. Then it takes *teamwork*, from the lowest person all the way up. And then you need a selection process that allows you to select *leaders*. You can tell when people have leadership training, military or otherwise. They know how to work with people different from themselves to get a result, they know their own people and what makes them tick, they know themselves and their limits, they are honest and trustworthy, and they are not afraid to make decisions and move forward.

**Q: Does your procurement process enable selection of collaborative players?**

Our state-mandated selection procedures are very rigid. They help us to narrow the field to firms that are highly qualified to do their job, and within that pool we select those who demonstrate the leadership capabilities I've described and are a strong group of people you want to work with to achieve a goal.

**Q: What was the biggest challenge the team faced and did a collaborative process enable you to mount that challenge?**

We had an opportunity to accept a grant late in design. In fact, Gilbane was already excavating foundations for the building. We brought the University, Architect, and Construction Manager team together to discuss what to do: the University could add program space for its renowned Physical Sciences program, but it would mean changing everything on the spot and accepting

unknowns and rework that would go with this. We decided as a team that it wasn't easy but it was *the right thing to do*, and we began a redesign - without stopping construction - to add a sub-basement level below our lowest level. The blood, sweat and tears that went into this are not visible in the end product. But, *if I didn't have this team, we couldn't have pulled this off.*



*“If I didn't have this team, we couldn't have pulled this off.”*

Bob Martinazzi  
University of Maryland