I WANT YOUR BEST PERFORMANCE

University of Colorado **Denver | Anschutz Medical Campus**

Mike Barden
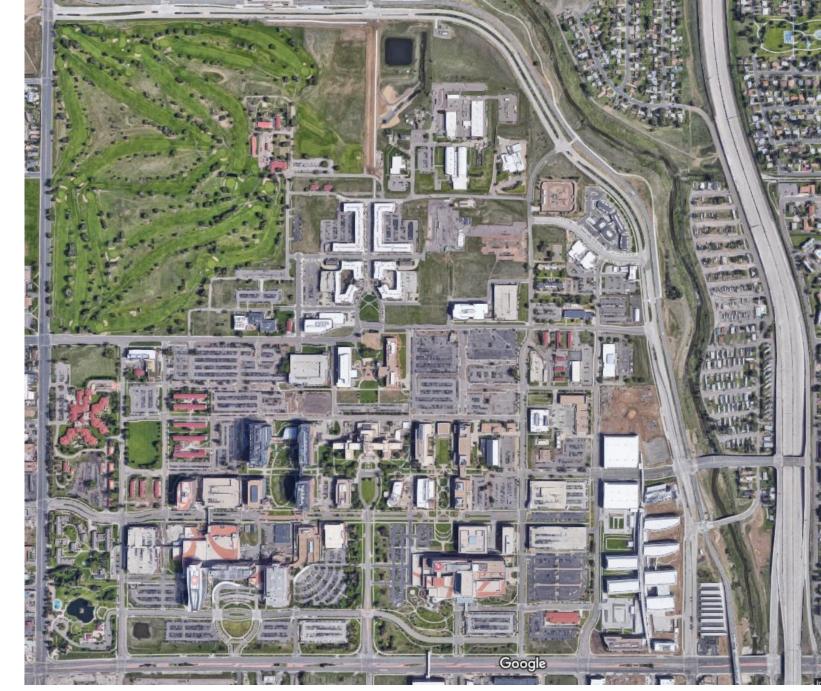**Director Facilities Projects**

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A Practical Guide for Successful Delivery of the World Class University of Colorado Anschutz Medical Campus

1 square mile of a blended campus
3 Major Hospitals
1 Major Medical University
1 Life Sciences R&D Park(FRA)

SITE: 1996

Fitzsimons Army Medical Center

150 plus Army buildings from WW1 and WW2 era

Pre CU Anschutz Medical Campus

SITE: 2018

CU Anschutz Medical Campus / FRA Redevelopment

CU Anschutz Medical Campus

<u>Over the Past 20 Years</u>
New Construction & Renovation

- 33 Buildings for CU
- 3.7 Million SF
- $1.4 Billion in Projects

<u>Next 10 Years</u>
New Construction & Renovation Plan

- Continue Renovation on 33 Buildings & Build 6 to 10 more
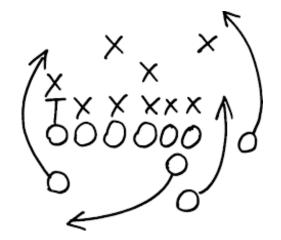- $1 Billion plus

-growing at 2% annually of 300 new staff/faculty each year

Develop a Play Book –
A Design and Construction Standard

- Organize so it compliments industry practice(CSI Master format).

- Give clear pre-design guidance to the design team.

- Give specification development guidance – prescriptive and performance.

- "On board" your design team to university process and needs.

- Keep a "lessons learned list" and share it with your design teams.

WHY ESTABLISH STANDARDS?

WHAT ARCHITECTS MAY GIVE YOU

WHAT WE REALLY WANT

ON Boarding
Standards Boot Camp
&
Lessons Learned List

Ultra Low Temp Freezer

- $1-$2M Loss of Research
- Dedicated 20 Amp Circuit
- Back-Up Generator
- Central Monitors (Security)
- Freezer Maintenance Program

Standards & Lessons Learned are Living Documents

- Standards Committee
- Staff Member Point Person

What are your best practices?

What is it going to cost me?

Scope Development, Cost Modeling, and Conceptual Cost Estimating

- Scope of Work Questionnaire

- Program Plan documents(comprehensive scope and justification documents)

- Estimating templates- Ball park, magnitude of cost, and detailed

- Historic Cost modeling for your specific campus

- Keep information on a sampling of new and renovation projects

- Keep and review all the industry information of cost escalation(contractors and industry

Scope of Work Questionnaire/Program Plan Document

- Develop a "survey monkey" that is common to every project with your customer
- Set up a list of your standard service providers and end user to get their input early
- Service providers are the building department, maintenance and operations, classroom support, IT, campus police, planning, etc.

Cost Estimates

- Create a template to consider all potential costs

- Qualify it based on the stage of the project and information and extent of design

- Estimates are based on the scope and what the market(contractors)

- Historic cost modeling - history repeats itself plus inflation

- Keep a strong connection with contractors and cost consultants

Types of Cost Estimates

- Ball Park or magnitude of Cost type(accuracy +/- 50%)

- Unit Cost based on historic cost and defined scope(accuracy +/-20 to30%)

- Detail estimate based on a concept level design and with outside contractor or cost consulting help(accuracy +/- 10-15%)

- Management of customer expectations and controlling scope creep

Something to consider...

- Customers want a number early and it better be right !
- A batting average of 1.000 is not possible…but how you are rated as an estimator?

Historic Costs Database are the Key – History Repeats Itself

- Record final costs for all projects by category(prof services, const, equip. and misc.)
- Track by Square footage for all new buildings and for renovations
- Adjust to current year dollars using local or national cost guides and contractor input
- Keep a sampling of renovation types from minor to major renovation

What are your best practices?

Design Management Phase

- Create the right team for the project from inception until completion

- Design review and user/service input is critical

- Making the design team accountable and get a complete set of documents

- Cost increases if issues are not covered in design

- Coaching and on boarding staff that do not understand design

Design Management Phase
Getting the right players involved early

- Have the same planner and project manager for the entire project

- Get a primary point of contact for the user group and make sure their role is understood.

- Get a representative from the maintenance team for the entire project

- Pull in subject matter experts at the appropriate times during design

Design Management Phase
Design Team Accountability

- Have a standard form for collecting design phase comments and responses
- Have the architect or engineer that they have followed the campus standards at each   stage of design
- Pull the code official in real time for sticky/unclear code issues
- Preferred delivery method is CMGC with strong contractor input early and often

What are your best practices?

Construction Management Phase

- Weekly Meetings – schedule, pending change orders, critical work, subcontractor issues
- Change Order management – manage to the worst case
- Architect' Observation walk – include a team of owner subject matter experts at key times
- Close out on a schedule – have an expert on staff to drive close out

Construction Management Phase Preconstruction and Weekly meetings

- Create a template for a preconstruction meeting template – "On Board" your contractor and staff

- Weekly meetings – let contractor drive them and cover schedule, changes, RFIs, Submittals, subcontractor issues, and general performance issues

- A large projects – have a once a month high level meeting with lunch and check on relationships and how things are going a 30,000 level. Allow honest feedback around issues

Construction Management Phase Change Order Management

- Make sure the changes order process is clear(Embrace it!)

- Manage to worst case and allow everything that may have a cost of schedule impact land on a logged and have a system of closing them out

- Do not allow open language in proposals about combined impact of all changes

- Get labor rates and detailed labor burdens negotiated prior to your first changes with general contractors and subs that are likely to have changes

- On CMGC project have a contingency use quiz to get everyone on the same page on how contingency can be used

Construction Management Phase Architect's Observation walk

- Critical tool for quality control

- Involve a group of owners maintenance staff to give feedback real time

- Reduces the number of punch list items

What are your best practices?

THANKS!

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