2018
Project Delivery Symposium: Delivering the future
CONTRACTORS PANEL
Moderator:

Greg Gidez AIA DBIA
Director of Design Services
Hensel Phelps

Panelists:

James Apodaca
Project Executive
Commodore Builders

Andrew Rhodes
Business Team Preconstruction Lead
Southland Industries

Will Thompson
Vice President and District Manager
Hensel Phelps Construction

Jim Pattee
Vice President
MC Dean
2018
Project Delivery Symposium: Delivering the future
James Apodaca – Commodore Builders
Introduction

James Apodaca, Project Executive
AGC Project Delivery Forum Steering Committee Past Chair
Delivery Methods – Contractual

- Design – Bid – Build
- Design – Build
- CM at Risk
- IPD
- ECM / CM
Delivery Methods - Approaches

- Lean
- Design Assist
- Prefabrication
- Modularization
What has worked?

• Match Charter School
• Three Buildings
  • Pre Engineered Gym with 4 Mods for offices and lockers
  • 2 – Two Story buildings a total of 80 Modules
Built in a factory - Indiana
Delivered to MA and put together on site.
One year total construction
CM at Risk – Preconstruction

- Newton Fire Station #3 & HQ
- Temp ops
- Schedule
- Mission Critical
- State of the art Emergency Operations Command
Design Build

Printing Facility

Paper Storage

Rail Access

Keep same corporate look
Future: Collaboration

- Labor shortage will dictate a rethinking of how we deliver projects
- Design Assist
- Prefabrication
- Modularization
- Integration of Design Team
2018

Project Delivery Symposium: Delivering the future

Will Thompson – Hensel Phelps
“Unity is strength – when there is teamwork and collaboration, wonderful things can be achieved”.

~Mattie Stepanek
Sharp Chula Vista Oceanview Tower

**Designer**
SmithGroupJJR/ AVRP studios

**Contract Type**
Design-Build

**Key Trade Partners**
Design Assist Drywall
Design Assist Exterior Skin

**Project Type**
Medical Building
Project Successes

- Key Collaboration with Designer/ GC a year before project award
- Consistency of key team members from Designer and GC
- Key Trade Partners working with designers during design
- Virtual Design and Construction
- Heavy use of mockups early in the design process
- On Budget and project will be delivered 3 months ahead of schedule
Federal Data Center

**Designer**
Gensler/ Thornton Tomasetti/ Syska Hennessy

**Contract Type**
Design-Build

**Key Trade Partners**
Design Build Electrical/Mechanical
Steel / Precast

**Project Type**
Federal Data Center | Mission Critical
• Designer/ D-B Trade Partners/ GC all co-located during proposal phase

• Consistent team members co-located throughout construction and Commissioning

• Visibility into budget by key team members

• Executive Team Meetings every other week during project – ‘What is best for the project?’

• Virtual Design and Construction

• Large prefabrication designed into the model

• Reduced workhours on site by more than 30%
Arizona Cancer Center

**Designer**
ZGF/ AEI (MEP Designer)
MWG (Structural Engineer)

**Contract Type**
Design-Build

**Design Assist**
MEP, Exterior Closure
Shielding Trade Partners

**Project Type**
Medical and Research
Project Successes

• Building on previous successes – Firms and People
• Entire team invested in project success
• Designers given insight into budgets while making design decisions
• Key stakeholders identified “Sacred Cows” for a win-win relationship
• Virtual Design and Construction
• Regular Owner and End User Access by Team members
Benjamin P. Grogan and Jerry L. Dove FOB

**Designer**
Gensler/ Thornton Tomasetti/ Syska Hennessy

**Contract Type**
Design-Build

**Key Trade Partners**
Design Build Electrical
Design Build Mechanical
Design Build Exterior Glazing

**Project Type**
Federal Office Building
Project Successes

- Key Collaboration with Designer/GC a year before project award
- Virtual Design and Construction
- One of Kind Custom Curtain Wall System meeting hurricane and blast requirements (designed by Design-Build sub at time of project delivery)
- Continuous collaboration between client, End User, and Design-Build team
THE FUTURE IS MODULAR
Modular Building for Non-modular Buildings
Benefits

Accelerates Delivery
Provides design certainty
Improves Quality
Enhances Safety
Eliminates on-site labor shortages
Reduces schedule compression risks
Allows for smaller engineering teams
Accelerates Delivery

3 Days vs 3 Weeks

Day 1
Day 2
Day 3

Manufactured Modules
Integrated Electrical Closets: Installed, Pre-Wired, and Tested to Reduce On-Site Active Time
Engineering in controlled environment

Issues resolved off critical path

EPMS Simulation and Connectivity Infrastructure at M.C. Dean Facility
OUR PROJECT DELIVERY VALUE STREAM
2018
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Andrew Rhodes – Southland Industries
If you only remember one thing...

Integrated Lean Project Delivery (ILPD) can produce better project outcomes than traditional delivery methods

• Commercial Terms – IFOA, Shared Risk/Savings
• Progressively Selected Team – Validation, Design, and Construction
• Target Value Design
• Maximize Prefabrication
Today – Leading Integrated Delivery of Project

- No longer just a “Mechanical Sub”
  - Facilitation – Ask the right questions
  - Breadth of Knowledge
- Must have relationship-based skills
  - High Emotional Intelligence
  - Trust and Respect
  - Lack of Ego – Team before Me
ILPD collaboration has many benefits

Schedule Alignment

Cost as an INPUT to design
Project teams must remember...

The customer defines **value**

Our purpose is to help the customer make **informed decisions**
Pipe Rack - Increase Value, Decrease Cost

Multi-Disciplinary Savings:
- **Structural**: $200K of $400K saved
- **Mechanical**: $250K of $1.8M saved
- **Safety**: 7,800 hours moved to fab shop
- **Schedule**: 3 of 40 weeks eliminated
Tomorrow - Enabling Customer’s Business

• Then: One stop shop for buildings
• Now: One stop shop for **ANY** customer need
  • Install production equipment
  • Assist/Lead Cx
QUESTIONS?