WELCOME

THE UNIVERSITY OF UTAH
Planning, Design & Construction Forum
May 9th, 2019

INTRODUCTION

Presenter:
Robin Burr – Chief Facilities Officer

MEETING GOALS

- Our Organization
- Where we’ve been
- Where we are today
- Where we’re going
- General Updates
- Practice Changes
- Current and Upcoming Projects
- Q&A
WHERE WE'VE BEEN...
- Changing Expectations
- Success with smaller, better integrated Project Teams
- Added Design & Construction Support Team

WHERE WE ARE TODAY...
- Continuous Improvement Mode
- Strong focus on Campus Planning
- More support for Project Delivery
- New Tools and Training
- Changes in Plan Check & Inspection
- Changes in Proposal Format
- Joining with Facilities Management and University Hospitals & Clinics

WHERE WE'RE GOING...
- Continued adaptation of Tools and Training
- Strong focus on Sustainability
- Heavy up-front involvement at beginning of projects
- Evolving Project Delivery methodology
- LEAN Practices
- Target Value Design
- Better integration of AE, GC and the U in project delivery
GENERAL UPDATES

Presentation
Ken Nye – Deputy Chief Facilities Officer

PROCUREMENT

Staff
- Heather Henderson
- Polly Alles
- CM/GC – we are transitioning to a pre-set fee
- Multi-Project Selections for A/E and Contractor
- Performance Reviews
CONFLICT OF INTEREST

- Gifts
- Option to donate to U of U Student Food Bank or other charity of your choice

UNIFIER

Staff
- John Naylor
- Jeff Record

- Electronic signatures coming
- PlanGrid is a companion system to Unifier

CONTRACTOR PARKING ON CAMPUS

- New policy coming this summer
- Objective is to minimize impact of construction on parking availability
CONTRACTOR PARKING REQUIREMENTS

- Permit required for parking anywhere on campus
- Sidewalk passes will carry a fee
- Designated parking areas for sidewalk passes limited to specific areas, according to Commuter Services parking plan
- Use of parking areas for staging require written approval in advance
- Contractor contact info on staging area fence

CHANGES IN PRACTICE & EXPECTATIONS

Presenter:
Gary Giglio - Director of Design & Construction
Support/Building Official
Sam Jannen Augustine - Energy/Sustainability Manager
Colin Moore - Preconstruction Manager

PROCESS IMPROVEMENT

Presenter:
Gary Giglio - Director of Design & Construction Support/Building Official
LEAN CONCEPTS FOR DESIGN & CONSTRUCTION

- OUR MISSION: Delivering projects on time, on budget with the expected quality and safely.
- Creating value for clients by eliminating activities that are considered waste, focusing on process and flow, and continuous improvement.

1. Deployment/Use of interoperable technology, such as BIM, cost-estimating and scheduling tools.
LEAN CONCEPTS FOR DESIGN & CONSTRUCTION

2. Use of prefabrication, preassembly, modularization, and off-site fabrication techniques and processes.

LEAN CONCEPTS FOR DESIGN & CONSTRUCTION

3. Effective performance measurement to drive efficiency and support innovation.

PLANGRID

Presenter:
Alex Demogines - Regional Manager, PlanGrid
Welcome to PlanGrid
Changing Project Delivery for the University of Utah

- Centralize all project lifecycle documentation
- Errors & omissions
- Change orders
- Inaccurate as-built drawings
- Incomplete reporting
- Missing asset management data

Solutions for owners from design to turnover
Raymond Group
T-Mobile Arena

"PlanGrid allows me to collect and turn over ‘live working’ as-built as invaluable to owners for the life of the building."
—Terry Coleman
Superintendent, Kraus-Anderson

Secure a complete turnover package

Granite Construction
Highway 99 Realignment

✓ Proven project team adoption
✓ Retain portable data for turnover
✓ Simplify team collaboration
✓ Deliver more predictable outcomes
✓ Control data for the lifecycle of the facility

Why PlanGrid?

Used by 52% of ENR top 400 GCs

PLANGRID Q&A
SUSTAINABILITY IN DESIGN & CONSTRUCTION

Presenter:
Sam Jensen Augustine – Energy/Sustainability Manager

- Started July 1, 2018
- Visiting firms to have conversation about U’s evolving approach
- Owner’s Project Requirements updated
- Working with project teams to tailor HBPS as appropriate
- Aligning upfront project decisions with LCCA

SUSTAINABILITY

CODE REVIEW & INSPECTION SERVICES

Presenter:
Gary Giglio - Director of Design & Construction Support/Building Official
ESTIMATING MANUAL, TEMPLATE & COST DATABASE

Presenter:
Colin Moore - Preconstruction Manager

PRECONSTRUCTION

1. WHAT IS VALUE?
2. WAYS TO INCREASE COST CERTAINTY
3. UPDATED AIA CODES / ESTIMATING METHODOLOGY MANUAL
4. COST DATABASE FOR BENCHMARKING
5. TARGET VALUE DELIVERY
WHAT IS VALUE?

- Value is "what the customer is actually paying for the project to produce and install." – Lean Construction Institute

- Value = Function

- Planning, Design, & Construction:
  - State entity with a charge to gain best value for Utah taxpayers
  - Understands – and assists to communicate and deliver on – the client’s definition of value (program, schedule, cost, social)

- Architects & Engineers:
  - Understands and designs to – client’s definition of value while collaborating closely with the client’s team

- Contractors:
  - Understands client’s definition of value and brings value by providing expert opinion, modifications, design and constructability feedback, and cost certainty while collaborating closely with the client’s team

WAYS TO INCREASE COST CERTAINTY

- Cost certainty is high on every client’s value list. Cost overruns cause redesign, schedule delays, and decrease delivered value

- Ways to increase cost certainty:
  - Establish consistent cost reporting tools, including Work Breakdown Structure (WBS) codes. Establish consistent times to report costs
  - Maximize collaboration during preconstruction and construction – all team members are “linked” to the project budget
  - Project “trend tracking” against similar projects to validate costs
  - Continuous review & feedback of design documents for cost, constructability, & conflicts
  - Immediate reporting of potential cost overruns, including market factors such as tariffs or commodity pricing increases
  - Establish target values, with subgroups that report on how specific target values are tracking with design

UPDATED WBS CODES/ESTIMATING METHODOLOGY MANUAL

- Establishes a uniform cost reporting system between University projects
- Reduces miscommunication and is more transparent
- Template based on Construction Specification Institute (CSI 2014)
- Will be used in University’s cost database
- Explains how to measure each of the line items in the WBS
- Defines scope of unit rates for database accuracy
- Guides definition of TI versus Shell & Core for renovation projects
**WORK BREAKDOWN STRUCTURE**

Example of the WBS - Summary

<table>
<thead>
<tr>
<th>Code</th>
<th>Component Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost $</th>
<th>Total $</th>
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<tbody>
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<td>F I N I S H E S</td>
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<td>90 920</td>
<td>Plaster And Gypsum Board</td>
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<td>90 921</td>
<td>Plaster And Gypsum Board Assemblies</td>
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<tr>
<td>90 922</td>
<td>Supports For Plaster And Gypsum Board</td>
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<td>90 922</td>
<td>Exterior Wall and Parapet Assemblies</td>
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<tr>
<td>90 922</td>
<td>Steel stud, 18 ga - 6&quot; SF</td>
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<td>90 922</td>
<td>Steel stud, 18 ga - 6&quot; at parapet walls SF</td>
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<td>90 922</td>
<td>Exterior soffit framing SF</td>
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<td>Metal Furring</td>
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<td>Portland Cement Plastering</td>
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<td>90 924</td>
<td>Portland Cement Stucco</td>
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<td>90 924</td>
<td>Exterior stucco, integrally colored, including lath SF</td>
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<td>90 924</td>
<td>Plaster control joints, including continuous bent plate LF</td>
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<td>Backing Boards And Underlayments</td>
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**WORK BREAKDOWN STRUCTURE**

Example of the WBS - Detail

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**ESTIMATING METHODOLOGY MANUAL 6**

SAMPLE OF THE EMM6

<table>
<thead>
<tr>
<th>Code</th>
<th>Material Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Cost $</th>
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<tbody>
<tr>
<td>08 040</td>
<td>Exterior: Corrugated metal deck, Nelson/shear stud</td>
<td></td>
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<tr>
<td>08 040</td>
<td>Labor: Fabrication/installation of deck system, welding of Nelson/shear studs</td>
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</tr>
<tr>
<td>08 040</td>
<td>Equipment: Hoisting equipment, welding equipment</td>
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</tr>
</tbody>
</table>

**Factors Affecting Cost:**

Metal Deck (SF): 05 31 13

The unit cost includes the furnishing and installation of Nelson or shear studs. Penetrations larger than 50 square feet are deducted from the overall quantity, however smaller penetrations are not deducted. Unit cost includes penetration cutouts, top and bottom.
COST DATABASE FOR BENCHMARKING

TARGET VALUE DELIVERY (TVD)

- Value & cost drive the design process instead of calculating the cost after design is complete.
- Increases cost predictability vs. the traditional method of estimating at established design intervals only.
- Teams work together to deliver value

MEET THE TEAMS/PROJECTS

Presenters:
- Rochelle Randazzo - Director of Finance & Accounting
- Andrew King - Associate Director of Campus Planning
- Bob Simonton - Director of Design & Construction
- Liz Blackmer - Director of Design & Construction
- Nils Eddy - Program Manager, Health Sciences
- Trent Cutler - Director of Planning, Design & Construction, Health Sciences
FINANCE & PROJECT METRICS

Presenter:
Rochelle Rondazzo- Director of Finance & Accounting

The University of Utah Planning, Design & Construction

Annual Number of Projects

Projects under $10M

In Millions

CAMPUS PLANNING

Presenter:
Andrew King- Associate Director, Campus Planning

The University of Utah Planning, Design & Construction

Project Spending

Annual Number of Projects

Fiscal Year Spending


Fiscal Year Spending

$50, $100, $150, $200, $250, $300, $350

2018 2019 2020 2021 2022 2023 2024

In Millions

Fiscal Year Spending


Fiscal Year Spending

$50, $100, $150, $200, $250, $300, $350

2018 2019 2020 2021 2022 2023 2024
CAMPUS PLANNING

Andrew King, Associate Director, Campus Planning

Campus Planning Responsibilities
- Project Studies and Research
- Visioning and Master Planning
- Campus Transportation
- Campus Parking
- Campus Site and Landscape
- Cultural Resources / Historic Preservation
- Campus Signs and Signage

Charles Shepherd: Cultural Resource Manager
Sue Pope: Open Space Manager
Tami Wolfgang: Campus Planner
John Close: Campus Planner
Andrew King, Associate Director, Campus Planning

CAMPUS PLANNING PRESENTER:
Bob Simonton - Director of Design & Construction

INFRASTRUCTURE TEAM

Scott Jefferson
Steve Laraway
Brett Petersen
Jon Jefferson
Astrid Paredes

Financial Analyst
Brenda Diaz

Project Assistant
Catey Bradbury

INFRASTRUCTURE, ENERGY & RED BUTTE GARDEN

Project Managers
- Scott Jefferson
- Steve Laraway
- Brett Petersen
- Jon Jefferson
- Astrid Paredes

Project Assistant
Catey Bradbury

Financial Analyst
Brenda Diaz

Types of Projects
- Energy Efficiency
- Transportation
- Utilities
- Red Butte Garden
- Security
- Building Systems Renewal

Presentation Date:
5/8/2019

Presentation Title:
infrastructure, energy & red butte garden

Presenter:
Bob Simonton - Director of Design & Construction

Infrastructural Types of Projects:
- Energy Efficiency
- Transportation
- Utilities
- Red Butte Garden
- Security
- Building Systems Renewal

Types of Projects:
- Energy Efficiency
- Transportation
- Utilities
- Red Butte Garden
- Security
- Building Systems Renewal
MAIN CAMPUS, RESEARCH PARK & COMMUNITY CLINIC TEAM

Presenter:
Liz Blackman - Director of Design & Construction

Project Managers
- Dessie Andreason (Retiring May 17)
- Andrea Cavrag
- Mark Grabl
- Rick Johansen
- Lori Kaczka
- Christin Robbins

Assoc. Project Managers
- Christian Johansen
- Sherri Somers

Financial Analyst
- Karen Jacob
- Nana Akondi
- Ewusi-Emmim

Types of Projects
- Academic
- Research
- Athletics
- Community Spaces
- Food Service
- Administration
- Clinics
- Housing
- Performance Arts
- Tenant Improvements
- Renovations
- Additions

MAIN CAMPUS & RESEARCH PARK

Presenter:
Nils Eddy - Program Manager, Health Science

HEALTH SCIENCES & TRANSFORMATION TEAM

Reviewer:
Nils Eddy - Program Manager, Health Science
HEALTH SCIENCES & TRANSFORMATION

Project Managers
- Kris Killion
- Harry Condi
- Mike Brancato
- Nirvan Rajbhandari

Construction Project Manager
- Eric Newby

Associate Project Managers
- Grant Spencers
- Deborah Foragotto

Financial Analysts
- Nana Anasah Adou-Eminco
- Jeff Kaminski

HOSPITALS & CLINICS TEAM

Presenter:
Trent Cutler - Director of Planning, Design & Construction, Health Sciences

DESIGN PROJECT MANAGERS
CONSTRUCTION PROJECT MANAGERS

AESTHETICS TEAM

HOSPITALS & CLINICS

Types of Projects
- Clinical
- Critical Care
- Outpatient
- Support Spaces
- Research
- Tenant Improvements
- General Renovations
- Infrastructure

Geographically Spread
- Main Medical Campus
- Research Park
- Community Clinics
  - Salt Lake County
  - Utah County