

22<sup>ND</sup> ANNUAL



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# ILPD Delivery Method in a Hard Bid World

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THE ABC'S OF LEAN: TRANSFORMATION THROUGH ACTIONS, BEST PRACTICES AND COACHING

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# How Do You Implement ILPD in a Hard Bid World?

- Using an Integrated Lean Project Delivery (ILPD) method on a hard bid public sector project.
  - How do you create a culture of collaboration through all phases of the project?
  - How do you change the traditional hard bid mindset of the subcontractors?
  - Challenges of a Hard Bid vs. ILPD contract type.



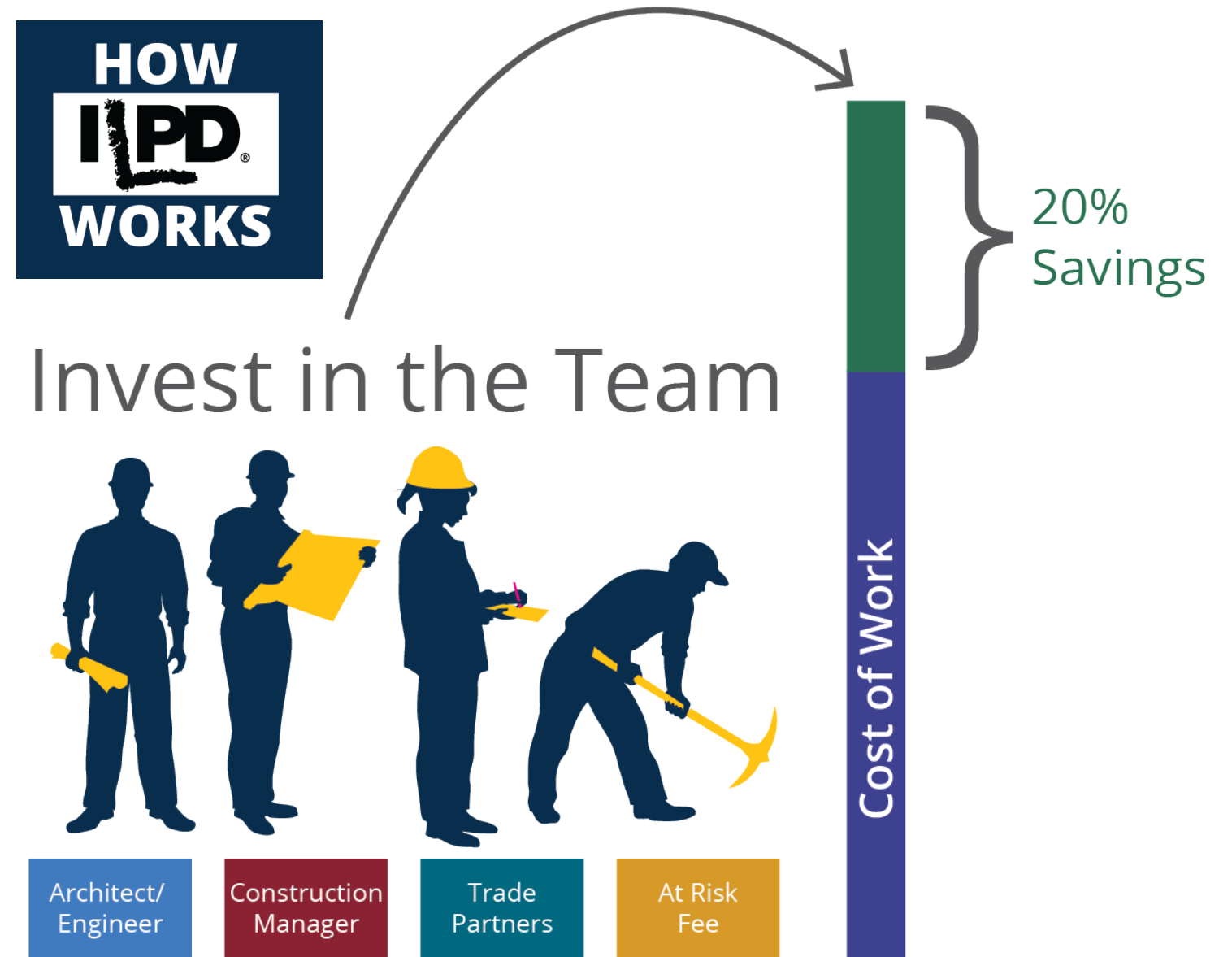


# Comparing ILPD vs. Hard Bid



# ILPD Environment

- Integrated Form of Agreement
- Reliable Trade Partners – GMP Contract
- Culture of Collaboration
  - Trade Partners involved in Design
- Continuity of project teams from project to project
- Shared experiences, Lessons Learned, Continuous Improvement
- Project Success = Team Success



# Hard Bid Environment

- Public Bid
  - Low bidder
- Lump sum subcontract agreements
- Bid plans and specs
- High tendency for change orders
- What's best for “me” mindset



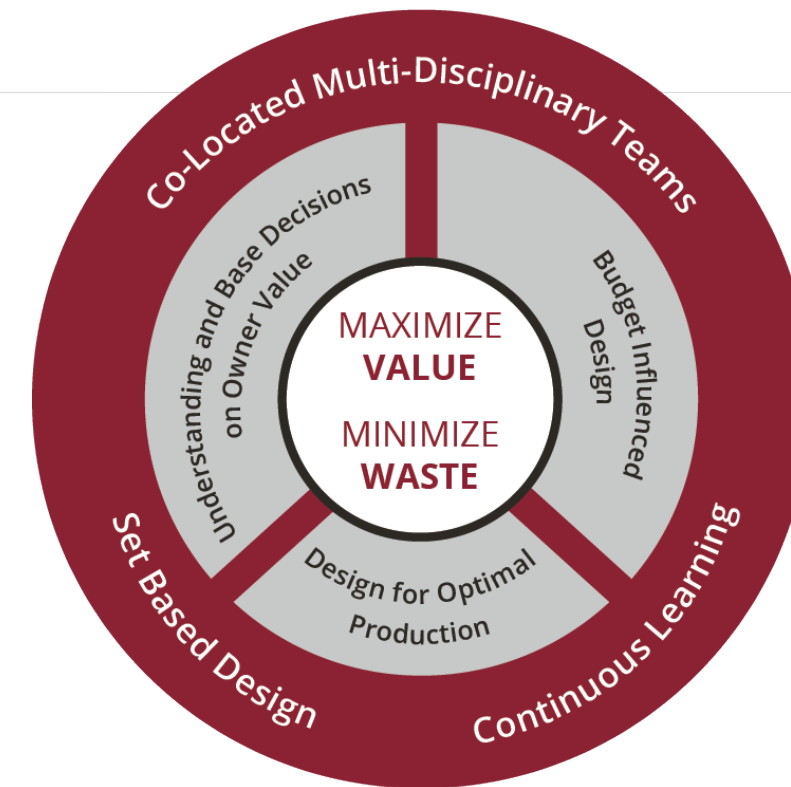
# Huntley Fire Station – Project Phases





# Preconstruction & Design Phase

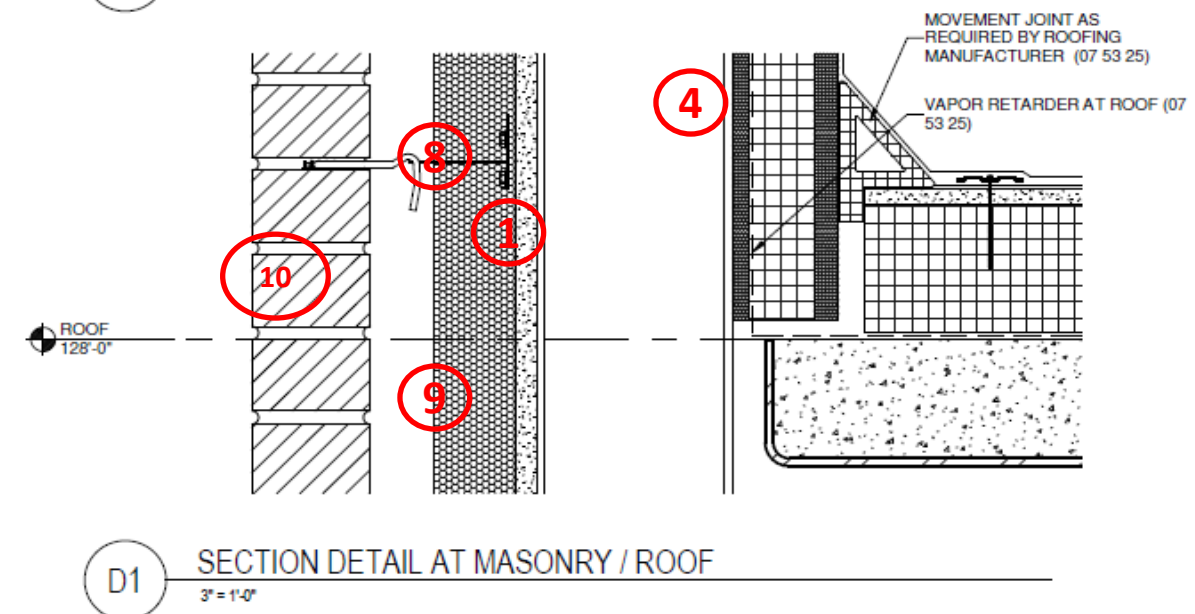
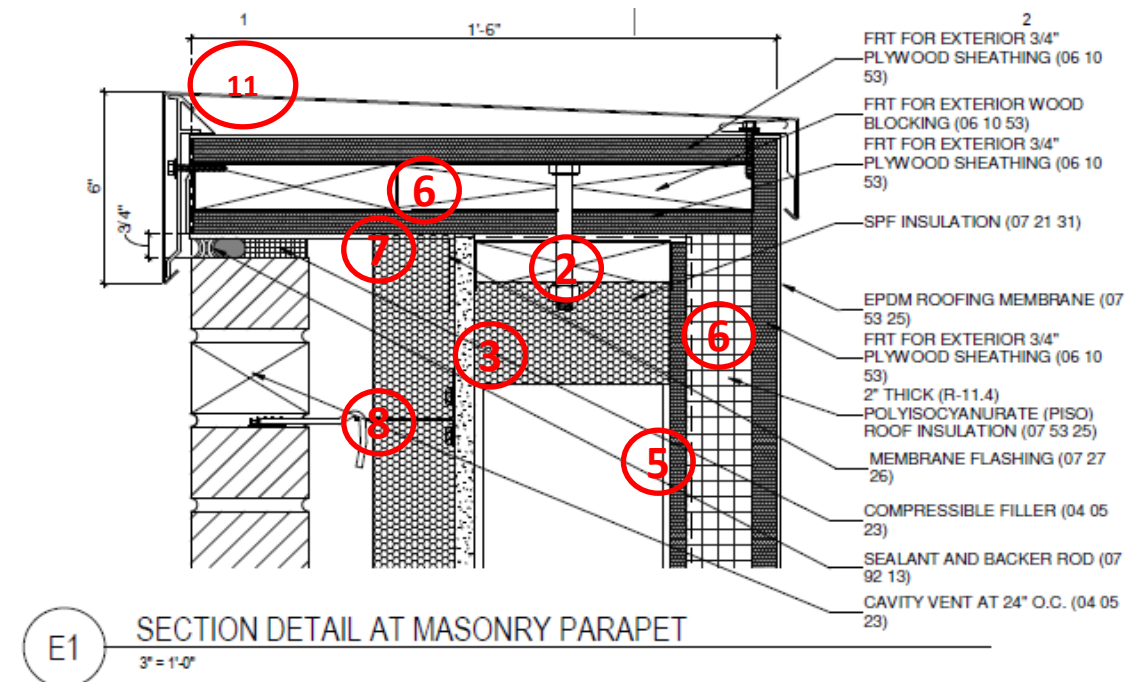
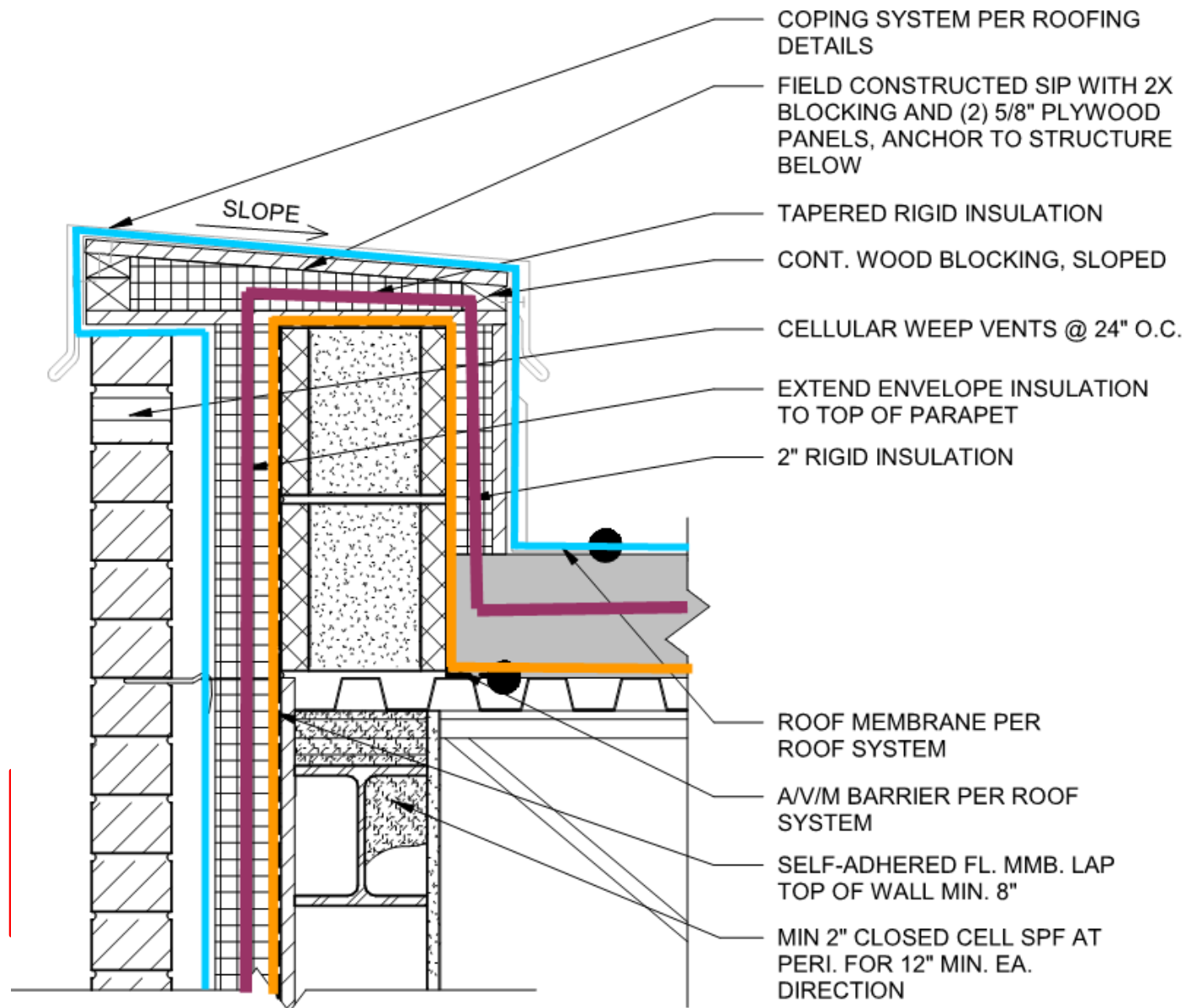
- Target Value Design (TVD)
  - Designed to an Allowable Budget
    - Identified Value for Owner
    - Maximizing Value
    - Transparency
  - Value Engineering
  - Constraint Management
  - Real Time Budgeting
    - Allows for Informed Decisions



Target Value Design Big Ideas:

|                                 |                               |   |
|---------------------------------|-------------------------------|---|
| Cross Functional Teams          | Set Based Design              | Do Not Impose Value onto the Customer                       |
| Early Trade Partner Involvement | Budget Influences Design      | Transparent Estimating                                      |
| Big Room                        | Design for Optimal Production | Built-in Reflection & Learning Focused on Eliminating Waste |

# Reconnecting the Team





# Construction Phase

- Create a Lean Culture
  - ILPD focused front end documents
    - Required participation in Last Planner and Pull Planning sessions
    - Collaborative Mindset & Attitude
    - Daily Huddles
- Target Value Management (TVM) Log
- Early Constraint Identification
- Frequent communication with owner



# Wins and Lessons Learned



# Wins – What Worked

- GMP Contract
- Target Value Design in Preconstruction
- ILPD Focused Front End Documents
- Building Information Modeling (BIM)
- Constraint Management
- Safety
- Target Value Management Cost Log
  - 50% of Contingency Saved and Used for Value Added items



## Financial

### Target Value Management

- Contingency Graph
- Productivity Tracking
- Real-time Cost



## Schedule

### Boldt Production System

- CPM
- Last Planner
- TAKT



## Quality

### Built-in Quality

- First Run Studies
- Virtual & Physical Mock-ups
- Testing



## Safety

### Built-in Safety

- CSI/STA
- Predictive Solutions
- Meta Posture



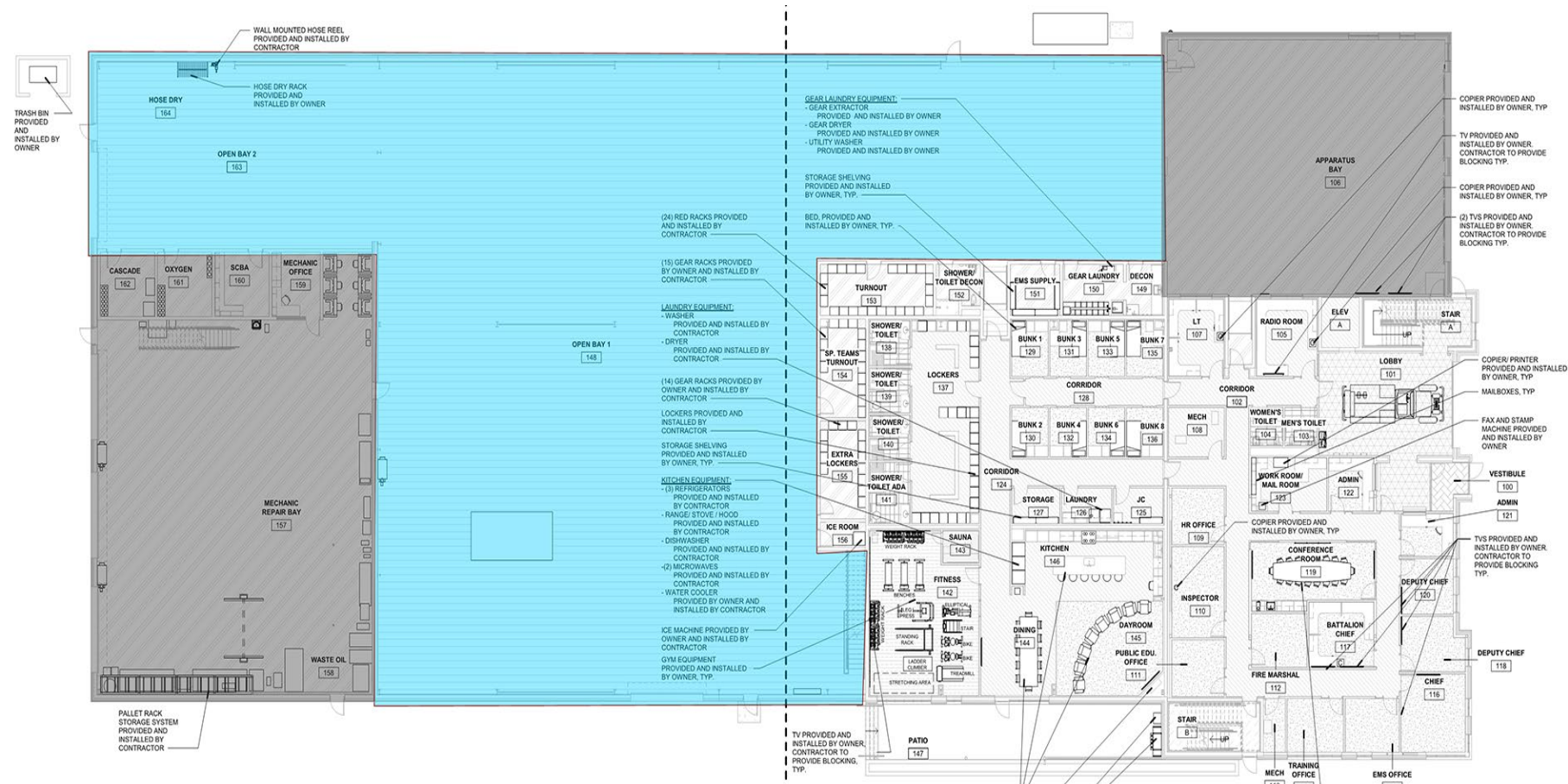
## People

### Lean Culture

- Small Wins
- Drake P3
- Growth Chart



# Added Value – Broadcast vs. Painted Flooring





# Lessons Learned

- Lean is not for everyone
  - Hard to break the mold on a single project
- Lump Sum Subcontractor
  - Challenge to prevent Change Orders
- Hard bid subcontractors less incentivized to provide VE options after awarded project
- Struggle to get subcontractors to help each other to ensure the project as whole is successful.



# How can you apply this tomorrow?

- *Where to Start*
  - IPD Agreement with Owner
  - Early involvement with Design Team
  - Use Target Value Design process to manage preconstruction phase.
  - Ensure alignment of expectations with Owner and Design team at all phases of the project.
  - Create IPD focused front end documents to be included in bid packages.
  - Use Target Value Management type cost log during construction phase.







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