

25TH ANNUAL



25TH LCI CONGRESS
OCTOBER 24-27, 2023

How to Build a Lean Culture from the Ground Up for Specialty Trade Contractors

Rob Walter – Chief Operating Officer

Jeff Cleary - General Superintendent

Blake Tormey - Process Improvement Manager

25 YEARS OF LEARNING: SUPERCHARGE YOUR LEAN JOURNEY IN THE MOTOR CITY

October 24th, 2023



25TH LCI CONGRESS
OCTOBER 24-27, 2023



Are you on the LCI app? This is the best way for us to receive feedback!

How to Build a Lean Culture from the Ground Up



Specialty Trade – Framing, Drywall, Plaster, Themed Construction
50%+ labor cost - \$125,000,000/year

Rob Walter – Background in design, project management & organizational management

Jeff Cleary – Background in field trades & leadership

Blake Tormey – Background in project analytics & operational controls

Congress Tracks:

Modifying Culture and Behavior for Success &

Gear Up Your Field Execution to Maximize Efficiency



Objective

- Learn what you need to do to build a Lean Culture in a specialty trade from scratch.
- Challenge = Culture Change
- 12 years since initial exposure to Lean
- Lessons learned from multiple approaches
 - Firehose
 - Discipline
 - Process and Tools will enable and build the Culture



Overview

1. Education Program
2. Certification & Recognition Programs
3. Enabling Tools
4. Coaching Program



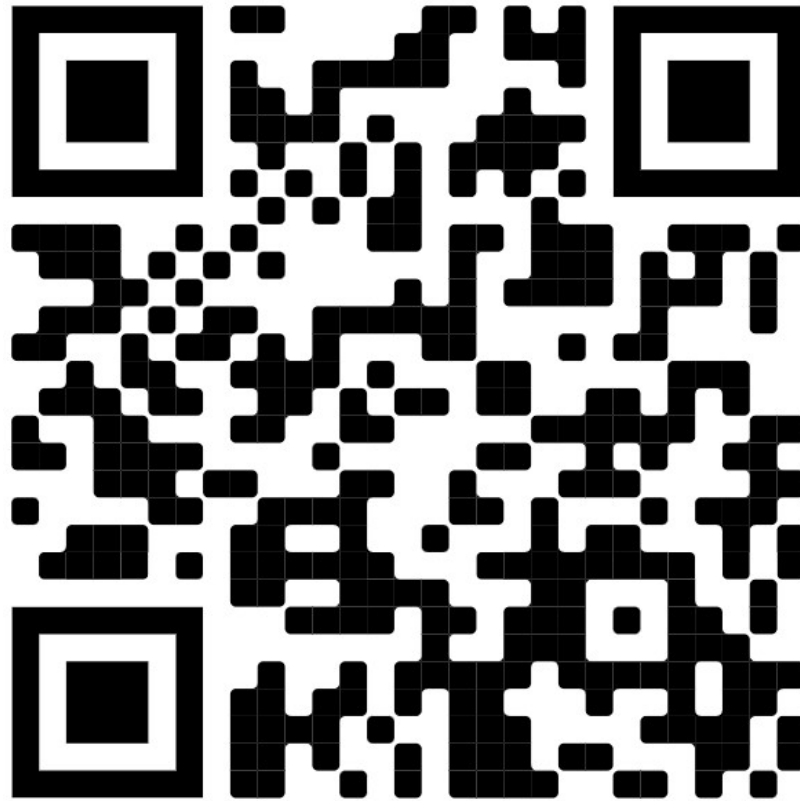
Interaction Around Participant LPS Stages



Live interaction app for questions and responses

- What is your role/position within your organization?
- What kind of company do you work for?
- What portion of LPS could you utilize the most?

Poll Everywhere Instructions:



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What is your role/position within your organization?

 25

Superintendent



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🌐 When poll is active, respond at **pollev.com/blaketormey896**

📱 Text **BLAKETORMEY896** to **22333** once to join

What kind of company do you work for?

Owner

Designer

Subcontractor

General Contractor

Student

Other

What portion of LPS could you utilize the most?

Milestones **A**

Phase Plan **B**

Pull Plan **C**

Weekly Work Plan **D**

Learning **E**

What is LPS?? **F**

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app



Basic Training for Lean and LPS / WWP

FOR FIELD LEADERS AND PROJECT MANAGEMENT

18-Hour Training Class Curriculum

6 Class Course, 3hr. Classes Once a Week

- Teach the Why
- Teach the Application
- Take Them Out of the Game (Field)

Start of Each Class

1. Review & discuss topics from last class (15 min)
2. Quiz (30 min)

End of Each Class

1. Plus / Delta
2. Questions / Review



Basic Training for Lean and LPS / WWP

EDGE Method

Explain

Demonstrate

Guide

Enable

“Tell me and I forget,
teach me and I may remember,
involve me and I learn.”

- Ben Franklin



Education Program - KHS&S Lean Basic Training for Field Operations Personnel (Bronze Training)





KHS&S Lean Basic Training for Field Operations Personnel

(Bronze Training) Curriculum

Class #1 – Lean House & Last Planner System

Class #2 – Stand Up Board, WWP, Teaching vs. Telling

Class #3 – 5-S Training & Visual Management Training

Class #4 – Weekly Improvement Meeting & Effective Meetings

Class #5 – Waste & Material Control

Class #6 – Full Dress Rehearsal – WWP, Teaching, & Daily Stand-Up Meeting



Program Overview Handout

6 CLASSES



Bronze Level Training for Operations Support & Field Personnel (6-Class Course)

OBJECTIVE: To train Field, Project Management (Project Managers, Project Engineers, Project Coordinators, and Site Administrators), Warehouse Managers, and Safety personnel in Last Planner System basics and basics of Lean Construction through a practical and hands-on approach aimed at immediate real world/project application.

AUDIENCE: Field, Project Management, Warehouse Managers, and Safety Personnel - Those who will lead daily and weekly Lean processes at the project level (Lead Craftsmen, Foreman, Superintendents, General Superintendents, Field Engineers, Project Engineers and Project Managers)

Lesson Plan: Lean House, Culture, Lean Stand Up Board, Budget, Weekly Work Plan

Class 1: Instructor Led (2 hours 30 minutes)

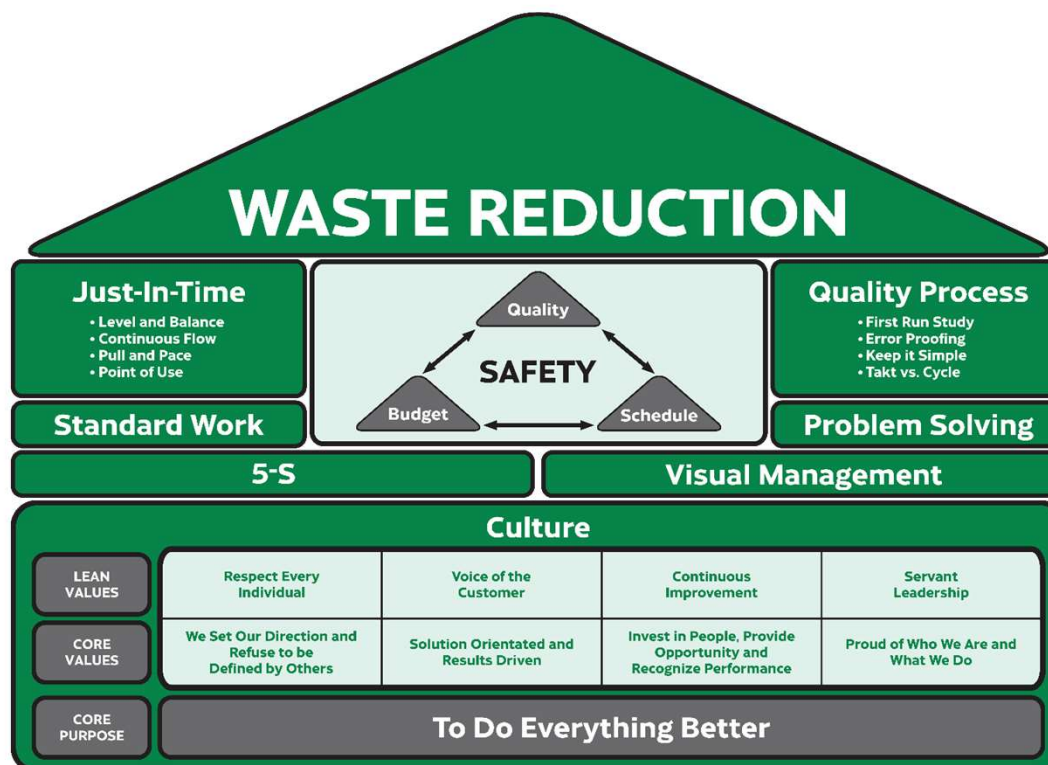
- A. Introduction to training and curriculum review (10 min)
- B. Lean House PowerPoint Slides (45 min)
 - 1. Overview Lean Values and Lean Principles
 - 2. Review the definition of Lean
 - 3. Explain the different levels of Lean Certification
 - 4. 9 Lean Value-Added Foundation
- C. Culture PowerPoint Slides (45 min)
 - 1. Core Purpose
 - 2. Core Values
 - 3. Lean Values
- D. Safety/Risk Resource and Class Offerings (15 min)
- E. Demonstrate reading an FSP, the basics of Last Planner System and Weekly Work Plan (WWP) for superintendents and foremen (30 min)
 - 1. Show the basics of reading each category of a budget.
 - 2. Review the superintendent WWP and how it is generated.
 - 3. Explain each category on the Weekly Work Plan sheet and the meaning behind each category.
- F. Wrap-up and Homework (5 min)
 - 1. Oh-no Circles
 - 2. Stop, Start, Continue

Authors: Greg Stedman, Rob Walter, & Blake Tormey KHS&S Contractors



Lean House

- Culture
- Core Purpose
- Core Values
- Lean Values





Last Planner System

- System Overview
- The Basics of a Weekly Work Plan (WWP)
 - Show the basics of reading each category of a budget.
 - Demonstrate how to calculate goals for the WWP.
 - Review the superintendent WWP and how it is generated.
 - Explain each category on the Weekly Work Plan sheet and the meaning behind each category.
 - Explain basics of Percent Plan Complete (PPC) chart and Tasks Made Ready (TMR) chart.
- Hands-On Learning Exercise





Exercise

Kim's Game #1

- Table Groups
- Each table to have report out person





Exercise

Kim's Game #1

- Rules:
 - You can get close, move around in anyway way, etc. But cannot touch or move the object .
 - No Talking.
 - For two minutes, write down what you see. Describe it in anyway but don't say what the object actually is.
 - After time, stop writing and each person will share how they described the object.





Exercise

Kim's Game #1

- GAME TIME! (2 Minutes)





Exercise

Kim's Game #1

- Report Out





Exercise

Kim's Game – Paper Clip

1. Shiny, metallic cylinder
2. Appears to be made from galvanized steel wire
3. Approximately 1/64" in diameter
4. Approximately 1 7/8" tall while bent
5. Has 3 radii
6. The larger radii are approx. 3/8",
7. Smaller radii are 1/4"
8. Two on one end and one on the other
9. Smallest radius is approximately half an inch below the other
10. Smallest radius is nested inside the other two curves
11. Outer leg is slightly longer than inner leg
12. Outer leg is 1 3/8" long, Inner leg is approx. 1"



Exercise



Kim's Game #2



Exercise



Kim's Game - Reflection





Exercise

Examples of other hands-on games to include in your training.

1. Parade of trades
2. 5-S numbers game
3. Lego building
4. House of cards
5. Peanut butter sandwich assembly
6. Marshmallow challenge

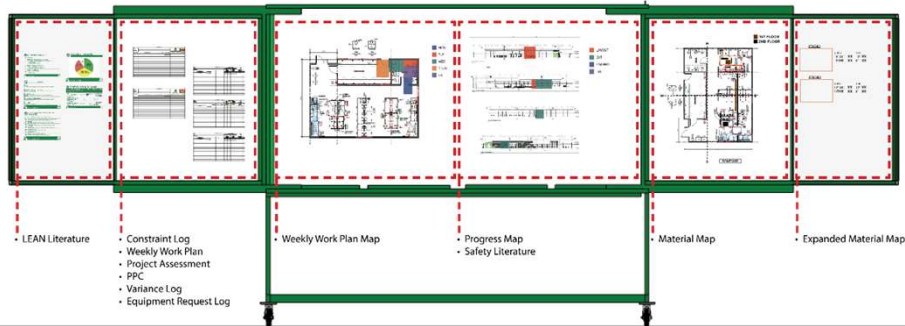
What are your favorite hands-on games?





Stand Up Board

- Setting up a Lean Stand Up Board:
 - Placement of each component on the Stand-Up Board.
 - Component and the intended information of each component.
 - Components tie together and are used in conjunction with each other.
 - Location of the Stand-Up Board on a jobsite.



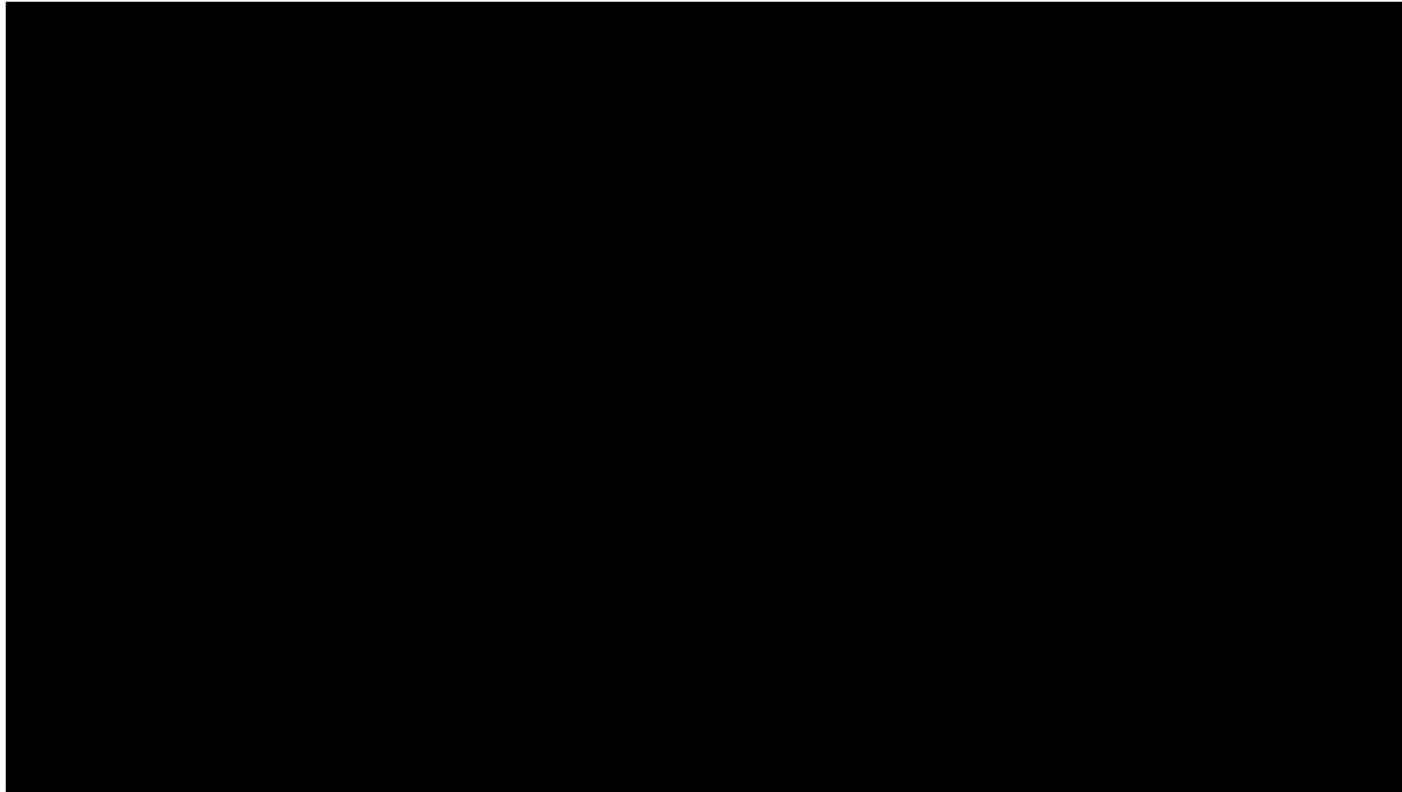
Stand Up Board

2



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Stand Up Board & WWP



WWP



- First hands-on use of WWP to gain familiarity and greater understanding



Write a mock Weekly Work Plan: Complete a blank Weekly Work Plan from the budget and superintendent's WWP and utilize Last Planner System (LPS) to generate Percent Plan Complete (PPC), Tasks Made Ready (TMR) and Variance Chart.

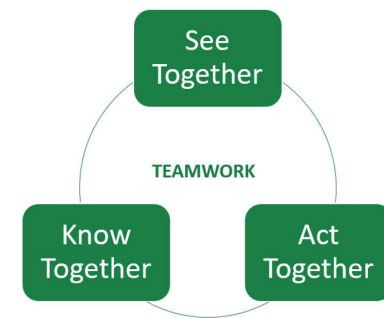


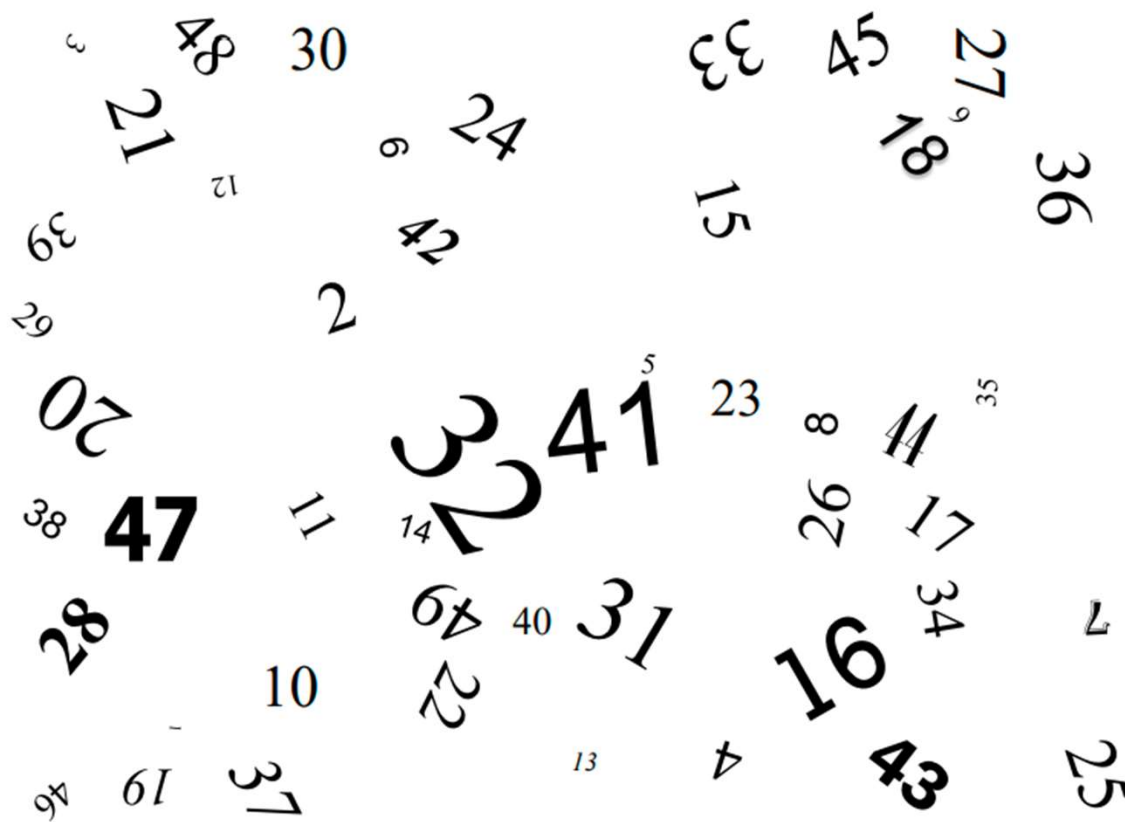


5-S Training & Visual Management Training

- 5-S - What, why, how, and applications
 - Sort
 - Set-In-Order
 - Shine
 - Standardize
 - Sustain
- Gang Box
- Visual Management - What, why, how, and applications
 - See Together, Know Together, Act Together
 - Inventory control cards
 - Tool control cards
 - Visual management of a material ordering tracking system
- Management of Constraint Log

Visual Management Triangle







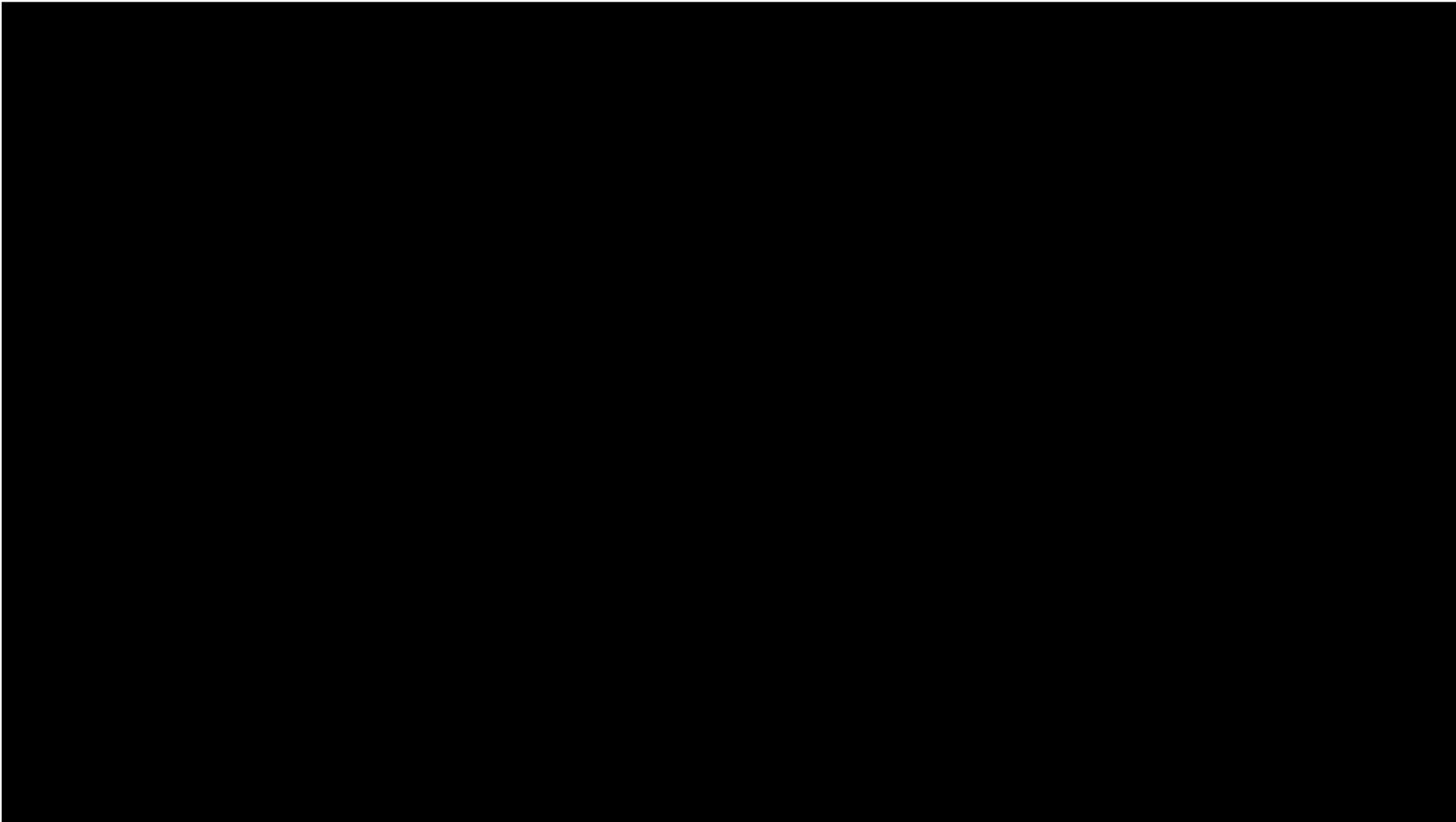
Weekly Improvement Meeting & Effective Meetings

- Weekly Meeting – What, Why, and How
- How to Hold Effective Meetings
 - Elements of a good action meeting
 - Purpose of action meetings
 - Purpose of superintendent improvement meetings
 - Review Improvement Meeting Assessment Form
- Speaking opportunity
 - Practice and get comfortable with public speaking and delivering Lean learning





Bad Meeting



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BREAK





Waste & Material Control

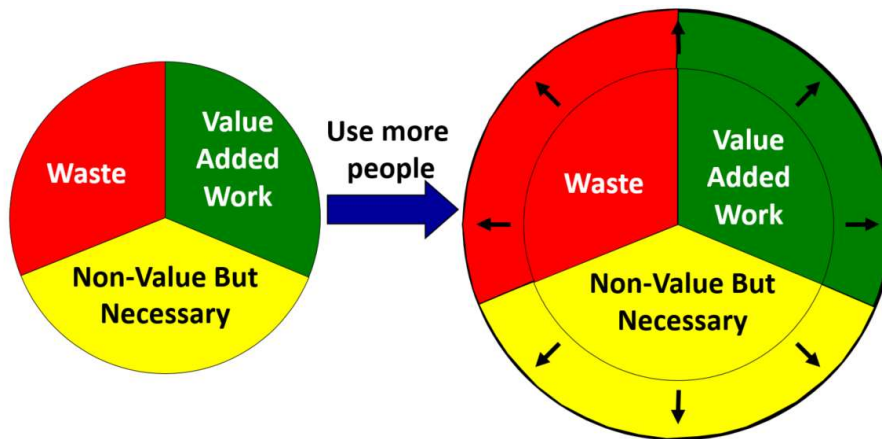
- 8 Types of waste



- How to get your work force engaged on eliminating waste.
- How to explain kinds of waste to your crew.

- Waste Walks

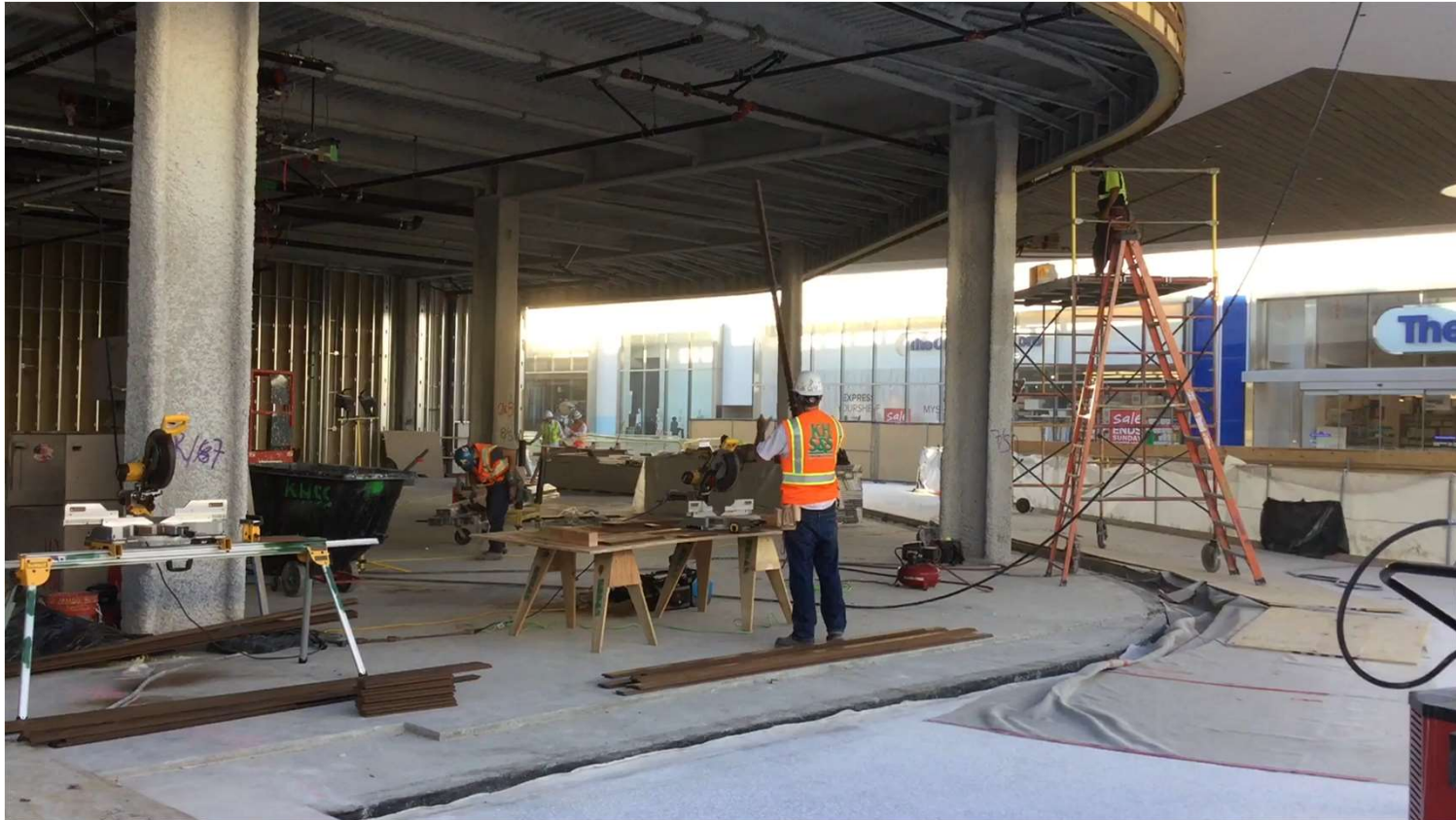
- Waste Walk Form & Waste Walk Summary



- 1. TRANSPORTATION** - Unnecessary movement of material and/or information based on the minimum required
- 2. INVENTORY** - Excess product, stock, materials, supplies, equipment or space greater than what is required by the system
- 3. MOTION** - Unnecessary movement of people or equipment that does not add value to the process
- 4. WAITING** - Idle time such as waiting for congestion / material to arrive / waiting for a meeting to start
- 5. OVER-PROCESSING** - Doing more work than necessary to meet customer requirements
- 6. OVER-PRODUCTION** - Producing more than is required or using excessive resources to meet actual customer demand
- 7. DEFECTS** - To work over again, to revise or to repeat a process usually in order to correct an error
- 8. UNUSED EMPLOYEE CREATIVITY** - Untapped potential and creativity of the people



Waste & Material Control





Waste & Material Control





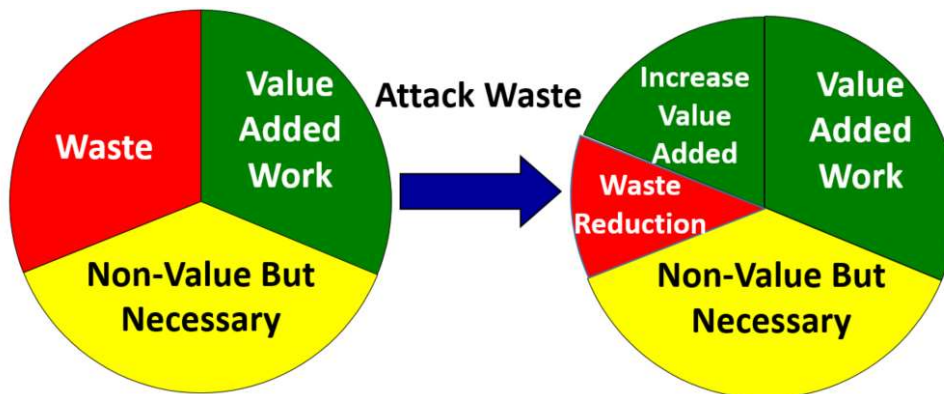
Open Discussion



What kind of waste do you see on your jobsite / in your work?

Waste & Material Control

- Material ordering, tracking, control & logistics
 - Importance of material inventory control
 - Material review in daily stand up meeting
- Point of use
 - What is “Point of Use”?
 - Importance of material location





Waste Factor – Per Day

Place your guess! Enter in a number of minutes.



🌐 When poll is active, respond at **pollev.com/blaketormey896**

📱 Text **BLAKETORMEY896** to **22333** once to join

Waste Factor - Per Day

5-10 Mins

15-30 Mins

35-60 Mins

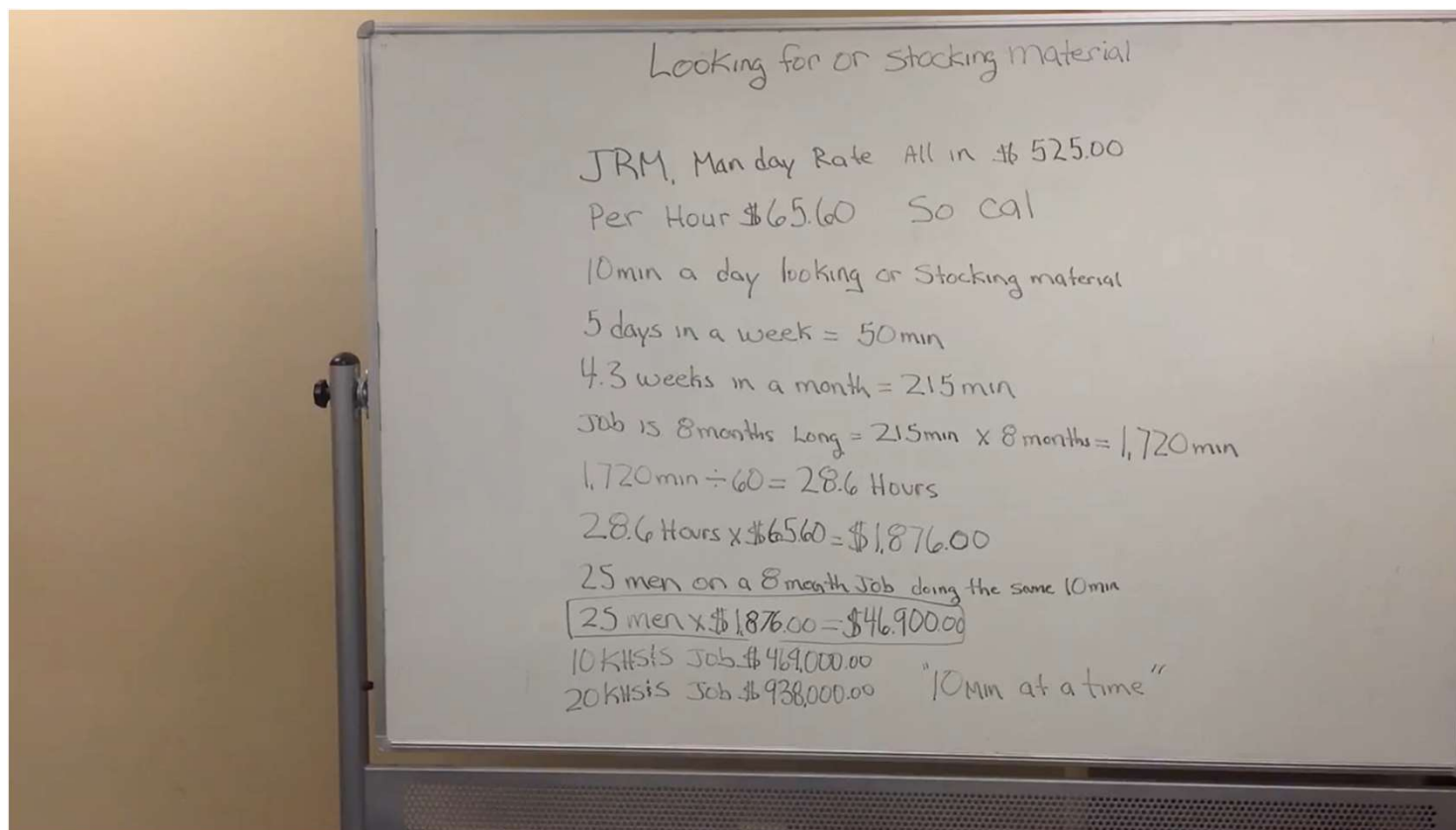
60-120 Mins

120+ Mins

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Waste Factor Video





Waste Factor – Per Day

Man day rate all in **\$525.00**

Per hour **\$65.60** So Cal

10 Min a day looking / stocking material

5 days a week (5x10) = 50 mins

4.3 in a month (4.3x50) = 215 mins

Job is 8 months long = 215min x 8 months = 1,720 minutes

1,720 mins /60 = 28.6 hours

28.6 hours x 65.60 = **\$1,876.00**

25 Men on a 8 month job

25 x \$1,876 = **\$46,900**





Full Dress Rehearsal - WWP & Daily Stand Up Meeting

- Lean Assessment Process
- Stand-up meeting & board assessments
- WWP & Stand Up
 - Write a plan and run a daily stand up meeting
 - Conduct actual assessments of each stand-up meeting.



Certification & Recognition Programs



Bronze Continuous Improvement Program (CIP)



Bronze Continuous Improvement Program (CIP) Handout

Theme: 1) Bronze Continuous Improvement Plan (Anaheim) 2) Introduction to Lean - Awareness Basics 3) Coaches Greg Stedman and Blake Torrey				Name: _____ Position: Foreman				Start Date: _____ Expected Completion: _____ Bronze Certified By: _____ Dates: _____																								
				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th># of actions</th> <th># complete</th> <th>% complete</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>LEAN TRAINING:</td> <td>23</td> <td>0</td> <td>0%</td> <td>Incomplete</td> </tr> <tr> <td>LEAN APPLICATION</td> <td>17</td> <td>0</td> <td>0%</td> <td>Incomplete</td> </tr> <tr> <td>SELF LEAN EDUCATION:</td> <td>6</td> <td>0</td> <td>0%</td> <td>Incomplete</td> </tr> <tr> <td>Totals</td> <td>46</td> <td>0</td> <td>0%</td> <td>Incomplete</td> </tr> </tbody> </table>			# of actions	# complete	% complete	Status	LEAN TRAINING:	23	0	0%	Incomplete	LEAN APPLICATION	17	0	0%	Incomplete	SELF LEAN EDUCATION:	6	0	0%	Incomplete	Totals	46	0	0%	Incomplete		
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SELF LEAN EDUCATION:	6	0	0%	Incomplete																												
Totals	46	0	0%	Incomplete																												

LEAN TRAINING:					LEAN APPLICATION				
ID	Action Item	Due Date	Status	Notes	ID	Action Item	Due Date	Status	Notes
1	Lean Basic Training (Course 1)				1	Achieve 75% or higher for 3 consecutive months on Lean Assessments			
2	Lean House Overview				2	Create complete WWP with no coaching			
3	8 Types of Waste				3	Display Variance on board and describe what they mean			
4	Culture Training				4	Conduct stand up meeting with no coaching			
5	Core Purpose				5	Recorded daily use of Foreman Walk Check-In			
6	Core Values				6	Create SWFL and walk a coach through it			
7	Lean Values				7	S-S all gang boxes (Everything has a place and everything in its place)			
8	5-S Training				8	3 month sustainment			
9	Visual Management Training				9	Inventory control systems in place and sustained			
10	Last Planner System (LPS)				10	Tool control systems in place and sustained			
11	Waste Walk Sheets				11	Effective visual management			
12	Standard Work for Leaders				12	Able to coach 5-S to teams			
13	Lean Stand Up Board				13	Able to coach 8 wastes to teams			
14	Weekly Work Plan				14	Able to coach Lean House to the teams (expert in Culture, 5-S and VM)			
15	WWP Map				15	Can conduct Kim's and 5-S game with team			
16	Progress Map				16	Utilizes +/-Δ			
17	Material Map				17	Any innovative improvement that can be shared			
18	Variance Chart				SELF LEAN EDUCATION:				
19	Constraint Log				ID	Action Item	Date	Status	Notes
20	Lean Assessment Process				1	Book Review			
21	Servant Leadership Video				2	Everything I Know About Lean I Learned in First Grade			
22	Kim's Game				3	5-S for Operators			
23	Bronze Certification				4	Lean Research:			
					5	Any article on any lean value			
					6	Examples of 5-S in other industries			

Bronze Follow Up:			
Date	Coach	Issues	Notes

Discussion/Follow Up Points:

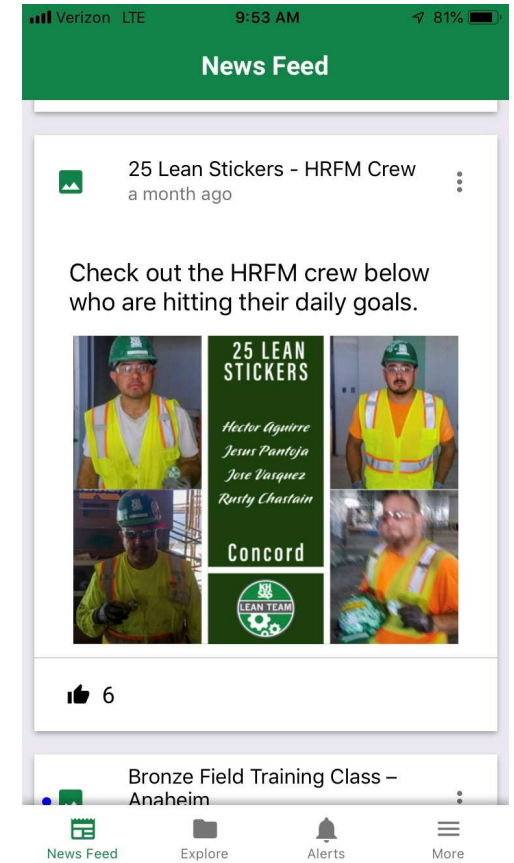
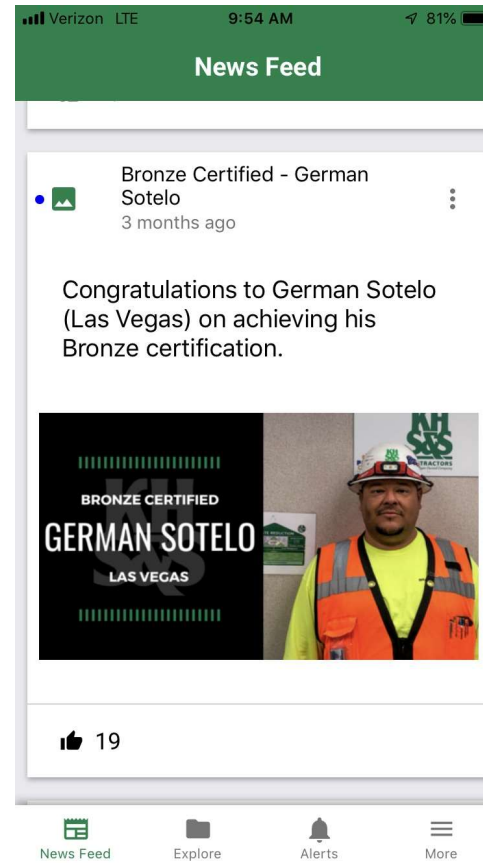
Bronze Certification and Recognition

- Bronze Certification
- \$1/hr increase from completion
- Recognition program
 - Stickers
 - T-Shirts



Bronze Certification and Recognition

- Recognition program
 - Vests
 - Social Media (Internal)



Bronze Certification and Recognition

- Recognition program
 - Lean Champion of the Quarter
 - President's Award



Group Discussion



What do you currently do for recognition?

How intentional are you about recognition?

Table Discussion

What challenges do you encounter in implementing or sustaining recognition programs?

What are the best practices or successes around recognition programs?

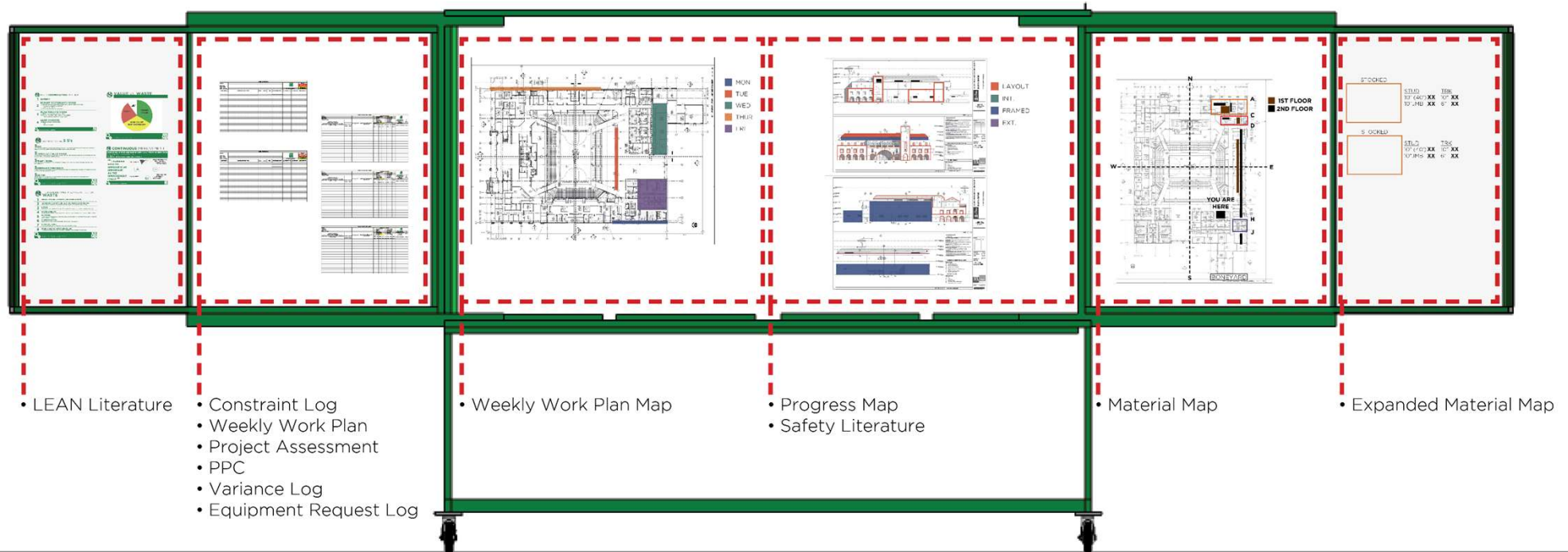


How to Set Up a Daily Stand-Up Board



Stand Up Board

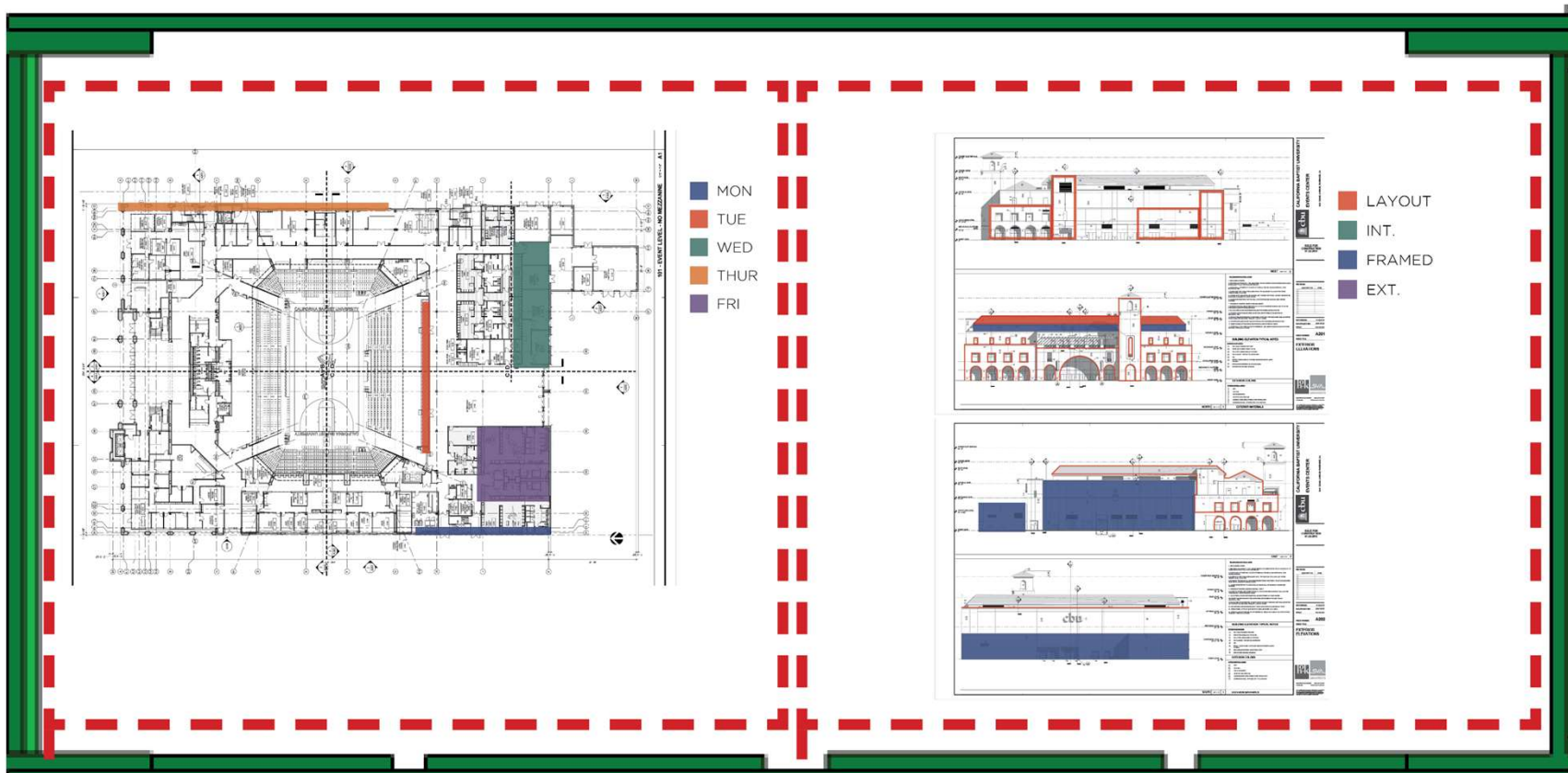
The board is the tool that enables the meetings and learnings that build the culture.



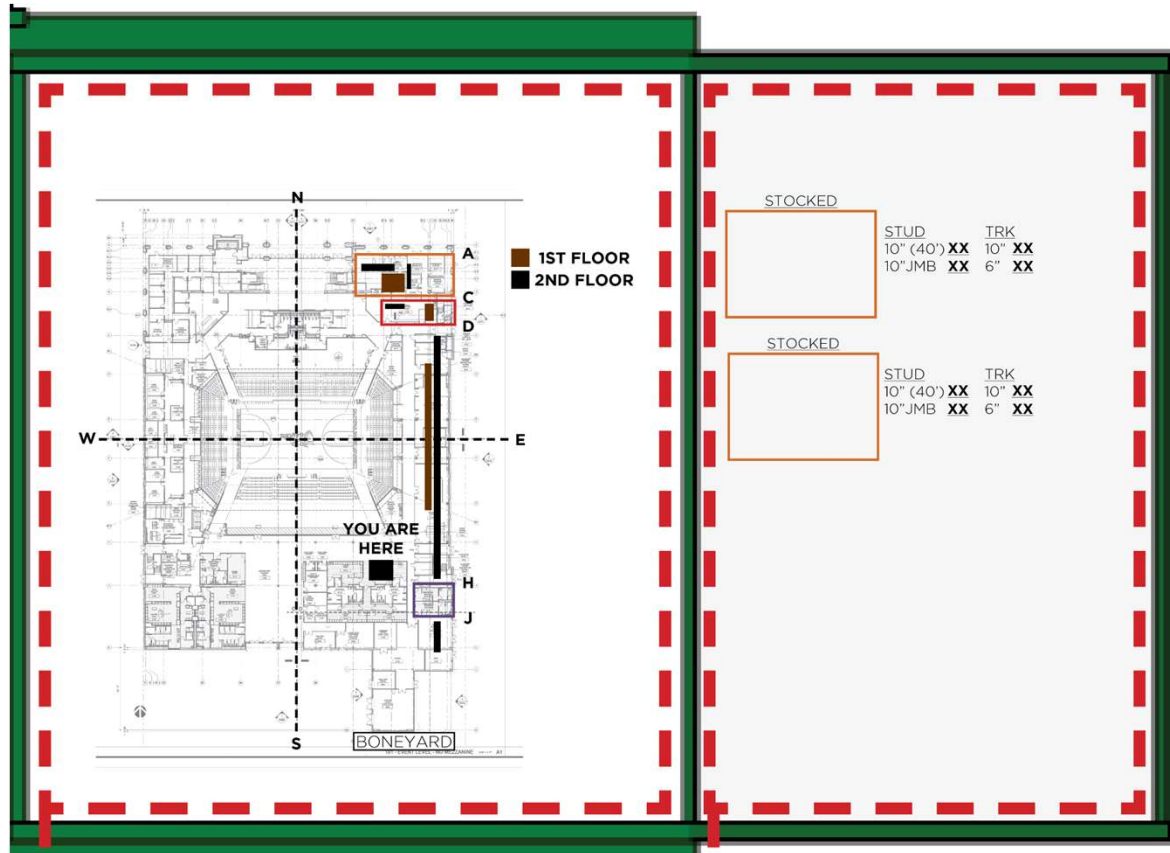
Stand Up Board Zoom into three segments – Agenda Handouts



Stand Up Board Zoom into three segments

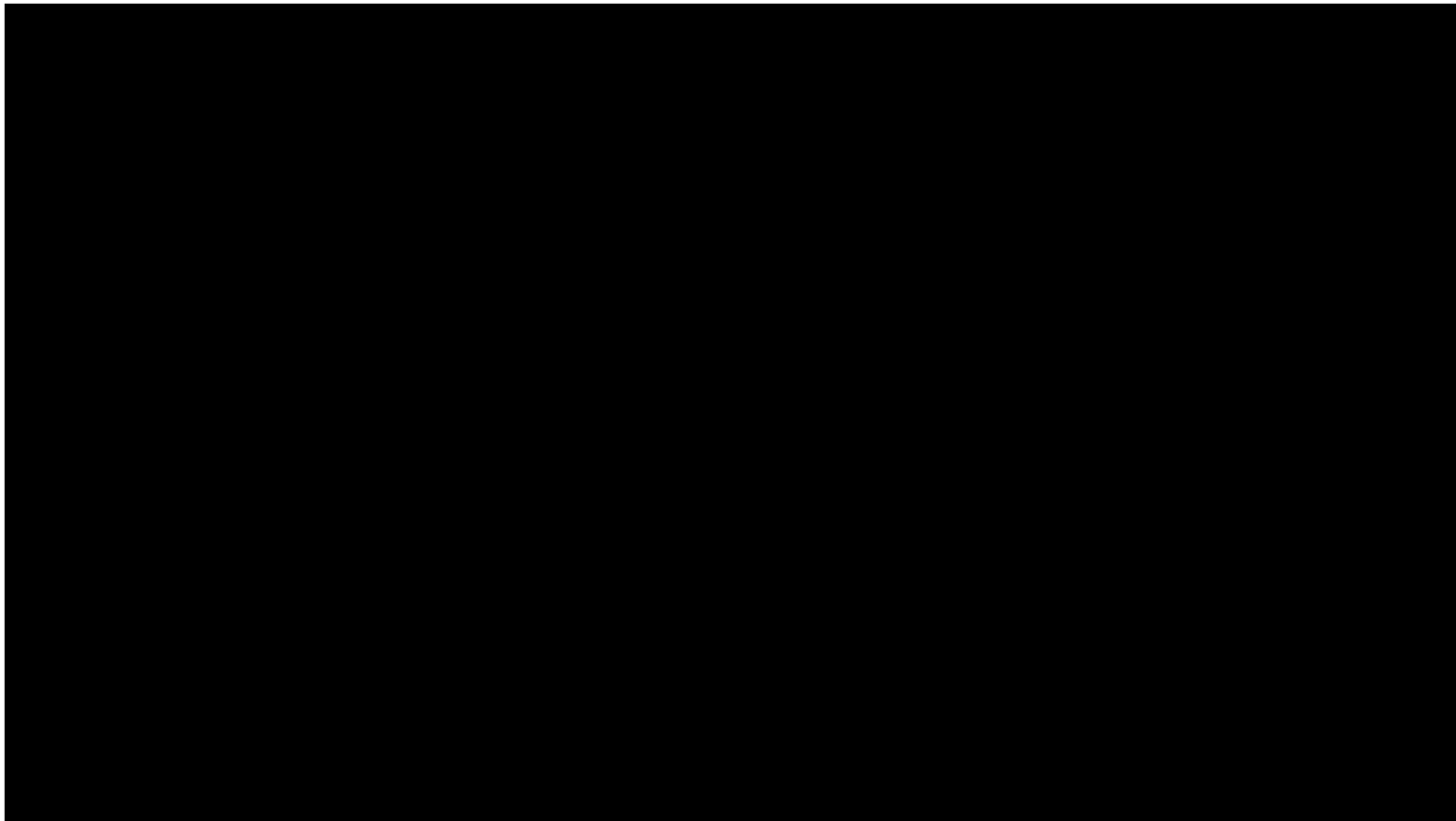


Stand Up Board Zoom into three segments



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Lean Stand Up Meeting



Assessment Program

© LEAN CONSTRUCTION INSTITUTE



Lean Construction Institute
Transforming Design and Construction

Assessment Program

- Assessment form



How to use the assessment information to coach



7/16/2021 C:\Users\inaomi.rivas\Documents\Copy of Lean Project Assessment - Daily Stand Up Template (7-9-2021).xslm

Summary & How can you apply this tomorrow?

- Education
 - Customized to company core **purpose and values**
 - Create a training course **specific to your business**
 - Use training time for **hands-on learning** that will be **applied in the field immediately**
- Certification & Recognition
 - Create **support and accountability** mechanisms that carries the application and growth further
 - Provide an **incentive** to change culture - WIIFM
 - **Recognize** Lean growth & behaviors
- Enabling Tools
 - Create **tools to enable** culture change
- Coaching
 - Create **feedback** system for lean coaching and growth





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In the spirit of continuous improvement, we would like to remind you to complete this session's survey! We look forward to receiving your feedback.

25 YEARS OF LEARNING: SUPERCHARGE YOUR LEAN JOURNEY IN THE MOTOR CITY

QUESTIONS?



Contact Us

Rob Walter

Chief Operating Officer

Rob.Walter@khsswest.com

Jeff Cleary

General Superintendent

Jeff.Cleary@khsswest.com

Blake Tormey

Process Improvement Manager

Blake.Tormey@khsswest.com





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Thank you for attending this presentation. Enjoy the rest of the 25th Annual LCI Congress!