Introduction to Preplanning

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This session is eligible for
1 Continuing Education and 1 Contact Hour.

For these hours to appear on your certificate, you must:

- Have your badge scanned at the door
- Attend 90% of this presentation
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Two Types of Pre-Planning

- Job Pre-Planning
- Task Pre-Planning

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Job Pre-Planning

- Understand how the preplanning process will:
  - Improve the bottom line
  - Develop staff growth
  - Build project management teams
  - Improve communications between team members
- Planning the project including:
  - Planning boards
  - Make certain check lists
  - Jobsite meetings

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Life Cycle of Project

- Procure
- Preplan
- Construct
- Debrief

Only Successful Contractors
Preplan & Debrief

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"Identify some of the biggest issues you run into when trying to plan out your day or week?"

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Solving the Issues

- So how is that list different from your previous job?
- And if not - what are you doing differently on your current project?

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One Definition of Insanity is Expecting Different Results from the Same Behavior

So what will you do different on your next project?

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Why Plan?

- Delays: materials, equipment, manpower, subcontractors, inspectors, previous work, etc.
- Congestion
- Unnecessary movement craft & equipment
- Unnecessary transport materials & equipment
- Ineffectively/inefficiently processing work
- Defects and rework
- Unused employee's creativity
- Jobsite hazards

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Pre-Job Kickoff Meeting Template

PRE-JOB CONFERENCE CHECKLIST AND REPORT			
Name of Job:			Job #:
Prime or Subcontracted?			Completion Date:
General Contractor:			Liquidation Damages:
Estimator:			Foreman:
Bond:			Insurance:
Progress Billing Date:			
Date of Conference:			Place:
Persons of Interest:			
Plans and Specs Reviewed:			Estimate Reviewed:
Job Procedure Reviewed:			Cost Breakdown Reviewed:
Special Conditions:			
Materials	Master Material List Issued:		
	Charge Slips for Major Materials Written:		
	Delivery Schedules Established:		
	Major Suppliers Selected:		
	Shop Dwgs, Etc., Ordered:		Date Due:
Manpower	Scheduled:		Type of Crew:
	Special Conditions (travel, premium time):		
	Job Shack:	Fencing:	Telephone:
Tools & Equipment	Tools Ordered:		Remarks:
	Job Boxes:		Special Equipment:
Copies Distributed to:			Controller:
			Supt:
Gen. Manager			Estimator:
Purchasing:			Foreman:
General Comments:			

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Planning Meeting Checklist

PREPLANNING MEETING CHECKLIST		
Date:		**Job:**
Attendees:		
Sequence		
Check	**Item**	**Comments/Action Required**
	Review Job Data Sheet	
	Review Scope of Work	
	Review Direct Job Costs in Bid	
	Review Job Site Organization	
	Review Safety Requirements	
	Report Procedures	
	Review EEO Requirements	
	Review Job Records	
	Reporting Procedures	
	Review Billing Procedures and Requirements	
	Review Quality Control Procedures	
	Review Paperwork Flow	
	Review Start-up Procedures	
	Review Short Interval Planning Procedures	
	Review Requirements for Operation/Maintenance Manuals	
	Review Completion of Project	
	Review Plans & Specifications	
	Review Equipment Purchase Orders	
	Review Material Purchase Orders	
	Prepare Equipment Delivery Requirements	
	Prepare Material Delivery Requirements	
	Prepare Fabrication Schedule (if applicable)	
	Review Material & Equipment Handling Requirements	
	Determine Special Tools & Rigging Required Material Handling	
	Determine Req. for Cranes, Hoists, Required Material Handling	
	Review Special Tools & Equipment for Installation	
	Review Activities Schedule	
	Review General Contractor Schedule	
	Review Detailed Schedule	
	Review Subcontractor Composite Crew Requirements	
	Review and Complete Labor Unit Breakdown	
	Prepare Manpower Loading Chart	
Subcontractors		
Trade	**Subcontractor**	**Comments/Clarifications**
Restrictions on Purchased Items		
Control Delivery Items and Dates		

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Checklist Topics

- Review Job Data Sheet
- Review Scope of Work
- Review Direct Job Costs in Bid
- Review Job Site Organization
- Review Safety Requirements
- Report Procedures
- Review EEO Requirements
- Review Job Records
- Reporting Procedures
- Review Billing Procedures and Requirements
- Review Quality Control Procedures
- Review Paperwork Flow
- Review Start-up Procedures
- Review Short Interval Planning Procedures
- Review Requirements for Operation/Maintenance Manuals

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Checklist Topics – Page 2

- Review Completion of Project
- Review Plans & Specifications
- Review Equipment and Material Purchase Orders
- Review Purchase Orders
- Prepare Equipment and Material Delivery Requirement
- Prepare Fabrication and Pre-Fabrication Schedule
- Review Material & Equipment Handling Requirements
- Determine Special Tools & Rigging Required Material Handling
- Determine Req. for Cranes, Hoists, Required Material Handling
- Review Special Tools & Equipment for Installation
- Review General Contractor Schedule
- Review Detailed Schedule
- Review Subcontractor Composite Crew Requirements
- Review and Complete Labor Unit Breakdown
- Prepare Manpower Loading Chart

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Key Concept

- None of us are as smart as all of us!
  - Pre-planning should include:
    - Foreman
    - Project Manager
    - Warehouse Manager
    - Major Suppliers
    - Estimator
    - Who Else

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Slide 14

M9 Show a group of folks working together?
Mark, 12/27/2016

"The plan is nothing, planning is everything."
- Dwight D. Eisenhower, President

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Avoid the Excuses*

1. No formal pre-planning process in place
2. Upper management doesn't support effort
3. Not enough time--other priorities--support personnel not available
4. No measurement or accountability from management
5. Foreman not available
   a. Not off other job in time
   b. Had to start onsite immediately
6. Poor PM time management

* From the Hanna Study

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The Pre-Planning Kickoff Meeting

- Objectives:
  - Provide project overview
  - Identify specific project challenges and opportunities
  - Assign specific responsibilities
  - Provide available documentation
  - Determine preplanning meeting date

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Benefits of the Pre-Planning process

- Deliver quality projects
- Create the most productive workforce
- Create a culture of continuous improvement
- Increase competitive advantage
- Generate post-bids write-ups

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Forward Looking

- Detailed Analysis & Planning of an Operation Before it has Started
- Predicting How Work Will Move Through Space & Time
- Identifying the Required Resources for an Operation

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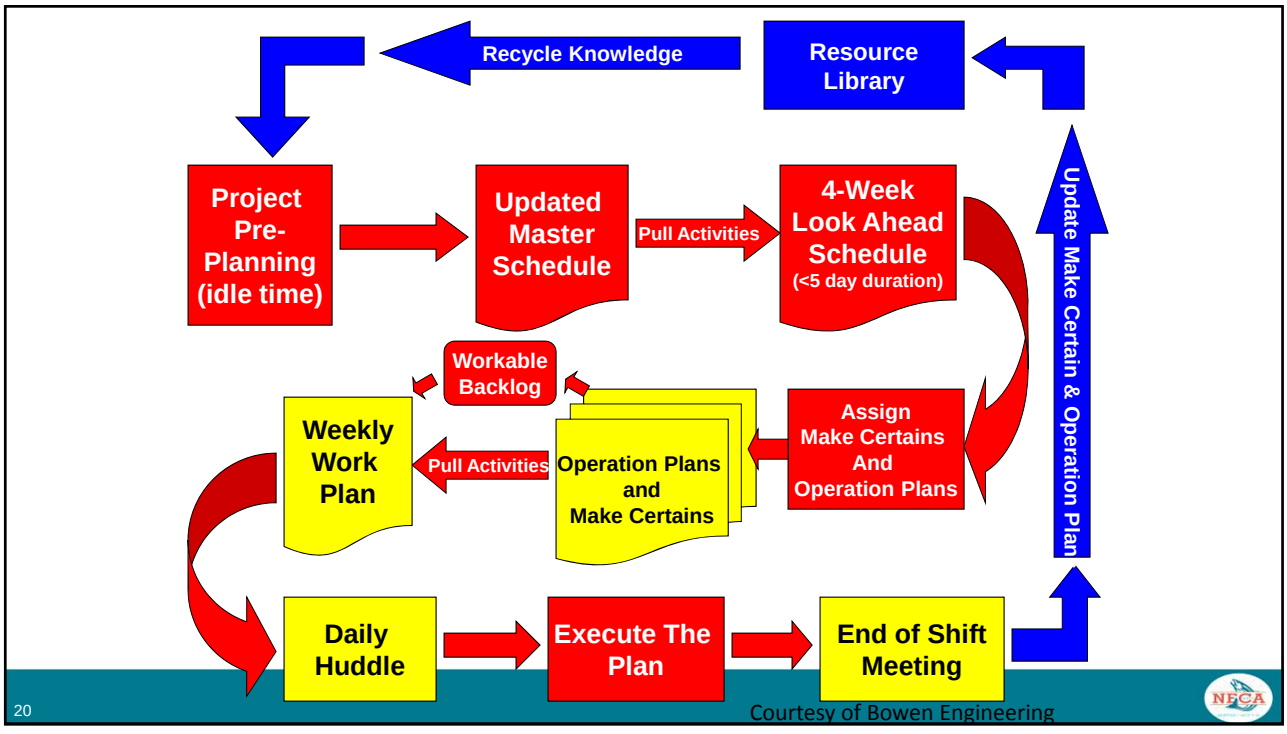

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Courtesy of Bowen Engineering

Task Pre-Planning

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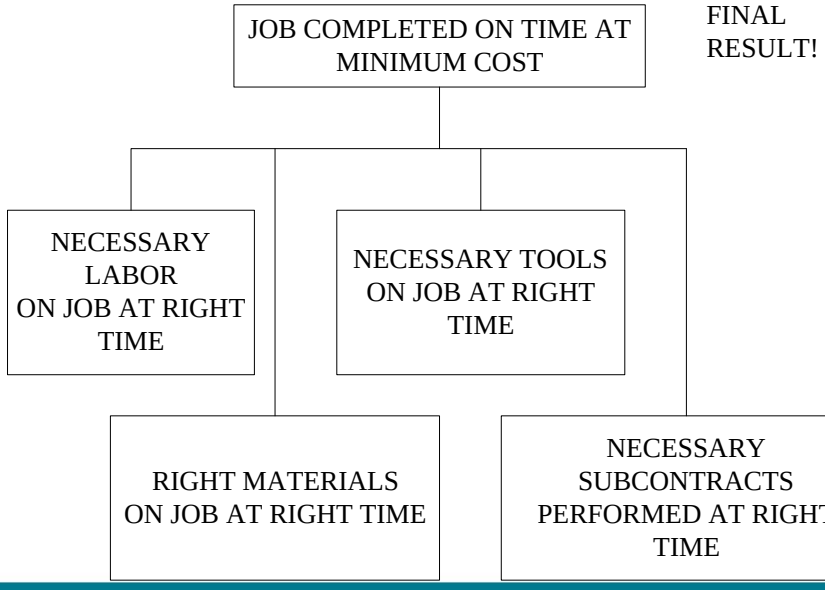
JOB PLANNING SIMPLIFIED



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Breakthrough

- Belief that Potential Productivity Exceeds Actual by 2:1, 3:1, OR 4:1
- Historical Budgeting
  - By Accounting Department
  - Bid Budget VS Actual Output
  - Cost Report

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Operation Plans
Step No. 1 - Analyze & Identify The Potential of an Operation

- Review previous operation plans
- Identify specific steps
- Duration for each step
- Resources for each step
- Work Process & Resource Utilization Chart

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Operation Plans
Step No. 2 - Establish Minimum Workzone Expectations (MWE's)

- Make Certain Tasks for each step
- Sketches, layout, additional drawings, etc.
- Consult experts (in-house, vendor, subcontractor, etc..)

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Operation Plans
Step No. 3 – Determining Execution Criteria

- Definition, purpose, and importance of the Operation Production Plan
- Points to consider when developing a plan

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Daily Huddle Meeting Agenda

- Safety
  - Review JSA / hazard analysis
  - What are you doing different today?
  - What could go wrong today?
  - Look out for each other
- Today's expectations
  - By AM Break? By Lunch? By End of Shift?
- Coordination w/ others (client, subs, primes, etc..)
- Special site conditions
- Quality issues

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Significant Causes of Labor Inefficiency *

1. Congestion
2. Out-of-sequence work
3. Adverse weather
4. Inadequate supervision
5. Work performed while facility is in operation
6. Lack of information
7. Lack of equipment
8. Lack of tools
9. Lack of materials
10. Rework

*Thomas and Oloufa, in *Construction Productivity,* 2008

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Pre-Planning Checklist

- Identify needed resources
  - What information do you need?
  - What information do you have?
  - What information is needed by others?
    - Shop Foreman
    - Warehouse manager
    - Job foreman
    - Business Agent

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Topics to Consider in the Procurement of Resources

- What resources are required?
- Where will the resources be obtained?
- What will the resources cost
- When will they be required
  - For how long
- Strategies to avoid hoarding
- Delivery Methods

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Pre-task Planning Form

Pretask Plan

Foreman:

Date: Time: AM or PM

Project:

Location:

Task:

Potential Hazards Present

- ☐ Pinch points ☐ Chemical burn
- ☐ Materials/scrap ☐ Thermal burn
- ☐ Elevated work ☐ Slips, trips, falls
- ☐ Cave-in ☐ Electrical shock
- ☐ Cuts ☐ Fire
- ☐ Heat stress ☐ Noise
- ☐ Rigging ☐ Overhead work
- ☐ Strains, sprains ☐ Harmful vapors
- ☐ Abrasions ☐ Overextension

Hazard Elimination

Personal Protective Equipment

- ☐ Safety harnesses ☐ Special gloves
- ☐ Protective clothing ☐ Eye protection
- ☐ Hearing protection ☐ Face shields
- ☐ Safety footwear ☐ Respirators
- ☐ Other:

Specific Safety Measures

- ☐ Toeboards, netting ☐ Eyewash, shower
- ☐ Use monitor ☐ Housekeeping
- ☐ Slope, shore, t-box ☐ Scaffold
- ☐ Set safe position ☐ Contain sparks
- ☐ Fire extinguisher ☐ Erect barricades
- ☐ Use proper tools ☐ Get help
- ☐ Change procedure ☐ Contain materials
- ☐ Other:

Items Verified

- ☐ Permits obtained ☐ Task reviewed

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Think TIMMESS

- T ools
- I nformation
- M aterial
- M anpower
- E quipment
- S pace
- S afety

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Questions?

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Don't forget…

- 10:15 am – 11:30 am – Opening General Session with Amy Purdy
- 11:30 am – 5:00 pm – NECA Show Hours

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