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
- Fill out the online evaluation for this session: www.necanet.org/2017Seattle
Two Types of Pre-Planning

• Job Pre-Planning
• Task Pre-Planning

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
Life Cycle of Project

- Procure
- Preplan
- Construct
- Debrief

Only Successful Contractors
Preplan & Debrief

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

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

So what will you do different on your next project?
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

Pre-Job Kickoff Meeting Template

<table>
<thead>
<tr>
<th>PRE-JOB CONFERENCE CHECKLIST AND REPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Job:</td>
</tr>
<tr>
<td>Prime or Subcontracted?</td>
</tr>
<tr>
<td>General Contractor:</td>
</tr>
<tr>
<td>Estimator:</td>
</tr>
<tr>
<td>Mile:</td>
</tr>
<tr>
<td>Bond:</td>
</tr>
<tr>
<td>Total Billing Date:</td>
</tr>
<tr>
<td>Place of Conference:</td>
</tr>
<tr>
<td>Persons of Interest:</td>
</tr>
<tr>
<td>Plans and Specs Reviewed:</td>
</tr>
<tr>
<td>Job Procedure Reviewed:</td>
</tr>
<tr>
<td>Cost Breakdown Reviewed:</td>
</tr>
<tr>
<td>Special Conditions:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Material List Issued:</td>
</tr>
<tr>
<td>Charge Slips for Materials Written:</td>
</tr>
<tr>
<td>Delivery Schedules Established:</td>
</tr>
<tr>
<td>Major Suppliers Selected:</td>
</tr>
<tr>
<td>Shop Drawings, Etc., Ordered:</td>
</tr>
<tr>
<td>Date Due:</td>
</tr>
<tr>
<td>Special Conditions (travel, premium time):</td>
</tr>
<tr>
<td>Job Shack:</td>
</tr>
<tr>
<td>Fencing:</td>
</tr>
<tr>
<td>Telephone:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tools &amp; Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tools Ordered:</td>
</tr>
<tr>
<td>Remarks:</td>
</tr>
<tr>
<td>Job Boxes:</td>
</tr>
<tr>
<td>Special Equipment:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Copies Distributed to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controller:</td>
</tr>
<tr>
<td>Shop:</td>
</tr>
<tr>
<td>Estimator:</td>
</tr>
<tr>
<td>Foreman:</td>
</tr>
</tbody>
</table>

| General Comments: | |
|-------------------|
### 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
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

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
Show a group of folks working together?
Mark, 12/27/2016
“The plan is nothing, planning is everything.”
- Dwight D. Eisenhower, President

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
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

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
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
Task Pre-Planning

JOB PLANNING SIMPLIFIED

FINAL RESULT!

JOB COMPLETED ON TIME AT MINIMUM COST

NECESSARY LABOR ON JOB AT RIGHT TIME

NECESSARY TOOLS ON JOB AT RIGHT TIME

RIGHT MATERIALS ON JOB AT RIGHT TIME

NECESSARY SUBCONTRACTS PERFORMED AT RIGHT TIME
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

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
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.)
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

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
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

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
Pre-task Planning Form

Think TIMMESS

- Tools
- Information
- Material
- Manpower
- Equipment
- Space
- Safety
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