

An Applied Tool to Improve Pre-Task Planning in Construction

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Online Evaluation



CPWR – The Center for Construction Research and Training

- A nonprofit organization established by NABTU (North America's Building Trades Unions) in 1990
- Located in Silver Spring, MD
- Activity areas: research, training, and service
- NIOSH's [National Construction Center](#)
- Dedicated to reducing occupational injuries, illnesses and fatalities in the construction industry

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CPWR's Project Team



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Project AIMS

Project: CPWR's "Prevention through Augmented Pre-Task Planning" funded by NIOSH.

AIMS: Enhance the quality of Pre-Task Planning (PTP) in construction, particularly in electrical construction.

- Identify gaps and shortcomings in current PTP practices
- Explore effective strategies to fill the gaps
- Develop an applied tool to help practitioners assess and improve their PTP process



Why Pre-Task Planning?

Prevention-through-Design (PtD):



"PtD encompasses all the efforts to anticipate and design out hazards to workers in facilities, work methods and operations, processes, equipment, tools, products, new technologies, and the organization of work. The focus of PtD is on workers who execute the designs or have to work with the products of the design."



Why Pre-Task Planning?

"When and how to address hazards associated with work methods, operations, and work organization?"



Why Pre-Task Planning?

"When and how to address hazards associated with work methods, operations, and work organization?"

Pre-Task Planning



Pre-Task Planning

- Research findings suggest that most work-related injuries could be prevented by:
 - Proactively identifying hazards and unsafe conditions associated with each task, tools/equipment, materials, work methods, and jobsite
 - Properly addressing hazards using effective controls before work begins
- When and how to recognize and address hazards?
- Pre-Task Planning (PTP)** is a process performed before each task starts to discuss the steps of work, the hazards, and available controls. This process may also be known as JHA, JSA, morning huddle, etc.



"... when we've done something a thousand times before, we begin to overlook things. We assume that the next time will be just like the last.

We are so used to doing what we've always done that we don't stop to question whether it's the right thing to do at all."

James Clear – Atomic Habits: An easy & proven way to build good habits & break bad ones



Are current PTP practices functional?

To answer this question, we:

- Interviewed 28 construction managers and safety & health professionals
- Interviewed 132 construction workers
- Observed onsite Pre-Task Planning and morning huddles
- Reviewed sample Pre-Task Planning forms and documents
- Reviewed findings with our Industry Advisory Group



Pre-Task Planning; Challenges and Gaps

The gap in the process:

- Lack of comprehensive guidelines
- Inconsistent style
- Inconsistent terminology (JHA, JSA, PTP, AHA ...)
- Confusion and conflicts on jobsites
- Mainly from a compliance perspective
- Minimal opportunity for workers' input
- Lack of workers' engagement in site safety planning
- Lack of task-specific content
- Inconsistency between content and task requirements

DESCRIPTION OF THE TASK	IDENTIFIED HAZARDS	RECOMMENDED CONTROL MEASURES

Preliminary Findings

Content & Format

Challenges	Recommendations & Strategies
<ul style="list-style-type: none"> Long, wordy documents Mismatch between task requirements and PTP content Management unaware of current site conditions Lack of supplemental information on topics besides S&H Repetitive/redundant material 	<ul style="list-style-type: none"> Provide task-specific information Use one-page summaries Replace text with visual aids when possible (photos, charts, etc.) Recognize hazards from adjacent crews Frequent site visits by management Provide additional information – tools, materials, schedule, other crews, etc.



Preliminary Findings

Worker Involvement & Empowerment

Challenges	Recommendations & Strategies
<ul style="list-style-type: none"> Complacency and pencil-whipping Resistance to change Lack of opportunity for worker input Lack of buy-in Absenteeism Lack of peer guidance and support 	<ul style="list-style-type: none"> Incorporate real-life incidents Involve workers in PTP design & development Give workers the opportunity to lead PTP meetings Designate worker-management liaisons Actively solicit and incorporate workers' feedback Brief workers who were absent on current site condition Establish mentorship program and peer-to-peer support



Preliminary Findings

Communication & Coordination

Challenges	Recommendations & Strategies
<ul style="list-style-type: none"> Inconsistent communication of changes Conflict between trades Language barrier Poor presentation skills 	<ul style="list-style-type: none"> Perform post-job review/debrief Regular all-trades PTP meetings Pair non-English speaking workers with bilingual coworkers Training on how to lead PTP meetings

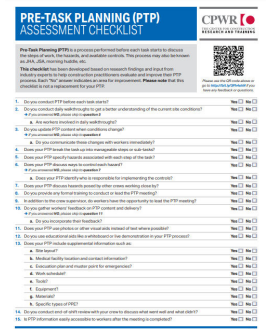
Stop mindlessly slipping into an ineffective routine.

Today's task **IS NOT** the same as yesterday!



From Research to Practice: An Applied Tool

- Translated research findings into an easy-to-use, one-page assessment checklist
- Reviewed and tested by construction safety and health professionals in 24 iterative sessions
- Helps field supervisors assess their PTP process and identify areas for improvement
- Each "No" answer indicates an area for improvement
- The checklist is currently available in a [fillable PDF format](#)
- Let's have a walkthrough to see how to use it ...

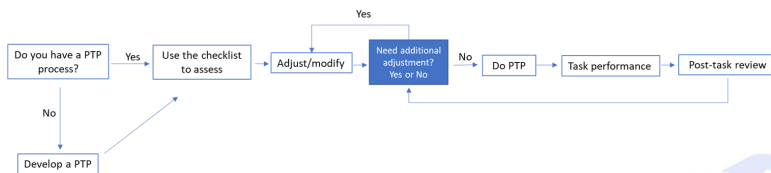


NOTE: This checklist **IS NOT** an exhaustive list of best practices. These are some good practices to help change old, ineffective routines in conducting PTP.



Continuous Improvement

- Encourage contractors to initiate their PTP process without emphasizing perfection.
- Repeat the process to identify shortcomings.
- Simplify the process so it can be completed with minimal effort.
- Remove unnecessary, non-value adding steps.
- Actively gather firsthand accounts from workers and continuously incorporate them to reach an optimum outcome.



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Testimonials

“It is clear and simple. Straight to the point.”

-Corporate Safety Director

“Good checklist with good questions.”

-Operations Manager

“It only took me a minute to fill out, but it made me think for hours about why we aren’t doing some of these things.”

-Senior Vice President

“I like the way this was put together and I feel this will help us with the way we use our PTP.”

-Anonymous

“The checklist is thorough and asks the ‘right’ PTP assessment questions.”

-Anonymous

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Let’s give the checklist a try!

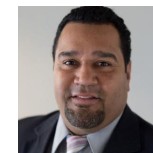
- Please complete the checklist based on the PTP/JHA you use at your workplace.
- Complete the assessment at the end – no identifying information please!
- Let’s discuss some of your “No” answers and how you would convert them into a “Yes.”

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Safety Director, The National Electrical Contractors Association (NECA)
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Thanks!

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