

Workshop L

MANAGING RISKS THROUGH PREOPERATIONS PLANNING

Presented by

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A best practices survey has identified preproject/pretask planning as the most effective tool in controlling construction losses, which translates into lower insurance costs (or operating costs for the self-insured) and increased productivity. In this session, the mechanics of preoperation planning will be reviewed, and attendees will be provided with the basic tools for implementing the technique on their next capital project. You will also hear case studies of contractors who have utilized this technique and have had very positive results on their projects.

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Director of Contracting
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Mr. Furst is presenting Workshop L, "Managing Risks through Preoperations Planning," on Wednesday. Since 1995, he has been the technical director of Contracting Services for Liberty Mutual's National Technical Center in Pleasanton, California. He is responsible for the Pacific, Western, and Northwestern regions (13 states); as well as the Pacific Rim countries served by the company's International Division.

As technical director, he provides specialist support for field customer service efforts in the Contracting Service areas. Mr. Furst works directly with field loss prevention consultants and contracting customers to support the quality and quantity of service provided. He has been able to consult with numerous contracting customers, helping them manage their safety programs more efficiently, thereby substantially reducing their cost of risk.

Mr. Furst has 20 years of construction experience with a multinational general contractor. He served as estimator, project engineer, superintendent, and project manager on numerous projects varying in size from \$5 million to \$350 million, involving hundreds of craftsmen and subcontractors. He also had overall safety responsibility for projects amounting to more than \$450 million annually. Under his leadership, on average, the EMR hovered at or below 0.50. Mr. Furst has also consulted with numerous contracting firms in construction and safety management.

He is a Registered Architect, Certified Safety Professional, an Associate in Risk Management, and a Registered Environmental Assessor. Mr. Furst has a master's in business administration with emphasis in management, a bachelor of architecture, and a bachelor of science in construction. He has taught construction management and safety courses at UCLA, USC, Berkeley, Cal Poly Pomona, Cal State Long Beach, and Cal State Hayward Universities. He has lectured on construction and safety topics at conferences since 1996. Some of the organizations at whose national conferences he has spoken are IRMI, RIMS, ASSE, NSC, CSC, ACI, CSI, US, and AGC. He has also spoken numerous times at regional conferences such as the Alaska, Oregon, Alabama, and Hawaii Governor's conferences, as well as state-level conferences for the AGC, ABC, and CEA.

Mr. Furst is a past member of the San Francisco and Los Angeles chapters of the American Institute of Architects, and the National Safety Council, a member of CSI, ASSE, and AUA, and he has served on the California AGC Safety, Labor Relations, Transportation, and Environmental Committees. Mr. Furst also serves as a Commissioner for the California State Board of Architectural Examiners.

Notes

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MANAGING RISKS THROUGH PREOPERATIONS PLANNING

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Objectives

- The integration of basics risk management principles into the construction process.
- Exploring the operationalization (integration) of safety into the contractor's day-to-day activities and processes.
- Review safety preoperational planning in various levels and degrees and the benefit of each.
- Application of some TQM & other business management concepts to the management of risk in the construction process

Introduction

Accidents happen, but do they really? Has anyone in your organization really stopped to analyze why your projects are experiencing disruptions, accidents, and losses? Why are workers getting hurt in spite of safety standards, programs, policies, procedures, training, and possibly everyone's best efforts? How can we get involvement, commitment, and buy-in, without expending considerable time and resources? What can we do to reduce our losses, control our cost of risk, and optimize the bottom line? These are important questions to address in a time when industry is under greater pressure to increase efficiency and effectiveness.

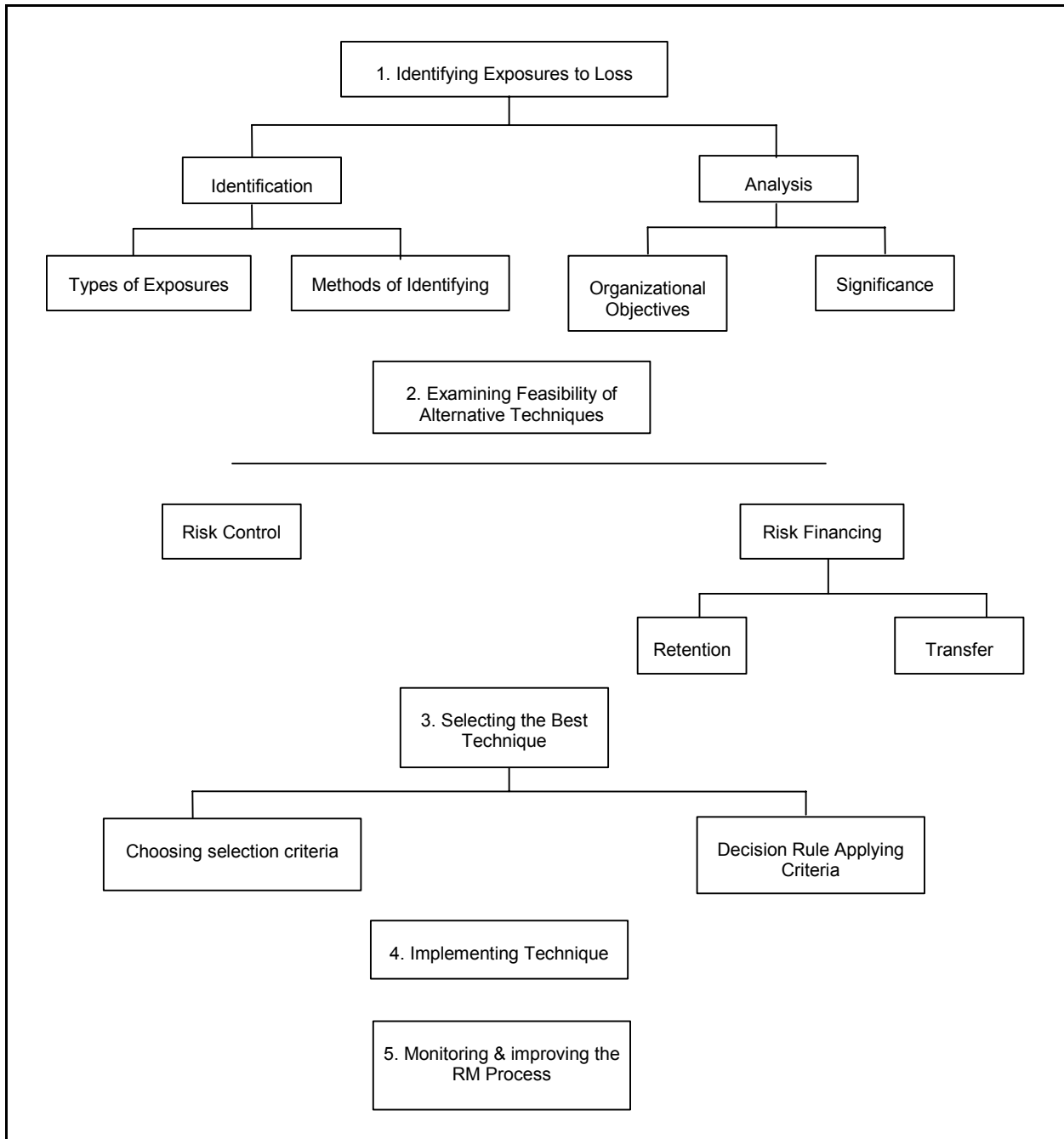
Typically, safety is treated as a discrete and separate function within the contractor's organization. Much of what we do in safety revolves around accidents. We try to avoid them. We use programs and other strategies to help us control their adverse effects. We train our workers on how to work safely. We measure our success by comparing our loss data to national statistics. Our accidents and losses impact our cost of risk and ultimately our very competitiveness in a highly competitive industry. This also may well impact our ability to market construction services and secure work. Accidents usually do not happen due to fate or intent on the worker's part. They happen because of ineffective processes, inadequate procedures, poor planning or lack of foresight. Therefore we must get away from the predominantly worker-focused intervention common in the industry, and look into areas that the worker has no control over but are contributing causes of accidents and losses.

One of the key objectives of any business is to make a profit. The best way safety can assist in achieving this is alignment with the organizational goals and objectives. That can only be achieved by seamless integration into the operations. We need to approach safety from a risk management perspective. We also need to ensure that planning before start of operation addresses the potential hazards of the job and evaluates techniques that will reduce or eliminate them.

What Is Risk Management?

Risk management consists of the logical sequence of identifying and analyzing loss exposures, examining alternative techniques for dealing with these loss exposures, selecting the most promising technique(s) and monitoring the results to see if, in fact, the loss exposure has been dealt with most effectively.

Identifying exposure to loss



The Preoperational Planning Process

- The Construction Industry Institute research identified the single most effective tool to prevent accidents as preproject/pretask planning. This study was conducted in the mid-80s with a later follow-up study in the 90s.
- Looks at potential physical hazards that can occur on the project and either eliminates them by substitution or provides for controls that will minimize them.
- Anticipates exposures resulting from operational procedures and work methods.
- The goal of preplanning is to reduce hazards, which will minimize disruption, increase efficiency, and lower costs.

Preoperational Planning

This effort can be performed at four distinct times in the life of a project. These are before the bid, before any work is started, at the beginning of each major phase, and before each task. This is accomplished at three levels: Globally for the complete project, specific tasks with high exposure potential, and before the start of the daily task.

All the folks involved in the estimating, planning, purchasing, cost control, and field operations need to be involved in this process at certain given times. This process involves fact-finding, analysis, and evaluation of operations and hazards, a preconstruction meeting with all parties, and follow-up to ensure that the planning was in fact effective. During the follow-up audit, things that don't work are identified and reevaluated and a new plan is devised. This process mimics the quality improvement process, an effective and powerful TQM tool.

Integration of RM & PP into the Contracting Process

A holistic approach by the contractor to risk management and loss prevention should broaden the view of the typical approach to safety. This kind of thinking will not only look at the worker but at the project delivery process when trying to identify hazards and the exposure to the workers. It also looks at the operational plan for the project and assesses its effectiveness in not only the efficient use of resources but its effect on the way tasks are planned and the resulting impact on worker safety.

Planning is a key cornerstone of any business and an integral part of any construction project. The advantage of this integration is the enhancement of an existing technique (planning). It does not require job management to get involved in different activities or more procedures and meetings. As a result safety becomes a part of, rather than added to, daily operations.

Thinking outside the box will allow the contracting firm to address risk in conjunction with worker safety. The integration of risk management and strategic planning will effectively address the loss sources and allow the contracting firm to approach this in a systematic, objective way, while making the best decisions given the available information.

The Mechanics of Preoperational Planning

Goals

- To help make preplanning standard operating procedures at your company.

Introduction

It is sometimes difficult to convince field management to expend resources for safety, especially if there is no money in the budget for it. It is even more difficult to convince company management to include money for safety in the bid. The reason being that "our competition is not doing this; therefore we will lose our competitive edge." We will look at preplanning as a tool to help identify exposures and reduce loss by implementing controls in anticipation of these losses. Having done this we should be able to better control the project's management, efficiency, and ultimately the costs. Preplanning is a tool the log management already uses to "run the project." We will try to get them to incorporate and address safety issues as an integral part of this.

What Is "Preplanning?"

- Preplanning is the review of planned operations before and during construction in order to identify and eliminate potential loss sources.
- The goal of preplanning is to reduce hazards, which will minimize disruption, increase efficiency, and lower costs.

Why Preplan?

- Construction jobs are dynamic and ever-changing. Planning is a necessary management tool to marshal and control the resources, which are men, material, and equipment.
- Safety is a managed process, just like any other in the construction business. You would not dream of running your job without a plan; you should also treat safety management in the same respect.
- Preplanning is proactive; you manage people, resources, events, and accident-causing situations based on a plan. By being proactive you try to anticipate problems (loss sources) and plan to eliminate them.

Applying Preplanning to Operations

Interference—Accidents interfere with the normal job operations. They cause disruptions, adversely impact the schedule, and cost money.

Construction and Safety Expertise—You must understand the construction operations to provide competent recommendations and to gain credibility with management.

Past Loss Experience—To bolster your case you must be prepared to show that you have studied the company's loss history and that these losses should be expected, unless they are planned out of the operations.

Management Principles—Management understands their function is to plan, organize, lead, and control. Preplanning is nothing more than that; they do that to run the business and/or the job. All we are asking is that they integrate safety as part of their management process.

The Preplanning Process

- Looks at potential physical hazards that can occur on the project and either eliminates them by substitution or provides for controls that will minimize them.
- Anticipates exposures resulting from procedures and work methods.
- Reviews applicable safety program elements to make sure that the operations are in compliance with the intent of the program, as well as see if they are addressed by the program.
- We will look at the when, how, who, where, and what of the preplanning process.

When To Preplan?

- **At Bid Stage**—This is the most effective time to address safety issues, because they can be identified, eliminated, and/or budgeted for.
- **At Job Mobilization**—This is where hazards can be addressed as they may apply to the whole project. This is the time to address the interfaces of the operations of various subcontractors. This is also the time and place to get the most “bang for your safety buck.”
- **At Preoperational Stage/By Job Phase**—This phase allows you to fine-tune your previous plan. By this time you may have more detail available to you, so you can address more issues in greater detail.
- **Special Operations**—You may have unique situations that require special attention, such as helicopter lifts, etc. These need to be addressed in great detail and contingency plans drawn up to address the potential exposures.

Who To Involve in Preplanning?

- **The Estimator**—This is the person in your company who first sees the job. He has to evaluate the job hazards and budget for them.
- **The Safety Director/Safety Coordinator**—You should be consulted at this stage to help evaluate exposures that the estimator has not identified or appreciates the seriousness of. You should also provide input as to how to most effectively and cost-efficiently provide the necessary controls.

You also bring to the table familiarity with the safety and other regulations. You are trained in hazard recognition and may have unique input to the process.

- **Project Manager/Job Superintendent**—Provides scheduling, site layout input, and may select equipment. They may also help select subcontractors. These inputs are under the purview of the contractor and should be evaluated for any unique exposure they may create.
- **Other Management**—There may be special requirements imposed on the project by the owner. Your company may have rules that are not common to the industry, and your organizational structure may have special requirements that should be reviewed and addressed at this time.
- **Insurance Carrier Loss Prevention Representative**—This is a free resource available to you to help you preplan your operations. We have a great deal of in-house information and expertise that you can draw on. We will also provide you with a report that you may then use as a guide to follow up on your project as well as to build upon as the job progresses.

How To Preplan

- **Fact Finding**—The sources to get information are from the project plans and specifications. The next source is from the “means and methods” your company is planning to use. You also need to review the site and the adjacencies. You will need to look at the site logistic plan prepared by your project manager.
- **Analysis and Evaluation**—The things that need to be evaluated and analyzed are the potential for worker injuries, both yours and your subcontractor's. Other things that you need to look at is the potential harm to the public, as well as damage to property both in and around the job site.
- **The Preplan Meeting**—The key to an effective and efficient meeting is preparation. Everyone must do their “homework” before attending the meeting. After the meeting there must be agreement as to what the exposures are and what controls are going to be put in place. The result of this meeting will be an action plan for the control of hazards and exposures.
- **Follow Through**—Of course for any plan to work there must be following through. Inspections must be conducted to ensure that controls are put in place and that they are sufficient to address to existing conditions. If there are changes, then modifications are made to meet the changing conditions.

What Do You Preplan for?

- You plan for everything that creates an exposure and for every hazard that you can anticipate and identify.
- To best address this issue you should create your own checklist. In creating this checklist you may seek the help of your Liberty Mutual Loss Prevention Representative.

Format

- The best format addresses the task or operation to be reviewed (the associated hazards and exposures; the system, environmental, and people components; as well as the responsible parties and a time to complete).

Project:		Number:				
Pre-Plan type:		Title:				
Date:		Approved date:				
Attendees:		Location:				
		Revision:				
Activity	Hazard/ Exposure	Factors			Resp	Date
		Environ.	Human	Process		

Inspections

- Inspections are part of the process but certainly not a substitute for it. Inspections are a snapshot of what is going on at the site at that particular point in time. Inspections are generally keyed into physical hazards and compliance issues.

Continuous Improvement

- The preplanning process, if properly done, is a “continuous improvement process.” You start with the plan, which is then implemented. After that you audit (inspect) the process. You analyze your findings and decide on what needs to be done to improve the plan, after which you modify the plan. The new plan is then implemented and you have come full circle.

Goal

- **Preplanning as Company SOP**—The intent is to make preplanning standard operating procedure for your company.
- **Accident Prevention**—This should become factored into the estimating, bidding, equipment selection, and staffing of your company projects.

Summary

- Preplanning is the review of planned operations before and during construction in order to identify and eliminate potential loss sources.
- The goal of preplanning is to reduce hazards, which will minimize disruption, increase efficiency, and lower costs.