

Construction Risk Control Techniques
Workers Compensation, General Liability/Construction Defects,
Construction Equipment/Thefts and Fleet/Driver Safety

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Introduction

The presenter will discuss each of the above exposures, how it affects every safety professional and the construction companies they work for and provide practical up to date solutions that can be implemented to reduce loss.

The presentation will be PowerPoint using photographs from construction projects and the discussion will focus on the major areas of construction soft costs such as insurance and what can be done to control those costs through implementing sound risk control techniques.

Since entering safety in the mid 1970s a lot has changed both in technology and particularly in construction safety. Some of the tools available now that were not available when I started are the internet, blackberries, iphones, on-line training capabilities (Aon's Safety Logic.), Fleet 1-800-how am I driving stickers (Aon's Smart Drive) and other technical advances. Experience is still very important and nothing can take the place of on the job learning. My presentation today will talk about my experiences that I hope you can use in preventing injuries and incidents on your projects.

Understanding the Problem

There are many exposures that we face on construction sites that we need to know about and know how to control them in order to bring real value to the companies we work for. The presentation will look at employee safety and how it relates to workers compensation costs, general liability exposures and how they relate to protection of the public and completed operations, fleet and driver safety and how important that is in controlling automobile insurance costs, and protecting our tools and equipment from theft with a good crime prevention program. All of these affect your insurance costs and your organization's top and bottom lines.

Construction sites are inherently dangerous and high risk environments. Construction has about 4 or 5 percent of the workforce and about 20 percent of all fatalities and disabling injuries. Construction activities typically encountered are steel and concrete, low mid and high rise buildings, bridges, street and highway construction, housing including high rise condos and town homes and detached homes, underground and infrastructure work such as tunnels for subway systems, natural gas lines, petroleum lines, electrical, water and sewer. Construction may also involve chemical and petroleum processing facilities and cleanup and environmental firms such as hazardous waste landfills and disposal. Whether you are an owner, construction manager, general contractor, subcontractor or second, third or fourth tier subcontractor, you will have specific exposures that you will need to control to maximize your profitability and to help stay in business.

Safety Management Systems are critical in preventing loss.

Loss prevention efforts should be treated no differently than any other department or process within the company. I have found that those companies that have the best safety records on a consistent basis are those that have a process in place which has clearly defined goals and objectives, management accountability systems and a safety culture that is strictly adhered to and enforced in the field. To be successful we need to work with several other departments: senior management support, human resource practices, risk management and operations. A well written safety program with documentation is an important document to lead us where we want to go – additional written programs will also include: fleet/driver safety, quality assurance/quality control program and others depending on your exposures to risk.

Workers Compensation

One of the most important areas we work on in safety is the prevention of injuries and illnesses. Unfortunately the construction industry suffers far too injuries, illnesses and fatalities. Countless thousands have been seriously injured or been fatally injured while building our roads, businesses, homes and bringing us comfort in our homes such as water, electricity, and gas. Workers compensation is a no-fault system which pays 100% of the medical costs and a designated sum of money for indemnity payments over a period of time for those workers who have been injured on the job. Employees give up the right to sue their employers in exchange for this no-fault system. Since insurance premiums are based in large part on the risks associated with every occupation and the likelihood of injury, individual experience for construction companies is one of the factors in establishing an overall premium. Although specific insurance rates are the same for like classes of occupations, various credits and debits such as the experience modifications rates are used to establish premiums.

In these tough economic times companies are laying off workers as they are completing projects and unable to immediately mobilize for backlog work. The funding has been dried up on a lot of projects and a wait and see attitude has taken hold. More and more contractors are bidding on fewer and fewer jobs. Those contractors with the best safety records, which translate into lower insurance costs with lower experience modification rates and incident rates, are the ones that are going to have the competitive advantage in

obtaining work that is available. With all bids being equal with labor and materials, sometimes the difference in winning a bid and coming in second may be the contractor with the lower soft (insurance) costs because their exmod is lower than their competitors'. So we all have a vested interest in safety from a financial perspective as well as the more important perspective of not killing and injuring our work force. Your company management should understand these factors and a good safety person will enlist the help of others in the organization to understand the financial aspects and provide input as to why accident prevention is so important for a company's success. See if you can find an accounting person at your company ask them to explain the profit and loss (P & L statement), look for line item insurance costs and see how they are charged back to each operating unit or project. Then go to the claims people in your operation and risk manager and find out what they do and learn as much as you can from their departments as well. In the end it is a team effort and the more you know how this process works, I believe the more effective you will be.

Experience Modification Rate: 2009 consists of policy years 2005, 2006, 2007 (PY 2008 claims are too "green" to use in the formula). It is a formula that uses frequency and severity of claims. Although some states use a somewhat different formula – in California we have a California EMR and an Interstate EMR for those firms with operations in the state and outside California. All the small claims under \$2001 are added up and used as a single number and claims over \$2001 (may be raised to \$6,000 soon in Calif) are listed individually. The lowest we can get to now is around high .40's in Calif. – some contractors have EMR's as high as 2.00 –

Example:

Premium is calculated at \$500,000 manual rate.

EMR is 1.00 premium is \$500,000

EMR is 1.50 premium is \$750,000

EMR is .75 premium is \$375,000

This difference has to be accounted for somewhere during the bidding process – usually in increased overhead or insurance costs for labor.

Although compliance with OSHA is always an important issue, I believe the prevention of accidents and injuries is even more important. Best practices that I have employed or recommend be employed include the following:

A written and comprehensive safety program is critical in holding people accountable for the contents of that program. Also of critical importance is the documentation of the injury and illness prevention program such as your orientation, job site inspections, training records, safety violation write ups, etc. The injury and illness prevention program will include a statement by the president of the company on safety, responsibilities for everyone in the organization in regards to safety and of course specific areas such as new employee hiring and orientation, employee training, enforcement of safety rules, accident investigations, drug testing, and specific safety rules for the hazards associated with the construction are all critical in having a well written program. As I mentioned earlier, there are a lot of resources to get templates for a good safety program including ANSI/NIOSH, OSHA website, your insurance carriers, insurance brokers have plenty of sample programs for you to look at and customize to fit your needs. Once the program has been established it

needs to be communicated at every level in the organization, responsibilities clearly identified and how each level will be held accountable for safety. Remember that what gets measured gets done and responsibility without accountability equals continued frustration.

When employees are injured on the job, returning them to work on a light duty or modified basis is essential in helping to keep costs to a minimum. Temporary disability payments to someone that sits at home for three to six months or longer can add up in a hurry. In California now, the weekly TD rate is \$958.00 a week, tax free. These TD costs are factored into your worker's compensation rates which will add significantly to your EMR and can cause a big increase in your insurance premiums. Workers who come back to work on light duty or on a modified basis are much less likely to obtain a lawyer.

Other critical areas in your safety program will include drug testing, possibly issuing authority to stop work which gives every employee the right to stop work in an unsafe environment. Perception surveys are also great methods of finding out from the work force what their perception of the safety program is.

According to the Construction Industry Institute, a comprehensive study was completed on construction projects in America and nine industry best practices "Getting to Zero" are as follows:

- demonstrated management commitment
- staffing for safety
- safety planning pre-project/pre-task
- safety training and education
- worker involvement and participation
- recognition and rewards
- subcontractor management
- accident/incident reporting and investigation
- drug and alcohol testing
- and another I strongly believe in is aggressive claims management and return to work

Project Safety Performance

Results of implementing best practices

Projects that implement a few 3.84 IR – (38 workers per 1,000 with recordable)

Projects that implant all or most 0.17 (2 workers per 1,000 – world class performance)

All employees must be thoroughly trained on the tools and equipment they are operating. If someone comes on site with a training certification, then that person must demonstrate their competency prior to being allowed to operate that piece of equipment or machinery, especially in these tough economic times when workers will say they can do just about anything you ask them. Speaking of asking employees about safety, perception surveys are also very valuable tools to use in bench marking your current safety efforts.

Leading vs trailing indicators

Observation – actual conditions & behaviors and extent of implemented programs on the site vs. trailing indicators IR's, EMRs, loss ratios.

General Liability

This area is of great concern because it has to do with protecting the public as well as the company's reputation. This is a major insurance cost and can be controlled through good sound planning. General liability lawsuits can be extremely costly because there is no set amount that is paid to claimants as in the workers compensation system. It is simply a matter of the attorneys negotiating a settlement amicable to both sides rather than going in front of a jury. One of the most expensive liability claims I have been involved with was when two teenage boys climbed a fence around a strip mine and then drowned at the mine site. Of course the mine owners were sued and the jury came back with a willful verdict because trespassing/ keep out signs were not posted on the fence. Security guards not only protect your tools and equipment but can keep trespassers off the site as well. Take a hard look at your job sites and surrounding areas to make sure that public liability is kept to a minimum.

Construction Defects (alleged)

Losses alleging construction defect are a huge drain on revenues and a major source of insurance premiums. The best way to control construction defects is to have an effective quality assurance program. Depending on what type of construction you are involved with, the quality process will involve different activities. The project owner may hire a third party inspector to insure that subcontractors are completing the work as specified and according to the shop drawings. The general contractor may ask the superintendent or have a quality control superintendent visit projects and check on the quality process. And subcontractors will utilize vendor training in product installation, storage and care prior to starting their work and throughout the process as needed. Subcontractors may also require their foreman and superintendents to do quality checks and may also enlist the assistance of a third party inspection service to look at their completed work. Testing may be required during the construction process, such as leak tests on the windows and landscaping drainage water tests around the building perimeter. A contractor can prevent many liability lawsuits and problems by initiating excellent customer relation teams. 800 numbers to call and other pro active claim cost reduction techniques. Some builders use fix and repair crews to handle only customer complaints and warranty issues.

Another point on liability is to have your contracts reviewed and updated by your insurance broker and legal counsel. Indemnification clauses in the contract will help protect you from other contractors' mistakes such as injuries on the site and defective workmanship. Certificates of insurance are important to have for all sub contractors doing business with you. The correct wording in your contracts will make all the difference in the world when defending these types of lawsuits, even with OSHA citations.

Construction Thefts/Contractors' Equipment

Everything from copper wire to vehicles to construction equipment is stolen every day on construction sites. Vandalism and malicious mischief is also a growing problem in most

areas. A sound security program can help to minimize these losses and control associated insurance costs. In addition a good security program can help minimize general liability losses from unauthorized persons entering the site, becoming injured and then suing the contractor for lack of control or “failure to warn”. The construction industry’s crime prevention programs throughout the country are a great starting point for helping to prevent thefts. The Crime Prevention Program of Southern California has some very specific guidelines for preventing thefts and vandalism at your job sites. Some of these ideas are:

- 1. Stencil or bead weld the company logo on equipment or tools. Color code tools in bright colors.*
- 2. Avoid storing equipment at the site overnight unless it is in a secured area.*
- 3. Consider retaining a security guard or closed circuit television surveillance systems in high risk locations.*
- 4. Keep equipment storage buildings in well lit areas...free of hiding places such as shrubbery, trees or other visual obstructions.*
- 5. Nighttime illumination is essential and should be elevated to eliminate dark areas and visible from adjacent streets.*
- 6. Restrict access to equipment storage areas to designated workers.*
- 7. Provide security keys stamped “do not duplicate” to these workers.*
- 8. Install GPS or LOJACK type systems on vehicles.*
- 9. Notify neighbors of job site – enlist their help. \$50 bucks a month to someone goes a long way.*

Electronic tracking devices work great for following stolen equipment, vehicles or anything else that is stolen from a job site that is equipped with ETS. It sends out a signal, like lojack, that security firms or police can follow and locate where the thieves are storing the equipment. With surveillance, police can then recover stolen equipment and nab the bad guys. One recent “sting” resulted in 40 arrests. Police followed the stolen generator back to the “safe yard/house” then watched and recorded night after night as many different thefts occurred on many different job sites. After several nights of watching, the police moved in and halted a major construction equipment theft ring.

Since small tools and equipment are usually not covered under the insurance policy or there is a significant deductible which would exclude these types of tools, any efforts you can make to prevent thefts are usually greatly appreciated not only by the company but by the individual construction workers who might lose their tools. Lojack, Dewalt and Tattletale are three companies I am familiar with who have leading edge technology that can help reduce thefts, vandalism and unwanted entry.

As with most insurance coverages, the cost paid by the contractor will be based in part on the frequency and severity of losses. So any successful efforts made in reducing loss will many times pay for itself in insurance cost savings. Keep in mind that direct insurance costs are only the tip of the iceberg in the overall costs of incidents. Many times the most significant claim costs are indirect costs which are almost always paid for by the contractor. As we all know and have heard, indirect costs are those costs that the insurance company does not pay such as lost production time, time it takes to investigate and mitigate the incident, replacement of personnel and possibly tools and equipment and

of course the ultimate increase in experience modification rate, incident rates and lack of insurance marketplace alternative due to a negative loss record.

Auto Liability and Fleet Safety

Now for the most difficult exposures to control: fleet and driver safety. You can provide a well maintained vehicle and have a well trained driver, however, drivers are alone most of the time, and as such will make individual decisions, some good and some not so good. The not so good decisions result in vehicle crashes. Also, since many vehicles are non regulated and there are no OSHA standards for fleet / driver safety – except transporting workers in vehicles—many construction firms have not invested much safety effort into this area. Most of the time these vehicles are pickup trucks, two axle bobtail trucks, stake bed trucks and automobiles that are on the road. Remember DOT requirements are for vehicles that weigh over 26,000 pounds, carry hazardous or other placarded cargo. Those drivers are tightly controlled and have to have Commercial Drivers Licenses (CDL).

Statistics show us that transportation incidents produce the most frequent fatalities at work than any other occupation. Simply put driving is dangerous. We need to address our driver safety programs more aggressively. A company vehicle that is involved in a crash could trigger several insurance coverages including workers compensation if the driver and/or company employees are injured. Or if a worker for another company is in the vehicle and is injured, a liability lawsuit could follow. Damage to the vehicle will of course trigger property damage, claim and then any other property damaged will obviously trigger a third party claim. Worst case scenario would be one of your drivers who has a suspended license because of a DUI, is intoxicated runs a red light, strikes a lady in the cross walk pushing her baby carriage. After running over the lady and the baby carriage careens into furniture store and catches fire burning down the furniture store. I won't even begin to start to calculate the various costs attributed to this claim but as you can imagine it will cost in the millions of dollars with punitive added in as well – punitive damages are uninsured (by law) and occur when deemed negligence has taken place. Negligent entrustment is now commonly used by lawyers in this type of incident involving company drivers that were not properly screened.

Vehicle insurance comes with a deductible and the market is getting hard. In other words, coverages are more difficult to obtain at reasonable prices. Insurance companies want to have partners that are more willing to share the risk (more skin in the game) by participating with larger deductibles.

There are several great references on fleet and driver safety which should be looked at when implementing this type of safety program or when looking at ways to improve your current fleet program. As with all insurance coverages take a close look at your losses over the last few years to identify trends and root causes so you can effectively allocate valuable safety resources to help prevent future occurrences.

Some basic fleet controls are:

🚧 Senior Management Commitment & Employee Involvement

- ✚ Written Policies and Procedures
- ✚ Driver Agreements
- ✚ Motor Vehicle Records (MVR's)
- ✚ Crash Reporting
- ✚ Vehicle Selection, maintenance and inspection
- ✚ Disciplinary Action System
- ✚ Reward/Incentive Program
- ✚ Driver Training/Communication
- ✚ Regulatory Compliance

Other Insurance Coverages

Environmental Impact Liability (EIL):

- Storm water run off, hazwoper, contaminated soil, asbestos, lead, silica.

Employment Practices:

Harassment, wrongful termination

Builders Risk – course of construction. Property damage through fire before project is turned over to owner. These losses can be huge – must look at material storage, fire prevention, hot work permits, etc. to control losses

Summary and Conclusion

I have found that Construction Risk Control is no easy task – but then again, if it was easy everyone could do it. It takes a broad understanding of risks – not only human but business operations and how loss can effect the entire operation and specifically projects. When big blue crane went down at Miller park several years ago it delayed the project by over a year, cost three iron workers their lives and cost Mitsubishi Heavy and other contractors over \$100 million. As a result of that incident ENR Magazine had a lead editorial that was headlined: “When safety people talk we must listen” referring to delaying the large roof section pick until less windy conditions were present may have prevented this tragedy. However, it appeared the schedule was the controlling factor – the risk factor was deemed acceptable by project management.

When I audit construction firms for best practices the main categories I’m looking at are:

Management Support & Accountability
 HR Practices
 Insurance Claims Management Practices
 Safety Program
 Fleet Management
 QA/QC Process

Don’t get bogged down “regulation compliance” or other compliance issues that don’t really impact the losses – I once walked a large construction site with an OSHA inspector

– he walked by several workers lifting incorrectly in awkward positions – and walked straight to fire extinguishers and cited the company about \$100 for an out of date service tag. The site safety person was happy how well the site was and I asked about the 4 workers that were lifting heavy loads that could have serious back injuries that OSHA just walked by. The loss potential was huge – at \$50K per back surgery the numbers get pretty staggering.

Review in detail loss history, make a viable plan, allocate resources and attack the issues head on. “Doing the same thing over and over again and expecting a different result is the definition in insanity” (or at the least leads to a very frustrated safety person). Shake things up, look at new technologies and work methods. Enlist the help of newer workers – ask them how the work could be completed more efficiently. There might be a better way to complete the task than having to lift two 90 lbs bags of stucco – ergonomics / back injury prevention / muscle strains are the leading source of WC costs—what have you done to help stop the number of strains / sprains? Same old thing – maybe a stretch & flex in the morning before work, some training on lift with your legs not your back, or are you looking at ways to reduce the load, handle load fewer times, stage materials so they are handled once, use long handled tools or ergonomically designed tools, break down heavy loads and best of all, use dollies, carts, lifts, forklifts and a host of other mechanical material handling devices. Preventing a \$10,000 back strain can buy a lot of mechanical material devices. Increased production, reduce injuries and reduce insurance costs == what a value you’ll bring to your company. You’ve heard the term safety as a profit center – thinking outside the box is a great way to begin. Especially people with less than 5 yrs experience -- question why do we do it this way? And then research – internet is great -- what a tool we now have – I used to go the library to study books – no cell phones, no DVD’s for training— we used phone booths to call in, used reel to reel movies for safety training (got good at splicing broken tape) carried large screens to show movies on -- it was a rough and tumble and crazy ride. Very few with PPE, even on commercial sites. I was the only one with PPE on many times on job sites in what for me were the early years – mid to late 70’s. Although OSHA had just come out no one knew what it was. No safety people on site, no written safety programs or procedures --- it was a very lonely job. I was informed that more than once that “we don’t need safety”. Fourteen thousand workers were killed on the job per year then – now 5,200 or so – and workforce has tripled.

The safety profession has come along way and continues to evolve – let’s set some new goals, be recognized as an investment and not an expenditure, be a part of the management team, help your companies stay profitable and employees go home safely. Safety – Quality --Production does indeed go hand in hand.