Focus on Struck-by Injuries

Features
- Struck-by Injuries
- Eye Protection
- Job Safety Analysis
- Falling Objects
- Nail Gun Safety
- Heavy Equipment
- Waste Materials Blitz
- TTC and IO to Require COR™
- IHSA Annual General Meeting
- IHSA at the CNE
- New Technologies to Prevent Struck-bys
- Struck-bys in Transportation
- Stacking and Storage
- MSD Prevention for Roofers
- Safety Day
- Training Standards

A specialized approach to health and safety
In January 2011, a 70-lb metal beam fell from the seventh storey of a condominium development and struck a worker on the head, face, and torso. The man was taken to hospital in serious condition but survived. Police credited his hard hat with saving his life.

**Explain dangers**
A hard hat can protect you from cuts, scrapes, and bruises. It can protect you from falling objects, which can cause severe damage to the head and spine. It can prevent electric shock and limit your exposure to UV radiation from the sun.

**Identify controls**
Keep these points in mind to ensure you get the best use out of your hard hat.

- Hard hats that are poorly maintained or improperly used can fail. It’s important to follow the manufacturer’s instructions.
- Use the correct type of hard hat for the job. Hard hats should be labelled with the CSA or ANSI Type and Class of protection.
- Approved hard hats protect against impact and penetration. **Type I** hard hats protect only the top of the head; **Type II** hard hats protect both the top and the sides of the head.
- A **Class E** hard hat is required for construction and utility projects. It provides electrical protection up to 20,000 volts.
- Inspect your hard hat every day before you use it.
- Clean your hard hat with soap or cleaning agents as recommended by the manufacturer.
- Never wear a baseball cap under your hard hat.
- A hard hat should normally be worn facing forward. It may be worn backwards only if it has a reverse orientation mark.
- Never paint a hard hat.
- Never make holes in a hard hat.
- Never store your hard hat in the rear window of your car—intense sunlight can make it age more quickly.
- Never spray your hard hat with insect repellant—it can damage the material.
- Hard hats are not made to last forever. Find out the useful life of your hard hat by contacting the manufacturer or reading the manufacturer’s instructions.

**Demonstrate**
Together as a crew, inspect your hard hats.

Check the shell for cracks, dents, deep cuts, or gouges. If the surface appears dull or chalky rather than shiny, the hard hat may have become brittle.

Check the suspension for cracks or tears. Make sure the straps are not twisted, cut, or frayed.

If you find any signs of damage or degradation, remove the hard hat from service immediately.
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On the cover...
Falling objects from workers overhead can cause a struck-by injury. Struck-by injuries occur when workers are hit by tools, materials, equipment, or vehicles. It is a leading cause of injury in the industries served by IHSA.

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Most of us hear a lot about the dangers of falls and how to prevent them—that’s because falls have consistently been a major cause of injury in Ontario. But in recent years, struck-by injuries have become a close second to falls, even though we don’t hear about them nearly as often. That’s why many of the articles in this issue of IHSA.ca Magazine focus on the increasing problem of struck-by injuries and ways to prevent them.

“Struck-by” is the term that Ontario’s prevention system uses for the various injuries that occur when workers are hit—or struck—by tools, materials, equipment, or vehicles. Just like falls, struck-by is a leading cause of injury in the industries that IHSA serves.

Between 2008 and 2012, 9,139 workers were injured when something hit them. At least 20 of these incidents were fatal, and 606 resulted in a critical injury. Since 2008, we’ve seen an encouraging downward trend in struck-by injuries; however, there was a slight increase from 2011 to 2012.

Most of these injuries occurred when a worker was struck by an object, such as a piece of falling material or equipment. It is also common for workers who slip or fall to be struck by the tools or materials in their hands.

Struck-by injuries are a cause for concern in all industries. But among IHSA’s rate groups, most of them happen in General Trucking and Homebuilding. To address some of the main causes, this magazine has articles on reversing vehicles, transportation hazards, nail gun safety, and falling objects. Struck-by injuries are also a significant problem in warehousing and lumber supply yards—that’s why you’ll see an article on safe stacking and storage. When a worker is hit by something, the part of the body that’s injured most often is the eyes. So we’ve included an article on the importance of eye protection.

Read on to learn more about the causes and situations that lead to struck-by injuries and how to prevent them. You can also visit ihsa.ca/struck-by for free tools, resources, posters, and much more.
Would you do something that could cost you your eyesight? Most people would answer no to that question. Yet every day there are people working on Ontario construction sites who do just that. They work without eye protection even though there are hazards all around them that could damage their eyes.

If something like a nail or a wire gets stuck in your eye while you’re working, Ontario’s prevention system considers that a stuck-by injury. Struck-by is the term used to describe the various injuries that occur when workers are hit—or struck—by tools, materials, equipment, or vehicles. The eyes are one of the most common body parts to be affected when someone suffers a stuck-by injury. Between 2002 and 2012, almost 2,700 Ontario construction workers were injured when something hit them in the eye. These injuries could have been prevented if the workers had been wearing eye protection.

Part of the problem is that the current legislation does not make eye protection mandatory on jobsites. It’s required in certain circumstances where there are hazards that could damage a worker’s eyes. However, the reality is that those hazards are not often confined to a specific area. As workers, equipment, and materials move around the jobsite, so do the eye hazards. Some of those hazards are

- dust and grit
- flying debris (wood, stone, or concrete chips)
- sparks and slag from welding and cutting
- abrasives from sandblasting
- chemical splash
- pipes and wires sticking out of walls
- ties and wires hanging from ceilings
- the sun, which can cause UV damage
- the wind, which can dry eyes out and carry dust and grit.

Whether it’s a physical object that hits your eye, or a biological or chemical hazard that causes the damage, it’s clear that wearing eye protection at all times is a good idea. It’s not surprising that many companies and jobsites have already made eye protection mandatory as part of their commitment to employee health and well-being.

**What to wear**

Wearing the right kind of protection can prevent most eye injuries. Safety glasses with sideshields are considered the basic standard for eye protection on construction sites, but it’s important to match the type of protection to the specific hazard. For example, goggles that protect your eyes from dust and other physical hazards may not protect your eyes from radiation or a chemical splash. All safety glasses and goggles should be CSA-approved, which means you should see the CSA logo on the frames. In order to protect you the way they are designed to, your safety glasses should fit securely.

If you’re a welder, your safety glasses should also have a shade number marked on them. Always keep your safety glasses on, even when you remove other personal protective equipment such as a welding helmet or faceshield. When you raise your visor or shield, you may still be exposed to flying chips, dust, or other hazards.

If you already wear regular glasses or contact lenses to correct your eyesight, you should wear prescription safety glasses on the site. Avoid wearing contact lenses—dust and other particles can get under the lens and irritate your eyes. It is important to replace your prescription safety glasses if they are scratched or damaged or if your eyeglass prescription has changed.

Consider making eye protection mandatory on your jobsite. Make eye protection your next safety talk by visiting ihsa.ca/safetytalks
Getting started

Large projects are often broken down into smaller segments to simplify scheduling and planning. With smaller jobs, this is often done in your head and not tracked formally. A JSA details the tasks and elements of a task in order to pinpoint where the risks for worker health and safety arise. Once the hazards are identified, precautions are put in place to eliminate or mitigate those hazards. When that information is documented, it can be recorded and shared with other people working on the jobsite.

Steps for a JSA

1. Identify the task
   
The first step is to identify the task at hand. That task will often be a situation that is repeated on many jobsites. It could be something like going up on a roof or tying rebar.

2. Break down the task into steps
   
The next step is to divide the job into steps. Each step is a segment of the operation that is necessary to advance the work. List the job steps in the order they will be performed.

3. Identify the hazards associated with each job step
   
The hardest part of the JSA is to take each step and list the hazards associated with it. Think about what could go wrong from a health and safety point of view. Think about how people, equipment, materials, processes, and the surrounding environment may contribute to a hazard.

4. Decide on controls for each hazard
   
Each hazard identified in the previous step needs a control. A control is a way of eliminating the hazard or reducing the risk of injury or illness associated with the hazard. When deciding on controls, consider the probability that the hazard might cause injury and consider the possible severity of that injury.
Sample JSA for Extension Ladders

The following is an example of a JSA for using an extension ladder. Though there are many different ways of documenting that information, this is a useful method of breaking down the task into its various components.

<table>
<thead>
<tr>
<th>Company Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Number</td>
</tr>
<tr>
<td>Prepared by</td>
</tr>
<tr>
<td>Applicable projects</td>
</tr>
<tr>
<td>Applicable ladder types</td>
</tr>
<tr>
<td>Reference material</td>
</tr>
</tbody>
</table>

Instructions

1. The JSA is to be prepared by a competent person familiar with the type of work.
2. The JSA must be explained to employees who will be relying on it.
3. Employees relying on this JSA must be told of any changes to it.
4. Using reasonableness as a guide, decide
   (a) whether a ladder can be used
   (b) whether the hazards of the ladder work have been assessed
   (c) whether there are suitable controls in place for the protection of the workers’ health and safety.
5. If associated with a specific checklist, this JSA must have an identifier, such as a file number, and be kept by the employer.

<table>
<thead>
<tr>
<th>Job Steps</th>
<th>Hazards</th>
<th>Barriers or Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifting ladder off truck</td>
<td>Strains and sprains</td>
<td>• Use mechanical leverage to raise ladder from truck bracket, or mount in an easily accessible location.</td>
</tr>
<tr>
<td>from braces</td>
<td></td>
<td>• Lift one end at a time.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Lift ladder onto shoulder directly from truck’s bracket.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Get assistance.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ensure there is a clear path of travel before removing ladder from truck bracket.</td>
</tr>
<tr>
<td>Carrying ladder and setting</td>
<td>Strains and sprains</td>
<td>• Get a good grip before starting to walk.</td>
</tr>
<tr>
<td>it up</td>
<td></td>
<td>• For long ladders, get help from second worker.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Carry ladder with its feet in front of you—ready to set up.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bend knees when setting ladder on ground.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Set ladder feet on ground and walk towards wall, raising ladder against wall.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Practise this step with short ladders.</td>
</tr>
<tr>
<td></td>
<td>Falls</td>
<td>• Adjust ladder footing as required and, if applicable, secure bracing or deploy stabilizers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ensure ladder is not leaning to the side, is on firm footing, and cannot move.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Set up the ladder at a safe angle—one foot out for every three or four feet up, depending on length.</td>
</tr>
<tr>
<td></td>
<td>Slipping and tripping</td>
<td>• Know where obstacles are before starting to walk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Make sure set-down area is clear.</td>
</tr>
<tr>
<td></td>
<td>Electrocution</td>
<td>• Check pathway for overhead wires.</td>
</tr>
</tbody>
</table>

Next steps...Climbing, etc.
Taking the edge off falling objects

You see them all the time and don’t take notice. Small tools and pieces of material lying around the jobsite seem harmless enough. But if those items fall from a high level, they can seriously injure or even kill someone below.

For IHSA member firms, struck-by injuries caused by falling objects account for over 400 lost-time injuries (LTIs) each year. It’s not just the frequency of these injuries that’s the problem—it’s also the severity. Workers who are injured by falling objects suffer not only bruises, strains, and sprains but also critical injuries such as fractures and concussions.

One of the best ways to reduce these types of injuries is to develop a falling-object prevention plan. Part of this plan would involve inspecting the jobsite for falling-object hazards and putting physical and procedural controls in place to prevent the hazards.

**Physical controls**

Physical controls physically stop an object from falling (or from falling very far).

- Install toeboards on all guardrails to stop objects from falling down to the level below. Do not pile tools, equipment, or materials higher than the top edge of the toeboard (3½ inches) unless you use panelling or screening to stop small objects from falling through the openings between rails.

- If working on open grating, place non-slip plywood or a similar product on top of the grating to prevent small objects from falling through it.

- Use tool lanyards and tethers that attach tools directly to the worker’s harness or tool belt.

- Use a cart with sides when moving equipment, tools, or material. The cart should be the correct size for what you’re moving. If anything extends over the sides of the cart, secure it and make sure the cart is stable.

- Use barricades to set up exclusion zones below the work area and hoisting area and put up signs to indicate entry is prohibited.

- If barricades are not practical, use overhead protective structures that meet legislative requirements (O. Reg. 213/91, s. 64 (3)).

**Procedural controls**

Procedural controls involve changing the way you work so that objects can’t fall.

- When lifting, make sure the load is balanced and secured. Check for small or loose pieces before you lift. If placing a load on a scaffold or platform, make sure the work area has properly built guardrails.

- Always use proper hoisting and rigging procedures. Never lift, lower, or swing a load over anyone’s head. Use barricades to block off areas where loads are being lifted or lowered. Use a signaller if the operator’s view is impeded in any way. Make sure the equipment is in good condition.

- Keep tools and other materials away from edges, railings, and other elevated surfaces. Stack materials on a flat surface and secure them.

- Be aware of your surroundings and be careful not to accidentally knock or hit something off the level you are working on down to the level below.

- Place materials and equipment at least six feet away from an edge. If working near an opening, cover it or arrange materials so that they can’t roll or slide towards the opening.

Using a checklist like the one on the next page, inspect your site for falling-object hazards. For more info on falling objects, visit ihsa.ca/safetytalks and download our safety talk on falling-object hazards.
## Falling-Object Inspection Checklist

<table>
<thead>
<tr>
<th>Areas Inspected</th>
<th>Date</th>
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</table>

**Inspection Items**

### 1. Job Safety Analysis
- JSA has been developed and reviewed.

### 2. Exclusion Zones
- **Barricades**
  - There is an accessible area below the work.
  - Barricades are in place.
  - Signs are in place to explain the reason for the barricades.
  - The exclusion zone is large enough.
- **Overhead Protective Structures**
  - There is an accessible area below the work.
  - The area must remain accessible, so it requires overhead protection instead of barricades.
  - Overhead protective structures are installed correctly.

### 3. Guardrails
- Toeboards are installed.
- There are no gaps between the toeboards and the work surface.
- There are no gaps between adjoining toeboards.
- Toeboards are at least 3½ inches high (89 mm).
- Guardrails have a mid-rail and a top rail.

### 4. Opening Covers
- Openings near the work area that require covers have been identified.
- Existing covers are in place.
- Existing covers are properly secured and marked.

### 5. Scaffolding
- All debris and unnecessary materials around the scaffold are removed regularly.
- Proper guardrails and toeboards are installed.

### 6. Hoisting and Rigging
- An exclusion zone has been established and barricades installed.
- Warning signs have been posted where needed.
- No workers are under the path of the overhead load.
- Loads are properly secured.
- Slings and other hardware are in good condition.
- Tag lines are used to control loads.
- Proper lifting containers are used.
- Signallers are used when required.

### 7. Housekeeping
- Material is properly secured.
- Material and equipment is kept at least 6 feet away from the edge.
- Debris is cleaned up and removed regularly.
- No tools or equipment is stored near edges or on railings or elevated surfaces.
- Material is stacked properly to prevent tipping.
- Material is stored on level surfaces.

### 8. Tools and Equipment
- Hand tools are secured in work belts.
- Carts are the correct size for the material being moved.
- Carts are stable and have sides.
- Anything extending over the sides of the cart is secured.
There’s no question that nail guns boost productivity on a construction site. They can fire several nails every second. Their speed and force are very useful on the job, but they can be deadly if a nail is fired into your head, neck, or chest.

Wounds from nail guns are a common struck-by object injury. Struck-by object injuries occur when a person comes in contact with a falling, flying, swinging, slipping, or piercing object that is in motion.

Struck-by object is the leading cause of lost-time injuries (LTIs) in Ontario’s homebuilding sector.* Most of these injuries involve being struck by fasteners such as nails, brads, and tacks. Compressor tools such as roofing nailers, strip nailers, coil nailers, and brad nailers are the main culprits.

If a nail hits your eye, you could lose your sight. If it goes into your head, neck, or chest you could die. The most common injuries are to the hands and feet, but even they can cause permanent damage. It only takes one careless movement to seriously injure yourself or someone else. However, proper training, regular maintenance, and safe work practices can help you prevent nail gun injuries.
Training
Everyone who uses a nail gun requires training. They may be a common tool on construction sites, but that doesn’t mean every worker is familiar with every kind of nail gun or every type of trigger. If you’re an employer, never take it for granted that someone knows what to do. Train your workers on the specific model of nail gun they will use on your site, and familiarize them with the work area where they will use it. Show them how the safety features work. It’s a good idea to demonstrate the specific task before starting work.

Maintenance
As with any tool or piece of equipment, proper maintenance is essential to ensure that your nail gun will work the way it’s supposed to. An unexpected malfunction could lead to a critical injury. Always use the proper kind of nails for the gun. Don’t try to get away with using nails that you think are similar enough. It’s not worth getting hurt.

Always inspect your nail gun before you use it to make sure it’s in working order. Check that all the safety features are intact. Never try to modify or override the safety features, such as by tying the nose contact in the activated position.

Before you reload your nail gun or clear a jam, always disconnect it from the air source or remove the cartridge. In fact, you should do that before performing any sort of maintenance on your nail gun. Any time you aren’t using the gun, engage the trigger safety device. You can also disconnect the gun from its power source.

Safe work practices
When nail guns and other compressor tools are used safely, they can be indispensable. By following these safe work practices, you can avoid nail gun injuries.

- Always wear the proper personal protective equipment—including eye protection.
- Keep your hands and fingers off the trigger when you are not using the nail gun.
- Never carry a nail gun with your finger on the trigger.
- Do not allow anyone who has not been trained to operate a nail gun.
- Never point a nail gun at anyone.
- Keep your hand and fingers well away from the path of the nail. Use clamps if necessary.
- Do not try to reach too far when you are using a nail gun. You need to be holding it firmly.

For more info about nail gun safety, download the Nail Gun Safety Talk at ihsa.ca/safetytalk

Nail guns with sequential-trip triggers are much safer than contact-trip triggers, which can fire accidentally if the nail gun recoils or the operator bumps against something. Studies have shown that using sequential-trip triggers can cut injury rates in half without affecting productivity.

*Statistics provided by Ontario’s Workplace Safety and Insurance Board, which classifies LTIs by CSA Accident Category Description.
Heavy equipment and struck-by injuries

You may think it never happens, but it does. When heavy equipment such as excavators, backhoes, and cranes are hoisting loads, things can come loose and fall if the necessary safety precautions are not taken. Someone could be hit and seriously injured or even killed.

**Boom extensions (jibs)**
An example of this type of struck-by injury occurred recently when a boom extension or jib detached unexpectedly from a telescopic boom mobile crane and hit a worker. This can happen during installation or stowage of the jib on the crane. To prevent this kind of accident, it is essential that jibs be installed and stowed in accordance with the operator’s manual.

When operating a crane, follow these safe work practices.
- Operate, inspect, and maintain cranes in accordance with the manufacturer’s instructions contained in the operator’s manual and with the regulatory requirements under the *Occupational Health and Safety Act* and any other legislation.
- Make sure that all crane operators are qualified and competent to operate a crane in accordance with the *Occupational Health and Safety Act*.
- Make sure all workers who are assigned to help the operator stow or install the jib are receiving step-by-step directions from the crane operator.
- Never allow workers to stand under the jib at any point throughout the installation and stowage procedure.
- Never hoist a load over other workers.
- Never unpin any connection before making sure that the jib is secure and all the steps have been performed correctly up to this point.
- Re-check every pin, electronic connection, and wire-rope routing BEFORE moving or operating the crane.

**Quick couplers**
Another recent struck-by injury happened when a quick coupler unexpectedly released, causing an attachment to fall and strike a worker. When they are not installed or maintained correctly, heavy equipment attachments—various-sized buckets, ripping teeth, hammers, and other tools attached by quick couplers instead of traditional pins—may release and fall. When that happens, it’s usually because the quick coupler was not properly engaged and locked. To make sure quick couplers are fully engaged and locked, the heavy equipment operator should do a ground test (also called a bump test).

To perform a ground test,
1. Place the connected attachment on the ground.
2. Using the equipment, apply pressure to the attachment. If the attachment is not securely connected, it should become obvious when you apply pressure.

Operators must also follow the rules contained in the construction regulation. They include the following:
- The operator (who must be a competent worker) must inspect the equipment before each use to make sure that there are no defects and that it is not in a dangerous condition.
- A supervisor or a competent person appointed by the supervisor must also inspect the equipment to ensure that it is not in a condition that will endanger a worker.
- No worker may operate the equipment unless he or she is competent to do so.

**Working on the ground**
If you are working on a jobsite where cranes or other types of heavy equipment are in operation, make sure you are aware of your surroundings. Never walk under a load. Even if a crane or excavator isn’t lifting anything, part of the equipment might dislodge and fall on you. Make sure everyone on the jobsite knows where cranes and excavators are working. If you need to enter those areas, always make eye contact with the operator to ensure that he or she knows where you are at all times. Simple measures can make all the difference.

Visit [ihsa.ca/news_events](https://ihsa.ca/news_events) to download safety advisories on boom extensions and quick couplers. Share them with everyone on your jobsite.
MOL looks at recycling and waste management in upcoming blitz

Recycling and waste management firms have seen a rise in injuries in recent years, and now they are going to see Ministry of Labour (MOL) inspectors knocking on their doors. In October and November, MOL inspectors will be visiting recycling and waste management facilities as part of a provincial safety blitz.

From 2010 to 2011, the total injury rate on these industrial sites increased by almost 13 per cent.* During the same period, the number of workers in that sector rose by 25 per cent. In most cases, inspectors will be visiting these industrial employers to make sure that health and safety programs include appropriate measures to reduce hazards in these workplaces.

This blitz will include visits to both municipal and privately owned workplaces. Inspectors will focus on a variety of situations and issues including, but not limited to, the following:

- movement of materials in and out of buildings
- safe use of cranes and lifting devices
- safe operation of mobile material-handling equipment
- safety of persons on foot in the workplace and surrounding yards
- occupational hygiene issues such as noise, silica, dust, and biohazards
- slipping, tripping, and falling hazards
- musculoskeletal hazards.

Musculoskeletal disorders (MSDs) and falls continue to be the leading causes of injuries in this rate group, and in 2012 they were responsible for just over 50 per cent of all lost-time injuries.

Province-wide blitzes not only give MOL inspectors the opportunity to check Ontario’s workplaces for compliance with the relevant legislation but also to provide education on the problems they find.

How IHSA can help

Resources
IHSA is here to help you and your workers prepare for this blitz. You can find many free resources on our website. Visit ihsa.ca/topics_hazards to download free safety talks, posters, and prevention tips on topics such as fall prevention, occupational diseases, and MSDs.

Training
IHSA offers a variety of courses that may be helpful before and after the blitz, such as

- Working at Heights
- Basics of Supervising
- Ergonomics: Implementing into the Workplace
- Ergonomics for Transportation: How to Prevent Strains, Sprains, and Overexertion
- Ergonomics: Manual Material Handling Workshop
- Lift Truck Operator

If your workers haven’t been trained yet, register them today at ihsa.ca/training

*Statistics were provided by Ontario’s Workplace Safety and Insurance Board (WSIB).
As the Certificate of Recognition (COR™) program gains popularity among construction, transportation, and utility firms in Ontario, it is also getting attention from those who buy the services provided by those firms. Earlier this year, both the Toronto Transit Commission (TTC) and Infrastructure Ontario announced that COR™ will be a pre-qualification requirement during the bidding process.

COR™ is a well-established, Canada-wide certification program that develops and assesses a company’s health and safety management system. The program looks at 19 elements that promote a safe and healthy workplace. To become certified, a firm must first pass an internal audit of its health and safety policy and program, and must then pass an external, third-party audit.

While working towards COR™ certification for its own operations, the TTC has decided to require COR™ as a safety standard from firms bidding on capital construction projects. This policy is expected to come into effect on July 1, 2014, for contracts estimated at more than $25 million. The next target will be January 1, 2015, for construction contracts valued at over $5 million, with full implementation of the COR™ requirement for all construction contracts regardless of value by January 1, 2016.

Similarly, Infrastructure Ontario has adopted COR™ as a pre-qualification requirement for bidders for its major projects program. Over the past few months, Infrastructure Ontario has been working with IHSA to sort out the details of this initiative. Steve Dyck, Vice President of Communications and Stakeholder Relations at Infrastructure Ontario, says it expects to start requiring COR™ certification sometime this fall.

During the hiring process, it’s not surprising that some organizations are using COR™ to help them decide which firms take health and safety seriously. When a company is COR™ certified, its commitment to health and safety is immediately demonstrated to prospective clients. COR™ certification proves that a company has an effective health and safety management system. It provides an objective way of assessing a firm’s qualifications when it comes to safety.

The fact that large organizations such as the TTC and Infrastructure Ontario are integrating COR™ into their bidding processes is a boost for health and safety standards in Ontario. As more buyers require COR™, more firms are likely to pursue certification in order to be eligible for those jobs. As a result, safety should improve across the province as more firms become certified. That’s exactly what IHSA envisioned when it brought COR™ to Ontario.

Keep your company competitive by becoming COR™ certified. Visit ihsa.ca/cor to find out how to get started.
IHSA Annual General Meeting focuses on achievement and the need for training standards

IHSA’s fourth Annual General Meeting took place on September 18 at IHSA’s main headquarters at the Centre for Health & Safety Innovation in Mississauga (CHSI).

Along with the formal business meeting, the event provided the opportunity to hand over some well-deserved awards to individuals and firms that have made great health and safety strides in the past year. This included ZeroQuest® and President’s Awards, Transportation Achievement Awards, the Gil Samson Award, the Roy A. Phinnemore Award, the Charles A. Tallon Award, and Certificate of Recognition plaques.

Keynote speaker Jackie Manuel, CEO of the Newfoundland and Labrador Construction Safety Association, discussed the development of that province’s fall protection training standard. She noted that before standardization, there had been hundreds of training providers and huge discrepancies between the length of courses, the costs, and the quality of training. She joked that before the standard, even her mother could have been a trainer.

Although there were bumps along the way, there are now 22 public providers and 6 corporate providers that have met the provincial standard for fall protection training. Manuel says the improvements in training are already changing lives. Even at a time of tremendous growth in the construction industry, falls from height are down more than 25 per cent since the standard came into effect. “There are workers in Newfoundland and Labrador who are walking around uninjured because of the standards”, she said.
ZeroQuest® Awards

ZeroQuest® is a program that evaluates a firm’s health and safety management system and encourages continual development and improvement. The program is broken down into a series of levels, including Commitment, Effort, Outcomes, and Sustainability. Firms are recognized as they achieve each level of ZeroQuest®.

Since ZeroQuest® was introduced in 2005, 220 firms have participated. Some of those firms received awards at the AGM.

**Commitment Level**
- Henkels & McCoy Canada Inc

**Effort**
- Centre for Health and Safety Innovation
- Riggs Distler

**Outcomes**
- Innisfil Hydro
- Wildon Wiring

**Outcomes II**
- Burlington Hydro
- Greater Sudbury Hydro
- London Hydro
- Orillia Power
- Woodstock Hydro

**Outcomes III Level**
- Oshawa PUC
- Peterborough Utilities Group

**Sustainability**
- EnWin
- GridLink
- Guelph Hydro Electric System

**AGM SPECIAL PULL-OUT**

Visit [ihsa.ca](http://ihsa.ca) to learn about our Safe Driver and Safe Worker award program.
**Certificate of Recognition (COR™)**

The COR™ program has continued to gain momentum over the past year. There are more than 275 firms actively working towards COR™ certification. The following firms received COR™ certification over the last year.

- Alberici Constructors Ltd
- Anderson-Webb Limited
- Carillion Construction Canada
- CEDA Mechanical
- CentiMark Ltd
- Clearway Construction Inc
- Comstock Canada Ltd
- DMC Mechanical Ltd
- Ellis Don Corporation
- E.S. Fox Limited
- Facca Incorporated
- Fermar Paving Limited
- Ferrovial Agroman Canada Inc
- Geo-Foundations Inc
- Gibbs Wilson Contracting Inc
- Gorlan Mechanical Ltd accepting awards for
  - Modern Niagara Group Inc
  - Modern Niagara Ottawa
  - Modern Niagara Toronto Inc
- GridLink
- Maple Reinders
- Melloul-Blamey Construction
- Mike Moore Construction Inc
- Oldcastle Building Envelope
- OZZ Electric Ltd
- Percon Construction Inc
- Rescom Coatings Inc
- Siemens Canada Ltd - Energy Service Fossil
- Sutherland-Schultz Ltd
- Winroc
- WorleyParsons
- Vector Corrosion

For more information on COR™, download the brochure at [ihsa.ca/cor](http://ihsa.ca/cor)

**President’s Awards**

The first President’s Award was presented 37 years ago in 1976. Since then, the President’s Award has been considered one of the highest safety achievement awards in the industry. The award represents consecutive years of performance without a lost-time injury and is based on milestones of 250,000 hours. It is open to any firm that is a member of IHSA.

- **Ground Aerial Maintenance**
  - Guelph Hydro 250,000 hrs (01/07 to 03/12)
  - Oakville Hydro 250,000 hrs (10/11 to 01/13)
  - PowerTel Utilities Contractors 250,000 hrs (10/11 to 08/13)
  - Thunder Bay Hydro Electricity Distribution 250,000 hrs (01/12 to 02/13)
  - Kitchener-Wilmot Hydro Inc. 500,000 hrs (07/11 to 03/13)
  - Orillia Power Distribution Corp 500,000 hrs (11/02 to 09/12)

- **Veridian Connections**
  - 250,000 hrs (09/11 to 05/12)
  - 500,000 hrs (09/11 to 12/12)

- **London Hydro Inc.**
  - 250,000 hrs (03/12 to 09/12)
  - 500,000 hrs (03/12 to 03/13)
  - 750,000 hrs (03/12 to 09/13)

- **PowerStream**
  - 750,000 hrs (09/12 to 07/13)

- **Hydro Ottawa**
  - 250,000 hrs (05/12 to 07/12)
  - 500,000 hrs (05/12 to 09/12)
  - 750,000 hrs (05/12 to 11/12)
  - 1 million hrs (05/12 to 02/13)

- **Peterborough Utilities Group**
  - 2 million hrs (01/06 to 11/12)
**Charles A. Tallon Award**

The Charles A. Tallon Award is an award formerly handed out by the legacy Electrical & Utilities Safety Association (E&USA). During his 29-year career at E&USA, Chuck Tallon was a trainer, field representative, supervisor, and General Manager (1988–1998). He earned a reputation as a leader, a fighter, and a man of integrity.

The award recognizes individuals who have demonstrated outstanding enthusiasm, integrity, and commitment to the ongoing pursuit of excellence in the field of occupational health and safety.

This year the IHSA Board of Directors brought back the award in order to mark the achievements of the association’s leader, Al Beattie. Al has been an advocate of health and safety from the beginning of his career as a powerline technician, to his work with the former E&USA, to his transition to CEO of IHSA.

Al has been a tireless leader for the association, providing a clear direction toward the achievement of his vision: workplaces without injuries, illnesses, or fatalities. This direction has helped IHSA become a vital and sustainable organization in the field of high-risk, sector-specific training and consulting in Ontario and around the world.

**Roy A. Phinnemore Award**

The Roy A. Phinnemore Award is presented each year to an individual who has made significant contributions to health and safety.

The 2012 Phinnemore Award was presented to Mike Gallagher, who served as President of the Construction Safety Association of Ontario in 2004-2005. Mike spearheaded numerous initiatives aimed at making construction sites safer in Ontario, including a review of tower cranes and drill rigs, and operator training for concrete pumps and 0 to 8 ton cranes. Mike led a campaign to draw more attention to fall-related injuries and fatalities on sites. As a result, CSAO embarked on its largest information blitz ever, distributing more than half a million posters and stickers to job sites across Ontario.

As a proponent of occupational health and disease awareness, Mike initiated studies of the higher incidence of diabetes and ischemic heart disease among equipment operators. At Mike’s direction, two cents from each hour worked by members of IUOE Local 793 are directed to mesothelioma research at Princess Margaret Hospital. He also initiated and is chair of the Gary O’Neill Memorial Fund, which has raised over $100,000 for esophageal cancer research since 2012.

Mike has worked in the construction industry for more than 30 years, starting in the civil sector, and has been Business Manager of Local 793 since 1996. His father, the late Gerry Gallagher, former Business Manager of LIUNA Local 183, was posthumously awarded this same award by CSAO in 1993 in recognition of his contributions to construction health and safety and his role in establishing the McAndrew Commission following the Hogg’s Hollow tunnel collapse that killed five workers.

**Gil Samson Award**


The 2012 Gil Samson Award was presented to the Service Sector Labour-Management Health & Safety Committee for their health and safety accomplishments this past year. The committee put considerable time and effort into the development of a web tool that addresses the unique needs of workers and employers in the service sector. The tool provides information on the responsibilities, liabilities, hazards, and proper work procedures for service workers, and for those who hire service contractors.
IHSA delivers health and safety message to thousands at Canadian National Exhibition

This past August, IHSA participated in the Canadian National Exhibition (CNE) to promote the critical importance of working safely. As Canada’s largest annual public event and one of the 10 largest fairs in North America, the CNE attracts more than a million visitors every year. IHSA was there to raise awareness about the hazards of working at heights and to give valuable information to homeowners about their responsibilities when they hire contractors to work on their homes or cottages.

Over five days, more than 12,000 people visited IHSA’s booth. Many came to get their souvenir photo taken with friends and family. The photo—showing fair-goers protected by a guardrail with the Toronto skyline in the background—reminded everyone about the importance of health and safety at work so that everyone returns home safe to their loved ones.

Ministry of Labour (MOL) representatives provided great support to this event by joining IHSA staff to help get the message out. Together, they spoke to thousands of people each day about the hazards of working at heights and how to eliminate the risks. Many of us know someone who works at heights or has hired someone to work at heights. The staff at the booth reminded everyone that fall protection training, such as IHSA’s one-day Working at Heights course, is mandatory on Ontario construction sites.

The CNE proved to be an excellent place for giving out valuable information to workers and employers, as well as to homeowners who hire contractors for repairs and renovations. It also provided an opportunity to educate young workers about their rights and responsibilities on the job.

This event at the CNE came just before MOL inspectors began a two-month enforcement blitz on falls in the construction industry. During September and October, inspectors visited construction sites across the province with their focus on fall prevention and fall protection training.

Anyone can visit ihsa.ca/falls for more information about fall hazards and how to work safely.
Management Health and Safety Committee took on that challenge. They asked IHSA to research proximity detectors and find out how effective they are in reducing injuries and fatalities from reversing vehicles.

IHSA researchers put a safety technology called Scan-Link Armour System to the test. This system is being used by several Canadian municipalities, companies in the oil and gas industry, and road building and demolition firms in construction.

Scan-Link system
IHSA researchers put a safety technology called Scan-Link Armour System to the test. This system is being used by several Canadian municipalities, companies in the oil and gas industry, and road building and demolition firms in construction.

Scan-Link has three components:
1. A sensor unit mounted on the back of the vehicle
2. A display unit in the cab of the vehicle
3. Safety vests and hard hats worn by workers

The system was better at detecting workers who were directly behind the vehicle than at the side of the vehicle.
• The Scan-Link system even detected workers lying on the ground as long as they were wearing their RFID-tagged equipment. Other radar and ultrasonic systems must be tilted up and away from the ground to prevent false positives.

In spite of those positive results, the findings suggest that in certain situations the technology may not be as effective.

• There was a slight delay from the time of detection to the time when the alarm sounded. So, depending on an operator’s reaction time and a vehicle’s braking distance, an operator might not be able to stop in time if a vehicle was moving fast.

• Our researchers tested detection ranges when workers were standing at three different angles to the back of the vehicle: 0° (directly behind), 45°, and 80°. The system was better at detecting workers who were directly behind the vehicle than at the side of the vehicle. The sensor sends out a conical signal, so as the angle of the worker to the vehicle increases, the detection range decreases.

• The system performed best when the workers were wearing an RFID-tagged vest and hard hat at the same time. It performed almost as well when just the vest was worn, but the detection range decreased significantly when the hard hat was worn alone.

Although this technology cannot replace a signaller, who is legally required to be on site (O. Reg. 213/91, s. 104), it can provide additional protection for workers, including the signaller. With reliance on any technology, however, there is always the possibility that workers will become complacent and not take their normal safety precautions.

For more info about this issue and the results of our study, contact IHSA. To learn more about the technology, visit the Scan-Link website: scan-link.com†

How it works
Scan-Link uses a radio frequency broadcast from the sensor unit mounted on the back of the vehicle to detect any worker who is in the path of the reversing vehicle. Workers wear safety vests and hard hats equipped with radio frequency identification (RFID) tags. If the system detects an RFID tag within the reversing zone, the display unit in the cab alerts the operator with an alarm and a visual warning.

How it performed
Our research department replicated some jobsite conditions and situations to see how the technology would perform. Overall, it worked quite well. Here are some of the positive findings of the research study.

• When there was a worker in the detection zone, a warning was given before the operator could start reversing the vehicle.

• The alarm was loud enough to be heard outside of the vehicle, even when the doors and windows were closed. That would help alert not only the operator but also the worker who is in the reversing zone.

• Other systems that use radar or ultrasonic sensors often sound the alarm for large objects as well as workers. The Scan-Link system only detected workers, not objects or equipment commonly found on busy jobsites.

† Since the time of the study, improvements have been made to the sensor units. The detection range has increased and there is a data recording option to download info such as time and date of detection, the direction a worker was facing, and the equipment detected (hard hat or vest).
Struck-by injuries in transportation: What they are and how to avoid them

Struck-by injuries are a serious concern in the general trucking and the lumber and building supply industries. Packages, goods, and lumber can fall or move in transit and become hazards to workers. Lift trucks moving around a loading dock can also increase the chance that an object may slip off and fall.

It’s a common assumption that most transportation workers are injured on the road. Even though motor vehicle incidents (MVIs) cause more fatalities and critical injuries, IHSA statistics show that struck-by injuries are a more frequent cause of lost-time injuries.

Between 2006 and 2011 in IHSA’s member firms, general trucking had the highest number of lost-time injuries due to struck-by incidents. Lumber and building supplies also experienced a high number of struck-by injuries; they were third on the list. There was an especially high number of injuries among workers with six months or less on the job.

Falling and moving objects should be taken seriously and efforts made to reduce the danger they pose. It is important for workers to realize that objects may fall or move and they must maintain the safest distance possible from them.

Like other hazards, struck-by incidents can be caused by:
• a lack of safe operating procedures
• a lack of safety-rule enforcement
• insufficient or inadequate training.

Part of preventing these hazards is to do a risk assessment to find out who is in danger and where and when they may be injured. This risk assessment should be used to decide what action must be taken to remove or reduce this risk. It is important to consult the workers—their knowledge can help to ensure that hazards are spotted and workable solutions adopted.

It is essential to know the root cause of these hazards. Most struck-by accidents in transportation happen on or near tractors, trailers, and mobile equipment. They can also involve skids and pallets that are being moved. In the lumber and building supply industry, wood, lumber, boxes, and bricks are among the top offenders.

What drivers can do
Drivers need to protect themselves from the danger of falling freight while loading and unloading. They can do that by taking the following precautions:
• Secure the load. Make sure the method being used complies with the load-securement regulations of the Highway Traffic Act. There are many methods and materials for securing loads and cargo on vehicles and intermodal containers.
• strapping (steel, polyester, nylon, and polypropylene)
• fasteners (nails and bolts)
• dunnage
• lashing (ropes, cables, wires, and chains)
• Stay away from the truck’s trailer when a lift truck is loading or unloading freight.
• If you must direct loading or unloading, plan it with the lift truck driver and have a safe place to stand.
• Make sure all goods are shrink-wrapped and strapped on the pallet or secured to a side wall of the trailer.
• Open the trailer doors correctly. Look at the trailer doors to make sure both of them are properly latched and that they aren’t bulging from the cargo leaning against them. If the doors aren’t properly latched or if they are bulging, ask for assistance. While standing in front of the left door, release the latch(es) on the right door and carefully open the right door. Check to see if any cargo is leaning forward or against either door and if it is stable.
• Don’t try to catch falling cargo or boxes.
• Inspect boxes before moving them.
• Look for banding that is broken or tape that is old or insufficient.
• Push boxes lightly to gauge their weight.
• Use the correct equipment for loading and unloading.
• Avoid lifting manually whenever possible.
• Use the lift gate if there is one.
• Wear proper footwear such as steel-toed or sturdy leather boots.

What employers can do
Employees need training on the general hazards of the job and the specific equipment being used. Orientation should include an overview of the relevant legislation and the company’s safety procedures.

IHSA offers a variety of transportation-related courses that cover the general hazards of the industry and ways of reducing them. Visit ihsa.ca to learn more.
With so much emphasis on the job to be done, sometimes we don’t pay enough attention to how things are loaded, unloaded, or stored. Improper loading and storage on jobsites, in warehouses, at lumber and building supply yards, or at loading docks can lead to much more than a simple cut or bruise. It can leave you seriously injured, paralyzed, or even dead.

It’s easy to imagine how this might happen. When material is loaded improperly onto a truck, it could fall off and land on your head. When it is left sticking out into a pathway, someone could trip on it and fall on something sharp. When material is not stacked properly, it could collapse on you. In some cases, the hazard may be in trying to get at stored items. Remember to make sure that you or a co-worker will be able to safely retrieve the things being stored.

**Common hazards**

Regardless of where you work, some of the common hazards related to storage are caused by

- a lack of space
- poor loading
- unsecured stacks
- damaged pallets
- unsafe or unsecured racking or shelving
- use of the wrong pallet for the racking system.

Be aware of any special storage requirements, such as for a dry, dark, or ventilated area. If you’re dealing with chemicals, remember to check each material safety data sheet.

**In the warehouse**

When working in a warehouse or other type of storage facility, follow these safety guidelines.*

- Check that shelves and racks are sturdy and in good condition.
- Stack all materials on a flat base.
- Place heavier objects close to the floor, and lighter or smaller objects higher up.
- Do not stack anything so high that it could block the sprinklers or touch overhead pipes or ceiling lights.
- If material-handling equipment is available, use it for stacking empty skids or pallets. If it is not available, ask someone to help you.
- Never climb up the shelves or racking. When placing or removing anything above your head, use a safe means of access (e.g., elevating work platform, stair platform).
- Never stand on boxes or chairs to reach a shelf or rack.
Stack empty skids and pallets flat rather than on end, and no more than 4 feet high.

Stack lumber no more than 16 feet high if you are handling it manually, and no more than 20 feet if you are using a lift truck.

When you are working at a height, use signs and barricades to alert people at ground level.

To prevent objects from falling, don’t put tools and materials on the edge of a platform, ladder, or railing.

On the jobsite
When working on a jobsite or in other work areas, follow these guidelines to help prevent injuries caused by unsafe storage practices.*

Keep material at least 1.8 metres, or 6 feet, away from openings in floors and roofs, floor and roof edges, excavations, and trenches.

Store materials away from overhead powerlines.

Remove all nails from used lumber before stacking it.

Stack and level lumber on solidly supported bracing.

Ensure that stacks are stable and self-supporting.

Do not store pipes and bars in racks that face main walkways. When material is being removed, they could roll off and hit someone.

Stack bagged material by stepping back the layers and cross-keying the bags at least every 10 layers. (To remove bags from the stack, start from the top layer.)

When baled paper and rags are stored inside a building, place them no closer than 18 inches from the walls, partitions, and sprinkler heads.

Band boxed materials or secure them with cross-ties or shrink plastic fibre.

When drums, barrels, or kegs are stored on their sides, block the bottom rows to keep them from rolling.

When drums, barrels, or kegs are stacked on their ends, lay planks, sheets of plywood dunnage, or pallets between each row to make a firm, flat, stacking surface.

When drums, barrels, and kegs are stored on their ends, chock the bottom tier on each side to prevent shifting in either direction when stacking two or more rows high.

Stack loose bricks no more than 7 feet high. When a stack reaches a height of 4 feet, step it back 2 inches for every foot of height above the 4-foot level. When masonry blocks are stacked higher than 6 feet, step the stacks back one-half block for each tier above the 6-foot level.

Pay attention when you are stacking and storing material. Be sensible about where you put things and how you store them. Make storage hazards the topic of your next safety talk. Visit ihsa.ca/safetytalks to download free safety talks about these issues.

*Recommended measurements stated in this article are based on requirements outlined in American OHSA Regulations, Part 1926.
When stripping material from the roof cavity, the main ergonomic hazard is hurting your lower back. This is due to bending and removing the material by hand. You are also liable to overexert yourself while handling the old roofing material.

Safety tips
1. Use upright scraping tools whenever possible to provide mechanical leverage and reduce the need to bend forward.
2. Use mechanical dollies, wheelbarrows, carts, or buggies to carry roofing materials when possible.
3. Use mechanical lifting, cutting, and removal equipment when possible.
Applying built-up roofing components often requires you to bend forward while you are using a screw gun to fasten vapour barriers, protection boards, and insulation. This repetitive bending can lead to back pain. You could also injure your knees or back from squatting and kneeling when you’re working on the floor.

Safety tips
1. Avoid working on the floor as much as possible. For example, use a work bench or mobile table for cutting material.
2. Consider using upright automatic-feeding screw guns. They allow you to work in an upright standing position rather than in an awkward, bent-over position.
3. For roofing membranes longer than two metres, get help to lift long lengths of capping or other accessories.

Applying roof membranes

Lifting and carrying are the main MSD-related hazards for roofers applying roof membranes. Handling propane and torches manually, along with lifting roofing membranes, can cause an MSD.

Safety tips
1. Use mechanical equipment such as dollies and carts whenever possible.
2. Get help from another worker if you can’t handle something safely. Consider the weight of what you are lifting, where you are lifting it, and how awkward your posture is if you try to do it alone.
3. Always use proper lifting techniques—squat down and lift with your legs rather than bending over and lifting with your back. Keep the load close to your body.

Another good way to reduce your risk of developing an MSD is by stretching. You can help prevent injuries by warming up the muscles in your neck, back, and shoulders. It only takes a few minutes. IHSA has a pocket card called “Before You Start Work” that shows warm-up and stretching exercises. Visit the products section at ihsa.ca/products for details. You can also visit the MSD page at ihsa.ca/msds for more information on how to avoid these types of long-term injuries.

IHSA recommends stretching before work. Getting ready for the job not only means setting up your tools and materials but also getting your muscles ready.

Stretching before work can help prevent back, neck, and shoulder injuries. IHSA has developed a Before You Start Work stretching and exercises card (V012). You can order it by visiting ihsa.ca/products.
an opportunity for learning

In southwestern Ontario, many of the local utilities joined together earlier this year for a unique two-day safety meeting. Through several presentations, the group was able to exchange safety information that was important for all the firms.

The event, which was held in Chatham, was organized by staff from Entegrus, Essex Powerlines, London Hydro, Erie Thames Powerlines, Ascent, Bluewater Power, and St. Thomas Energy Inc. The importance of safety meetings such as this one was underscored by Entegrus CEO Jim Hogan during his opening remarks.

“Though keeping the lights on is extremely important, health and safety is number one,” he said. “Events like this demonstrate the importance of health and safety.”

The speakers’ topics were varied, but there was one important similarity. All of them stressed the importance of communication and the sharing of information when it comes to health and safety for the good of all.

Bernie Inman — The danger of complacency

While he was working in the petroleum industry in 1994, Bernie Inman, then a 27-year-old family man, was critically injured. For the 19 years since his accident, Bernie and his wife Sheila have been speaking to groups about the danger of complacency in health and safety and how failing to take a few minor precautions can have devastating consequences.

“I would give anything for the chance to go back 19 years in time so I could take a different approach to safety,” he said.

As a power engineer in the petroleum industry, Bernie travelled to various well sites in rural northern Alberta.

“I was encouraged to report incidents and near misses, but I can tell you that if I took a shortcut and a near miss happened, no one knew except me.”

The day of his injury was a cold and wintry one. He wanted to finish work quickly and get home to see his wife, who was six months pregnant.

“I was good at my job. I got promoted and moved around because of my ability,” said Bernie. “Obviously I wasn’t as good as they or I thought—otherwise I’d still be working in that field instead of doing what I do today.”

While working alone on one of these remote sites, he entered the small building quickly and bumped his head on the way in. He was not wearing a hard hat.

He became disoriented, and though he doesn’t remember, he thinks he stumbled and struck a bleed valve on a methanol injection pump near the entrance. That explanation is based on the incident investigation and Bernie’s log book, because he has no memory of what happened to him that day.

Methanol, which was used to keep the lines from freezing, can be deadly. Bernie had become unconscious and was beginning to be exposed to the methanol, which was now pooling in the building.

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“I would give anything for the chance to go back 19 years in time so I could take a different approach to safety,” he said.

As a power engineer in the petroleum industry, Bernie travelled to various well sites in rural northern Alberta.

“I was encouraged to report incidents and near misses, but I can tell you that if I took a shortcut and a near miss happened, no one knew except me.”

The day of his injury was a cold and wintry one. He wanted to finish work quickly and get home to see his wife, who was six months pregnant.

“I was good at my job. I got promoted and moved around because of my ability,” said Bernie. “Obviously I wasn’t as good as they or I thought—otherwise I’d still be working in that field instead of doing what I do today.”

While working alone on one of these remote sites, he entered the small building quickly and bumped his head on the way in. He was not wearing a hard hat.

He became disoriented, and though he doesn’t remember, he thinks he stumbled and struck a bleed valve on a methanol injection pump near the entrance. That explanation is based on the incident investigation and Bernie’s log book, because he has no memory of what happened to him that day.

Methanol, which was used to keep the lines from freezing, can be deadly. Bernie had become unconscious and was beginning to be exposed to the methanol, which was now pooling in the building.
When Sheila got home, she was surprised to find the house dark. She started phoning Bernie’s friends and co-workers asking where he was. Eventually she reached one who set out to retrace Bernie’s path. He found Bernie’s truck with the door open and Bernie lying where he had been for almost 12 hours.

Bernie was airlifted to Vancouver to begin a long recovery from what the authorities deemed to be an “unsurvivable incident.” Because of the length of his chemical exposure, he had second- and third-degree chemical burns to 70 per cent of his body. He suffered from organ failure and required blood transfusions and skin grafts.

“But I had the easy job,” he said. “I was comatose.”

Meanwhile Sheila had gone into premature labour from the shock of Bernie’s injuries. She spent most of her time in hospital between the nursery and Bernie’s ward. The co-worker who found Bernie was so troubled by the experience that he too needed an extended leave of absence to recover.

Bernie is now a quadriplegic and requires a great deal of physical help.

“I feel like I’ve cheated my kids. I’ve never tied their shoes or skates, but they’ve helped me with mine.”

Over the months that followed, the family began to recover and Bernie began piecing together his accident and spreading his message of safety by describing his experience.

His family, now with two more children, is his reason for living, and Bernie hopes that’s also a motivator for others: “Everyone is a VIP, and I guarantee someone somewhere is waiting for you to come home.”

Dale Moore, Ontario Fire Marshal’s office
Dale Moore is a fire protection specialist with the Ontario Fire Marshal’s (OFM) office. He gave an extensive presentation on some of the situations that the OFM has investigated and some of the many hazards often found at these sites such as

- poorly stored dangerous chemicals
- electrical supply that has been tampered with
- humidity and mould that can cause respiratory problems
- fire hazards
- booby traps (e.g., devices that fire shotgun shells and razor blades) that are intended to injure anyone who enters the building.

He explained that illegal drug labs and marijuana grow ops are becoming more and more common. What is not widely known is that they can cause serious injuries to utility workers, who are often called in by authorities to disconnect the power.

Moore said that for every pound of methamphetamine produced, four or five pounds of chemical waste are created. That waste can be a danger to anyone who has to enter these buildings when the operation is discovered.

“Grow ops and drug labs affect the work that you do,” Moore told the group. “The drug world is big business, and health and safety isn’t a part of it.”

Fuse Group — Safety training videos
Closing the day was a presentation from Todd Ross of the Fuse Group. This group of utilities has been helping to create a series of trade-specific videos for use in safety and new worker training.

This safety event is the second of its kind for the utilities in this region. The organizers say collaborations such as this allow the companies involved to

- promote a common vision for safety
- share their resources when planning events and initiatives
- improve communication between staff of neighbouring utilities.

The group hopes to continue holding such safety meetings in the coming years.
Sometimes it takes all day. Sometimes it takes only half a day. And sometimes it’s no more than a video over lunch. Depending on where you work and who you work for, the training you get can vary widely. That’s one of the problems that were highlighted in the 2010 report of the Expert Advisory Panel on Occupational Health and Safety. The panel’s report called for “rigorous training standards that set a minimum standard for high-risk activities such as working at heights in the construction industry.” Since then, the Ministry of Labour has been working on establishing those standards, which would regulate occupational health and safety training in the province.

“Training standards will level the playing field and ensure that all workers start work with the same knowledge and understanding,” says Cordelia Clarke Julien. She is the Director of Training and Safety Programs in the Prevention Office. Right now her department’s priority is to create a provincial training standard for working at heights. As a first step, Ms. Clarke Julien and her team have assembled a development group that includes employer and labour representatives. IHSA is working with the group, providing assistance and expertise on the construction, electrical, and transportation industries.

Course content

Ms. Clarke Julien explains that under the Occupational Health and Safety Act, employers are required to give their workers certain training, depending on the kind of work they do. However, the Act doesn’t specify what that training should cover, who should give it, or how long it should be.

That’s the current situation with working at heights training. “The training standard will say exactly what a certain training program must cover,” says Ms. Clarke Julien. “For example, if you are going to work at heights, the training standard will state clearly what you have to know and understand before you start work.”

Instructors’ qualifications

Ontario’s new health and safety training standards will apply to the instructor as well as the course content. “The standards we’re working on will not only look at the quality of the content but also the quality of the instruction,” says Ms. Clarke Julien. She explains that the reason for this is to encourage interaction between participants and the instructor. Instructors need to be able to answer industry-specific or task-specific questions and provide relevant examples.

Standards in other provinces

Health and safety training standards are not a new concept. Some provinces already have them, and those provinces have seen their injury rates drop as a result. Newfoundland and Labrador is one example. At IHSA’s recent Annual General Meeting, Jackie Manuel, CEO of the Newfoundland and Labrador Construction Safety Association, described how a fall protection training standard reduced falls from heights by 25 per cent since April 2011.

Progress in Ontario

The working at heights training standard development group will soon hold consultations with industry stakeholders. Next year, the focus will be on implementation. “The Expert Advisory Panel was stage one. Developing the draft standard for working at heights training is stage two. That’s where we are now. Deciding how the standard will be put into effect is stage three,” says Ms. Clarke Julien. “We’re looking at 2014 before the standard will be ready. At that point we can put it forward and then we’ll need a regulation change to make it mandatory.”
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