SINTRA ENGINEERING

Fall 2011

NEW PRODUCT: RAPID REPORTS *Technical Answers Fast!*

Sintra Engineering is pleased to announce the introduction of a new report format called the RAPID REPORT. These reports are short and to the point. More importantly, they provide property adjusters with the information they need to make decisions and resolve claims quickly. In addition, the turnaround on these types of reports is three weeks from assignment to reporting (provided the site exams can be arranged quickly).

We get that when it comes to a property loss, time is literally money. From temporary accommodation to site security, the longer it takes to restore the premise, the more it costs. In these instances, it is important to get critical information quickly. Where technical answers are required before restoration can begin, the timelines become even more critical.

We understand this and we continue to evolve our processes to ensure that we are providing insurance professionals with rapid response to scene and rapid reporting of findings. It has always been our practice to respond immediately once retained to the scene to document and preserve critical evidence so that the restoration process can begin as quickly as possible.

In an effort to ensure timely reporting we have developed a report format that cuts to the chase and provides a concise summary of our findings to enable our clients to take action immediately. It answers the critical questions that enable you to assess liability and progress confidently towards resolving the claim.

Our new Rapid Report highlights these key details:

Cause

- *What was the cause of the loss?*

Contributing Factors

- *What other factors contributed to the loss?*

Involvement of Insured

- *Does the evidence suggest whether the actions of the insured contributed to the cause?*

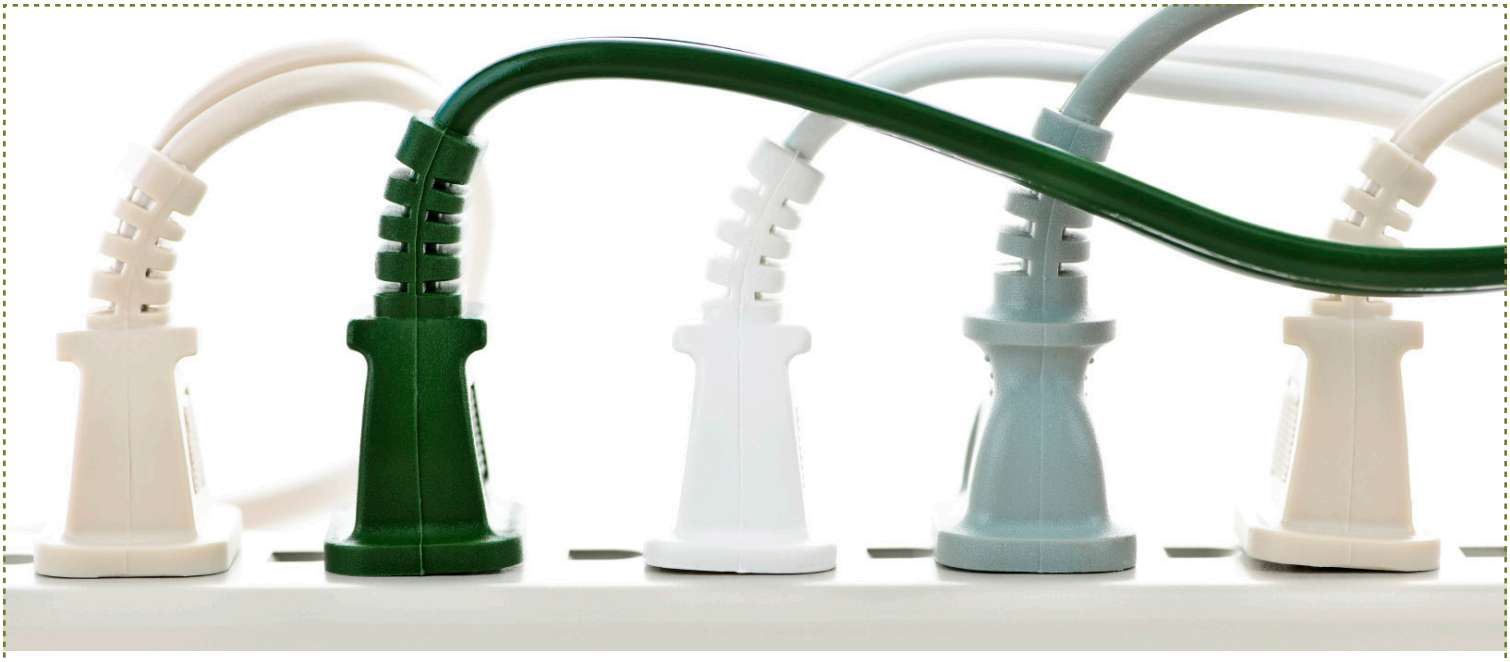
Potential for Subrogation

- *Are there other parties that partially or fully contributed to the cause of the loss or exacerbated the size of the loss?*

For some claims, these responses will suffice for our clients to take appropriate action. Where further details are required or where a subrogation action is warranted, the possibility of requesting a more comprehensive technical report remains should it be required.

The Rapid Report is intended to provide our clients with a quick, concise, and cost effective option to assist in resolving claims. If our findings are the basis for denial of a claim or in support of a position in liability negotiation or litigation, we can provide a more comprehensive report detailing our analysis and explicitly outlining the basis for our conclusions.

As previously stated, it is our goal to provide our clients with the technical information they require to resolve claims as quickly as possible. The early feedback from clients who have received this new report has been extremely positive. We welcome your feedback in our pursuit of providing forensic engineering services that meet the needs of our clients.



THE OLD MADE NEW – *Potential Implications of the New Electrical Inspection Code for Insurers and Adjusters*

The Canadian Standards Association has recently issued a new code to fulfill the need for a common standard for electrical inspections. CSA Standard C22.6 No. 1-11, titled *"Electrical Inspection Code for Existing Residential Occupancies"*, is a new Canadian standard developed to establish a minimum level of safety in existing residential occupancies. This code is sure to be a useful resource for insurers, regulatory authorities and property adjusters alike, and will aid in establishing a means for consistent evaluation of existing electrical installations.

C22.6 No. 1-11 is a voluntary standard for the time being; however, if it becomes adopted by the authority having jurisdiction, its requirements shall become mandatory. If this happens, there will be new considerations when assessing liability in circumstances where old electrical installations are found to be the cause of an insured loss.

Most regulatory codes, including building codes and electrical codes, are designed to only apply to installations, maintenance or repairs that occur after the effective date of the applicable code. As such, pre-existing installations need only comply with the code requirements at the date of installation. Existing installations do not need to be upgraded when new requirements are adopted by new editions of the code, and in most cases installations are considered to be acceptable if they meet all requirements of the codes in place at the time of installation.

Consider a house built in the 1940's, which did not have any exterior outlets installed. When the homeowners need to use electrical equipment outside, they run extension cords outdoors from inside the house. During the 1940's there was no requirement to have exterior electrical outlets installed. Thus, this is not a violation of the electrical code in place at the time that the home was built. Despite this, frequent use of long extension cord runs from inside the house presents a hazard.

The Canadian Electrical Code, Part 1, was first published in 1927. Since that time, 21 editions of the Code have been published. Throughout the years, the Canadian Electrical Code has constantly evolved to improve the minimum level of safety; the Canadian Electrical Code today is more detailed and stringent than its earlier versions. On top of that, many of us have added useful appliances and electronic devices to our homes over time, yet by doing so we have sometimes inadvertently created unsafe conditions.

It has often proven difficult for electrical inspectors to perform comprehensive inspections involving existing installations constructed under previous editions of the electrical code. In many instances, safety-related issues are discovered, but no code violations can be formally concluded since the relevant version of the code does not address the problems identified.

C22.6 No. 1-11 identifies potential safety issues and/or fire hazards in existing residential occupancies, and in some cases, compliance will necessitate upgrading portions of existing electrical installations. In the instance of the 1940's home mentioned above, C22.6 No. 1-11 requires that at least one duplex receptacle (a ground fault circuit interrupter of the Class A type) be installed outdoors for single dwelling homes. Outdoor receptacles need to be readily accessible from ground or grade level, and they also need to have a weatherproof cover plate. Compliance with the new C22.6 No. 1-11 standard would necessitate the installation of at least one exterior outlet for the 1940's house. This will surely make it easier and safer to use the electric lawn mower or portable power saw!

Natalie Campbell, *P.Eng., CFEI, is an electrical forensic engineer at Sintra Engineering. Natalie provides insight into electrical systems that have failed or have been attributed as the cause of a failure or fire loss. Natalie has a background in aerospace and avionics design.*

DOES SIZE MATTER?

Car Safety – How Small Vehicles Measure Up

As someone who has investigated hundreds of serious motor vehicle collisions, I am sometimes asked by clients or friends 'what is the safest car to buy?' Unfortunately, there is not a straight-forward answer as there are really many different factors that affect one's safety in a collision. My reply to this question is often a cheeky response in the form of reciprocal question: "Well, what kind of collision would you like to be in?"

With the economic downturn over the past few years and the ever increasing cost of fuel, the demand for smaller more affordable and fuel-efficient cars has risen. With the rise in the number of smaller cars being manufactured, has come pressure on automakers to improve safety features in these smaller vehicles. And it seems to have worked. More than ever, smaller cars are earning top safety ratings. According to IIHS (the Insurance Institute for Highway Safety), six of thirteen small vehicles recently tested earned the top safety rating compared to only three in 2006.

The increased safety performance of smaller cars over the past several years is primarily due to the following changes:

- Electronic Stability Control (ESC)
- Better designed crush zones that help absorb energy better in a crash
- Stronger occupant compartments
- Stronger roofs
- Side impact airbags as standard equipment

The work done by the National Highway Traffic Safety Administration (NHTSA) deserves commendation as they do a very good job of designing specific tests in order to compare the safety of vehicles within similar classes in an unbiased way. However, these staged crash tests aren't designed to compare vehicles across classes, and so it begs the question: 'can a smaller vehicle ever be as safe as a truck or SUV?' To answer this, we need to consider real-world collisions. The occurrence of real-world collisions is unpredictable, and the factors that are out of most drivers' control include the size and type of vehicle or objects with which they may collide, and the type of collision, i.e. head-on, side impact, rollover, etc.

Generally speaking, the three factors that keep occupants safe in a vehicle are:

1. Space within the compartment
2. The ability of the vehicle's safety features, such as seat belts and airbags, to evenly distribute collision forces over the occupant's body
3. The weight of the vehicle

Although small cars now have stronger occupant compartments and better designed crush zones, they remain deficient when it comes to space around the occupants and overall vehicle mass when compared to large vehicles like pickup trucks and SUVs (or semi-trucks for that matter).

When we apply the laws of physics in a motor vehicle collision, mass is a very crucial variable that dictates the severity of the collision and the magnitude of forces involved. In general, the occupants in a heavier vehicle will feel the effects of an impact less than occupants in a lighter vehicle. A larger passenger vehicle may also provide more space around the occupant, so in cases where the occupant compartment starts to become compromised, there may still be sufficient space around the occupant to prevent serious injury. On the downside, larger vehicles such as SUVs and pickup trucks are often less stable (due to their high centre of mass) and are more susceptible to rollover events.

The improved design and safety features available in small cars should give consumers confidence that smaller vehicles are becoming safer options. Keep in mind, however, that the potential for injury in automobile collisions depends on a multitude of factors, many of which cannot be designed into the vehicle. For consumers looking to buy a new vehicle, the NHTSA crash test ratings are a very useful resource and a good place to start when considering safety features, but don't let a vehicle's high crash test rating make you feel invincible; injuries occur in all sizes of vehicles and in all types of collisions.

Michael Peck, *P.Eng., CFEI is a senior collision investigator at Sintra Engineering. Michael has conducted over 1,000 collision investigations and is a court qualified expert in accident reconstruction.*

TIPS FOR CLEARING ROOF SNOW

Before it's Too Late

Snow accumulates on all roof types. The amount of accumulation depends on conditions such as wind, orientation of the building, and roof pitch, to name a few. Too much snow accumulation can lead to excessive loading and possible roof collapse. So, when is it time to remove that snow? What are the conditions that necessitate snow removal from a roof top? And, how do you safely remove it?

Here are a few things to consider as a property owner when it comes to rooftop snow removal:

- Removing snow can eliminate the snow load and mitigate structural issues related to the snow loads
- Removal of snow from a typical house roof should be consid ered when approximately 16" of snow has accumulated on the roof
- When it comes to commercial,condo or apartment buildings, the Alberta Building Code stipulates that removal should be consid ered after about 20" of snow has built up
- Ice or really wet (heavy) snow would result in a greater load, so 16" and 20" can only be considered guidelines
- Appropriate safety precautions should always be taken by a property owner – a ladder and shovel may not be safe
- Consider hiring an insured and bonded contractor specializing in snow removal - it may be money well spent
- While ice damming (which is caused primarily by ventilation issues in the attic) may still occur with any amount of snow on the roof, any snow removal will help lessen the severity of the problem

GRANDE PRAIRIE CLAIMS SEMINAR – *November 23rd*

This four hour half day Alberta Insurance Council accredited seminar costs $85.00. Breakfast and refreshments will be provided.

SEMINAR OVERVIEW:

- Collision Claims | New technological advanc- es and how they are changing the way colli- sion claims are investigated
- Fire Claims | Critical steps to consider in the early stages of handling fire claims (from evidence preservation to subroga- tion identification)
- Winter Claims | Common failures that arise during the winter season and the investiga- tive techniques used to resolve them
- Injury Claims | An overview of the insurance issues and the investigative techniques em- ployed in slip and fall claims

To register, please contact Sonia Dautovich 1.877.244.6251 | sdautovich@sintraeng.com

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