



Construction Insurance

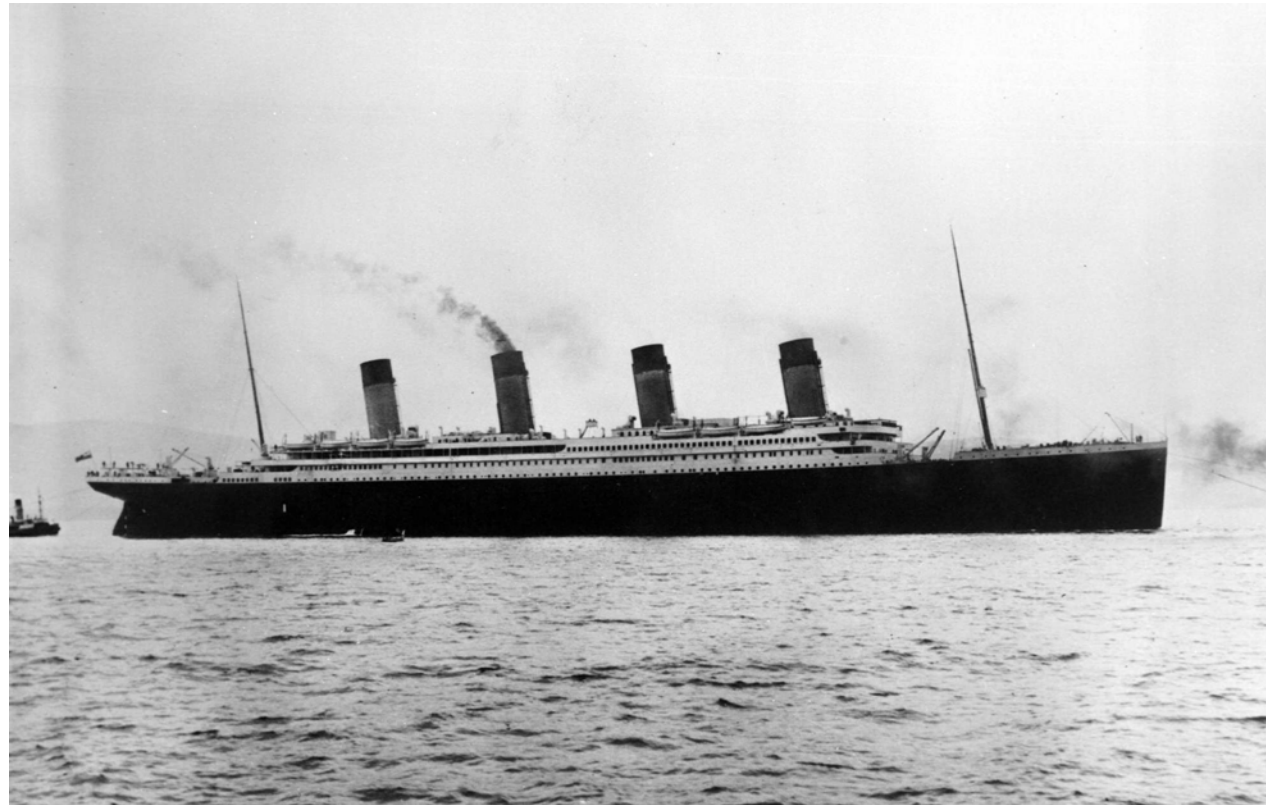
WTW Construction Safety and Risk Control

Mike Fredebeil, CSP – SVP North American Construction Risk Control Leader

June 8, 2022

NORA Construction Sector Council Meeting

With roots dating to 1828, Willis Towers Watson has 40,000 employees serving more than 140 countries. We partner with over 12,000 contractors worldwide.



North American Construction Safety Professionals

West Region

John Ritter – AZ
Rudy Suzich – SoCal
Ryan Kilcullen – SoCal
Mark Hernandez - Texas

Midwest Region

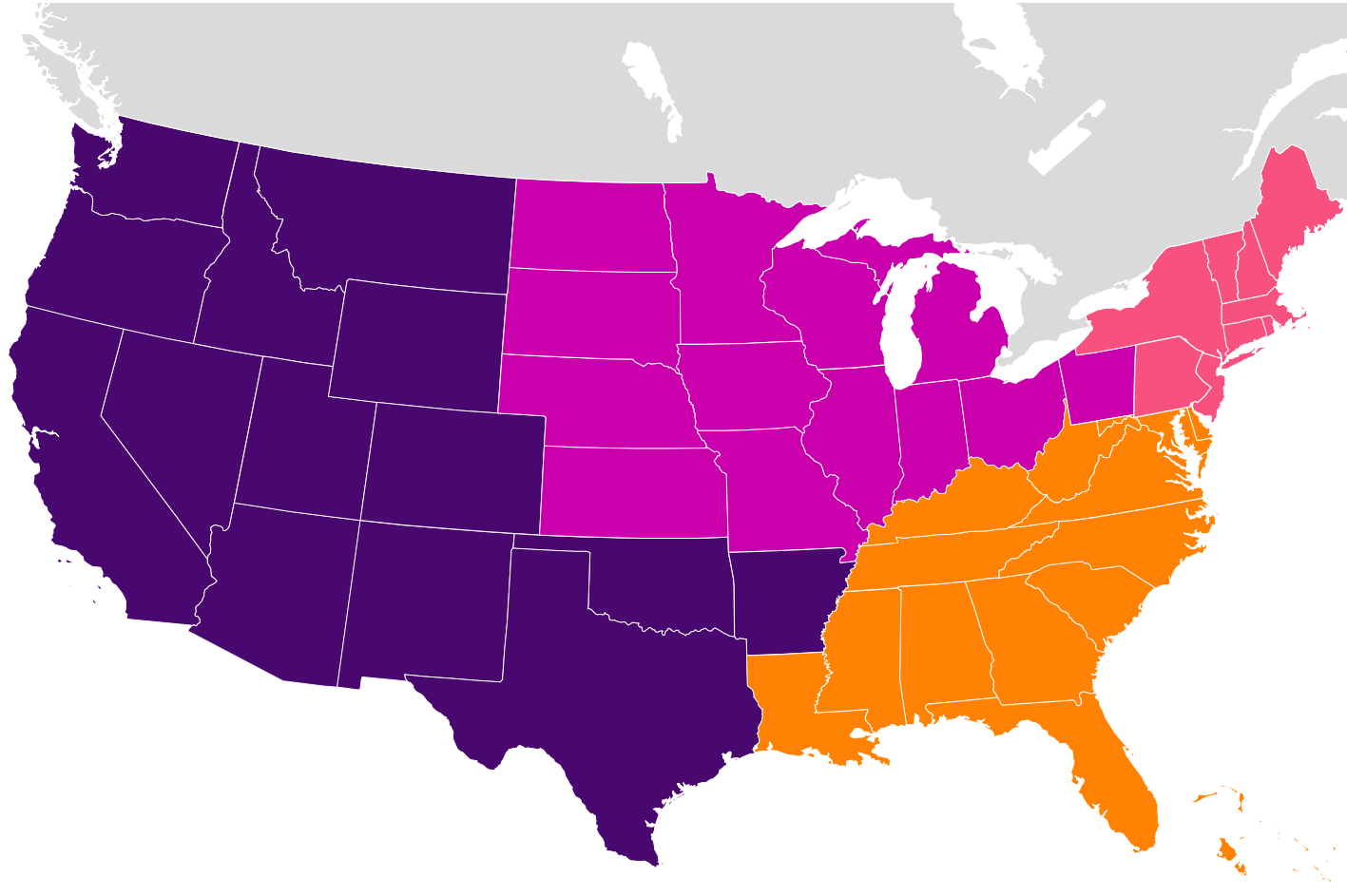
Dale Dhooge – MN
Fritz Leitenberger – PA
Rick Risi – MI
John Primozich–MN
Paul Leimer – WI
Blaise Steadman – PA
Dan Pfister – IL
Kent Nelson, Jr.– IL
Mark Nilsen – MN

Northeast Region

Bob Azarian – NY
Ed LaVallee – MA
Andy Chattergoon – NY
John DiBrita – NY
Jonathan Evers – CT
Frank McIntyre – NY

Atlantic South Region

Brian Phillips – PA
Jeff Waldron – MD
Bob Fitzgerald – AL
Todd Irvine – VA
Larry Edwards – AL
Sonia Vaquerizo – FL



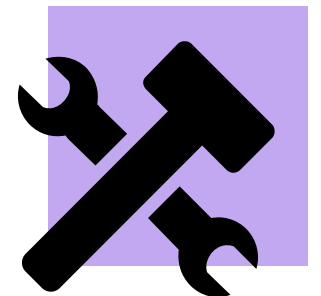
Mike Fredebeil, CSP

Construction Risk
Control Leader

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watson.com



Construction Risk Control

Where is your management system now and



Vendor partnerships

- SAMBA – Fleet Safety Management
- MEDCOR – Onsite Medical
- Mobile Medical Corporation – Onsite Medical
- S1-Safety 1st - Onsite Medical
- Trinity Project Safety Resources
- CORE Project Safety Resources
- Sportex Safety
- Local and regional partners

Carrier resource management

- Your trusted partner when dealing with carriers
- Managing the service plan
- Managing the carrier's role
- Identifying best resources and specialists ~ IH
- Validating solutions and alternative solutions
- Managing the service and evaluation process
- Managing the Underwriting Risk Evaluation Rating

Total cost of risk factors

- Workers Compensation
- General Liability – Contractual risk transfer, 3rd party liability, Construction Defect
- Automobile Liability & Workers Comp
- Builders Risk and Contractors Equip.
- Umbrella – Catastrophic Losses
- Environmental
- Risk Transfer strategies
- Construction Risk Management Profile

Safety professionals

- 30 North American dedicated Construction Safety Professionals
- Diverse team – Contractor, Carrier, Owner senior industry experience
- Credentialed – National and International
- \$11M annual investment in resources
- 700 years of combined construction safety management experience
- Specialized Industry expertise

Delivering best practices

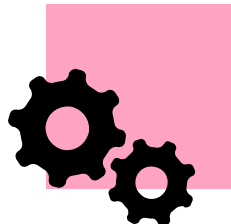
- World class Construction Safety/Claims, & Risk Conference (27 years)
- Construction Peer Roundtables
- Construction Safety Network
- Seminars and Webinars
- Local~Regional~National – Risk view
- Workshops (Local~Regional~National)
- Share Peer Solution Knowledge
- On demand web-based training: <https://wtw.puresafety.com/OnDemand/Home>

External best practice networking

- National Association member network
- AGC and ABC – local and national safety committees and board membership
- Willis Towers Watson/AGC – Construction Safety Excellence Awards and Judging
- NCCER – National Safety Committee
- MSHA – Chair National Committee
- NORA – National Occ Research Agenda
- CPWR – Constuction Research & Training
- OSHA – national project team
- ISMSP – Mine Safety Professionals
- CFMA, ASSE, NSC, Moles and Beavers

Construction Risk Control

Where is your management system now and



QA/QC

- Construction Defect, Water Intrusion, Mold, Asbestos, Lead, Acoustical, and Environmental
- Knowledge and network of external vendors
- Management program review ~ peer practices
- National Contractor Best Practice Network

Carrier marketing

- Customized Safety and Risk Management Profile
 - Showcase your program to prospective Carrier's and Clients
 - Makes you more insurable
- Website safety image when you are searched
- OSHA and DOT establishment searches
- Knowledge of Carrier & proposed service offerings

Leading issues

- Controlling the high cost of Falls from Elevations, Overexertion, and Falls on the same level – 70% of Incurred costs.
- Lean Construction
- Workforce labor market challenges
- Economic challenges
- Quality and Rework
- Changing regulatory landscape
- Safety Technology

Crisis management

- Public relations strategies
- Catastrophic Employee Injury
- Large Liability incidents
- Property, Auto, and Environmental

Performance measurement

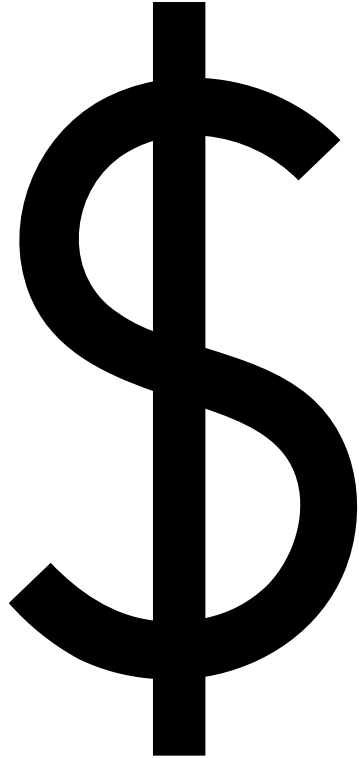
- CORR – Assessment
- Cost Allocation methods
- CPWR – [Safety Climate Assessment Tool \(S-CATsc\)](#)
- Leadership Participation Measurement
- Leading and Lagging indicators
- Leveraging Technology
- Customized Scorecards/Dashboards

Trusted advisor

- We work hard to understand your unique business environment
- Compliance assistance (Inspections, and Citation Strategy)
- Listen to your needs
- Earn trust throughout your company
- Call it the way it is"What you really don't want to hear, but need to understand"
- Challenge to continuously improve
- Enhance your competitive advantage
- Part of Risk management team

Responsibility and accountability

- Safety Management practices
- Leadership practices
- Share peer Best Practices
- Facilitation of Risk Oversight Committee



Typical causes of loss for general building contractors

As a leading construction insurer, Zurich provides coverage for general building contractors across North America. This experience coupled with our industry research enables us to identify the primary hazards associated with construction, including:

Workers' compensation

- Sprains and strains
- Slip, trips and falls
- Falling objects
- Heavy equipment
- Uncontrolled work zones
- Vehicular traffic accidents
- Trenching and excavation
- Electrical
- Cuts and abrasions
- Hazardous chemicals and fumes

Automobile

- Lack of driver qualifications
- Distracted driving
- Inadequate vehicle inspection and maintenance
- Personal use of autos for business
- Untrained drivers

General liability

- Construction defect
- Injury to the public
- Damage to the property of others
- Inadequate perimeter security
- Lack of subcontractor controls
- Attractive nuisance
- Visitors without escort or PPE
- Vibration exposures
- Noise pollution
- Traffic
- Limited lay down areas and controls

Property

- Improper equipment maintenance and storage
- Lack of equipment theft protection
- Hidden damage with failure to inspect upon receipt
- Inadequate rigging plan
- Improper fire protection

Environmental/Pollution

- Surface water/run off, ground water and other water contamination
- Air emissions/chemical releases contamination
- Improper hazardous and non-hazardous waste disposal / inadequate permits
- Third-party property in work area
- Environmental exposures from materials and equipment staging

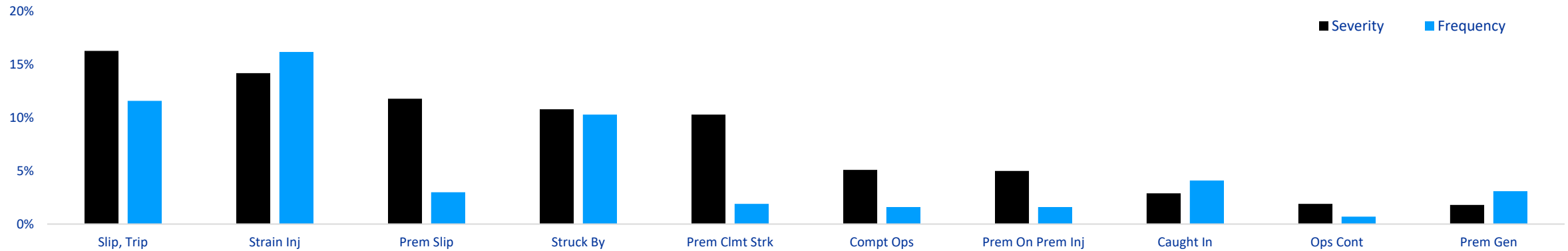
Professional liability

- Poor quality control or construction management
- Pollution, mold damage, or contaminant
- Acceleration costs and cost overruns arising from design delay and errors
- Code compliance failure requiring rework
- Inadequate design resulting in:
 - Structural failure
 - Mechanical failure
 - Process failure
 - Foundation or earthwork failure

Zurich's loss experience for general building contractors



This exhibit shows our typical loss experience for contractors over the last five years. Our account team works collaboratively with you to develop a loss reduction strategy that includes the appropriate services and products to directly impact these loss leaders.



Loss leader	Coverage	Severity	Frequency	Avg claim
Slip, Trip, Or Fall	Work Comp	16.3%	11.6%	\$39,000
Strain Injury	Work Comp	14.2%	16.2%	\$24,000
Premises: Slip and Fall	Gen Liab	11.8%	3.0%	\$109,000
Struck Or Injured By	Work Comp	10.8%	10.3%	\$29,000
Premises: Claimant Struck	Gen Liab	10.3%	1.9%	\$146,000
Completed Operations	Gen Liab	5.1%	1.6%	\$89,000
Premises: Other On-Premises Injuries	Gen Liab	5.0%	1.6%	\$86,000
Caught In, Under, Or Between	Work Comp	2.9%	4.1%	\$20,000
Operations: Contracting	Gen Liab	1.9%	0.7%	\$71,000
Premises: General	Gen Liab	1.8%	3.1%	\$16,000

Zurich U.S. construction data as of 2/8/2021 for losses occurring between 1/1/2015-12/31/2020; Severity is a percent of total claim cost and frequency is a percent of total number of claims.

Typical causes of loss for street and road contractors

As a leading construction insurer, Zurich provides coverage for street and road contractors across North America. This experience coupled with our industry research enables us to identify the primary hazards associated with construction, including:

Workers' compensation

- Sprains and strains
- Slip, trips and falls
- Falling objects
- Placing and maintaining traffic control
- Heavy equipment
- Uncontrolled work zones
- Vehicular traffic accidents
- Trenching and excavation
- Cuts and abrasions
- Asphalt burns
- Hazardous chemicals and fumes

Automobile

- Lack of driver qualifications
- Distracted driving
- Inadequate vehicle inspection and maintenance
- Personal use of autos for business
- Untrained drivers

General liability

- Construction defect
- Injury to the public
- Damage to the property of others
- Underground utility strikes
- Inadequate perimeter security
- Attractive nuisance
- Visitors without escort or PPE
- Vibration exposures
- Noise pollution
- Traffic
- Limited lay down areas and controls

Property

- Improper equipment maintenance and storage
- Lack of equipment theft protection
- Hidden damage with failure to inspect upon receipt
- Inadequate rigging plan

Environmental/Pollution

- Surface water/run off, ground water and other water contamination
- Air emissions/chemical releases contamination
- Improper hazardous and non-hazardous waste disposal / inadequate permits
- Third-party property in work area
- Environmental exposures from materials and equipment staging

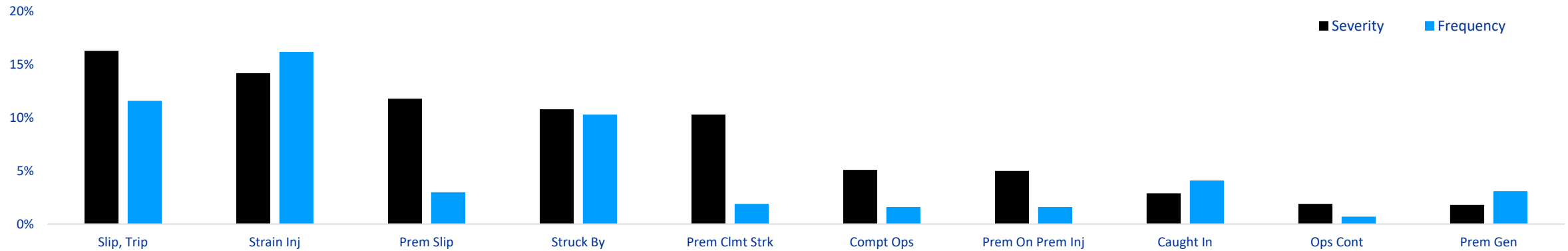
Professional liability

- Poor quality control or construction management
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Zurich's loss experience for street and road contractors



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Zurich U.S. construction data as of 2/8/2021 for losses occurring between 1/1/2015-12/31/2020; Severity is a percent of total claim cost and frequency is a percent of total number of claims.

WC Accident Construction Type Analysis

SIC Codes 15, 16, and 17

5 Calendar Years (1-1-2014 to 1-1-2018)

Valued at 17 months

- Non-\$0 Claims -



Workers Compensation Accident Type	
Average Cost per Claim	SIC 15, 16, and 17
Struck by / Against / Caught	\$12,713
Materials Handling - Manual	\$18,130
Slips and Falls - Same Level	\$20,883
Slips and Falls - Elevation	\$40,159
Hand Tool - Manual or Powered	\$8,550
Vehicle - Registered	\$29,044
Miscellaneous	\$15,215
Occupational Diseases or Illnesses	\$3,919
Repeated Trauma - Upper Extremity, Neck	\$19,516
Animal / Insect Injury	\$2,513

*losses limited to \$1M

Continuum of Construction Risk Control Services



Construction Risk Control

Physical Health, Fatigue, Mental Health, and Human Error



Video

Construction industry video series

Ideal Body Environment And Mind

Share

March 12, 2021

In this video series, we explore mental health and suicide in the construction industry including the role we can play in combatting the crisis.



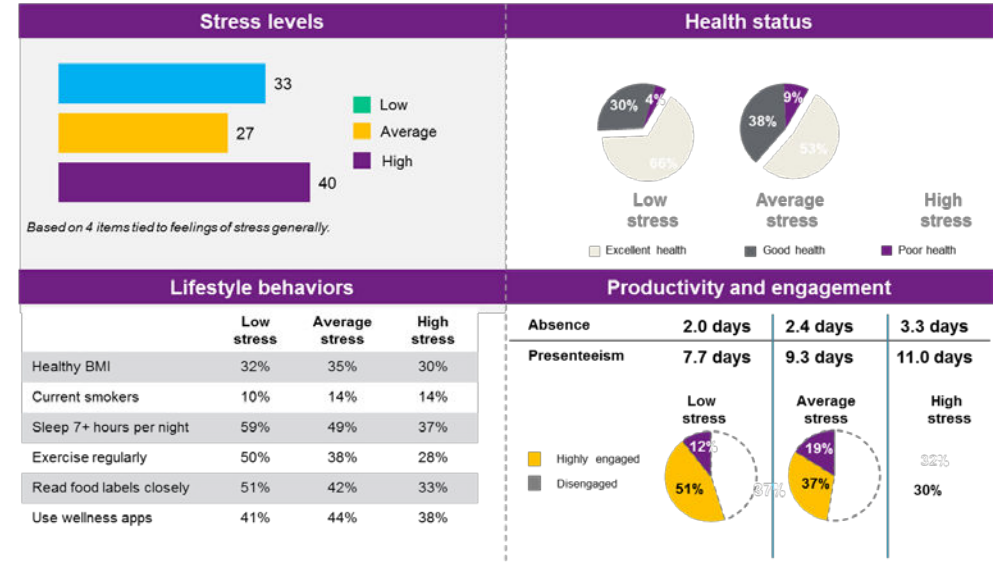
COVID-19 has affected the construction industry in many ways. A stressed and anxious workforce is a top concern of many. Stress is often triggered by events that make us feel nervous or frustrated. Anxiety is often a reaction to stress.

To effectively cope with stress, deconstruct it. Divide and conquer it letter by letter.

You never need to manage stress, anxiety or depression alone. Contact a family member, friend, supervisor, clergy, or a doctor for additional assistance.

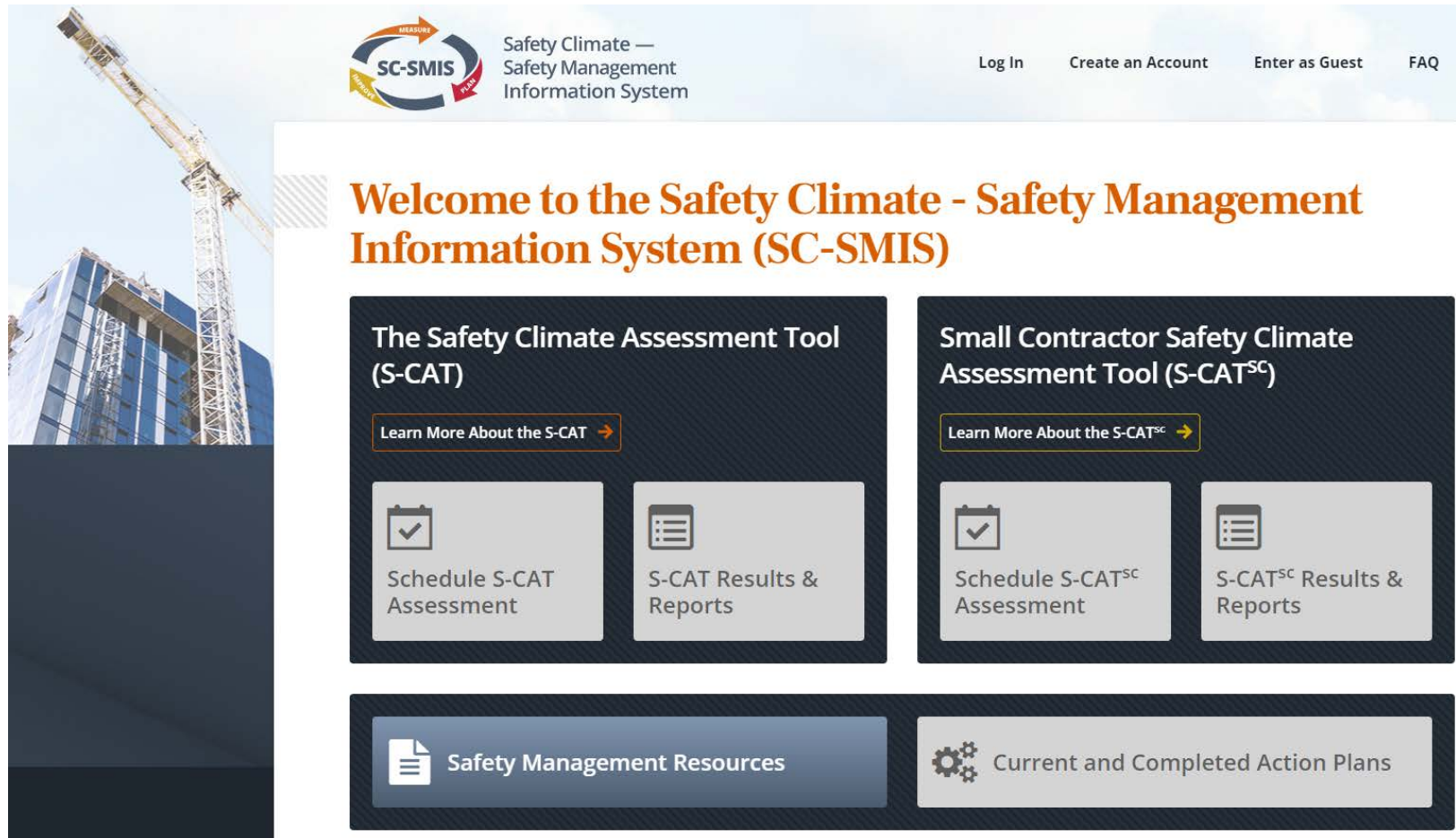
Stop. Take deep breaths and take note of how you feel.
Take breaks from COVID-19 related news and conversations.
Reach out to friends, co-workers and family.
Exercise regularly.
Sleep to rest your body and mind.
Seek help if you're feeling unsafe, overwhelmed, or out of control.

Stressed Employees Have Greater Health Risks and Productivity is Lower



Partnerships SC-SMIS

Construction Safety Climate Assessment Tool S-CAT



The screenshot shows the SC-SMIS website interface. At the top left is the SC-SMIS logo with the text "Safety Climate — Safety Management Information System". To the right are navigation links: "Log In", "Create an Account", "Enter as Guest", and "FAQ". The main heading reads "Welcome to the Safety Climate - Safety Management Information System (SC-SMIS)". Below this are two main sections: "The Safety Climate Assessment Tool (S-CAT)" and "Small Contractor Safety Climate Assessment Tool (S-CAT^{SC})". Each section has a "Learn More About the S-CAT" link and two buttons: "Schedule S-CAT Assessment" and "S-CAT Results & Reports". At the bottom, there are two buttons: "Safety Management Resources" and "Current and Completed Action Plans".



Construction Safety Excellence Awards

Recognizing Corporate Excellence and Commitment to Job Site Safety and Employee Health

38 Years – *Since 1984!*



AGC
THE CONSTRUCTION ASSOCIATION



2013 AGC-Willis CSEA
Construction Safety Excellence Awards
Safety Management Showcase

Introduction

On March 9th, 2013 the AGC-Willis Construction Safety Excellence Awards (CSEA) breakfast was held at the AGC National Convention in Palm Springs, California, with over 800 contractors in attendance. AGC's Construction Safety Excellence Awards (CSEA) program is the industry's elite safety excellence awards program for companies of all sizes and occupational divisions. It is unique because finalist contractors make 5 minute presentations to 5 finalist judges, who then ask each finalist contractor a series of unknown questions for 5 minutes. CSEA recognizes companies that have developed and implemented premier safety and loss prevention programs and showcases companies that have achieved continuous improvements and maintenance of their safety and health management system. For 2013 there were 55 total finalists.

AGC-Willis presented the Grand Award for Construction Safety Excellence to Opti Construction. Each category of first-place winners were judged to determine the "Best of the Best" of the 2013 Construction Safety Excellence Awards finalists.

The following quote from a CSEA competing contractor tells it all - "I had never been to an AGC national event before. In a way, I still have not because I spent the entire week observing the presentations for the CSEA, an experience I found more instructive and more enlightening than any safety related training or event I have ever attended. I was fascinated to see and hear how other organizations address their safety challenges. I am deeply grateful to Willis North America for sponsoring the CSEA competition. Most of us already deploy ideas, solutions and programs I learned about during the competition. The experience is already making Mevot a safer, more efficient organization." Bruce McCaw, Safety Director Mevot construction Company



2014 AGC-Willis CSEA
Construction Safety Excellence Awards
Safety Management Showcase

Introduction

On March 9th, 2014 the AGC-Willis Construction Safety Excellence Awards (CSEA) breakfast was held at the AGC National Convention in Las Vegas, Nevada. Over 800 contractors attended the awards breakfast. AGC's Construction Safety Excellence Awards (CSEA) program is the industry's elite safety excellence awards program for companies of all sizes and occupational divisions. It is unique because finalist contractors make 5 minute presentations to 5 finalist judges who then ask each finalist contractor a series of unknown questions for 10 minutes. CSEA recognizes companies that have developed and implemented premier safety and loss prevention programs and showcases companies that have achieved continuous improvements and maintenance of their safety and health management system. For 2014 there were 54 total finalists among six divisions and 26 categories.

AGC-Willis presented the Grand Award for Construction Safety Excellence to Gray Construction. Each category's first place winner was included in the evaluation that determined the "Best of the Best" of the 2014 Construction Safety Excellence Awards finalists.

During the post-competition exit interviews many contractors shared the value that the CSEA process brought to their organization:

- "Believe that this process has caused them to raise the bar and become a better and safer contractor"
- "Forces you to look at the big picture, specific questions require you to answer honestly about your processes"
- "The process has forced us to look at and improve our safety processes"
- "Giving the presentation with president of the company"
- "The process validates years of safety improvements made within the organization"
- "Opportunity to show your program so others can learn and vice versa"
- "Makes you look at your program and how to improve it. Makes you refine your goals"



Willis
2015 Construction Safety Excellence Awards
Safety Management Showcase

Introduction

On March 19th, 2015 the AGC-Willis Construction Safety Excellence Awards (CSEA) breakfast was held at the AGC National Convention in San Juan, Puerto Rico. Over 800 contractors attended the awards breakfast. Paul Becker, Chairman of Willis Construction introduced the awards and noted, "The goal of the CSEA competition remains the quest to minimize worker injuries and more importantly deaths in the construction industry. It is unacceptable to have more than 100 deaths in the construction industry each year and everyone in the industry must lend this as our highest priority. The CSEA is a big part of this effort by demonstrating that this is being done and rewarding the best ideas to achieve this in the industry."

AGC's Construction Safety Excellence Awards (CSEA) program is the industry's elite safety excellence awards program for companies of all sizes and occupational divisions. It is unique because finalist contractors make 5 minute presentations to 5 finalist judges who then ask each finalist contractor a series of unknown questions for 10 minutes. CSEA recognizes companies that have developed and implemented premier safety and loss prevention programs and showcases companies that have achieved continuous improvements and maintenance of their safety and health management system. For 2015 there were 45 total finalists among six divisions and 28 categories.

AGC-Willis presented the Grand Award for Construction Safety Excellence to WB Moore Company, Electrical Contractors. Each category's first-place winner was included in the evaluation that determined the "Best of the Best" of the 2015 Construction Safety Excellence Awards finalists.



During the post-competition exit interviews many contractors shared the value that the CSEA process brought to their organization:

- "Excellent process to review our own programs and find methods to improve"
- "It required us to dig deep into our safety process/program and learn more about ourselves"
- "We will proudly publish our award on our website and in every SOG for work. We will let everyone know how proud we are for the award"
- "We will use our award to project our continued best practices in safety with owners and employees"
- "Very thorough process. It made us think about what we do on a regular basis"



2016 CONSTRUCTION SAFETY EXCELLENCE AWARDS SAFETY MANAGEMENT SHOWCASE



2017 Construction Safety Excellence Awards (CSEA) Safety Management Showcase



2018 Construction Safety Excellence Awards (CSEA) Safety Management Best Practices

2019 Construction Safety Excellence Awards (CSEA)

Safety Management Best Practices



CHOATE
— CONSTRUCTION —



Jim Smoltz – Google

Tony Militello – Boeing

David Wessin – Safety and Risk Advisors

Kevin Cannon – AGC

Mike Fredebeil - WTW



EXIT

Leadership and Responsibility

- Measure of education and activities
- Indicator reviews
- Management based on BIF approach
- Quality, Productivity campaign

Four men in black polo shirts and khaki pants are standing on a stage. The man on the far right is gesturing towards a large screen. The man on the far left is standing with his hands clasped. The man in the middle-left is standing near a podium. The man in the middle-right is gesturing towards the screen.

MIKE FREDEBEIL
JIS TOWERS WATSON

JIM SMOLTZ
GOOGLE

WATSON TOWERS WATSON

wtw

Back view of a man in a light-colored shirt sitting at a table, looking towards the stage.

Back view of several men sitting at a table, listening to the presentation. They are wearing various shirts, including a grey button-down and a light-colored patterned shirt.

Partial view of a man in a blue shirt sitting at the table on the right side of the frame.



9 Safety Management Areas

- Senior Management Ownership and Participation
- Risk Identification and Analysis
- Task Design – Engineering Controls and DfS
- Safe Work Methods (Planning and Validation of)
- Worker Engagement, Involvement, and Participation
- Safety Training and Validation of Training
- Subcontractor Management
- 911 – Emergency and Crisis Management

CSEA Applicant Benchmarks

CSEA 2019

126 Applications
57 Finalists



447

safety management best practices
to share with the construction
industry



CSEA

applicants provided an average of
5 hours of new employee safety
orientation



73%

of CSEA applicants have craft
workers that completed OSHA 30-
hour for Construction



CSEA applicants had an average:

Total Recordable Rate – 1.33

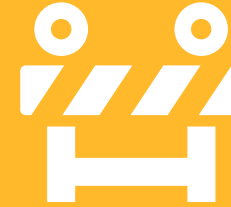
Lost Time Rate – 0.26

DART Rate – 0.77

EMR – 0.67



40% of CSEA applicants
complete monthly safety
performance trending reports.
14% – complete quarterly
10% – complete annually



30%

of CSEA applicants perform
fitness for duty and agility testing



82% of CSEA applicants have
supervisors that completed OSHA
30-hour for Construction



68%
of CSEA applicants use employee safety culture/perception surveys



56%
of surveys were in-house. 40% were administered by a third party

79% of CSEA applicants complete an annual formal safety program evaluation

67% are completed in-house

31% by an outside 3rd party



25%
of CSEA applicants have a CSP (Certified Safety Professional) on staff



According to the BCSP, around **5%** of the current CSP's are in the construction industry



CSEA Applicant Benchmarks

CSEA applicants had a site-specific safety orientation for craft workers of:

70% less than 1 hour

20% more than 2 hours



70%
of CSEA applicants conduct random drug tests and include subcontractors in the testing program.

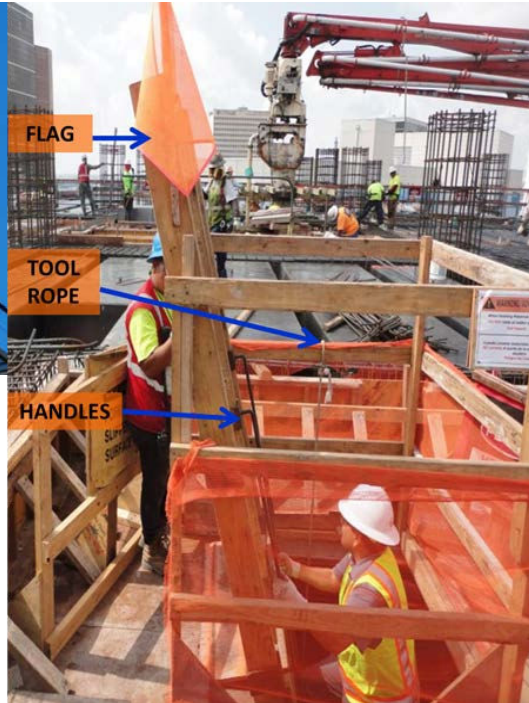
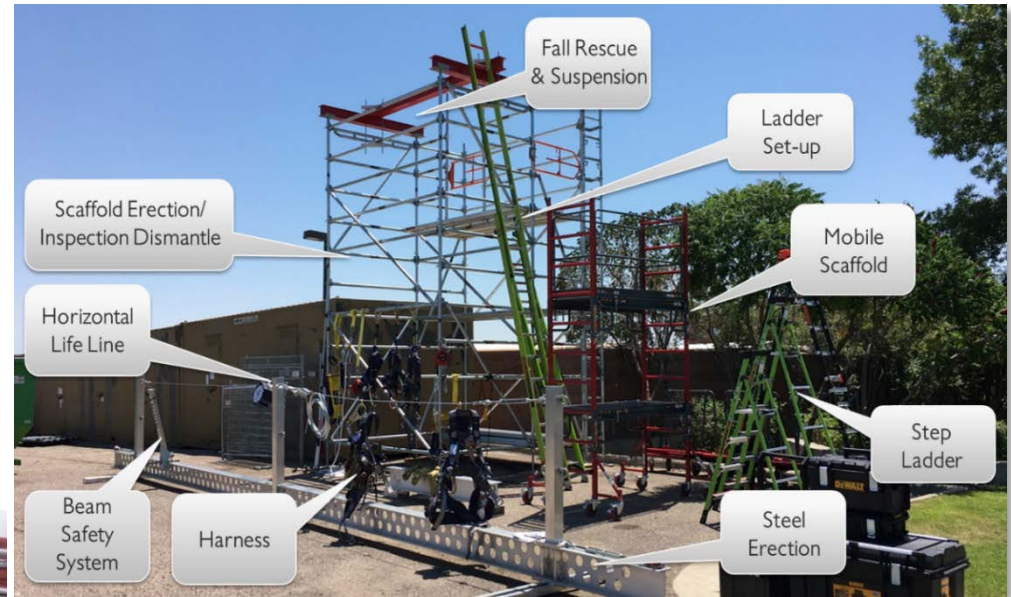


81%
of CSEA applicants attend national construction association meetings such as AGC



- AGC Members **submit a detailed application**
- The AGC National Safety Committee **reviews the applications** in January and **selects finalists** in each category to compete in the National CSEA
- Categories include: (grouped by workhours)
 - *Utility*
 - *Federal/Heavy*
 - *Highway*
 - *Building*
- At the AGC National Conference a **team of five finalist judges** review each finalist application and the applicants performs a **five minute verbal presentation and a ten-minute Q&A** from the final judges
- A **Grand Award winner is chosen** from the first place winners in each category

Learn From The BEST



Finally

Construction Workforce Shortage

List of characteristics of the new generation of employee

- Bad attitude
- Constant complaining
- Not focused
- Gossip & social
- Lazy & question work ethic
- Rude
- Disloyal
- Expect constant rewards
- Want to just have fun

Baby Boomers

Life Magazine May 17, 1968

