

ABC 2016 SAFETY PERFORMANCE REPORT

UNDERSTANDING THE IMPACT OF
STEP PARTICIPATION ON OVERALL
SAFETY PERFORMANCE



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Introduction

Every company that works in nonresidential construction wants to send its workers home in the same condition in which they arrived—if not even better, after an active day of satisfying work that stimulates the mind and the body.

Until now, relatively few studies have been conducted on the correlation between the use of measures companies can take to keep workers safe on jobsites—leading indicators—and the number of incidents, accidents and injuries that occur—lagging indicators. The empirical evidence didn't exist.

Associated Builders and Contractors (ABC) created the Safety Performance Report to address this issue.

The charts and summaries within this report present the clearest picture yet of the remarkable impact that leading indicator use has on a company's safety performance: fewer disrupted or lost lives and a safer, more productive jobsite regardless of the size of the company. In fact, companies that engage in leading indicator use are, statistically, considerably safer than their peers.

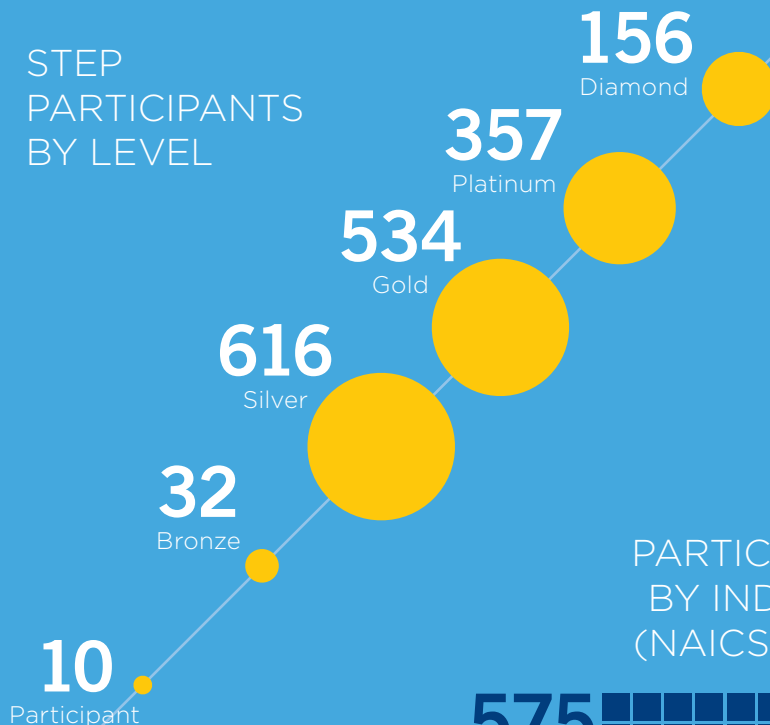
**Leading indicator programs work
to improve safety performance.**

Methodology

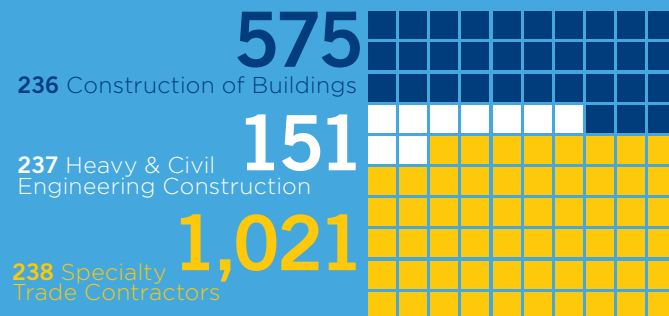
The 2016 ABC Safety Performance Report is based on 1,762 submissions of unique company data gathered from participants in the 2015 Safety Training Evaluation Process (STEP). ABC collects each company's lagging indicator data as reported on its annual Occupational Safety & Health Administration (OSHA) Form 300A ("Summary of Work-Related Injuries and Illnesses") and its self-assessment of leading indicator practices from its STEP application. Each of the 35 data points collected is sorted using statistically valid methodology developed by the U.S. Bureau of Labor Statistics (BLS) for its annual Occupational Injuries and Illnesses Survey, and combined to produce analyses of STEP participant performance against BLS industry average incidence rates.

1,762 submissions of unique
company data

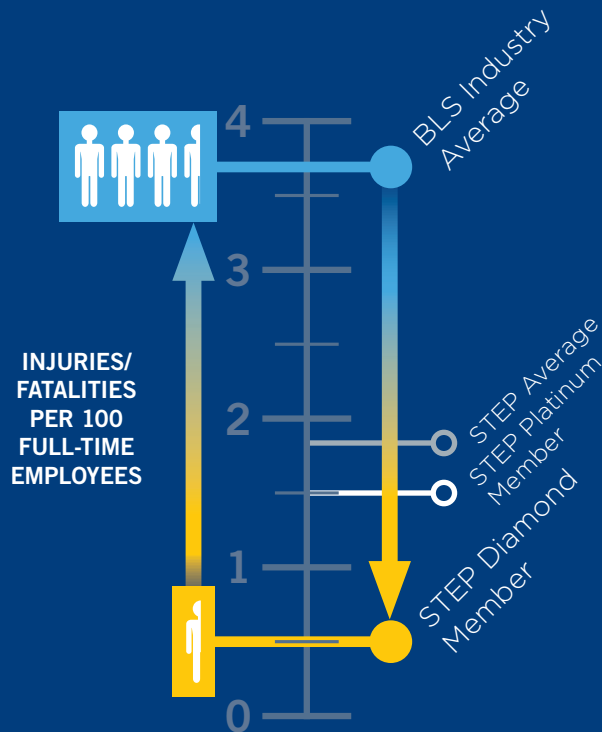
STEP PARTICIPANTS BY LEVEL



STEP PARTICIPANTS BY INDUSTRY (NAICS) CODE



ABC STEP PARTICIPANTS ARE
SAFER THAN THE INDUSTRY
AVERAGE



Total Recordable Incidence Rate (TRIR) STEP vs. BLS'
Industry Average

86%
REDUCTION IN
TRIR RATES

720%
SAFER

What If Your Company Could Be 720 Percent Safer Than the Industry Average?

And you could reduce your Total Recordable Incidence Rate (TRIR) by 86 percent?

It's more than possible. **It's doable.**

The 2016 ABC Safety Performance Report is not a research project or academic study. It captures the results of ABC STEP member companies performing real work on real projects. ABC is building on analysis presented in the 2015 report to identify what comprises a world-class safety program.

LAGGING INDICATORS: OUTPUTS AND RESULTS

Measuring Safety Performance

The construction industry has long evaluated safety performance based on lagging indicators—statistics that measure performance based on past incidents or conditions. These statistics judge companies not on the steps taken to prevent jobsite injuries and fatalities, but rather on the number of past safety failures. Lagging indicators tell only part of the story.

The fact is that safety performance
isn't reflected in what you **did**. It's
reflected in what you're **doing**.



Total Recordable
Incidence Rate



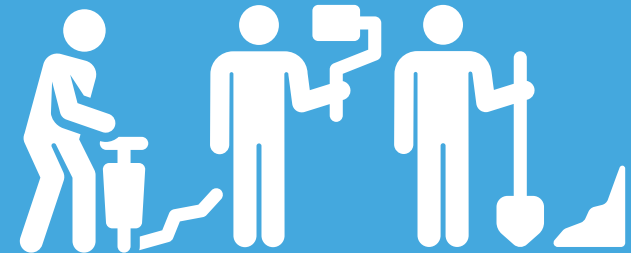
Days Away,
Restricted or
Transferred Rate



Experience
Modification
Rate

3

FATAL
INJURIES
PER DAY



Every work day in the construction industry,
an average of three people are fatally injured.

LEADING INDICATOR IMPLEMENTATION



LAGGING INDICATOR PERFORMANCE

GOAL: determine the correlation
between **leading** indicator implementation
and **lagging** indicator performance

What's Behind World-class Safety Performance

Innovative thinking from contractors, the owner/user community and insurers puts leading indicators under the microscope.

ABC has been studying how to improve safety through STEP since 1989.

STEP is comprised of 20 “Key Components,” leading indicators that are proven to improve safety performance and the criteria that indicate best practices. Participating companies score their level of achievement for each component on a weighted scale of 0 points (low score) up to 12 points (high score). Companies receive a recognition level of Diamond, Platinum, Gold, Silver, Bronze or Participant based on their score.

ABC quantified the positive impact of proactive injury and hazard elimination tools on the jobsite using 1,762 data sets gathered from STEP participants in construction, heavy construction, civil engineering and specialty trades. Analyzing aggregated data allows ABC to determine how measures taken to prevent incidents actually improve lagging indicator performance.

20 Key Components of a
world-class safety program.

STEP Improves Safety



STEP is a safety benchmarking and improvement tool. Participating ABC member firms measure their safety processes and policies on the 20 Key Components through a detailed questionnaire with the goal of implementing or enhancing safety programs that reduce jobsite incidence rates. Applying world-class processes dramatically improves safety performance among participants regardless of company size or type of work.

EMPLOYER POLICY STATEMENT ON SAFETY
EMPLOYEE SAFETY TRAINING
TRAILING INDICATORS
INCIDENT INVESTIGATION
SAFETY PROGRAM GOAL SETTING
EMPLOYER
INVOLVEMENT
SUBSTANCE ABUSE
PRE-PLANNING
FOR JOBSITE SAFETY
NEW EMPLOYEE ORIENTATION
EMPLOYEE PARTICIPATION
RECORDKEEPING AND DOCUMENTS
RESPONSIBILITY FOR SAFETY
SAFETY RULES
SITE-SPECIFIC SAFETY ORIENTATION
TOOLBOX TALKS
SAFETY PROGRAM
PERFORMANCE REVIEW
EMPLOYER SUPERVISORY MEETINGS
EMPLOYER SUP
MEETINGS
RESOURCES
FOR SAFETY
INSPECTIONS
NEAR-HIT/NEAR
MISS ANALYSIS
USE OF PERSONAL
PROTECTIVE EQUIPMENT
SITE SAFETY COMMITTEE
PRE-PLANNING FOR JOBSITE SAFETY
SUPERVISORY TRAINING TOPICS

STEP ACHIEVEMENT LEVELS

TRIR at or below 50 percent of the BLS NAICS code average in each of the previous three data years

TRIR at or below 25 percent of the BLS NAICS code average for the data year

TRIR at or below BLS NAICS code average for the data year

EMR at or below 0.7 beginning Jan. 1 of the application year

EMR at or below 0.8 beginning Jan. 1 of the application year

No lives lost or catastrophic incidents, company-wide, during the application year

No lives lost or catastrophic incidents, company-wide, during the previous three years resulting in an OSHA citation

Minimum 20 Key Components score

STEP Diamond
STEP Platinum
STEP Gold
STEP Silver/Bronze

Get into STEP

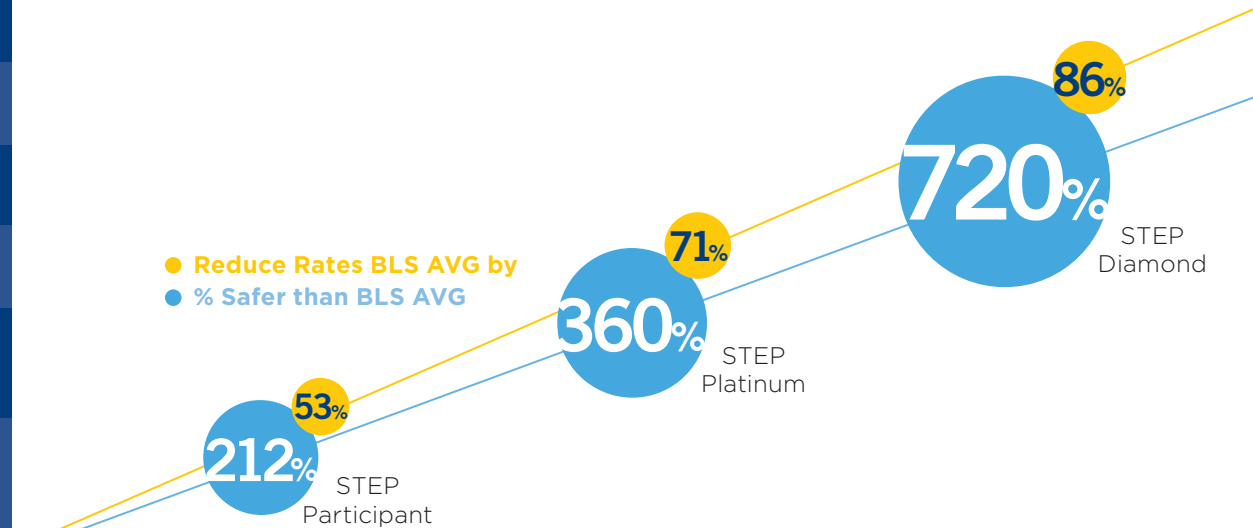
Analyze your safety and loss program

Learn the best practices that reduce TRIR and DART rates and mod factor (EMR)

Benchmark your safety record against similar companies and industry averages

Measure improvement from year to year

Show your safety commitment to potential clients and insurers



Getting started is free up to the platinum level. Visit abc.org/step.

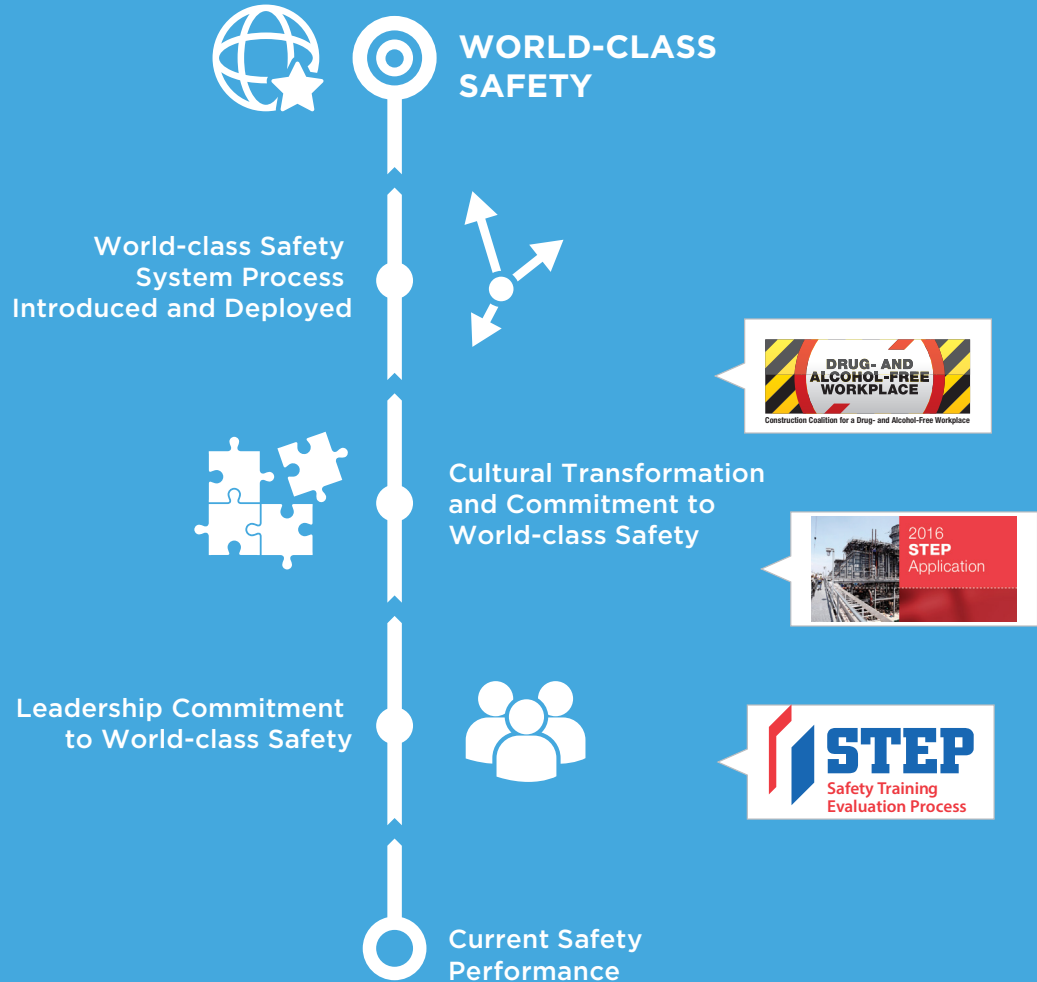
The Roadmap to World-class Safety

LEADERSHIP

is the courage to be out front and take a stand to challenge and transform the status quo to create a

CULTURE

that is passionate in its belief that all incidents are preventable—a culture where safety is considered a moral obligation not just for leadership, but for all employees. A culture of safety cannot exist without leadership taking a stand that includes an unwillingness to compromise safety and modeling this belief in their every action.



C-Suite Engagement and Commitment Matters

Employer involvement at the highest level of company management produces a more than 50 percent reduction in TRIR and DART rates. In high-scoring firms, the owner/CEO:

Is a direct and active participant in the safety program

Instills personal accountability for safety throughout the company

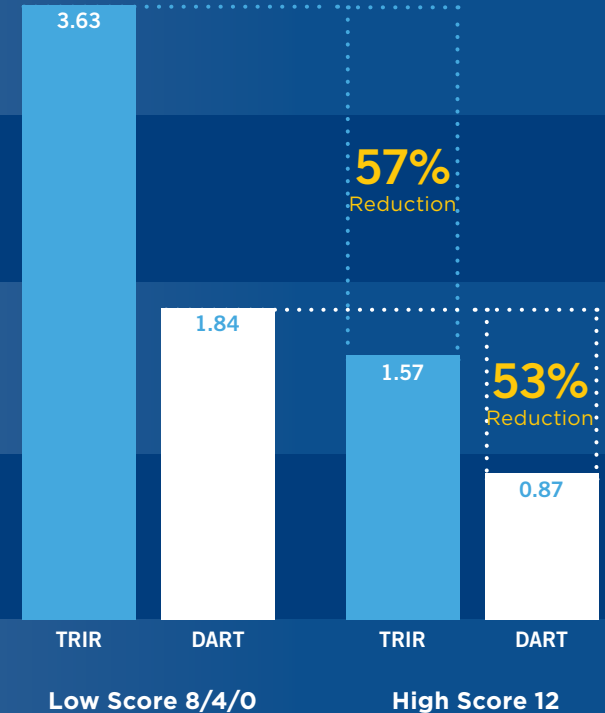
Tracks and annually reviews safety goals and objectives

Solicits feedback on the safety program and seeks ways to improve it

Commits resources—money, time, personnel, equipment, supplies, etc.

Integrates safety into performance appraisals and other company operations

EMPLOYER INVOLVEMENT AT THE HIGHEST LEVELS (C-SUITE): HIGH SCORE VS. LOW SCORES



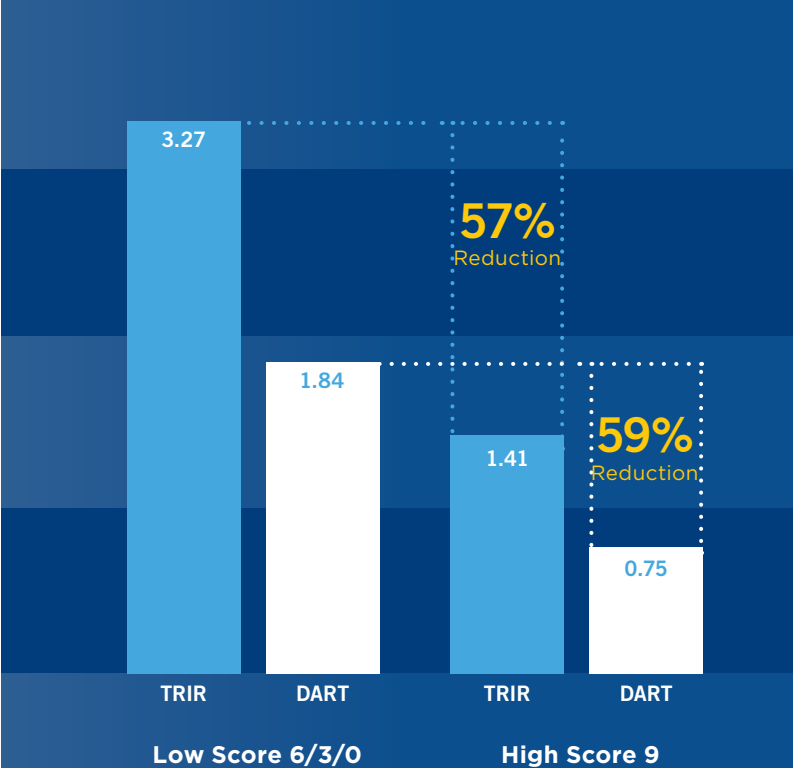
Employee Participation Counts

Employee participation throughout the safety management system improves TRIR rates by 57 percent and DART rates by 50 percent. High-scoring firms:



A commitment to **employee safety training** lowers incidence rates.

EMPLOYEE PARTICIPATION THROUGHOUT THE SAFETY MANAGEMENT SYSTEM: HIGH SCORE VS. LOW SCORES



1

SUBSTANCE
ABUSE
PROGRAM

2

NEW HIRE
SAFETY
ORIENTATION

3

SITE-SPECIFIC
SAFETY
ORIENTATION

4

TOOLBOX
TALKS

5

NEAR-MISS/
NEAR-HIT
ANALYSIS

6

SITE SAFETY
COMMITTEE

Six Core Leading Indicators

A leading indicator is a system or process used to identify hazards and eliminate or minimize the condition to prevent injury.

This report focuses on six core leading indicators that have the most dramatic impact on safety performance.

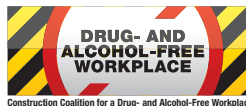
1

CORE LEADING INDICATORS

Substance Abuse Program

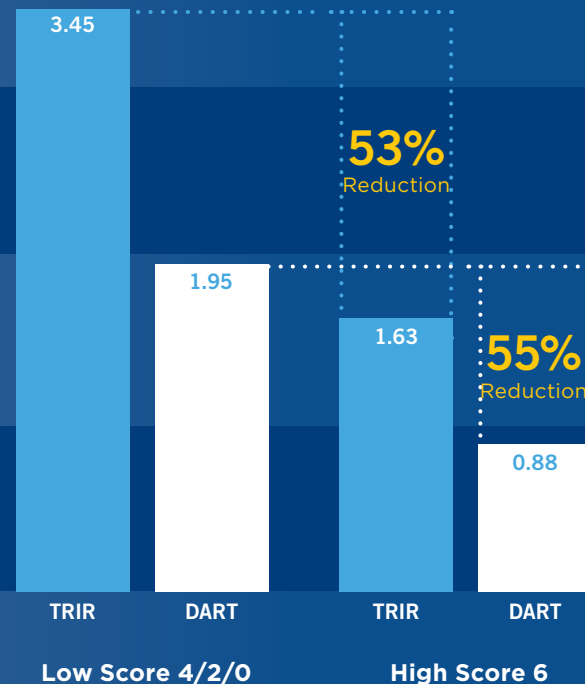
A written substance abuse program/policy with provisions for drug and alcohol testing where permitted.

One-third of all incidents on construction jobsites are drug- or alcohol-related. Companies with substance abuse programs in place dramatically outperform those without an implemented program in terms of safety. Plus, substance abuse testing can be an effective method of incident prevention if used properly.



ABC is an active member of the Construction Coalition for a Drug- and Alcohol-Free Workplace. Take the pledge at drugfreeconstruction.org.

SUBSTANCE ABUSE PROGRAMS: HIGH SCORE VS. LOW SCORES



SUBSTANCE ABUSE PROGRAMS REDUCE INCIDENTS

Key components include:



“At Humphrey & Associates, ensuring a **drug- and alcohol-free workplace** is one way we are able to attract and hire the right kind of employee. It has most certainly improved our overall safety performance both on and off the jobsite.”

—Jeff Bills, CRIS, safety & personnel director,
Humphrey & Associates, Fort Worth, Texas,
STEP Gold member

2 CORE LEADING INDICATORS

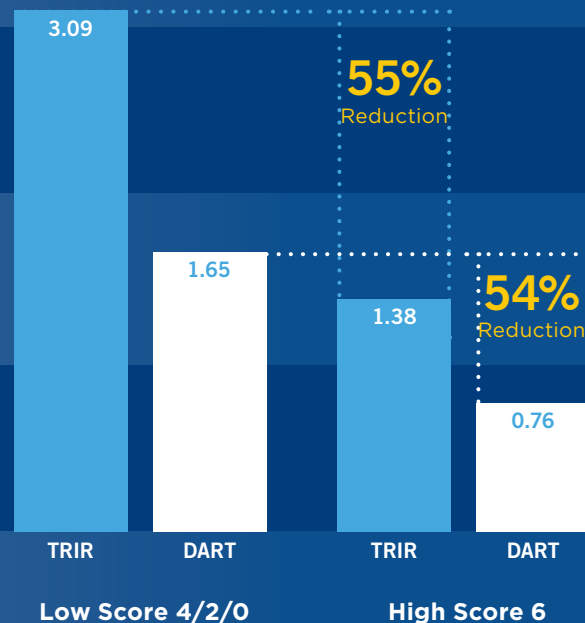
New Hire Safety Orientation

Length of time spent on safety awareness and education during training for new hires.

Companies that conduct an in-depth indoctrination of new hires into the safety culture, systems and processes based on a documented orientation process experience 54 percent to 55 percent lower incidence rates than companies that limit their orientations to basic safety and health compliance topics. The CEO or senior leadership delivers the introduction to the company's safety culture and core values:

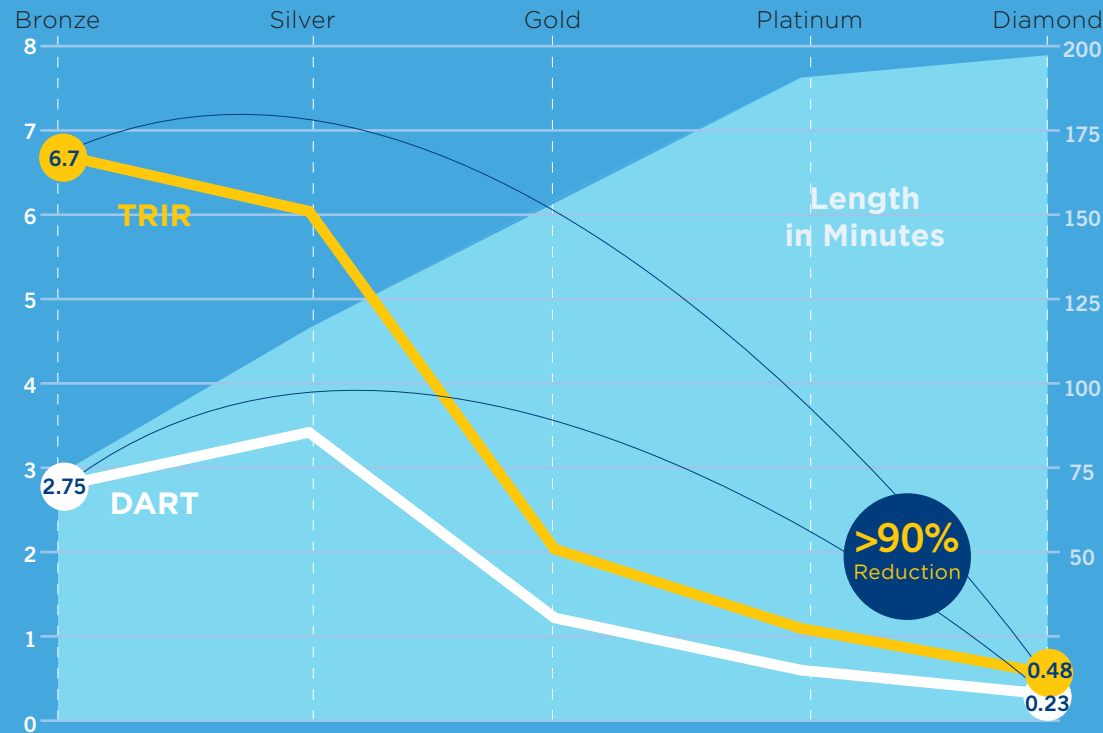


NEW EMPLOYEE SAFETY ORIENTATION: HIGH SCORE VS. LOW SCORES



IN-DEPTH SAFETY ORIENTATION IS MORE EFFECTIVE

STEP Diamond companies that conduct new hire orientation sessions of nearly 200 minutes on average, compared to about 72 minutes for STEP Bronze firms, improve their TRIR and DART rates by more than 90 percent.



Average Length of Safety Portion of New Hire Orientation by STEP Level



“New hire orientation is a great way to immerse and indoctrinate recently hired employees in our company’s safety culture and familiarize them with our environment, health and safety expectations, policies, and procedures. We conduct an all-day, in-person training session covering more than 30 crucial topics, led by Kwest EH&S professionals and field supervisors.”

—Jim Thompson, corporate EH&S director, Kwest Group, Perrysburg, Ohio, STEP Diamond member

3 CORE LEADING INDICATORS

Site-specific Safety Orientation

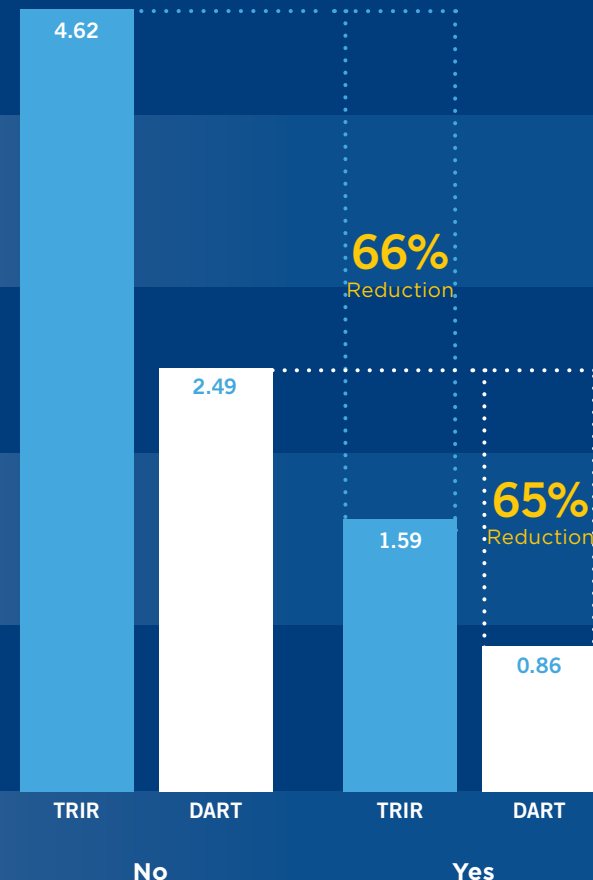
Companies that conduct site-specific orientations reduce their TRIR and DART rates by 66 percent and 65 percent, respectively. These sessions incorporate:



“We recognize that although construction projects are similar, no two projects are the same. For that reason, we conduct safety orientations that are tailored to the specific construction site. Information covered in these sessions includes our company background, Safety Data Sheet, use of fall protection equipment and every employee’s obligation to stop work if they encounter or see unsafe conditions. **These orientations are instrumental in building our safety culture.**”

—Gordon Beaver, Vice President, EHS, Quality, Security at S & B Engineers and Constructors, Houston, STEP Diamond member

SITE-SPECIFIC SAFETY ORIENTATION (Y/N) VS. TRIR & DART



4 CORE LEADING INDICATORS

Toolbox Talks

Brief, single-topic training sessions of 15 to 30 minutes conducted on the jobsite for all employees.

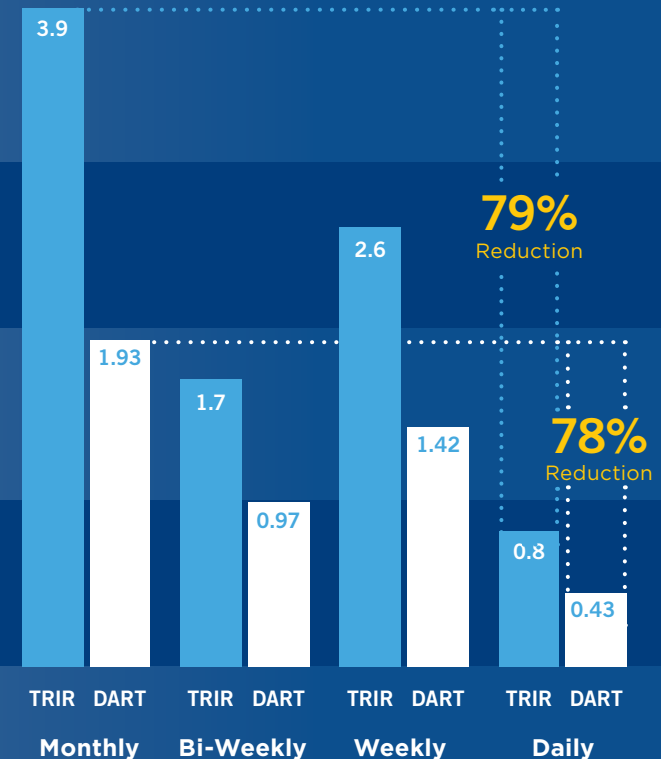
Can you brief employees on safety too much? No matter what you may have heard, there is no negative effect to conducting daily toolbox talks. The less frequently this type of training is conducted and the fewer safety topics covered, the higher the lagging indicators. Companies that conduct only monthly toolbox talks have a TRIR more than four times higher than those that hold them daily.



“The toolbox talk is a safety talk that takes place at the beginning of each day right when crews gather their tools. We use these talks as another means to focus crews’ attention on the tasks at hand and on potential hazards that may not be directly related to completing the task. By using Toolbox Talks, we continue to bolster our culture of safety.”

—Gordon Beaver, Vice President, EHS, Quality, Security at S & B Engineers and Constructors, Houston, STEP Diamond member

FREQUENCY OF TOOLBOX TALKS



5

CORE LEADING INDICATORS

Near-miss/Near-hit Analysis

The quintessential leading indicator, near-miss/near-hit analysis records observations of situations that could have potentially been catastrophic, but did not result in disrupted or lost lives. While there is no industry-wide recognized definition of a near miss, tracking and learning from such episodes shows much promise in improving safety, with TRIR and DART rates reduced by 55 percent and 54 percent respectively at companies that do so. Companies that conduct near-miss/near-hit analysis:

Ensure that the site supervisor investigates both accidents and near misses promptly

Determine causal factors

Follow up and take corrective actions

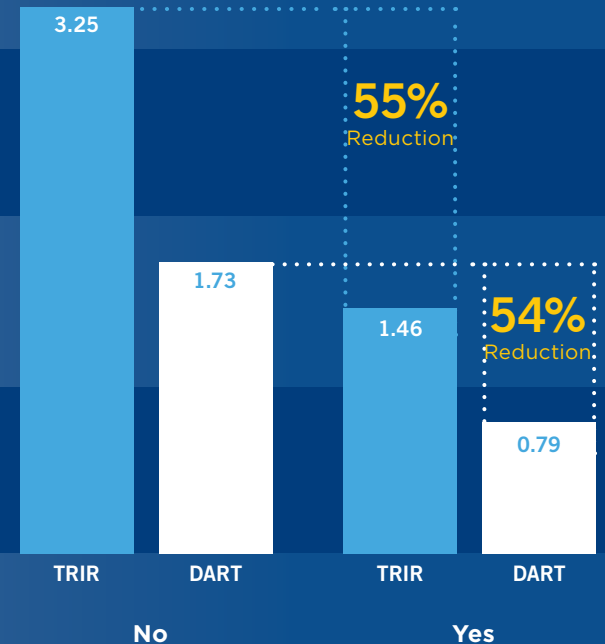
Share lessons learned



“Often a near miss is a fortunate break in a chain of events—a close call, a narrow escape—that may presage an injury or fatality the next time around. That’s why it’s critical to take it seriously, report and investigate the causal factors in any near-miss incident and do everything possible make sure it never happens again.”

—Greg Sizemore, vice president, Health, Safety, Environment and Workforce Development, Associated Builders and Contractors, Washington, D.C.

TRACK AND LEARN FROM NEAR MISSES (YES/NO) VS. TRIR AND DART



6 CORE LEADING INDICATORS

Site Safety Committee/ Principals' Council

Regular meetings coordinated by the general contractor or construction manager that include representatives from site employees, subcontractors, vendors/suppliers and the client.

Companies that participated in site safety committee meetings had 55 percent fewer incidents. These information- and idea-sharing sessions:

Serve as a communications hub to enhance jobsite safety

Meet at least weekly to raise and correct safety concerns

Are comprised of volunteers or members selected by peers

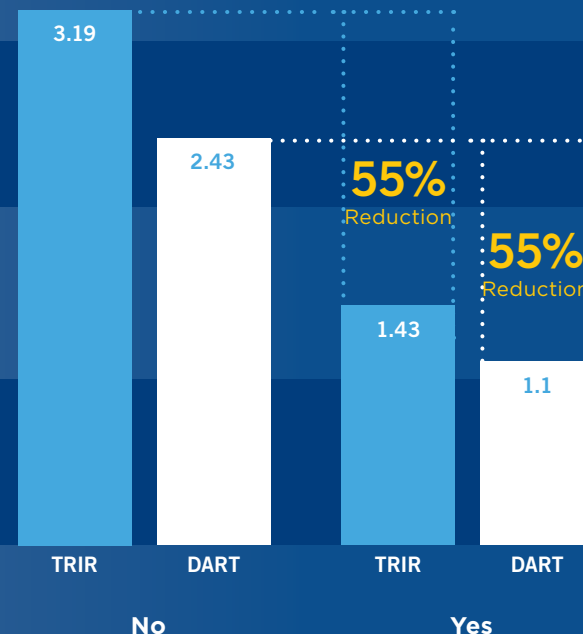
Represent all subcontractors on site



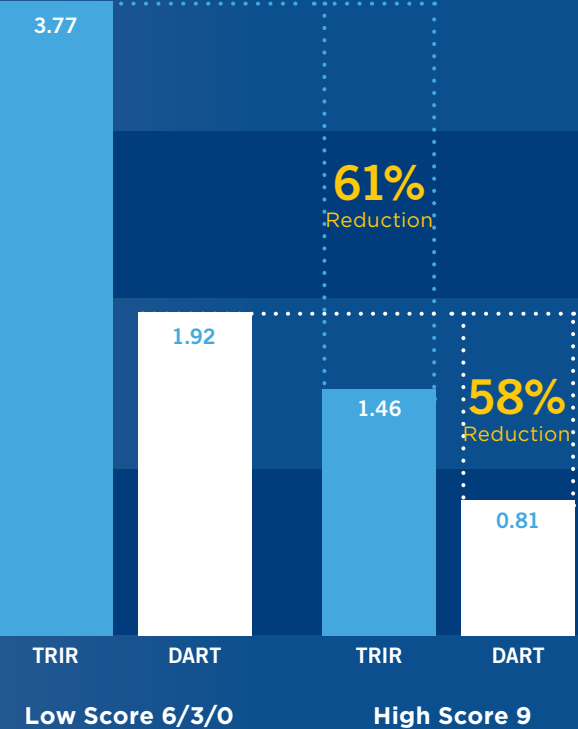
“Site safety committees are a valuable component of overall jobsite safety success because they engage workers and trades in risk-reduction strategies. Their collective knowledge helps tackle complex safety-related activities. No jobsite safety plan can be complete without a safety committee that includes representatives of management, craft professionals, subcontractors and temporary workers.”

—Jerry E. Rivera, safety director, National Electrical Contractors Association, Washington, D.C.

SITE SAFETY COMMITTEE/ PRINCIPALS' COUNCIL PARTICIPATION (Y/N) VS. TRIR & DART



FREQUENT INSPECTIONS, CORRECTIONS AND LEARNINGS: HIGH SCORE VS. LOW SCORES



Weekly jobsite inspections by the site supervisor are a critical information input to the site safety committee. Frequent inspections, corrections and learnings lead to a 61 percent reduction in TRIR rates and a 58 percent reduction in DART rates.

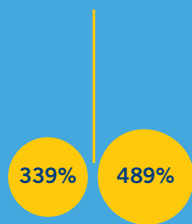
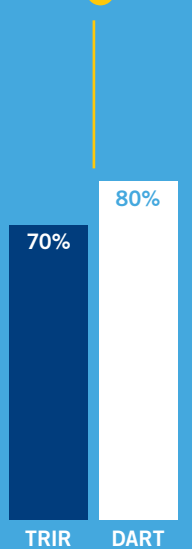


The Effect of World-class Safety Processes on Performance

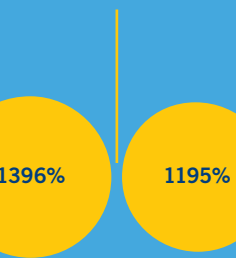
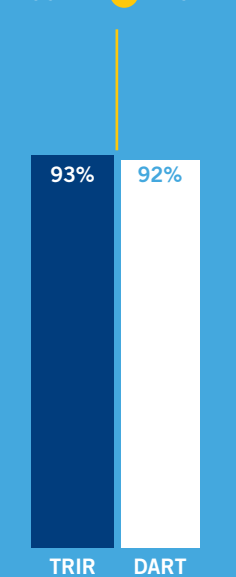
ABC further analyzed the impact of the core leading indicators by comparing the delta in incidence rates between companies that deploy world-class processes and procedures and companies that do not. This breakdown revealed, for example, that a longer, high-quality safety portion of new hire orientation reduced incidence rates by more than 90 percent over shorter sessions. That makes the company with the new hire orientation focused on safety a stunning 1,200 percent to 1,400 percent safer.

COMPANIES THAT DEPLOY...

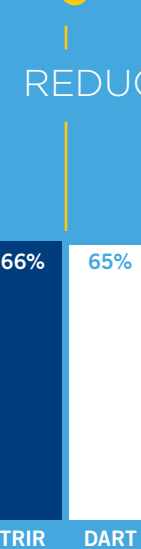
Substance Abuse Program
Yes **1%**, No



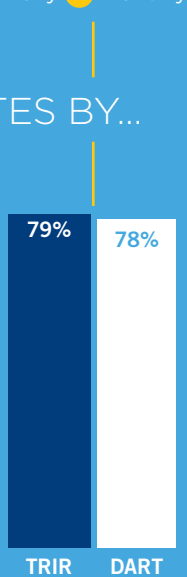
New Hire Orientation
> 195 min **1%**, < 75 min



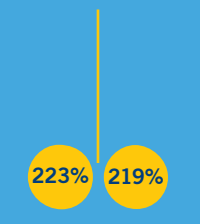
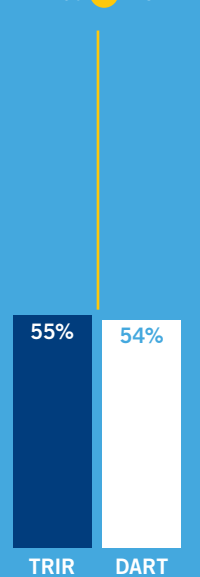
Site-specific Orientations
Yes **1%**, No



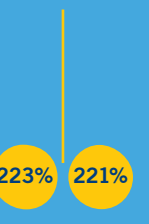
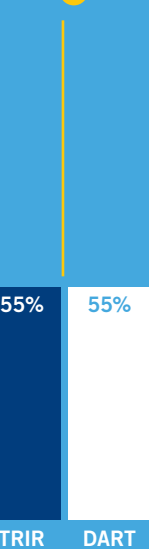
Toolbox Talks
Daily **1%**, Monthly



Track Near Misses
Yes **1%**, No



Site Safety Committees
Yes **1%**, No



REDUCE RATES BY...

AND ARE SAFER BY...

Glossary of Common Terms

ABC – Associated Builders and Contractors Inc., a construction trade association representing more than 21,000 merit shop contractors and affiliated firms nationwide.

BLS – U.S. Bureau of Labor Statistics, a federal agency responsible for providing statistical analysis on workplace injuries, illnesses and fatalities. Operates under the scope of the U.S. Department of Labor.

CII – Construction Industry Institute, a consortium of owners, engineering-construction firms and suppliers focused on the effectiveness and sustainability of the capital facility life cycle through research and industry initiatives.

CCDAFW – Construction Coalition for a Drug- and Alcohol-Free Workplace, established in 2012 by construction trade associations to develop resources in the campaign to eliminate substance abuse in the industry (drugfreeconstruction.org).

CURT – The Construction Users Roundtable represents many owners/users/clients that hire construction industry firms.

DART Rate – Days Away, Restricted or Transferred rate. Measures the number of cases per 100 full-time employees where an injury or illness causes an employee to be restricted or transferred based on inability to perform normal job functions.

Disrupted Life/Lives – Non-statistical term used to describe the impact on the employee, friends and family when a life has been disrupted because of an injury suffered during work hours.

Experience Modification Rate (EMR) – Also referred to as “mod factor.” Calculation normally performed by the insurance industry (National Council on Compensation Insurance or state-level agency) reflecting percentage of workers’ compensation payouts by a company compared to a company of similar size and type.

FTE – Full-time employee as defined by BLS and captured on a company’s OSHA Form 300A, which tracks the number of full-time employees that a company employs in the course of a calendar year.

Lagging Indicators – Metrics used by industry to measure safety performance based on historical data (i.e. incidence rate, DART rate, etc.).

Leading Indicators – Metrics used by industry to measure the use and effectiveness of incident prevention (i.e. near-miss reporting, use of substance abuse programs, site-safety orientation programs, etc.).

Lost Life/Lives – Non-statistical term used to describe a fatality caused by an injury suffered during work hours and the long-term extended impact, beyond the lost life, on family and friends.

Near-miss Tracking – Observations made and recorded of cases where, had conditions been different, an OSHA recordable incident would have occurred. Also referred to as “near-hits.”

OSHA – The Occupational Safety and Health Administration, a U.S. government agency tasked with establishing workplace safety and health requirements and enforcement of existing rules. Operates under the scope of the U.S. Department of Labor.

OSHA Form 300A – The “Summary of Work-Related Injuries and Illnesses” required by OSHA for all companies with 11 or more employees and is created using information gathered from a company’s OSHA Form 300, the “Log of Work-Related Injuries and Illnesses.”

Safety Portion of a Company’s New-Hire Orientation – Amount of time, in minutes,

a company devotes to covering safety-related topics during orientation for all new employees.

Site Safety Committees – Group comprised of employees and site management representatives, usually selected from the general contractor and subcontractors operating on the jobsite, tasked with reviewing and establishing safety and health training and education, as well as reporting on the general well-being of employees onsite. Also may be referred to as “Principals’ Councils.”

Site-Specific Safety Orientation – Jobsite-specific training conducted by a construction firm designed to orient employees recently hired or assigned to the jobsite with operational procedures, safety hazards specific to the work being performed, and location-specific safety and health information, such as emergency contacts, first response procedures, etc.

STEP – ABC’s Safety Training Evaluation Process, created in 1989 to gather data related to member safety performance and to evaluate the effectiveness of safety programs based on 20 Key Components of world-class safety programs.

Toolbox Talks – Topic-specific, short-format training, usually conducted before the workday or during lunch breaks, aimed at crews and site employees to educate on specific safety and health topics/hazards/policies and procedures.

TRIR – Total Recordable Incidence Rate. Measures the number of cases per 100 full-time employees where an injury or illness caused a loss of life, situation where an employee is unable to work (days away), is restricted or transferred based on inability to perform normal job functions or any other injury that falls under the OSHA definition of a recordable incident.

You Can Achieve World-class Safety. Start Today.

A commitment to world-class safety takes tremendous effort and is fraught with leadership challenges.

Transforming a company is difficult. Transforming an industry is daunting. Once you resolve to make that transformation, ABC can help.

Whether your company is large or small, ABC's Safety Training Evaluation Process—STEP—gives you an organized approach to analyze and develop your company's safety and loss prevention program, wherever you are on the roadmap to world-class safety performance.

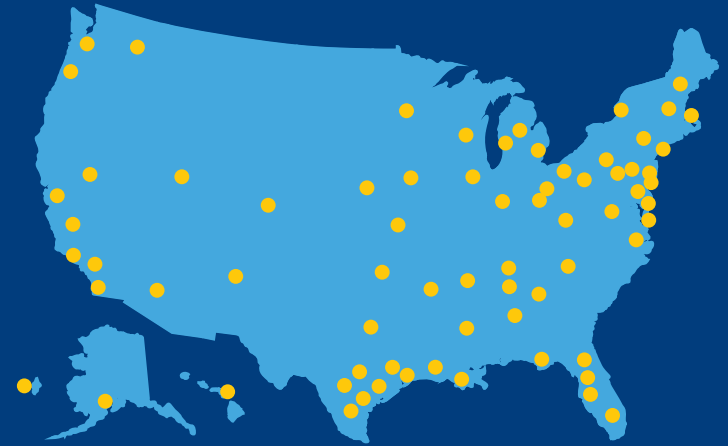
The STEP application is now online, making it faster and easier to complete your self-evaluation. You can also ask your ABC chapter to host an ABC STEP Plus Safety Excellence Academy.

I hope the 2016 ABC Safety Performance Report helps you discover how world-class results can be realized in your company. Please feel free to share the report widely.

If we choose to lead, if we choose to commit, if we choose to transform, together we will create the conditions for all to do their work without incident and go home safely every day.



Michael D. Bellaman
President and CEO
Associated Builders and Contractors



Founded in 1950, Associated Builders and Contractors (ABC) is a national construction industry trade association representing nearly 21,000 members. Founded on the merit shop philosophy, ABC and its 70 chapters help members develop people, win work and deliver that work safely, ethically and profitably for the betterment of the communities in which ABC and its members work. [Visit us at abc.org.](http://abc.org)

ABC 2016 ENVIRONMENT, HEALTH AND SAFETY COMMITTEE

Chair Melanie Laird
FC Background

Vice Chair Stephen Wiltshire
Avalon Bay Communities

Troy Allen
CB&I

Richard Baldwin
PCL Construction Services Inc.

Gary Birchall
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