ABC 2017 SAFETY PERFORMANCE REPORT

UNDERSTANDING THE IMPACT OF STEP PARTICIPATION ON OVERALL SAFETY PERFORMANCE
UNDERSTANDING THE IMPACT OF STEP PARTICIPATION ON OVERALL SAFETY PERFORMANCE

Disclaimer:

The information contained within this report is for reference purposes only and reflects data submitted by ABC member companies during the 2016 Safety Training Evaluation Process (STEP) term. Any unauthorized use or distribution of this information without the express written consent of Associated Builders and Contractors, Inc.; 440 First St. NW, Suite 200, Washington, DC 20001, is strictly prohibited.
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 2017 ABC Safety Performance Report is based on submissions of unique company data gathered from participants in the 2016 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 incident rates.
What If Your Company Could Be 770 Percent Safer than the Industry Average?

And you could reduce your Total Recordable Incident Rate (TRIR) by 87 percent?

It’s more than possible. It’s doable.

The 2017 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 2016 report to identify what comprises a world-class safety program.
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.

Every work day in the construction industry, an average of three people are fatally injured.
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 data 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 incident rates. Applying world-class processes dramatically improves safety performance among participants regardless of company size or type of work.
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

**STEP ACHIEVEMENT LEVELS**

- **STEP Participant**
  - 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 Silver/Bronze**
  - % Safer than BLS average
  - Reduce BLS average TRIR by 73%
  - 73%

- **STEP Gold**
  - 330%

- **STEP Platinum**
  - 770%
  - Reduce BLS average TRIR by 770%
  - 770%

- **STEP Diamond**
  - 87%
  - Reduce BLS average TRIR by 87%
  - 87%

Getting started is free up to the platinum level. Visit abc.org/step.
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 rates. In high-scoring ABC STEP member 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

TRIR DART

Low Score

High Score

54% Reduction

50% Reduction

2.56 1.31

1.19 0.65
Employee Participation Counts

Employee participation throughout the safety management system improves TRIR rates and DART rates by more than 60 percent. High-scoring STEP firms:

- Identify and explain opportunities for employee participation in hazard reporting, incident investigation, etc.
- Train supervisors how to actively engage employees
- Identify and eliminate potential barriers to participation
- Provide the necessary resources (time, money, staff, etc.)

A commitment to employee safety training lowers incident rates.
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.
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.
“As a safety professional, I have personally seen the value of substance abuse testing prior to allowing new employees to work on a jobsite. In the world we live in today there is no way for us to determine who may enter our site under the influence of drugs. These preventive and proactive programs give us an opportunity to determine who can and cannot work on site.”

—Joel Pickering, senior vice president/director of fire prevention, Lend Lease (US) Construction Inc., Rockville, Md., STEP Gold member
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 48 percent to 50 percent lower incident rates than companies that limit their orientations to basic safety and health compliance topics. The CEO or senior leadership delivers that introduction to the company’s safety culture and core values:

- Safety commitment, expectations and responsibilities
- Workplace safety rules specific to the site and hazards
- Hazard, injury and emergency communication and reporting procedures
- Protective gear/safety skills demonstrations
- Assignment of a safety mentor to each new hire until orientation is complete
- Performance evaluation and record-keeping

NEW EMPLOYEE SAFETY ORIENTATION: LOW SCORE VS. HIGH SCORE

- TRIR: 2.13 vs. 1.10, 50% reduction
- DART: 1.18 vs. 1.09, 48% reduction

Low Score

High Score
IN-DEPTH SAFETY ORIENTATION IS MORE EFFECTIVE

STEP Diamond companies that conduct new hire orientation sessions of more than 200 minutes on average, compared to about 30 minutes for STEP Bronze firms, improve their TRIR and DART rates by more than 90 percent.

The new hire orientation is where we began to instill our culture of safety in our workers. It’s a culture that emphasizes that we can achieve zero accidents, that we must watch out for each other and prevent anyone from doing anything that is unsafe. Our initial safety orientation is approximately five hours.

—Gordon Beaver, vice president, environment, health, safety, quality, security at S & B Engineers and Constructors Ltd., Houston, STEP Diamond member
Site-specific Safety Orientation

Companies that conduct site-specific orientations reduce their TRIR and DART rates by 45 percent and 37 percent, respectively. These sessions incorporate:

- Site-specific policies and procedures
- Site-specific hazards and operations
- Company safety vision and core values
- Emphasis on the importance of stop-work authority and peer observations

“The knowledge and expectations communicated in site-specific orientations are vital in preparing our teams to make good, safe decisions. Our workforce not only has the specific information to work safely in that facility, they also have the confidence to handle what comes their way.”

—Shelley Sutton, CSHO, director of shared services, hth companies inc., Union, Mo., STEP Platinum member
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.

“Focusing on safety as you start the day or week sets expectations for safety by highlighting the precautions needed to mitigate anticipated risks. Toolbox talks have a significant positive impact on safety performance, especially when coupled with stretching exercises and preparation of each crew’s daily task plan.”

—Rich Baldwin, director, health, safety and environment, PCL Construction Enterprises Inc., Orlando, Fla., STEP Gold member
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 41 percent and 39 percent respectively at companies that do so. Companies that conduct near-miss/near-hit analysis:

“Every incident that occurs on a construction site must receive some level of review. Near misses, however, receive extra scrutiny. A near miss can be a fraction of an inch from causing a serious injury. That is why it is critical to have a system that tracks, analyzes and reviews near misses and shares findings to prevent it from happening again.”

—Gordon Beaver, vice president, environment, health, safety, quality, security at S & B Engineers and Constructors Ltd., Houston, STEP Diamond member
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 46 percent to 47 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

“Project safety committees should be an essential part of every contractor’s safety program. The nurture a strong sense of safety culture, create an awareness that every worker is empowered to work safely, and improve communication between contractors from various trades.”

—Chris Diaz, vice president, safety, health and environmental, Balfour Beatty Corp., Dallas, STEP Diamond member

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIR</td>
<td>2.04</td>
<td>1.11</td>
</tr>
<tr>
<td>DART</td>
<td>1.09</td>
<td>0.60</td>
</tr>
</tbody>
</table>

47% Reduction

46% Reduction
Site Safety Committee/Principals' Council

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 58 percent reduction in TRIR rates and a 59 percent reduction in DART rates.

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

- TRIR: Low Score 2.63 vs. High Score 1.46
  - Reduction: 58%
- DART: Low Score 1.10 vs. High Score 0.60
  - Reduction: 59%

Inspections are made by the supervisor and are documented.
Potentially serious safety issues are corrected immediately.
Less serious safety issues are corrected promptly.
Follow-up processes ensure that corrective actions produce expected results.

CORE LEADING INDICATORS

6
### BENCHMARKING STEP MEMBER SAFETY PERFORMANCE IMPROVEMENT, 2011-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>BLS</th>
<th>STEP Average</th>
<th>STEP Platinum</th>
<th>STEP Diamond</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>4.0</td>
<td>2.5</td>
<td>1.1</td>
<td>0.7</td>
</tr>
<tr>
<td>2012</td>
<td>3.9</td>
<td>2.2</td>
<td>1.2</td>
<td>0.3</td>
</tr>
<tr>
<td>2013</td>
<td>3.8</td>
<td>2.0</td>
<td>1.2</td>
<td>0.5</td>
</tr>
<tr>
<td>2014</td>
<td>3.7</td>
<td>1.8</td>
<td>1.5</td>
<td>0.5</td>
</tr>
<tr>
<td>2015</td>
<td>3.6</td>
<td>1.8</td>
<td>1.0</td>
<td>0.5</td>
</tr>
<tr>
<td>2016</td>
<td>3.5</td>
<td>1.4</td>
<td>0.8</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Total Recordable Incident Rate (TRIR): STEP vs. the U.S. Bureau of Labor Statistics Industry Average

**770% SAFER**
Glossary of Common Terms

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


**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. incident 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 Incident 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 2017 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.
ABC 2017 ENVIRONMENT, HEALTH AND SAFETY COMMITTEE

Chair
Sam Stiteler
MetroPower Inc.

Executive Committee Liaison
Jay Baldwin
Reliable Contracting Company Inc.

Chapter President Liaison
John Mielke
ABC Wisconsin Chapter

Staff Liaison
Greg Sizemore
ABC National

Troy Allen
Primoris Services Corp.

Richard Baldwin
PCL Construction Services Inc.

Gary Clevenger
CNA

Kevin Converse
United Rentals Inc.

Shane Davis
Ivey Mechanical

Christopher Diaz
Balfour Beatty Construction

Edwin Foulke, Jr.
Fisher & Phillips LLP

Bill Goss
CNA

Daryl Guercio
CB&I

Melanie Laird
FC Background

Anthony Lombardi
Centennial Contractors Enterprises Inc.

Todd Meek
Lauren Engineers & Constructors Inc.

Jeremy Miller
Performance Contractors Inc.

Danny Oubre
EXCEL Contractors Inc.

Joel Pickering
Lend Lease (US) Construction Inc.

Ralph Riley
S&B Engineers and Constructors Ltd.

Shelley Sutton
hth companies inc.

Jim Thompson
Kwest Group LLC

Bart Wilder
Hoar Construction, LLC

Stephen Wiltshire
Forrester Construction

Lauren Williams
ABC National
For more information, contact:

Greg Sizemore
Vice President, Health, Safety, Environment and Workforce Development
Associated Builders and Contractors
440 First St., NW, Suite 200
Washington, DC 20001
sizemore@abc.org

abc.org/safety