The information and materials contained in this publication have been developed from sources believed to be reliable. However, the American Society of Safety Engineers (ASSE) as secretariat of the ANSI accredited A10 Committee or individual committee members accept no legal responsibility for the correctness or completeness of this material or its application to specific factual situations. By publication of this standard, ASSE or the A10 Committee does not ensure that adherence to these recommendations will protect the safety or health of any persons, or preserve property.
ANSI®
ANSI/ASSE A10.47 – 2015

American National Standard
Construction and Demolition Operations
Work Zone Safety
for Highway Construction

Secretariat
American Society of Safety Engineers
520 North Northwest Highway
Park Ridge, Illinois  60068

Approved April 23, 2015

American National Standards Institute, Inc.
Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus and other criteria for approval have been met by the standards developer. Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered and that a concerted effort be made toward their resolution. The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he/she has approved the standards or not, from manufacturing, marketing, purchasing or using products, processes or procedures not conforming to the standards. The American National Standards Institute does not develop standards and will in no circumstance give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretation should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

Caution Notice: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published June 2015 by

American Society of Safety Engineers
520 North Northwest Highway
Park Ridge, Illinois 60068
(847) 699-2929 • www.asse.org

Copyright ©2015 by American Society of Safety Engineers
All Rights Reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.

Printed in the United States of America
Foreword

(This Foreword is not a part of American National Standard A10.47-2015.)

This standard is one of a series of safety standards that have been formulated by the Accredited Standards Committee on Safety in Construction and Demolition Operations, A10. It is expected that the standards in the A10 series will find a major application in industry, serving as a guide to contractors, labor, and equipment manufacturers. For the convenience of users, a list of existing and proposed standards in the A10 series for Safety Requirements in Construction and Demolition Operations follows.

A10.1 Pre-Project & Pre-Task Safety & Health Planning
A10.2 Safety, Health and Environmental Training (under development)
A10.3 Powder-Actuated Fastening Systems
A10.4 Personnel Hoists and Employee Elevators
A10.5 Material Hoists
A10.6 Demolition Operations
A10.7 Transportation, Storage, Handling and Use of Commercial Explosives and Blasting Agents
A10.8 Scaffolding
A10.9 Concrete and Masonry Construction
A10.10 Temporary and Portable Space Heating Devices
A10.11 Personnel Nets
A10.12 Excavation
A10.13 Steel Erection
A10.15 Dredging
A10.16 Tunnels, Shafts and Caissons
A10.17 Safe Operating Practices for Hot Mix Asphalt (HMA) Construction
A10.18 Temporary Roof and Floor Holes, Wall Openings, Stairways and Other Unprotected Edges
A10.19 Pile Installation and Extraction Operations
A10.20 Ceramic Tile, Terrazzo, and Marble Work
A10.21 Safe Construction and Demolition of Wind Generation/Turbine Facilities (under development)
A10.22 Rope-Guided and Non-Guided Workers' Hoists
A10.23 Safety Requirements for the Installation of Drilled Shafts
A10.24 Roofing – Safety Requirements for Low-Sloped Roofs
A10.25 Sanitation in Construction
A10.26 Emergency Procedures for Construction Sites
A10.27 Hot Mix Asphalt Facilities
A10.28 Work Platforms Suspended from Cranes or Derricks
A10.29 Aerial Platforms in Construction (under development)
A10.31 Digger-Derricks
A10.32 Personal Fall Protection Used in Construction and Demolition Operations
A10.33 Safety and Health Program Requirements for Multi-Employer Projects
A10.34 Public Protection
A10.37 Debris Nets
A10.38 Basic Elements of a Program to Provide a Safe and Healthful Work Environment
A10.39 Construction Safety and Health Audit Program
A10.40 Reduction of Musculoskeletal Problems in Construction
A10.42 Rigging Qualifications and Responsibilities in the Construction Industry
A10.43 Confined Spaces in Construction (under development)
A10.44 Lockout/Tagout in Construction
A10.46 Hearing Loss Prevention
A10.47 Highway Construction Safety
A10.48 Communication Tower Erection (under development)
A10.49 Control of Health Hazards
One purpose of these standards is to serve as guides to governmental authorities having jurisdiction over subjects within the scope of the A10 Committee standards. If these standards are adopted for governmental use, the reference of other national codes or standards in individual volumes may be changed to refer to the corresponding regulations.

Revisions: The A10 Committee welcomes proposals for revisions to this standard. Revisions are made to the standard periodically (usually five years from the date of the standard) to incorporate changes that appear necessary or desirable, as demonstrated by experience gained from the application of the standard. Proposals should be as specific as possible, citing the relevant section number(s), the proposed wording and the reason for the proposal. Pertinent documentation would enable the A10 Committee to process the changes in a more-timely manner.

Interpretations: Upon a request in writing to the Secretariat, the A10 Committee will render an interpretation of any requirement of the standard. The request for interpretation should be clear, citing the relevant section number(s) and phrased as a request for a clarification of a specific requirement. Oral interpretations are not provided.

No one but the A10 Committee (through the A10 Secretariat) is authorized to provide any interpretation of this standard.

Approval: Neither the A10 Committee nor American National Standards Institute (ANSI) approves, certifies, rates or endorses any item, construction, proprietary device or activity.

Appendices: Appendices are included in most standards to provide the user with additional information related to the subject of the standard. Appendices are not part of the approved standard.

Checklists: Checklists included in A10 standards may be copied and used in non-commercial settings only.

Committee Meetings: The A10 Committee meets twice per year. Persons wishing to attend a meeting should contact the Secretariat for information.

Standard Approval: This standard was processed and approved for submittal to ANSI by the American National Standards Committee on Safety in Construction and Demolition Operations, A10. Approval of the standard does not necessarily imply (nor is it required) that all Committee members voted for its approval. At the time ANSI approved this standard, the A10 Committee had the following members:
Richard King, CSP, Chair
Steven Rank, Vice Chair
Timothy R. Fisher, CSP, CHMM, ARM, CPEA, Secretary
Jennie Dalesandro, Administrative Technical Support

**Organization Represented**

<table>
<thead>
<tr>
<th>Organization Represented</th>
<th>Name of Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accident Prevention Corporation</td>
<td>Frank Burg, CSP, P.E.</td>
</tr>
<tr>
<td>Alstom Power</td>
<td>Terry Krug, CSP, CIH</td>
</tr>
<tr>
<td>American Insurance Services Group</td>
<td>Robert Renney</td>
</tr>
<tr>
<td>ASCE - Construction Institute Committee</td>
<td>Ted P. Sharp</td>
</tr>
<tr>
<td>American Society of Safety Engineers</td>
<td>Thad Nosal</td>
</tr>
<tr>
<td>American Wind Energy Association</td>
<td>James G. Borchardt, CSP, CPE, CRIS</td>
</tr>
<tr>
<td>Associated Builders and Contractors, Inc.</td>
<td>Harlan Fair, P.E.</td>
</tr>
<tr>
<td>American General Contractors of America, The</td>
<td>Ken Shorter, CSP, ARM, TCDS</td>
</tr>
<tr>
<td>Association of Union Constructors, The</td>
<td>A. David Brayton, CSP, CPC</td>
</tr>
<tr>
<td>Barton-Malow Company</td>
<td>Michele Myers Mihelic</td>
</tr>
<tr>
<td>Black &amp; Veatch</td>
<td>Dennis W. Eckstine</td>
</tr>
<tr>
<td>Building &amp; Construction Trades Department</td>
<td>Ralph Riley</td>
</tr>
<tr>
<td>A-Z Safety Resources, Inc.</td>
<td>Chris Williams</td>
</tr>
<tr>
<td>The Association of Uran Constructors</td>
<td>Michael McCaffrey</td>
</tr>
<tr>
<td>Cole-Preferred Safety Consulting, Inc.</td>
<td>Kevin Cannon</td>
</tr>
<tr>
<td>Cole-PREFERRED Safety Consulting, Inc.</td>
<td>Wayne Creasap, II</td>
</tr>
<tr>
<td>Capital Safety Group</td>
<td>Rusty Brown, CSP</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>Jane F. Williams, CPEA, CCA</td>
</tr>
<tr>
<td>Construction &amp; Realty Safety Group, Inc.</td>
<td>Jeffrey Oliver</td>
</tr>
<tr>
<td>CPWR - Center for Construction Research &amp; Training</td>
<td>Mark Haggenmaker</td>
</tr>
<tr>
<td>Capital Safety Group</td>
<td>Richard F. King, CSP</td>
</tr>
<tr>
<td>CPWR - Center for Construction Research &amp; Training</td>
<td>John H. Johnson, CSP</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>Pete Stafford</td>
</tr>
<tr>
<td>CPWR - Center for Construction Research &amp; Training</td>
<td>Chris Trahan, CIH</td>
</tr>
<tr>
<td>Cole-PREFERRED Safety Consulting, Inc.</td>
<td>Bruce Lippy, Ph.D., CIH, CSP</td>
</tr>
<tr>
<td>Capital Safety Group</td>
<td>Scott C. Casebolt</td>
</tr>
<tr>
<td>Cole-PREFERRED Safety Consulting, Inc.</td>
<td>Joe Yeatman</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>Kurt Dunmire, CSP, CHST</td>
</tr>
<tr>
<td>Capital Safety Group</td>
<td>Barry Cole</td>
</tr>
<tr>
<td>Cole-PREFERRED Safety Consulting, Inc.</td>
<td>Philip L. Colleran</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>Ron Lattanzio</td>
</tr>
<tr>
<td>Cole-PREFERRED Safety Consulting, Inc.</td>
<td>Frank Marino</td>
</tr>
<tr>
<td>Capital Safety Group</td>
<td>Anthony Merisola</td>
</tr>
<tr>
<td>Cole-PREFERRED Safety Consulting, Inc.</td>
<td>Patrick Brennan, CSHM, CSSM</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>R. Lee Reed, Jr.</td>
</tr>
<tr>
<td>Cole-PREFERRED Safety Consulting, Inc.</td>
<td>Charles Kelly</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>E. Martin Kris</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>Paula Manning</td>
</tr>
<tr>
<td>Cole-PREFERRED Safety Consulting, Inc.</td>
<td>J. Nigel Ellis, Ph.D., P.E., CSP, CPE</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>John Whitty, P.E.</td>
</tr>
<tr>
<td>Cole-PREFERRED Safety Consulting, Inc.</td>
<td>David Ahearn, P.E.</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>Ed Tuczak, P.E.</td>
</tr>
<tr>
<td>Cole-PREFERRED Safety Consulting, Inc.</td>
<td>Anthony O'Dea, CSP, CHST</td>
</tr>
<tr>
<td>Clark Construction Group</td>
<td>Charles Praul, Jr., CSP</td>
</tr>
</tbody>
</table>

**This is a preview of "ANSI/ASSE A10.47-201...". Click here to purchase the full version from the ANSI store.**
Richard D. Hislop
Independent Electrical Contractors, Inc.
Institute of Makers of Explosives
Insulators International Union
International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers
International Brotherhood of Boilermakers
International Brotherhood of Electrical Workers
International Brotherhood of Teamsters
International Safety Equipment Association
International Union of Bricklayers & Allied Craftworkers
International Union of Operating Engineers
Jack L. Mickle & Associates
Laborers’ International Union of North America
Lamar Advertising
Lend Lease
Marsh USA, Inc.
Maryland Occupational Safety & Health
Mechanical Contractors Association of America
National Association of Home Builders
National Association of Railroad Safety Consultants & Investigators
National Electrical Contractors Association
National Institute for Occupational Safety & Health
National Railroad Contractors & Maintenance Association
National Roofing Contractors Association
National Society of Professional Engineers
Operative Plasterers and Cement Masons International Association
Daniel M. Paine
Phoenix Fabricators and Erectors, Inc.
Powder Actuated Tool Manufacturer’s Institute

Richard Hislop
Shawn Bradfield
John P. Masarick
Jerry Rivera
Ronald Thomas
Susan JP Flanagan
Terry Lynch
Jim E. Lapping, MS, P.E., CSP
Steven Rank
Kendall Martin
Mark Garrett
Bridget Connors
David Mullen
LaMont Byrd, CIH
Asher Tobin
Cristine Fargo
Michael Kassman, CHST
Gerard Scarano
Donald “Chip” Booth, MS, CSP
Barbara McCabe
Jack Mickle, Ph.D., P.E.
Steve Stock, P.E., PLS
Scott Schneider, MS, CIH
Walter A. Jones, MS, CIH
Chuck Wigger, CSP
Micky Vint
Joel Pickering, CET, CHMM
Michael Lentz
Timothy Bergeron, CSP
Mischelle Vanreusel
Eric Uttenreither
Peter Chaney, MS, CSP
Dennis Langley
Robert Matuga
Chelsea Vetick
Lewis Barbe, P.E., CSP, CRSP
Michael J. Johnston
Wesley Wheeler
Thomas G. Bobick, Ph.D., P.E., CSP, CPE
G. Scott Earnest, Ph.D., P.E., CSP
Jeffrey D. Meddin, CSP, CHEP, CHCM
Harry Dietz
Tom Shanahan
E. Ross Curtis, P.E., DFE
Paul Swanson, P.E.
Deven Johnson
Daniel M. Paine
Barbara Paine
Robert E. Clouse, CSP, CHST
Luke Humphrey
James A. Borchers
David Jablonski
Power Consultants, Incorporated  David Goldsmith
Property Casualty Insurers Association of America  Daniel Lavoie, CSP, ARM  Stanley Williams, ARM, CHST  Bob Masterson, CSP  Laurie Weber  DeAnna Martin
Ryland Group, Inc., The  Carmen Shafer, CSP, CHST, CRIS
Scaffolding, Shoring & Forming Institute  Mike McCullion, CSP, ARM  Joe Visgaitis  Randall Krocka  Charles Austin, MS
Shafer Safety Solutions, LLC  Stanley Pulz, CSP, P.E.  Richard B. Loucks, Ph.D., P.E.  Cindy L. DePrater, ALCM
Sheet Metal & Air Conditioning Contractors’ National Association  Paul Huntley  Bruce Dantley
Sheet Metal Workers International Association  Laurie Shadrick
SPA, Incorporated  William Irwin  Thomas L. Kavicky
Turner Construction Company  John Barnhard  Brian Becker, MS  Ellen B. Stewart, CSP  Leslie Bermudez  Joseph Hopkins  Brandon Takacs, CSHM  Larry Freiert
United Association of Plumbers and Pipefitters  Mark Fullen, Ed.D., CSP  Greg Thompson, CSP  Jeffrey D. Meddin, CSP, CHEP, CHCM
United Brotherhood of Carpenters and Joiners of America  Independent Experts & Observers:
United Union of Roofers, Waterproofers and Allied Workers  Balfour Beatty Construction, LLC  Fluor Corporation  Liberty Mutual Insurance  Par Electrical Contractors  Safety Environmental Engineering, Inc.
U.S. Department of the Army – Corps of Engineers  Charles Bird  Michael Weatherred, CSP  Craig Clairmont, CIH  John Rabovsky, MS, CSP, CHST, CRIS, ARM  Steven T. Theis  Lee Boulanger  Matthew Murphy  Elliot Niefeld
U.S. Department of Energy  West Virginia University Extension Service
Winchester Homes Inc.
ZBD Constructors (Zurn Industries)

Subgroup A10.47 had the following members:
Scott Schneider (Chair)  Travis Parsons (Vice-Chair)  Camille Villanova (Liaison)  David W. Ackerman  Timothy Bergeron, CSP
James G. Borchardt, CSP, CPE, CRIS
James E. Bryden, P.E.
Frank Burg, CSP, P.E.
Julie Carter-Simon
Tim Cox
Tapan K. Datta, Ph.D., P.E.
Donald Elisburg
Cristine Fargo
David Fosbroke
Mike Gostovich
Carl Heinlein, CSP, ARM, CPEA, CSHM, OHST
Ernest D.L. Huckaby
Eric Kechejian
Jim Kellenberger, P.E.
Rod Klashinsky
Jeffrey J. LaBarge
Tom Land, MS, CSP
Jim E. Lapping, MS, P.E., CSP
Jeff Lewis
Allen Macenski, CSP, J.D.
David McKee
Harry Miller
Kenneth Opiela
Daniel M. Paine
Douglas S. Prince
R. Lee Reed, Jr.
Craig Ruyle, P.E.
Bradley Sant
Ken Smith
Ronald Stemple, CSP
Gerald Ullman, Ph.D., P.E.
Mischelle Vanreusel
Michael Weatherred, CSP
William W. Wellman
Daniel D. Zarletti, Esq.
Wesley C. Zech, Ph.D.
Norm Zuckerman
| Contents |
|-------------------------------|-------------------------|
| 1. General ......................................................... | PAGE |
| 1.1 Scope ................................................................. | 11 |
| 1.2 Purpose ............................................................... | 11 |
| 2. Referenced Standards ............... | 11 |
| 2.1 Related American National Standards | 11 |
| 3. Definitions ........................................... | 12 |
| 4. Temporary Traffic Control for Construction Activity | 15 |
| 4.1 General Requirements .................. | 15 |
| 4.2 Transportation Management Plan (TMP) | 16 |
| 4.3 Communicating Plans .................. | 16 |
| 4.4 Positive Protection Measures .......... | 16 |
| 4.5 Set Up and Removal of Traffic Control Devices | 16 |
| 4.6 Inspections of Traffic Control Set Up .......... | 17 |
| 4.7 Removal of Traffic Control Devices When Work is Inactive | 17 |
| 4.8 Speed Reductions/Management .......... | 17 |
| 4.9 Other Traffic Control Measures .......... | 18 |
| 4.10 Construction Vehicles ............... | 19 |
| 4.11 Cranes and Aerial Lifts .............. | 19 |
| 5. Flagger Safety ........................................... | 19 |
| 5.1 Use of Flaggers ................................. | 19 |
| 5.2 Positioning ................................................. | 19 |
| 5.3 Visibility .................................................... | 20 |
| 5.4 Escape Path ................................................. | 20 |
| 5.5 Requirements for Flaggers ............... | 20 |
| 5.6 Advance Warning Signs ................. | 20 |
| 5.7 Stop/Slow Paddles .............................. | 20 |
| 5.8 Flagger Training Requirements .......... | 20 |
| 5.9 Training Records ................................... | 21 |
| 5.10 Communication Between Flaggers .......... | 21 |
| 5.11 Use of AFADs ............................................. | 21 |
| 5.12 Response to Frustrated Motorists .......... | 22 |
| 5.13 Intrusion Warning Devices .............. | 22 |
| 6. Runover/Backover Prevention .......... | 22 |
| 6.1 Traffic Control Plan .......................... | 22 |
| 6.2 Mirrors ....................................................... | 22 |
| 6.3 Backing Construction Vehicles and Equipment | 22 |
| 6.4 Internal Traffic Control Plans (ITCP) .......... | 23 |
| 6.5 Access and Egress to Work ............... | 23 |
| 6.5 Distracted Driving and Semi-Autonomous Vehicle Operation | 23 |
| 7. Equipment Operator Safety ............... | 24 |
| 7.1 Inspection and Maintenance of Equipment | 24 |
| 7.2 Lockout/Tagout ........................................... | 24 |
| 7.3 Roll-Over Protection Structures (ROPS) and Seatbelts | 24 |
| 7.4 Operator Qualifications ................. | 24 |
| 7.5 Multiple Person Occupancy ............... | 24 |
| 8. Excavation Safety ................................. | 24 |
| 9. Electrical Safety (Underground Utilities and Overhead Power Lines) | 25 |
| 9.1 Underground Installations ............... | 25 |
| 9.2 Overhead High Voltage Lines, Installations and Equipment | 25 |
| 10.1 General ....................................................... | 28 |
| 10.2 Guarding .................................................... | 28 |
10.3 Vibration .................................................................................................. 28
10.4 Electrocution ............................................................................................ 28
10.5 Training .................................................................................................... 29

11. Fall Prevention .......................................................................................... 29
   11.1 Walking and Working Surfaces ............................................................... 29
   11.2 Working at Heights ................................................................................ 30
   11.3 Floor Openings/Holes .......................................................................... 30
   11.4 Access/Egress to Equipment .................................................................. 30
   11.5 Ladders .................................................................................................. 30
   11.6 Scaffolds ................................................................................................ 30
   11.7 Excavations .......................................................................................... 30

12. Reduction of Musculoskeletal Problems ....................................................... 30
   12.1 General .................................................................................................. 30

13. Protection from Health Hazards .................................................................... 30
   13.1 Health Hazards ..................................................................................... 30
   13.2 Potential Major Health Hazards ............................................................. 30
   13.3 Engineering Controls .......................................................................... 31
   13.4 Administrative Controls ...................................................................... 31
   13.5 Personal Protective Equipment ............................................................. 31
   13.6 Extreme Temperatures ......................................................................... 31
   13.7 Dermal Hazards ................................................................................... 31
   13.8 Concrete/Masonry Cutting ................................................................... 31
   13.9 Sanitation ............................................................................................. 31
   13.10 Insect Bite Protection ......................................................................... 31

14. Illumination Requirements for Night Work ................................................... 31
   14.1 Illumination Plan .................................................................................... 31
   14.2 Illumination Levels .............................................................................. 32
   14.3 Vehicle Lights ...................................................................................... 32
   14.4 Glare Control ....................................................................................... 32

15. Personal Protective Equipment ...................................................................... 32
   15.1 High-Visibility Safety Apparel ............................................................... 32
   15.2 Head Protection .................................................................................... 32
   15.3 Eye and Face Protection ....................................................................... 33
   15.4 Hearing Protection .............................................................................. 33
   15.5 Other Personal Protective Equipment .................................................. 33

16. Paving Operations ....................................................................................... 33
   16.1 General .................................................................................................. 33

17. Emergency Incidents .................................................................................... 33
1. GENERAL

1.1 Scope. This standard covers employees engaged in construction, utility work, maintenance or repair activities on any area of a highway.

1.2 Purpose. Establishes the minimum requirements for the construction and maintenance of public and private highways and roads to achieve the following objectives:

1. Prevent employee injuries and illnesses resulting from working in work zones.
2. Establish safe work practices in highway work zones.
3. Prevent vehicular crashes in highway work zones.

2. RELATED AMERICAN NATIONAL STANDARDS AND OTHER REFERENCES

2.1 Related American National Standards. The American National Standards found in the ANSI/ASSE A10 Construction and Demolition Operation series contain materials and instructions related to other aspects of roadway construction and are beneficial to use, see the foreword of this standard for this listing. The following American National Standards are referred to, supplement or are related to this document. Provisions of other federal, state, local, ANSI or other standards creating organization standards that are applicable to roadway construction are to be considered. When American National Standards are superseded by a revision approved by the American National Standards Institute, the revision shall apply.

- ANSI/ASSE A10.1, Pre-Planning for Construction Safety and Health
- ANSI/ASSE A10.2, Safety, Health, and Environmental Training
- ANSI/ASSE A10.12, Safety Requirements for Excavation
- ANSI/ASSE A10.32, Fall Protection Systems for Construction and Demolitions
- ANSI/ASSE A10.33, Safety and Health Program Requirements for Multi-Employer Projects
- ANSI/ASSE A10.34, Public Protection
- ANSI/ASSE A10.38, Basic Elements of an Employer's Program to Provide a Safe and Healthful Work Environment
- ANSI/ASSE A10.40, Reduction of Musculoskeletal Problems in Construction
- ANSI/ASSE A10.44, Control of Energy Sources (Lockout/Tagout) for Construction and Demolitions Operations
- ANSI/ASSE A10.46, Hearing Loss Prevention in Construction and Demolition Workers
- ANSI/ISEA 107, High Visibility Safety Apparel and Headwear
- ANSI/ISEA 207, High-Visibility Safety Apparel and Headwear
- ANSI S2.73, Mechanical Vibration and Shock - Hand-arm Vibration - Measurement and Evaluation of the Vibration