ANSI/ASSP A10.12-2022

Safety Requirements for Excavation

AMERICAN SOCIETY OF
SAFETY PROFESSIONALS

Approved American National Standard
ANSI

ANSI/ASSP A10.12 – 2022

American National Standard
Construction and Demolition Operations

Safety Requirements for Excavation

Secretariat

American Society of Safety Professionals
520 N. Northwest Highway
Park Ridge, Illinois 60068

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American National Standard

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Foreword (This Foreword is not a part of American National Standard A10.12-2022.)

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 and technical materials in the A10 series for Safety Requirements in Construction and Demolition Operations follows.

A10.0 The Construction and Demolition Compendium of Standards
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 Use, Storage, Handling and Site Movement of Commercial Explosives and Blasting Agents
A10.8 Scaffolding
A10.9 Concrete and Masonry Construction
A10.11 Personnel Nets
A10.12 Excavation
A10.13 Steel Erection
A10.15 Dredging
A10.16 Tunnels, Shafts and Caissons
A10.18 Temporary Roof and Floor Holes, Wall Openings, Stairways and Other Unprotected Edges
A10.19 Pile Installation and Extraction Operations
A10.21 Safe Construction and Demolition of Wind Generation/Turbine Facilities
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
A10.28 Work Platforms Suspended from Cranes or Derricks
A10.29 Pre-Planning, Installation, Inspection and Use of Fall Protection for Construction and Demolition (under development)
A10.30 Installation of Anchors and Micropiles
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
A10.35 Pressure Testing of Steel and Copper Piping Systems
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 (under development)
A10.40 Reduction of Musculoskeletal Problems in Construction
A10.42 Rigging Qualifications and Responsibilities in the Construction Industry
A10.43 Confined Spaces in Construction and Demolition Operations
A10.44 Lockout/Tagout in Construction
A10.46 Hearing Loss Prevention
A10.47 Highway Construction Safety
A10.48 Communication Structures
A10.49 Control of Chemical Health Hazards
A10.50 Heat Stress Management in Construction and Demolition Operations (under development)
A10.100 Prevention through Design in Construction
A10.101 Drones in Construction (under development)

A10.102 Emerging Technology in Construction (under development)
A10.103 Lagging and Leading Indicators Used in Construction (under development)
A10.104 Pandemics and Infectious Diseases on Construction and Demolition Sites (under development)

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.

Normative Requirements: This standard uses the single column format common to many international standards. The normative requirements appear aligned to the left margin. To meet the requirements of this standard, machinery, equipment and process suppliers and users must conform to these normative requirements. These requirements typically use the verb “shall.”

> *NOTE: The informative or explanatory notes in this standard appear indented, in italics, in a reduced font size, which is an effort to provide a visual signal to the reader that this is informative note, not normative text, and is not to be considered part of the requirements of this standard; this text is advisory in nature only. The suppliers and users are not required to conform to the informative note. The informative note is presented in this manner in an attempt to enhance readability and to provide explanation or guidance to the sections they follow.*

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:

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Contents

AMERICAN NATIONAL STANDARD A10.12
SAFETY REQUIREMENTS FOR EXCAVATION

1. Scope and Application

This standard applies to all open excavations made in the earth's surface that require worker and/or property protection.

NOTE: See Section 2, Definitions. Excavations are defined to include trenches

2. Definitions

Accepted Engineering Practices. Those requirements which are compatible with established best industry practices and safety regulations.

Adjacent. The area within a horizontal distance from the edge of a vertical sided excavation equal to the depth of the excavation.

Authority Having Jurisdiction. The governmental agency, office, or individual responsible for approving equipment, and installation, or a procedure.

Barricade. To obstruct or deter the passage of persons or vehicles or to restrict access.

Barrier. A physical obstruction that blocks or limits access or demarcates in a conspicuous manner.

Benching (Benching System). A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.

Cave-In. The separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench box/shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure or immobilize a person. Also known as "trench wall failure."

Competent Person. One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Confined Space. A space that (a) is large enough and so configured that an employee can bodily enter and perform assigned work; (b) has a limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and (c) is not designed for continuous employee occupancy.

Constructor. See **Project Constructor**.

Contractor. The individual, firm, or corporation undertaking the execution of the construction work under the terms of the contract and acting directly or through its agents or employees.

Cross Braces. The horizontal members of a shoring system installed perpendicular to the sides of the excavation, the ends of which bear against either uprights or wales.

Design. To formulate, evaluate, and prepare plans and/or specifications for a device, system, slope, or other means to protect workers in excavations. All worker protection designs shall be prepared by registered professional engineers.

Excavation. Any natural or man-made cut, cavity, trench, or depression in an earth surface formed by earth removal.