DRAFT

BSR ES1.2 - 202x

Event Safety – Event Planning, Management, & Major Incident

Approved by the ANSI Board of Standards Review on _____

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The Working Group, which authored this standard, consists of a cross section of entertainment industry professionals representing a diversity of interests. ESTA is committed to developing consensus-based standards and recommended practices in an open setting.

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Voting members:

Observer (non-voting) members:

Interest category codes:

DE = designer	DR = Equipment dealer or rental company
EQP = Equipment provider	EVP = Event producer
EW = Event worker	G = general interest
INS = Insurance company	P = Performing Artist

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Foreword

The Event Safety Guide was first published by the Event Safety Alliance (“ESA”) in 2014 as a treatise which identified and explained various reasonable practices regarding special event safety. With permission from the UK Health and Safety Executive, ESA’s Guide was modeled after, and extensively borrowed from HSG195, The Event Safety Guide (Second edition), A guide to health, safety and welfare at music and similar events, often referred to as “The Purple Guide.”

In 2016, the Event Safety Working Group (ESWG) was established within ESTA’s Technical Standards Program in order to convert certain Event Safety Guide chapters into formally recognized, consensus- based standards that could be universally referenced across special events organizers, producers, enforcement agencies and user-groups. This document is one of those standards, intended to be used in conjunction with each other, which are used to identify reasonable care and safety at special events. Because events constantly evolve, so too will this collection of standards.

It is assumed in this standard that the design and implementation of processes described here are entrusted to reasonably qualified and experienced people who are knowledgeable about the circumstances of their particular event.

This standard may serve as guidance to regulatory and other enforcement authorities. Compliance with this standard, however, does not itself satisfy legal obligations or confer immunity from legal consequences in any specific circumstance.

Introduction

Successful planning for and managing of events usually requires a group of people—stakeholders[1]—using a team approach where information is shared and easily accessible. Using clear and easily understood language is a critical component of realizing a safe event.

The event safety management planning team must include stakeholders who participate in the management of day-to-day safety practices and/or play a role in the crisis response plan and producing a safe event. In some instances, this team would include the event organizer, suppliers, contractors, subcontractors, venue operators, managers, and government agencies such as local, regional, and national law enforcement, fire, health, emergency medical, and emergency management personnel. These stakeholders are an integral component part of producing a safe event and should be included in the planning considerations. The use of a "RACI" matrix is a good way to identify, document, and track the roles and responsibilities of each stakeholder in the plan (i.e., are they Responsible, Accountable, Consulted, and/or Informed – RACI).”

The goal of this standard is to identify and describe the steps necessary to create a reasonable level of safety throughout all phases of the event including planning for and responding to emergencies. This includes identifying the roles and responsibilities of the event organizer and the applicable event personnel.

1 Scope, purpose and application

This standard describes a process for event stakeholders to create and implement event-related plans for health and safety management. This process includes a framework, guidelines, and recommended practices that can be used to reduce risk as much as reasonably practical and to respond appropriately when an incident occurs within the event.

1.1 Purpose

The purpose of this standard is to identify and describe the steps necessary to create a reasonable level of safety throughout all phases of an event.

[1] The international standard providing guidance on social responsibility, called ISO 26000, defines a stakeholder as an “individual or group that has an interest in any decision or activity of an organization.” The American Society for Quality suggests there are four primary stakeholders in a typical organization: its investors, employees, customers, and suppliers.

1.2 Intent
This document is intended for use by both users and enforcement officials to help establish and maintain minimum standards for planning and safety at events.

1.3 Equivalency
The provisions of this standard are not intended to prevent the use of any materials or to prohibit any design, method, or services not specifically described in this standard, provided that any such alternative design, method, or services complies with the intent of these provisions. The quality and effectiveness of all methods of work that one chooses to apply for a given event should be at least equivalent to those described in this standard. This standard is not intended to replace any applicable laws, regulations, codes, or other guidance – it supplements those authorities with the goal of improving safety.

1.4 Application
This document is part of a collection of standards relating to event safety. Users should consider the requirements of the complete collection in relation to the application of this standard, where such consideration is necessary to coordinate and correlate related requirements into an event safety management plan.

1.5 Normative references
The following documents contain requirements relating to the scope of this standard. They are provided for guidance only, unless otherwise referenced specifically elsewhere within this standard. Where a specific version is not given, the version applicable to the event's state, local, or municipal jurisdiction should be used. European, British, Australian, and other globally recognized standards are also recommended for review, as they are useful sources of guidance where domestic national standards do not already exist.

- ANSI ES1.4-2021 Event Safety – Event Fire Safety Requirements
- ANSI ES1.7-2021 Event Safety – Weather Preparedness
- ANSI ES1.9-2020, Event Safety – Crowd Management
- ANSI ES1.19-2020, Event Safety – Safety requirements for special event structures
- ANSI ES1.18-2022, Event Safety – Rigging
- Event Safety Alliance, Event Safety Guide, 2014
- ANSI/PM 99-001-2021, Project Management Body of Knowledge, Seventh Edition
- U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA), Special Events Contingency Planning Job Aid (Independent Study Course IS-15.b), 2005/updated in 2010
- International Building Code®, International Code Council
- International Fire Code®, International Code Council
- U.S. Department of Homeland Security, Federal Emergency Management Agency, National Incident Management System (NIMS)(https://www.fema.gov/emergency-managers/nims)
- U.S. Department of Homeland Security, Federal Emergency Management Agency, Incident Command System (ICS) Review Document
- NFPA 101, Life Safety Code®, National Fire Protection Association
- NFPA 1, Fire Code®, National Fire Protection Association
- Canada Occupational Health and Safety (OHS), Occupational Health and Safety Act (OHSA), R.S.O. 1990, c. O.1
- UK Health and Safety at Work etc. Act 1974
- UK Health and Safety Executive (HSE), Managing Risks and Risk Assessments at Work (https://www.hse.gov.uk/simple-health-safety/risk/risk-assessment-template-and-examples.htm)
- U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), Occupational Safety and Health Act, 29 U.S.C. §651 et seq. (1970)
- U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) website, emergency action plans (29 CFR 1910.38)
- The Purple Guide (UK), The Events Industry Forum in consultation with the events industry
- United States Department of Labor website (https://www.dol.gov/)

2 Definitions

2.1 Authority having jurisdiction (AHJ): An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

2.2* Competent person: One who is capable of identifying existing and predictable hazards in the surroundings or working conditions and who has authorization to take prompt corrective measures to eliminate them.

2.3 Control measure: Actions that can be taken to reduce or eliminate exposure to a hazard or to reduce the likelihood of the risk of exposure to that hazard being realized. (https://www.hsa.ie/eng/Topics/Hazards/).

2.4* Emergency action plan (EAP): A written document that memorializes contingencies, staff duties and responsibilities, during both normal and emergency operations, and that incorporates and describes the actions event stakeholders should take to ensure safety during an incident within an event.

2.5 Emergency operations plan (EOP): A reference and planning document, typically developed and maintained by a government jurisdiction, that assigns responsibility to organizations and individuals, sets forth lines of authority and organizational relationships, describes how people and property are protected, identifies personnel, equipment, facilities, supplies, and other resources, and reconciles requirements with other jurisdictions during a disaster.

2.6 Event: A planned, nonemergency activity (e.g., sporting event, concert, parade, mass gathering) usually conducted proximate to a live audience When used in this standard, an “event” shall always mean a live event.

2.7 Event duration: The length of time from the start of event phase 2 (the entire period the event occupies the site) through the end of event phase 3 (completion of load-out and/or site restoration).

2.8 Event health and safety: As used in this standard, includes health and safety laws and policies that provide the health and safety framework for the rights and duties of all parties that participate in an event.

2.9* Event management center (EMC): The physical location/facility where management functions are conducted and coordinated at an event. Some may also refer to this as the “incident command center,” “event control center,” “incident management center,” or “command center.”

2.10 Event organizer: The individual, group or organization (or their authorized representatives) that originates, organizes, promotes and/or manages an event. The event organizer is ultimately responsible for the event.

2.11 Event stakeholders: Anyone working the event including the production team, supervisors, employers, employees, contractors, subcontractors, laborers, volunteers, performers, venue owners or venue operators, vendors, etc. May be also be referred to as event staff, even personnel, or event workers.

2.12* Event phases

2.12.1 Event phase 1 (“pre-planning,” planning, pre-event, pre-production): The period before event phase 2 begins and when all aspects of the event are initiated, considered, and planned prior to the event. During this event phase, risk assessments are completed, all event-related plans are created and approved, and all elements related to the event are considered and planned. Equivalent to Project Management Institute’s Execution Phases 1 (initiation) and 2 (planning).

2.12.2* Event phase 2 (the event, at the event site / venue): The period of time immediately following event phase 1 and prior to event phase 3 when the event organizer/producer occupies and becomes responsible for the event activation within the venue or, in a temporary event site (e.g., in a non-traditional location), for the temporary venue. This phase includes not only the actual event time (when the attendees are present) but also includes the setup/construction time (including initial site layout, marking of the site, if applicable, and load-in) and the dismantle time, along with execution of a site restoration plan, which would include returning the venue or site to its original state before the event began, if applicable. Equivalent to Project Management Institute’s Execution Phase 3 (execution).

2.12.3* Event phase 3 (post-event): The period of time immediately following event phase 2 after the event organizer has relinquished control of the venue or site back to the its owner. Typically, during this event phase, final accounting is completed; post event analysis takes place and reports are developed, reviewed, and discussed; rental items are returned; documentation is gathered and stored; and, assets are examined, repaired/replaced (as necessary), stored, and managed for future use. This event phase

does not have a specific time frame. Equivalent to Project Management Institute's Execution Phases 4 (monitoring and controlling) and 5 (closure).

2.13* Event safety management plan (ESMP): An umbrella term for a collection of subordinate plans and documents—including all safety plans, policies, and safety documentation related to the event—that describe how safety will be achieved, managed, and maintained for all those present during all phases of an event.

2.14 Event safety management planning team (ESMPT): The group of stakeholders who have a vested interest, and play an integral role, in producing the plan to ensure a safe event, including, but not limited to, the event organizer, contractors, subcontractors, venue owners, managers, and government agencies such as local, regional, and national law enforcement, fire, health, emergency medical, and emergency management personnel.

2.15 Event safety meeting (aka, site safety briefing): A daily stand-up meeting in which all event stakeholders receive role-specific, relevant, health and safety information for the event that day including, but not limited to, safety-related laws, rules, onsite hazards, policies, and procedures.

2.16 Hazard: Anything with the potential to harm people, structures, and facilities; A condition that presents the potential for harm or damage to people, property, or environment;. Something that is potentially dangerous or harmful, often the root cause of an unwanted outcome (NRF, 2008; FEMA EMI, 2018).

2.17 Health and safety: A general term referring to regulations, laws, rules, principles, guidelines, policies and procedures that are intended to keep people safe from injury or disease at work or in public places. Sometimes referred to as "Occupational Safety and Health" or "Life Safety."

2.18 Health and safety coordinator: A competent person authorized by the event organizer to coordinate and comply with all safety related requirements (e.g., relevant laws, regulations, standards), take actions to ensure the safety of everyone on site, monitor all activities for safety, ensure safe methods and practices are being used for all operations, and producing and maintaining appropriate and complete documentation for all safety-related activities conducted in all phases of an event.

2.19 Health and safety management: The task of managing matters of health and safety and related risks as part of an event which is defined in the Event Safety Management Plan (ESMP).

2.20 Health and safety policy: A written document that demonstrates the event organizer's commitment to health and safety, and details the mission, intent, criteria, considerations and conditions necessary to promote and maintain a healthy and safe environment at a particular event or for all activities in which the event organizer may participate. This is often part of, or incorporated by reference in, the event safety management plan (ESMP).

2.21 Incident: An unplanned occurrence, natural or human-caused, that requires a response to protect life, property, or the environment (FEMA EMI, 2018). For the purposes of this standard, there are two categories of incidents: minor and major.

2.21.1* Major Incident: An incident that did, or has the potential to, result in serious harm to numerous persons, significant property and/or environmental damage, and which does or may require an immediate response and intervention from the local authorities or emergency services. A major incident is likely to escalate and produce significant consequences that cannot be managed with onsite resources.

2.21.2* Minor Incident: A simple, undesired occurrence (a) that adversely affects a task or process, (b) whose consequences can be managed through normal service delivery, and (c) which is not likely to escalate.

2.22* Incident Command System (ICS): Generally, ICS is an Incident Management System (see *Incident Management System [IMS]*). Specifically, ICS is a management system designed to enable effective and efficient incident management by integrating a combination of facilities, equipment, staff, procedures, and communications operating within a common organizational structure.

2.23 Incident Commander: In ICS applications, the individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources for an incident.

2.24* Incident management system (IMS): A general term for a system that defines the roles and responsibilities to be assumed by responders and the standard operating procedures to be used in the management and direction of emergency incidents and other functions (NFPA 1561, 2020, *Standard on Emergency Services Incident Management System and Command Safety*).

2.25 Incident management team (IMT): Within the incident command system (ICS), an IMT is a group that includes the incident commander and the appropriate command staff (officers who answer directly to the incident commander: Safety Officer, Liaison Officer, Information Officer) and general staff (responders that serve as section chiefs of the operations, planning, logistics, and finance/administration sections of the IMS) personnel assigned to an incident (FEMA Glossary, 2022; NFPA 1561, 2020).

2.26* Load-in: The act of bringing in the necessary materials and equipment and setting up the event at the event site. This may also be referred to as setup, install, or build.

2.27* Load-out: The act of dismantling equipment used during the event; packing it for transport away from the site or placing it in storage; removing the items from the site (via truck or other means); and, returning the site to an agreed upon condition. This may also be referred to as strike, break, dismantle, or tear down.

2.28* Mass gathering: A non-routine activity within a community that brings together a large number of people.

2.29 Must: Interchangeable with “shall” and indicates a mandatory requirement.

2.30 Occupational safety and health (OSH): See “Health and safety.”

2.31 Personal protective equipment (PPE): The safety equipment worn by a user to prevent bodily harm (e.g. safety shoes, high visibility vests, hard hats, fall arrest harnesses, etc.) required only to mitigate the residual risk of injury after all technical and organizational means to mitigate and control the risk of injury have been implemented.

2.32 Post event analysis (PEA): As used herein, assessment or evaluation reports documenting the successes and/or failures of any safety related policy, document, action, incident etc., which resulted from the event. An after action report with lessons learned should be the result of the PEA.

2.33 Qualified person: A person who, by profession or recognized degree, or certificate of professional standing, or by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve and resolve problems relating to the subject matter and work.

2.34* Risk: Having the capacity to produce harm or loss that is measured in terms of likelihood of occurrence and severity of impact.

2.35* Risk assessment: A process to identify potential hazards and analyze what could result from exposure to hazards. A risk assessment should also include suggestions for mitigation/control measures to reduce the risk to an acceptable level.

2.36* Safety data sheet (SDS): An SDS includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. It provides guidance for each specific chemical on things such as personal protective equipment (PPE), first aid procedures, and spill clean-up procedures.

2.37 Security: Most broadly, security is the protection of people or property from harm (ES1.40). As used in this standard, the branch of an organization, public or private, charged with the responsibility of safeguarding the assets (people, physical plant, properties, products and reputation) of an organization.

2.38 Shall: Is interchangeable with “must” and indicates a mandatory requirement.

2.39* Should: Denotes a non-mandatory recommendation; that which is advised but not required.

2.40 Site map: A map, usually created digitally and to-scale, showing the basic layout of the venue, site, or area related to an event, may show an indoor event's floor plan, and that shows all the event's critical, on-site elements; Site plan.

2.41 Site safety rules: Required guidelines that describe exactly how an event organizer or venue expects everyone entering the site to behave.

2.42 Stand-up meeting: A brief, daily collaboration meeting in which the team review progress from the previous day, declares intentions for the current day, and highlights any obstacles encountered or anticipated.

2.43* Vulnerable persons: Those in need of protection, who may not be fully capable of decision making, and who hold membership to undervalued groups within society.

3 General

3.1 Every event must comply with all local, regional and national laws and regulations as per the authority having jurisdiction (AHJ).

3.2 Every event shall be constructed, designed, equipped, maintained, and operated in accordance with this standard so as to provide protection from reasonably foreseeable risks, their actual and potential hazards related to the health and safety of everyone involved in the event, any property used by the event, and the environment.

3.3 All equipment, devices and materials shall be used in accordance with the manufacturer's instructions and, where required, display all necessary labels and limitations.

3.4 Every event, regardless of the size, must have an initial, comprehensive planning meeting. This initial meeting will define the scope of the event and will include, but is not limited to, the following topics:

- Roles, titles
- Responsibilities
- Staffing (event personnel)
- Licenses
- Permitting
- Procedures
- Production
- Timelines

3.5 All event stakeholders (e.g., first responders, AHJs, etc.) must be informed of important event safety and security features including, but not limited to, ingress, egress, and other emergency information during the event safety meeting. This information should be updated regularly by the health and safety coordinator by any means necessary as the set-up progresses and risks, hazards and locations change.

4 Event phase 1: Planning the event

4.1 Event organizer

4.1.1 The event organizer shall initiate the planning of the event and shall be responsible for all health and safety related issues during all phases of the event.

4.1.1.1 The overall responsibility for health and safety-related issues must not be delegated away from the event organizer, but the tasks associated with this responsibility may be delegated to others.

4.1.1.2* Health and safety related tasks must only be delegated to competent, and preferably qualified, persons.

4.1.3 Responsibilities of the event organizer include but are not limited to:

- Oversight of the activities of the health and safety coordinator.
- Creation and oversight of an overall health and safety framework for all entities that participate in the event during all event phases.
- Approval of specific health and safety policies that are intended to protect attendees and event personnel from reasonably foreseeable risks during all event phases, and

- Oversight and approval of a plan to address all reasonably foreseeable emergencies that might occur during any event phases.

4.1.4* The event organizer should obtain health and safety, legal, and insurance advice from qualified persons early in event phase 1 (planning phase).

4.1.5* The event organizer must provide instruction and supervision, conduct relevant training, and ensure compliance with procedures, communication methods, and rules.

4.1.6 The event organizer should frequently review and update planning documents as part of the risk assessment and hazard mitigation process.

4.2 Health and safety coordinator

4.2.1 All events must have at least one health and safety coordinator.

4.2.2 Health and safety coordinators must be members of the event safety management planning (ESMP) team.

4.2.3* The health and safety coordinator must not have other roles or responsibilities that would prevent material fulfillment of the duties as the health and safety coordinator.

4.2.3.1 The role of health and safety coordinator must not be filled by the event organizer.

4.2.4 The health and safety coordinator shall be responsible for, but not necessarily limited to, the following:

- Compliance with all applicable health and safety regulations,
- Compliance with all liabilities governed by applicable regulation in the location(s) that the event operates,
- Identifying existing and reasonably foreseeable risks of the event,
- Identifying potential liability incurred by the event due to the strain on emergency services and surrounding areas, if the event experiences a major emergency (major incident), and
- Documenting incidents and accidents.
- Establishing and recording the details of the health and safety policy that are intended to protect attendees and event personnel from reasonably foreseeable risks during all event phases.
- Seeking guidance from relevant AHJs and other related agencies to ensure compliance with all applicable regulations.
- Ensuring that first-aid kits, and personnel trained in their use, are available during all event phases.
- Ensuring there is active monitoring of health and safety systems, and procedures, during all event phases.
- Posting health and safety policies and procedures, with emergency contact information in locations that are clearly identified and easily accessible to all event personnel, prior to commencement of any onsite work.
- Communicating the event site safety rules to all event personnel, prior to commencement of any onsite work.
- Conducting safety meetings prior to all event phases.
- Clearly demarcating all discrete work zones prior to commencement of any onsite work.

4.2.5 Health and safety coordinator tasks must only be delegated to competent persons.

4.2.6 All persons performing health and safety coordinator tasks shall be authorized by the event organizer to do at least the following:

- Inform all event personnel about the hazards and risks that exist at the event site, and work to create cooperative strategies and procedures to minimize those identified hazards;
- Take prompt and corrective action to mitigate or eliminate identified reasonably foreseeable risks;
- Have access to all safety documentation supplied by the contractors and the event organizer;
- Ensure all event personnel understand how health and safety policies and procedures will be implemented, monitored, and enforced before they begin work on site;
- Clearly identify and communicate each relevant staff member's role and responsibility as they may relate to all reasonably foreseeable risks and emergencies during the event (This communication will outline who has decision making authority, and in which circumstance);

- Communicate emergency response requirements and information to all event personnel and attendees in a manner that is appropriate for their roles and responsibilities during an emergency; and
- Establish and maintain records as required by the authority having jurisdiction and the event organizer.

4.2.7 The specific work of a health and safety coordinator should be accomplished in coordination with the event organizer and other departments including, but not limited to, security personnel, medical team, law enforcement and human resources.

4.2.8 The health and safety coordinator must also be authorized to evaluate the need for special services, including, but not limited to, the following:

- Accessibility needs
- Communications
- Literature and health services pertaining to substance usage, hydration, temperature exposure and management of (both for heat and cold), sexual harassment strategies
- Public health announcements
- Signage
- Support and assistance to vulnerable persons based upon the circumstance of the event

4.2.9 The health and safety coordinator should have procedures in place to react if an accident or incident occurs. The procedures should include as much information as possible such as but not limited to:

- Additional hazards and omissions in safety standards
- Documenting what occurred through incident reports, accident reports, and lost person reports
- Incidents with the potential to cause further injury
- Identifying and reporting injuries to the health and safety coordinator
- Identifying losses such as property damage
- Photos and videos

4.2.10 The health and safety coordinator should follow the guidance provided in chapter 6, Communications, of the *Event Safety Guide* (2014, Event Safety Alliance).

4.2.11 As size and complexity of the event increases, it becomes more important that the health and safety coordinator role be assigned to a qualified person with a working knowledge of at least the following:

- Events and how the event industry differs from other industries,
- Emergency planning and management,
- Individual tasks that need to be completed, including the writing of plans, policies, and procedures,
- Fire and building codes/regulations and laws,
- Event-related construction,
- Applicable industrial laws and regulations, and
- Occupational safety and health laws and regulations applicable in the location (jurisdiction) where the event is being held.

4.2.12 Methods of informing event personnel of these matters may include, but are not limited to:

- Individual (direct) communications,
- Team or group presentations,
- Training videos, and
- Written memos and instructions.

4.2.13 During event phase 1, the event organizer must seek advice from the health and safety coordinator regarding all contracts and agreements between the event organizer and their contractors to ensure the contracts and agreements adequately address issues related to health and safety at the specific event.

4.2.13.1 All contractors should have their own insurance policy or be willing to share the expense of a group insurance policy.

4.2.13.2 Contracts and agreements with contractors should specify a minimum amount of insurance coverage and desired level of indemnity.

4.2.13.3 Relevant insurance schedules should be provided by all contractors for review by the event organizer and health and safety coordinator to ensure correctness, adequate coverage levels, and to determine if advice from a broker is required.

4.3 Meetings and Documentation

4.3.1 The event organizer must hold at least one planning meeting prior to the start of event phase 2 to review the initial risk assessment and draft event safety management plan (ESMP), and to revise them, if necessary, based on changes made during the time frame between event phase 1 and phase 2.

4.3.2 For the event safety management plan (ESMP) to function as intended, and depending on the size and complexity of the event, the health and safety coordinator should set up a series of meetings of relevant stakeholders.

4.3.3 During event phase 1, the health and safety coordinator should plan for the communications of site safety rules, which should include briefings that will be held prior to event personnel entering the site.

4.3.4 Site safety rules must describe exactly how an event organizer or venue expects everyone entering the site to behave and must meet the venue's minimum safety requirements. These requirements may be stricter than applicable local, regional, and national laws and regulations.

4.3.5 An event safety (stand-up) meeting must be held daily and attended by all relevant event stakeholders.

4.3.6 The health and safety coordinator must satisfactorily address any questions or concerns from those attending the event safety meeting.

4.3.7 If there are changes to health and safety information during a multi-shift or multi-day event, that information must be communicated to all event stakeholders.

4.3.8 During a major incident, operations and management must be coordinated between external stakeholders such as government agencies, emergency responders and non-government (private) entities and internal stakeholders who are responsible for event health and safety such as the event organizer, health and safety coordinator, event safety management planning team, and those staffing the event management center.

4.3.8.1 The specific ways in which this coordination occurs, and the specific roles and responsibilities associated with it, should be identified and planned in event phase 1 and included in the ESMP.

4.3.9 A representative from one agency, such as the local fire or police department, should serve as the single point of contact for accessing external agencies and responders and should be on-site, in the event management center. Larger events may require additional responder representation in the event management center.

4.3.10 All necessary documentation required by applicable codes and the authorities having jurisdiction (AHJ) for the event shall be maintained on-site throughout all event phases.

4.3.11 It is recommended that all relevant documents be maintained in the ESMP as part of a binder or file. The health and safety coordinator should ensure that incident forms are available for each anticipated incident, and must create procedures for these forms to be completed and kept on file**.** The ESMP file should be easily identifiable as such and readily accessible.

4.3.12 The health and safety coordinator must communicate the site safety rules in writing to all event personnel in advance of arriving onsite.

4.3.13 For suppliers and contractors, written site safety rules should be part of the contract.

4.3.14* The use of preapproved forms is recommended for the reporting of event-related near-misses, accidents, and incidents.

4.3.14.1 These forms should be readily available for use by event personnel during all phases of the event and completed as necessary.

4.3.14.2 Any such forms must meet all legal requirements as set out by applicable employment laws, workplace health and safety laws, and local regulatory requirements.

4.3.15 Safety data sheets (SDS), which are required for all hazardous chemicals present at the event, must be made available to the end user of the chemical described, made available to event personnel assigned tasks in response to an emergency, and included in the event safety management plan.

4.3.16 The health and safety coordinator should frequently review and update planning documents.

4.4 Site maps

4.4.1 Site maps must be prepared for each event and should be developed early in event phase 1.

4.4.2 Site maps should be developed according to the guidance provided in chapter 8, Venue and Site Design, in the *Event Safety Guide* (2014, Event Safety Alliance).

4.4.3 If applicable, required engineering documents and calculations, renderings, and contractor-specific plans must be obtained. These documents will be needed during planning meetings when discussing the event with inspectors, regulators, and emergency services representatives.

4.4.4 The event organizer must take into consideration the surrounding areas when selecting an event site. This may include but is not limited to obtaining permission, whether by law or consideration, regarding surrounding wildlife, and from neighboring facilities and residences to produce the event.

4.4.5 Venue and site design should be developed according to the guidance provided in chapter 8, Venue and Site Design, in the *Event Safety Guide* (2014, Event Safety Alliance).

4.5 Event safety management plan (ESMP)

4.5.1 Every event must have an event safety management plan (ESMP), which must incorporate all safety plans, policies, and safety documentation related to the event.

4.5.1.1 The size and complexity of the ESMP will depend on the size and complexity of the event.

4.5.2 The ESMP must be easily understood and made available to relevant stakeholders involved in the planning and execution of the event.

4.5.3 The ESMP must clearly identify who has the primary authority to both stop and restart the event, the procedures for taking such actions, and what reasonably foreseeable scenarios would result in stopping a show.

4.5.4 The ESMP must clearly identify alternates who have the authority to both stop and restart the event, the procedures for taking such actions, and what reasonably foreseeable scenarios would result in stopping a show should the primary personnel be unavailable or incapacitated.

4.5.5 Welfare considerations for event personnel during all phases of an event must be documented and included in the ESMP.

4.5.6 The ESMP should include plans to address both minor and major incidents and procedures to be implemented if an incident within the event arises.

4.5.7* If the event is to be held in an existing venue, such as an auditorium, rental outdoor event space, arena or sports stadium, the health and safety coordinator must communicate with the venue management regarding any existing health and safety policy and procedures.

4.5.7.1 The event-specific ESMP should supplement the venue’s existing health and safety policy and procedures.

4.5.8 The health and safety coordinator must determine if the local regulation for the size or complexity of the event requires a separate emergency action plan (EAP). If it does, the plan must be included in the ESMP.

4.5.8.1 An emergency action plan must include the following information:

- Procedures for reporting of emergencies;
- Occupant and staff response to emergencies;
- Procedures for emergency evacuation, including type of evacuation and exit route assignments;
- Evacuation, relocation and shelter-in-place procedures appropriate to the building/site, its occupancy, emergencies, and hazards;
- Procedures to be followed by employees who remain to operate critical operations before they evacuate;
- Procedures to account for all staff after evacuation;
- Procedures to be followed by training staff performing rescue or medical duties;
- Appropriateness of the use of elevators;
- Design and conduct of fire drills;
- Type and coverage of building fire protection systems; and
- Other items required by the Authority Having Jurisdiction.

4.5.9 If an incident management team (IMT) is used at the event and described in the ESMP, the incident management team must be invited to any event planning meetings.

4.5.10 The ESMP, once compiled, should be shared with local authorities and responder organizations prior to event phase 2.

4.5.10.1 Feedback and suggestions for improvement from these authorities and agencies should be solicited and used to improve the ESMP.

4.5.11 The health and safety coordinator and all relevant stakeholders must ensure that the event personnel responsible for implementing the plan fully understand their roles and responsibilities through written and verbal communications.

4.5.12 The ESMP must be reviewed and updated regularly by the health and safety coordinator to address developing and potential risks as the event progresses.

4.5.13 The following are the minimum plans and topics that must be evaluated and documented in the ESMP, depending on the reasonably foreseeable risks of the event:

- Identification of the event type (artists, performers, etc.), anticipated number of attendees, and the anticipated demographics of the attendees
- Identification of the event size and the venue’s maximum occupancy
- Risk assessment(s)
- Health and safety Policy
  - Roles, responsibilities, and training of event personnel, including key staff the members of the management team
  - Chain of command, line of authority; who answers to whom
- Identification of, and contact details for, key event personnel
- Emergency contact numbers
- Dates, capacity and timings of the event
- Location description (including appropriate plans and site maps)
- Event safety (stand-up) meetings
- Communication protocols, methods, and monitoring
- Incident reporting for different types of incidents
- Crowd management plan
- Disabled access, signage and located on maps
- Sanitary facilities, signage and located on maps
- Fire safety and response provisions, policies, and procedures
- Medical services and response provisions, policies and procedures
- Security requirements and response provisions, policies and procedures
- Plans to address major and minor incidents that occur within the event
- Emergency action plan

- Emergency protocols for evacuation
  - Evacuation plan(s)
  - Detailed emergency egress maps
  - Emergency directional signage,
  - Emergency announcements, texts, big screen narrative, etc.

4.6 Health and safety policy

4.6.1 If a health and safety policy is deemed necessary, it must address items including, but not necessarily limited to:

- Roles and responsibilities for event health and safety
  - ESMP team
  - Other event personnel
- Provision of information
- Training and consultation with event personnel
- Minimum safety standards that all event personnel must meet
- Safe working methods, safe access
- The maintenance of a safe event site
- Welfare of all event personnel through all phases of the event

4.7 Event risks

4.7.1 Depending on the size and complexity of the event, facilities for medical services must be available for those who will be on site (event personnel and attendees).

4.7.1.1 These services and facilities must be made available throughout the entire event duration; from the time that the event first occupies the event site until all work is completed.

4.7.2* If medical service facilities are planned, they must be evaluated for the reasonably foreseeable hazards at the event, the type of work being performed, and follow the guidance provided in chapter 5, Medical, in the *Event Safety Guide* (2014, Event Safety Alliance).

4.7.3* Events with tents or overnight camping present unique risks that must be identified, evaluated, mitigated, and controlled.

4.8 Risk assessment

4.8.1* All events, regardless of size or complexity, must go through a risk assessment process to identify and mitigate all reasonably foreseeable risks.

4.8.1.1 The risk assessment shall meet the requirements of this section (4.8).

4.8.1.2 The risk assessment should begin with a site inspection of the venue to develop a list of potential hazards.

4.8.1.3 The risk assessment can be used as an effective tool to communicate roles and responsibilities and is also a helpful starting point for planning the major incident portions of the event safety management plan (ESMP).

4.8.1.4* The risk assessment should be easily understood, documented (i.e., written down), retained for the record, and made available to relevant stakeholders.

4.8.2 Separate risk assessments should be created at the departmental level. The number of departments involved depends on the size and complexity of the event.

4.8.3 Event stakeholders should appoint, hire, or work only with qualified persons, for their advice, council, and health and safety expertise.

4.8.4 The risk assessment can be created using various methods and models, but a simple recipe for completing and documenting a risk assessment is:

a. Identify the hazards,
b. Decide who, what, and how someone or something could be harmed,
c. Evaluate the risks, and deciding on control measures to mitigate them,
d. Record the findings, and
e. Review the risk assessment.

4.8.5 A risk assessment should be started early in event phase 1, while planning the venue and site design.

4.8.6 For complex events, the event organizer should consult a qualified insurance or risk assessment expert to help create the event risk assessment.

4.8.7 Risk assessments should be developed according to the relevant guidance provided in chapter 8, Venue and Site Design, in the *Event Safety Guide* (2014, Event Safety Alliance).

4.8.8 The risk assessment should:
- Include a physical examination of the event site or space while considering event elements such as but not limited to peripheral structures.
- Undergo revision, as necessary, throughout all event phases while retaining copies of all versions and ensuring all stakeholders are working with the latest version.

4.8.9* The control measure(s) applied to minimize or mitigate risk identified in a risk assessment should reduce the likelihood and severity of any residual risk to an acceptable level.

4.9 Major incident planning

4.9.1 Preparing for a major incident requires additional planning that is crucial to ensure that event personnel and attendees are safe and that hazards of the event are identified and mitigated effectively.

4.9.2 Event emergency planning should identify both minor and major incident hazards and risks. Planning should include times when the event may foreseeably strain existing public safety services or agencies.

4.9.3 Major Incident planning should begin with, but may not be limited to, a review of:
- Risk assessments
- Event design
- Site maps
- Operations
- Staffing plans
- Announcements and communications
- Emergency responses
- Evacuation procedures

4.9.4 For complex or large-scale events, the event organizer must be familiar with the incident management system(s)(IMS) that will be used both at the event and by local responders.

4.9.5 If an IMS is implemented within the event, the ESMP team should be integrated into it at the beginning of event phase 1.

4.9.6 People to fill positions within an incident management team (IMT) will often be drawn from competent persons from external agencies and organizations and with appropriate experience and training.

4.9.7 Unless the event organizer is acting as the health and safety coordinator, the health and safety coordinator could serve as an assistant safety officer on the IMT, if an IMT is used. This would be especially appropriate in a large or complex incident.

4.9.8 Plans for major incidents must be approved and agreed to by all relevant parties, issued in writing, and located in a designated and agreed upon place (e.g., production management office) ready for use and reference.

4.9.9 For larger and/or more complex events, the event organizer must evaluate the need for an appropriate, designated, separate onsite space for the event management center (EMC).

4.9.9.1 It is recommended that a secondary or backup location be identified and available for the event management center in case the primary location is deemed unsafe and/or must be evacuated or moved.

4.9.9.2 A designated primary and secondary space may also be a requirement of the authority having jurisdiction.

4.9.9.3 For smaller or less complex events, the event management center could be located in the event's management office.

4.9.10 If a separate event management center is deemed necessary, the location of it should be developed according to the guidance provided in chapter 8, Venue and Site Design, in the *Event Safety Guide* (2014, Event Safety Alliance).

4.9.11 For events utilizing an incident management system, the event organizer must have the event management center staffed at all times during event phase 2.

4.9.12 Circumstances for "off site" considerations are often considered and addressed in an emergency operations plan (EOP), which may be available for a venue or preexisting event space.

4.9.12.1 Traffic considerations must be included when planning emergency access and egress, as well as readiness for an off-site or area-wide incident occurring with consequences for the entire event.

4.9.13 In response to a major incident, emergency services may dispatch one or more command vehicles to the event site (i.e., large vehicles to provide shelter and resources for conducting incident management functions). These often very large vehicles must have unobstructed access to their preplanned and designated location(s), ideally as close as is reasonable in the given circumstances to the event organizer's (management or production) office or event management center. Vehicle access to the event management center may also be required by local authorities.

4.9.14 The health and safety coordinator or ESMP team must be prepared for cancellation of the event. Therefore, the event must have messaging and announcements prepared regarding cancellation for event personnel, attendees, and other public information sources (e.g., local media).

4.9.15* For situation-specific protocols regarding communications and emergency public announcements, the guidance provided in chapter 6, Communications, of the *Event Safety Guide* (2014, Event Safety Alliance) should be followed.

5* Event phase 2: the event, at the venue/event site

5.1 Load-in

5.1.1 The scope and scale of the load-in will vary depending on the venue's location, size, and environment.

5.1.1.1 For permanent venues, the majority of the venue infrastructure will already be in place. For temporary venues, the venue infrastructure may need to be built.

5.1.2 The event organizer must carefully consider how to minimize reasonably foreseeable risks for both load-in and load-out.

5.1.3 Once the venue's infrastructure is ready, other equipment and services (e.g. event specific lighting, rigging, sound, staging, performers equipment etc.) will need to be brought to the site. This activity typically requires delivery and manual handling by event personnel. During this time, multiple elements often compete for the same space at the same time, so the logistics of these operations should be carefully planned.

5.1.4 The health and safety coordinator, in conjunction with the necessary authorized and qualified event personnel, must ensure the event's infrastructure elements (i.e., electrical, stages, seating, tents, stages or other structures) are safely installed, erected, and monitored during operation. This may include engineering or required inspections prior to use.

5.1.5 Event infrastructure should be constructed and monitored according to the guidance provided in chapter 8, Venue and Site Design, in the *Event Safety Guide* (2014, Event Safety Alliance).

5.1.6 For large or complex events, safety-related plans must be available to all relevant event personnel during the event in the production office or other designated location. For larger or more complex events, this location would include the event management center.

5.1.7 For large or complex events, health and safety coordinators must ensure site maps are prepared, distributed, or displayed to show attendees the location of emergency egress and other important event safety and security features.

5.1.7.1 Site maps may be printed or electronically displayed on LED walls, sign boards, etc.

5.1.8 The arrival and movement on-site of all relevant load-in personnel (such as contractors, equipment providers, labor crews, etc.). must be planned to ensure their activities on-site are safely coordinated. These activities should include but are not limited to:

- Artist and special guest transportation routes
- Cable routes
- Delivery truck routes
- Drinking water stations
- Emergency routes
- Entries (ingress) and exit (egress) points
- Generator placement
- First-aid and triage areas with ambulance parking locations, if applicable
- Merchandising, vendors, and other activations
- Construction of peripheral structures
- Positioning of sanitation and hand-washing facilities
- Shelter locations
- Stages, barricade construction

5.2 Load-out

5.2.1 This aspect of event phase 2 begins after the event has concluded.

5.2.2 Prior to load-out commencing, a specific load-out version of an event safety meeting must be held for all stakeholders who will be exposed to load-out/construction hazards. This load-out-related event safety meeting should include, but not be limited to, a review of the following topics:

- Emergency medical services (EMS),
- Load-out schedule,
- Roles and responsibilities of each involved individual,
- Site safety rules during load-out, and
- Reasonably foreseeable hazards, risks, and their mitigation.

5.2.3 Load-out must not commence until all personnel not involved in load-out (e.g., attendees) are off-site.

5.2.4 If event stakeholders are not under the direct control or employ of the event organizer (such as subcontractors), the health and safety coordinator must take all reasonable efforts to inform them of the assessed risks, which could be integrated into an agreement or contract.

5.2.5 Welfare of event stakeholders must be planned for the load-out. At minimum, the health and safety coordinator must consider:

- Access to food
- Adequate lighting
- Equipment required
- Fatigue
- Hydration
- Sufficient numbers of event personnel
- Weather

- Workspaces

6 Event Phase 3: post-event

6.1 At a time convenient for stakeholders, the event organizer should hold a post-event meeting with key event personnel to collect and evaluate all “as built” drawings and documentation as well as to determine the success and failure of any policies and procedures, including those related to health and safety. This is considered an integral part of the post-event analysis and documentation of lessons learned.

6.2 If the event is to be re-built, all aspects of the event safety management plan should be reviewed and updated to incorporate any changes or improvements from the post-event analysis, and these changes/revisions communicated to all applicable event personnel.

6.3* For each event, accurate documentation of safety decisions, actions, successes, and failures must be initiated and maintained for consideration and improvement at future events.

Annex A – Supplementary commentary

A 2.2 The Health and Safety Executive (HSE) in the United Kingdom of Great Britain (UK) suggests that competence can be described as the combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely. Other factors, such as attitude and physical ability, can also affect someone's competence. They define a competent person as, "not someone who simply has the competence to carry out a particular task safely." In general terms, they define a competent person as, "someone who has the necessary skills, experience and knowledge to manage health and safety" (https://www.hse.gov.uk/competence/what-is-competence.htm).

A 2.4 In the United States, OSHA requires that an emergency action plan must be in writing, kept in the workplace, and available to employees for review. Alternatively, an employer with ten or fewer employees may communicate the plan orally to employees (CFR 1910.38[b]).

In the U.S., OSHA (29 CFR 1910.38), and model fire codes (NFPA 1 and International Fire Code [IFC]) require an emergency action plan and specify minimum contents. In addition, OSHA requires that an employer have and maintain an employee alarm system, designate and train employees to assist in a safe and orderly evacuation, and review the emergency action plan with each employee covered by the plan when the employee is assigned to a new job, when an employee's responsibilities change, and when the EAP is changed. Regardless of whether OSHA rules apply, it is prudent for event organizers and health and safety coordinators to follow these standards.

A 2.9 The term "event management center" is used specifically to differentiate this location/facility from an "incident command post," which is the term used in the United States by Incident Command System (ICS) purists to describe the field location at which the primary tactical-level, on-scene incident command functions are performed, usually by jurisdictional (government) authorities. Agency-based (government), responder organizations in the United States are required to use ICS and will use the term incident command post to describe the location/facility from which the incident commander manages an incident and where other incident management functions are performed. In contrast, the location at which an event is managed is referred to as the event management center primarily to reduce the potential for conflict with other similar terms such as the ICS version (incident command post) used by emergency responders and jurisdictional authorities.

If the Incident Command System (ICS) is used as the basis for organizing an event and ICS terminology and doctrine is used throughout the planning and execution of an event, using the term incident command post to describe the location at which event management functions are performed may be acceptable.

A 2.12 The Project Management Institute (PMI, founded in 1969) develops and publishes consensus-based project management standards that set forth a globally recognized lexicon for project management (ANSI/PMI 99-001-2021). Steering future generations of event leadership to be knowledgeable of, and rooted in, the existing project management standards will serve to align the work of the event project manager with other industries, perhaps creating a path to survival should the event community encounter another global challenge as was experienced during the COVID-19 pandemic.

Planning an event as if it were a "project" allows event organizers/producers to bring numerous project management tools and resources to bear, including the international standards developed by the Project Management Institute. For example, according to the Project Management Institute's "Guide to the Project Management Body of Knowledge" (PMBOK; ANSI/PMI 99-001-2021), the five phases of project execution are…

1. Initiation: Project identification, vision and goal setting, baseline requirements for success, initial risk considerations, desired outcomes.

2. Planning: Qualitative and quantitative risk identification, risk register, plan risk responses, Risk Assessments and Method Statements (RAMS) developed and shared, communication management plan developed and agreed.

3. Execution: Delivering the event. Processes of planed execution being followed.

4. Monitoring and controlling: Ensuring that the planned safety practices are happening, that the plans are communicated and shared with all stakeholders, response plans monitored against triggers.

5. Closure: Post project/event analysis, final project/event reporting, lessons learned, suggested improvements, incident report filing, final closing meeting, organizational process assets filing, acknowledgements.

In addition to the event phases defined in this standard, these project execution phases may be useful in organizing and conceptualizing the event planning process. Using these globally recognized project management standards and their associated terminology can not only be useful in managing an event, they can also allow the inclusion of resources far beyond the scope of this standard and provide users access to planning tools that are not conventionally have not typically been available to event planners in the past.

Consider learning more about the Project Management Institute and its “Guide to the Project Management Body of Knowledge” (PMBOK; ANSI/PMI 99-001-2021) to enhance your ability to plan and manage any project, including an event of any size.

A 2.12.2 The “show” or “event” (event phase 2) includes the period before and after a performance, presentation or event when the public or attendees occupy the event space. Event phase 2 is the operational period of the event. It begins when the event first occupies the venue and continues until all the event’s elements are removed from the venue and the final walkthrough is performed.

A 2.12.3 The post-event phase begins when the event has relinquished control of the venue back to the venue owner.

A 2.13 Specifically, the ESMP includes documents describing how safety practices and procedures will be implemented, including the management of crowds, while work is being performed within all phases of an event.

The ESMP is a collection of written, health and safety management documents. It states how the safety of all those present during the entire event will be managed and is a compilation of the various event safety policies, plans, and risk assessments. As such, it should detail how health and safety policies and plans are put into practice, including the findings from risk assessment(s).

A 2.21.1 JESIP (Joint Doctrine: the interoperability framework) in the UK defines “Major Incident” as an event or situation with a range of serious consequences which requires special arrangements to be implemented by one or more emergency responder agency. A major incident is beyond the scope of business-as-usual operations, and is likely to involve serious harm, damage, disruption or risk to human life or welfare, essential services, the environment or national security. It may involve a single-agency response, although it is more likely to require a multi-agency response, which may be in the form of multi-agency support to a lead responder. The severity of the consequences associated with a major incident are likely to constrain or complicate the ability of responders to resource and manage the incident, although a major incident is unlikely to affect all responders equally (https://www.jesip.org.uk/uploads/media/app/Jesip-web-version/major.html).

A 2.21.2 Minor incidents may involve few resources, be located within a small geographical area, and last for only a short time. They may include events such as a near-miss, when a forklift is carrying a load, and the load almost falls off the forklift, potentially injuring people and equipment. In the area of security, a minor incident could result in the loss of property through theft.

A 2.22 The Incident Command System (ICS) is a scalable response system that can be implemented for all sizes of incidents, whether they are small issues, or massive emergencies, and it includes the goal of minimizing loss of life and assets. ICS is normally structured to facilitate activities in five major functional areas: command, operations, planning, logistics, and finance and administration. It is a fundamental form of management by objectives, with the purpose of enabling incident managers to identify the key concerns associated with the incident—often under emergency conditions—without sacrificing attention to any component of the command system.

Further information on various national models for incident management, incident command and incident response can be found at:

- USA: FEMA (Federal Emergency Management Administration) fema.gov
  - Search for NIMS (National Incident Management System) and ICS (Incident Command System)

- Canada: Incident Command System Canada : icscanada.ca

- The U.K.: System of Incident Command
  - https://www.gov.uk/guidance/emergency-response-and-recovery
  - https://www.ukfrs.com/guidance/incident-command
  - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7643/incidentcommand.pdf

- Australia: Australian Interservice Incident Management System (AIIMS)
  - https://www.homeaffairs.gov.au/about-us/our-portfolios/emergency-management

- Germany: The Crisis Management System in Germany
    - https://www.bmi.bund.de/SharedDocs/downloads/EN/publikationen/2012/system_krisenmanagement_en.pdf?__blob=publicationFile
    - https://www.bbk.bund.de/SharedDocs/Downloads/BBK/DE/FIS/DownloadsRechtundVorschriften/Volltext_Fw_Dv/FwDV-100%20englisch.pdf?__blob=publicationFile

A 2.24 In the United States, the National Incident Management System (NIMS) guides all levels of government, nongovernmental organizations, and the private sector to work together to prevent, protect against, mitigate, respond to and recover from incidents.

A 2.26 In the United States, 29 CFR 1926 (U.S. Department of Labor, Occupational Safety and Health Administration [OSHA]) standards apply to construction, alteration, and/or repair, including painting and decorating, as those terms are defined under the Davis-Bacon Act, U.S.C. 276a. The U.S. Congress created OSHA to assure safe and healthful conditions for workers by setting and enforcing standards and providing training, outreach, education and compliance assistance. Under the OSHA law, employers are responsible for providing a safe and healthful workplace for their workers. It is prudent for all those working or volunteering at an event to comply with OSHA construction standards (29 CFR 1926; https://www.osha.gov/laws-regs/regulations/standardnumber/1926) during load-in and load-out and OSHA general industry standards (29 CFR 1910; https://www.osha.gov/laws-regs/regulations/standardnumber/1910) at all other times during the event.

A 2.27 In the United States, 29 CFR 1926 (U.S. Department of Labor, Occupational Safety and Health Administration [OSHA]) standards apply to construction, alteration, and/or repair, including painting and decorating, as those terms are defined under the Davis-Bacon Act, U.S.C. 276a. The U.S. Congress created OSHA to assure safe and healthful conditions for workers by setting and enforcing standards and providing training, outreach, education and compliance assistance. Under the OSHA law, employers are responsible for providing a safe and healthful workplace for their workers. It is prudent for all those working or volunteering at an event to comply with OSHA construction standards (29 CFR 1926; https://www.osha.gov/laws-regs/regulations/standardnumber/1926) during load-in and load-out and OSHA general industry standards (29 CFR 1910; https://www.osha.gov/laws-regs/regulations/standardnumber/1910) at all other times during the event.

A 2.28 This definition of a mass gathering comes from FEMA's Special Events Contingency Planning Job Aids Manual (2005, updated in 2010, p. 1-1). Emphasis is not placed on the total number of people attending but rather the impact on the community's ability to respond to a large-scale emergency or disaster or the exceptional demands that the activity place on response services. A community's special event requires additional planning, preparedness, and mitigation efforts of both local public safety agencies and the event planning team. A mass gathering is considered a subset of a special event and is usually found at a special event that attracts large numbers of spectators or participants.

The World Health Organization defines a mass gathering as an occasion, either organized or spontaneous, where the number of people attending is sufficient to strain the planning and response resources of the community, city, or nation hosting the event.

A 2.34 Although the definition of "risk" varies greatly across many domains, this traditional definition is widely accepted and adequate to convey the term's meaning in this standard.

Bruce Lyon, P.E., CSP, SMS, ARM, CHMM and Georgi Popov, Ph.D., CSP, QEP, SMS, ARM, CMC, FAIHA published a peer-reviewed article in the *Professional Safety Journal* (March 2022) on the topic entitled "On the Concept of Risk, Uncertainty & Black Swans," which can be found here:

https://www.assp.org/docs/default-source/psj-articles/f1lyon_0322.pdf?sfvrsn=85d9247_0

This article is recommended reading for anyone interested in the definition of Risk.

A 2.35 A practical way of thinking about a risk assessment is as a systematic analysis of reasonably foreseeable threats to determine the risk for each issue identified in the hazard identification process, including the frequency, likelihood of occurrence, and the potential severity of outcome. A useful risk assessment formula is Risk = Vulnerability x Consequences. Some disciplines, such as emergency management and occupational health and safety, may require creation of a HIRA ("Hazard Identification and Risk Assessment"). A HIRA can help allocate resources to reduce risk to an acceptable level under the circumstances. The risk assessment must be recorded and communicated in advance of the event to allow appropriate implementation of resources to prevent, mitigate, transfer, or otherwise address hazards. The risk assessment should be updated as new information relevant to the safe planning of an event becomes available (ANSI ES1.9-2020, p. 5).

A 2.36 In the United States, the Hazard Communication Standard (HCS; 29 CFR 1910.1200[g]), revised in 2012, requires that the chemical manufacturer, distributor, or importer provide Safety Data Sheets (SDSs) (formerly known as MSDSs or Material Safety Data Sheets) for each hazardous chemical to downstream users to communicate information on these hazards. SDSs are now required to be presented in a consistent user-friendly, 16-section format.

The SDS includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. The information contained in the SDS must be in English (although it may be in other languages as well). In addition, the U.S. Occupational Safety and Health Administration (OSHA) requires that SDS preparers provide specific minimum information as detailed in Appendix D of 29 CFR 1910.1200. The SDS preparers may also include additional information in various section(s).

More details on SDSs in the United States can be found at:
https://www.osha.gov/sites/default/files/publications/OSHA3514.pdf

A 2.39 If one determines that a recommended activity is not going to be used for a particular event, it is also recommended that a user contemporaneously document the reason for that decision for future reference. This is because the root of the legal duty to behave reasonably under one's own circumstances is to have a reason, preferably a good reason, which is consistent with this standard.

A 2.43 Source: Iltis, A. S., Wall, A., Lesandrini, J., Rangel, E. K., & Chibnall, J. T. (2009). Federal interpretation and enforcement of protections for vulnerable participants in human research. *Journal of Empirical Research on Human Research Ethics: JERHRE*, 4(1), pp. 37-41.

A 4.1.1.2 It is important to clearly define the conditions under which these tasks must be delegated.

A 4.1.4 Usually through contractual requirements, the event organizer should be ultimately responsible for all event-related financial obligations, including those resulting from emergencies and liability under applicable regulations for acts or omissions.

A 4.1.5 Section 2(1) of the Health and Safety at Work Act (HSWA, 1974) in the UK states that, "It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees" (https://www.legislation.gov.uk/ukpga/1974/37/section/2).

Similarly, in the United States, section 5(a)(1) of the Occupational Safety and Health Act (the "General Duty Clause") requires an employer to furnish to its employees, "…a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees..."

A 4.2.3 There may situations when more than one competent advisor to the health and safety coordinator is necessary. For example, the health and safety coordinator may be perfectly knowledgeable, experienced, and

qualified regarding electricity, working at height, and rigging, but know nothing at all about crowd management. In such a situation, it may be prudent to engage additional expertise and assign another health and safety coordinator, such as a specialist in crowd management, for the risks outside the expertise of the first health and safety coordinator.

A 4.3.14 Insurance, workers' compensation, and similar schemes may mandate the reporting of very specific information, which must be included on such a form. The required information will likely vary depending on the geographic location of the event and/or incident and the requirements of the authority having jurisdiction.

A 4.5.7 Communication and collaboration between the health and safety coordinator and the venue is especially important if the event, and its associated risks, is markedly different than the events usually held in the facility. For example, if a concert is to be held in a sports stadium with spectators allowed on the playing field, significant consideration must be given to evacuation procedures since having a large number of people on the playing field is not what the building, its exits, and the venue's customary evacuation procedures were designed for.

A 4.7.2 An ANSI standard ("Event Safety Requirements – Medical Preparedness," BSR ES1.5 – 202x) is currently under development. When this standard is published, it should replace the guidance provided in chapter 5, Medical, in the *Event Safety Guide* (2014, Event Safety Alliance).

If an incident or accident occurs, it may be because a risk was not previously foreseeable. If this happens, the health and safety coordinator will need to identify, evaluate, mitigate and control to an acceptable level the now foreseeable additional risk.

A 4.7.3 Significant tent and overnight camping related safety risks may include, but not necessarily be limited to, the following:
- First aid / Medical: triage, treatment, and transport
- Life safety: occupational health, wellness, and injury prevention
- Fire prevention, fire suppression, and emergency egress
- Minor and major incidents
- Crowd management
- Artist (talent) transportation management
- Temporary structures and their associated regulations
- Site design
- Traffic and parking (for event personnel and contractors, as well as guests)
- Sanitation (toilets, trash, etc.)
- Security
- Weather and its consequences

A 4.8.1 The risk assessment is an early, critical step in developing a comprehensive Event Safety Management Plan (ESMP).

A 4.8.1.4 Not all risk assessments are written. Small or simple events may only require an informal risk assessment, which in its simplest form is the time it takes to consider a situation before taking an action. A formal risk assessment, in contrast, documents everything that goes into forming an opinion about risk, including how the identified risks will be mitigated, managed, and/or controlled to an acceptable level.

A 4.8.8 When conducting a risk assessment, consideration of reasonably foreseeable risks should include, but may not be limited to, at least the following:

Location and date
- Time of year
- Topography
- Weather and dealing with the consequences

Audience size and demographics
- Age of expected patrons
- Behavior
- Drugs and alcohol
- Expectations of the crowd while attending

- Crowd management and consequences of overcrowding
- Smoking, vaping, and tobacco policy

Site or venue

- Building(s) age and construction
- Capacity and suitability
- Emergency announcement capabilities
- Entry and exit requirements (ingress and egress)
- Evacuation routes (emergency and typical)
- Local transportation types (bus, trains, subways, parking etc.) and routes available
- “Major incident” hazards associated with the event and vanue (e.g. structure collapse, civil disorder, crushing, explosion, vehicular threat, active aggressor, fire, chemical release, food poisoning, bomb threats, suspicious packages, etc.)
- Neighboring venues and other local events that impact traffic, access and egress
- Power and electrical distribution and consequences of failure
- Rally and assembly points
- Special considerations
- Access control (security)

Event production

- Audio and communications technologies
- Costuming
- Lighting
- Performers
- Proximity to hazards
- Pyrotechnic
- Rigging
- Scenic and decorations
- Staging
- Temporary structures (ANSI E1.21 – 2020; ANSI ES1.19 - 2020)
- Video (ANSI E1.50 - 2017)

Production design

- Availability of hospitality and other social services
- Backstage ingress and egress
- Catering and promotions
- Directional signage
- Emergency signs and lighting
- Evacuation communication
- Maps and plans
- Occupancy load (established by fire marshal and building officials)
- Open flames
- Required ingress and egress
- Site safety meetings

Staffing

- Assignments and roles (typical and during emergency)
- Availability of first responders and medical staff
- Bullying, harassment, and discrimination policies
- Documentation and reporting
- Evacuee and casualty verification
- Health and safety policies
- Other policies, protocols and procedures
- Qualifications, orientation, training and monitoring
- Staff sanitary facilities, food and beverage and rest areas
- Staff wellness, mental health care and facilities
- Work hours

Equipment

- External factors
- Heavy equipment
- Loading area availability
- Material handling
- Pedestrian access
- Storage of equipment
- Vehicles
- Waste handling
- Wait times
- Working at height

Logistics of equipment

- Damaged equipment and removal from service
- Documentation
- Equipment inspection
- Equipment storage
- Grounding, surge protection and isolation
- Lock out / tag out procedures
- Operating voltage(s) and cycle(s)
- Servicing protocols
- Unauthorized-access and tampering

Communication

- Mobile phones
- Communication breakdown, comm failure procedures
- Delayed evacuation
- Entrance and internal kiosks
- Intelligence from other agencies/entities regarding previous experience of similar events
- Limited visibility
- Media access
- Social media
- Stage PA
- Stage video Screens
- Walkie talkies

Security

- Additional police services
- Arrest and detain procedures
- Enhanced security methods (dogs, drones, metal detectors, barricades)
- Locations and positions of security staff
- Requirements and level of service provision
- Restricted egress
- Search protocols
- Threat assessment

Medical

- Level of service provision
- Location
- Requirements
- Transport requirements

Crowd Management (refer to ANSI ES1.9 - 2020)

- Asphyxiation injuries
- Bumps and bruises
- Crowd expectations
- Crowd movement routes
- Crush injuries
- Emergency egress
- Entrance wait times

- Ingress
- Lost and found people
- Monitoring crowd flows and potential overcrowding issues
- Slips, trips and falls

Food and Beverage
- Food handling and hygiene
- Fuel
- Ignition sources
- Open flame
- Sanitation
- Storage and safety

Sanitation services
- Chemical spills
- Disease exposure
- Site cleaning
- Waste removal and servicing
- Sewage
- Trash (including compost and recyclables)

Accessibility services and vulnerable persons
- Access assistance
  - Accessible facilities, including toilets and handwashing
  - Viewing and accessible areas
- Evacuation
  - Assistance
  - Duration
  - Routes

A 4.8.1 The risk assessment is the central pillar of risk mitigation at any event. It is the process of identifying physical, health, and occupational hazards at all locations relevant to the event.

The UK Health and Safety Executive (HSE) offers a number of useful, public domain resources (e.g., templates, examples, etc.) for conducting risk assessments. Visit their web site to learn more: https://www.hse.gov.uk/simple-health-safety/risk/risk-assessment-template-and-examples.htm

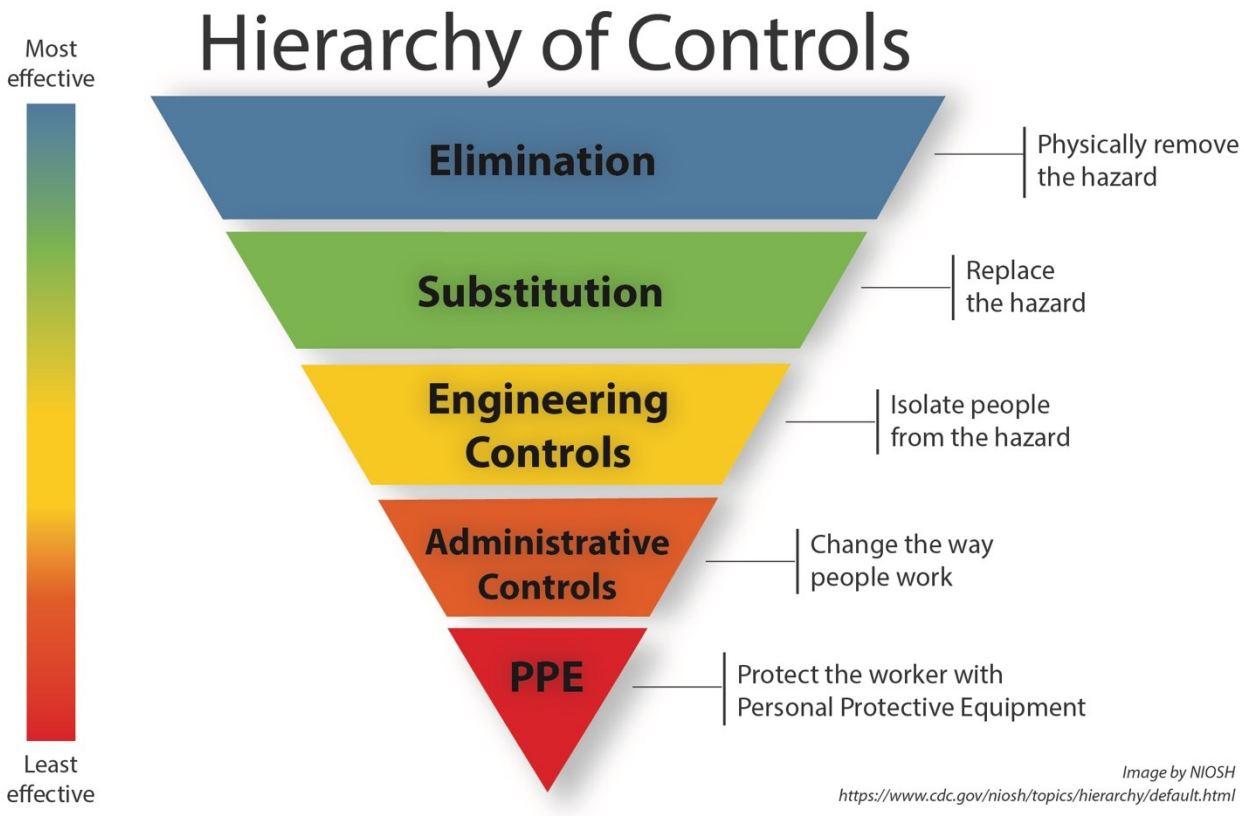
The American Association for Safety Professionals (ASSP) provides relevant resources, training, and access to international, voluntary, consensus standards for risk assessment. Visit their web site to learn more: https://www.assp.org/resources/risk-assessment-and-management-for-safety-professionals

A 4.8.9 Control measures include actions that can be taken to reduce the potential of exposure to the hazard, or the control measure could be to remove the hazard or to reduce the likelihood of the risk of the exposure to that hazard being realized. A simple control measure would be the secure guarding of moving parts of machinery eliminating the potential for contact.

When we look at control measures, we often refer to the hierarchy of control measures. The hierarchy of control measures is a way of determining which actions will best control exposures. The hierarchy of controls has six levels of actions to reduce or remove hazards. The preferred order of action based on general effectiveness is:

1. Elimination
2. Substitution
3. Isolation
4. Engineering controls
5. Administrative controls
6. Personal protective equipment (PPE)

1. Eliminate the hazard	Elimination of the hazard is not always achievable though it does totally remove the hazard and thereby eliminates the risk of exposure. An example of this would be that fuel station attendants are no longer exposed to the risk of chronic lead poisoning following the removal of lead from fuel products.
2. Substitute the hazard with a lesser risk	Substituting the hazard may not remove all the hazards associated with the process or activity and may introduce different hazards but the overall harm or health effects will be lessened. In laboratory research, toluene is now often used as a substitute for benzene. The solvent-properties of the two are similar but toluene is less toxic and is not categorized as a carcinogen although toluene can cause severe neurological harm.
3. Isolate the hazard	Isolating the hazard is achieved by restricting access to plant and equipment or in the case of substances locking them away under strict controls. When using certain chemicals then a fume cupboard can isolate the hazard from the person. Similarly, placing noisy equipment in a non-accessible enclosure or room isolates the hazard from the person(s).
4. Use engineering controls	Engineering Controls involve redesigning a process to place a barrier between the person and the hazard or remove the hazard from the person, such as machinery guarding, proximity guarding, extraction systems or removing the operator to a remote location away from the hazard.
5. Use administrative controls	Administrative controls include adopting standard operating procedures or safe work practices or providing appropriate training, instruction, or information to reduce the potential for harm and/or adverse health effects to person(s). Isolation and permit to work procedures are examples of administrative controls.
6. Use personal protective equipment	Personal protective equipment (PPE) includes gloves, glasses, hearing protection, aprons, safety footwear, and dust masks, which are designed to reduce exposure to the hazard. PPE is usually seen as the last line of defense and is usually used in conjunction with one or more of the other control measures. An example of the weakness of this control measure is that it is widely recognized that single-use dust masks cannot consistently achieve and maintain an effective facepiece-to-face seal and cannot be adequately fit-tested and do not offer much, if any real protection against small particulates and may lead to a false sense of security and increase risk. In such instances an extraction system with fitted respirators may be preferable where the hazard may have significant health effects from low levels of exposure such as using isocyanate containing chemicals.



Sources: https://www.hsa.ie/eng/topics/hazards/ and https://www.cdc.gov/niosh/topics/hierarchy/default.html

A 4.9.15 An ANSI standard ("Event Safety Requirements – Communications," BSR ES1.6 – 202x) is currently under development. When this standard is published, it should replace the guidance provided in chapter 6, Communications, of the *Event Safety Guide* (2014, Event Safety Alliance).

A 5 Subparts of the event may be referred to as the "install," "load-in," or "build" when the event's operational elements are delivered, installed and checked. Activities that occur during this time period (i.e., load-in and load-out) are often fast-paced and therefore increase risk to event personnel due to issues like fatigue, and the quantity of personnel and equipment in operation. However, these activities are usually performed prior to open public access to the event site.

In the United States, 29 CFR 1926 (U.S. Department of Labor, Occupational Safety and Health Administration [OSHA]) standards apply to construction, alteration, and/or repair, including painting and decorating, as those terms are defined under the Davis-Bacon Act, U.S.C. 276a. The U.S. Congress created OSHA to assure safe and healthful conditions for workers by setting and enforcing standards and providing training, outreach, education and compliance assistance. Under the OSHA law, employers are responsible for providing a safe and healthful workplace for their workers. It is prudent for all those working or volunteering at an event to comply with OSHA construction standards (29 CFR 1926; https://www.osha.gov/laws-regs/regulations/standardnumber/1926) during load-in and load-out and OSHA general industry standards (29 CFR 1910; https://www.osha.gov/laws-regs/regulations/standardnumber/1910) at all other times during the event.

A 6.3 Documentation produced at a previous event can generate lessons learned that can serve as input when planning future events. It can also be a significant help should litigation related to the event arise later. What was once unforeseeable can now be anticipated, and even expected, after an incident or experience at a previous event.

A post-event analysis (PEA) should answer at least the following essential questions for optimal post-event reflection:

1. How did we meet or not meet our goals for this event?
2. What resources (e.g., human resources, financial resources, space resources) did we utilize to execute this event? In what ways was it enough? In what ways did we need more resources?
3. What was the communication and promotion plan for the event? How was it successful? How can it be improved?
4. Were there any extraneous factors impacting our event's success (e.g., conflicting events, weather, changes in group membership, security and safety concerns)?
5. How was our effectiveness and professionalism in planning and executing the event?
6. What conflicts within the management team occurred during the planning/execution of the event? How did we address group conflict as it arose?
7. In general, would we do this event again? What would we change? What would we keep the same?
8. How did this event allow us to develop critical leadership and/or professional skills?

DIN, the German Institute for Standardization, was founded in 1917, and is made up of more than 36,500 experts from industry, research, consumer protection and the public sector. DIN is an independent platform for standardization in Germany and worldwide. DIN promulgates an international standard (DIN 69901-1:2009-01, Project management - Project management systems - Part 1: Fundamentals) that describes a number of steps that should be taken at the closure of a project (event). Among them are the following:

Final Project Report
The primary purpose of the final project report is to create a "common reality" for all those involved in relation to the completed project. The report should provide the information needed so that future events can be planned and handled better. In addition, the Final Project Report also documents the experiences made and provides a basis for the final meeting.

The Final Project Report contains a summary, including a description of tasks with their actual results up to the project evaluation by the participants and clients. It can be detailed, including an evaluation on the time spent, costs incurred and personnel expenditures as well as possible deviations. What happened that shouldn't have happened – were there "near misses" in relation to health & safety? And finally, what did the client say was great, good, bad, or unacceptable?

Final Meeting
After the final report has been prepared, the main findings and suitable measures for improvement are discussed by selected project participants. It's not just about the "hard facts" of the event itself, but above all about the "soft facts", i.e., the cooperation in the project team and with the external participants. The aim is to gain experience and learn for the next events.

All of the interesting aspects of the event management and operation are presented, discussed and documented. The most important findings are published as "lessons learned" and made usable for further work and shared with colleagues.

Acknowledgment
After an event, which is usually very demanding, it is necessary for the long-term job satisfaction of the project participants that achievements are appropriately acknowledged. If this does not happen, it will be difficult to find motivated team members for the next project, and there may even be a risk of "burnout" and fluctuation.
At the same time, poor work must also be acknowledged, and solutions for better performance in the future discussed and documented. The achievements of the project participants are recognized in a suitable form and the successes in the management and operation of the event duly celebrated.

Documentation
The project documentation should be available for follow-up work and research after the event has been completed. The documentation must therefore be archived in a suitable form so that it can be easily found for future use. First, the project documentation is checked for completeness and consistency. It is then integrated into the existing archive in a suitable form.