Fédération Internationale de Sports d'Obstacles

Operation Guidelines for Obstacle Course Events

This guideline is based on the draft ASTM International standard F24.61 Standard Practice for Obstacle Course Events and is applicable to all disciplines and events of obstacle sports under FISO regulation

1. Scope

1.1. This practice establishes standards for the design, build, execution, maintenance, inspection and delivery of Obstacle Course Events (OCE). This does not apply to military obstacle courses or permanent adventure courses and training facilities.

1.2. This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health and environmental practices and determine the applicability of regulatory limitations prior to use.

1.3. This practice offers a set of instructions for performing one or more specific operations. This document cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this practice may be applicable in all circumstances. This ASTM standard is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this document be applied without consideration of a project's many unique aspects. The word "Standard" in the title means only that the document has been approved through the ASTM consensus process.

2. Significance and Use

2.1. The purpose of this practice is to provide OCE providers, designers, engineers, medical providers, owners, and operators with criteria and references for use in designing and executing OCEs.

3. Terminology

3.1. ***Definitions of Terms Specific to This Standard***:

3.1.1. ***Obstacle Course Event (OCE)***- Obstacle Course Events are events which include a Course designed for Participants to traverse primarily on-foot and include Obstacles. The term Event is used synonymously with OCE.

3.1.2. ***Event Organizer***- Organization that produces and operates the OCE.

3.1.3. ***Participants***- individuals participating in the OCE and interacting with Obstacles.

3.1.4. ***Event Personnel***- any entity, individuals, volunteers or contractors retained by Event Organizer to help produce the OCE.

3.1.5. ***Qualified Engineer***- Individual with an engineering degree and experience relevant to their assigned OCE work.

3.1.6. ***Qualified Medical Manager*** – the individual responsible for overseeing patient care and any medical staff on site during the OCE. This individual must have a current certification or license of an EMT (or non-US equivalent certification/license) or greater training and have experience in emergency medical care and experience relevant to their assigned OCE work.

3.1.7. ***Qualified Medical Planner*** – an individual responsible for developing an Emergency Medical Action Plan, Incident Action Plan or other Risk Management plans pertaining to the medical operations of the Event. Such individual shall have a current certification or license of an EMT (or non-US equivalent certification/license) or greater training, have relative experience in emergency medical care, experience relevant to their assigned OCE work, and training in Incident Command and Emergency Medical Management. A Qualified Medical Planner is responsible for reasonably acceptable methods and guidelines for patient care and the transfer of patients into the local emergency medical system if needed.

3.1.8. ***Qualified Risk Assessor*** - person with extensive knowledge, training and experience relating to OCE events who is capable of identifying existing, reasonably anticipated and predictable hazardous scenarios, unsanitary conditions, has familiarity with the Obstacle build process, and who has authorization to take prompt corrective measures to address these hazards.

3.1.9. ***Lifeguard*** - person with a current nationally or internationally recognized lifeguard certification or greater who has experience in surface water rescue.

3.1.10. ***Rescue Diver*** - appropriately equipped person who is trained and has experience as a Public Safety Rescue Diver or equivalent training or equivalent international certification.

3.1.11. ***Obstacle*** - Man made or natural elements identified by the Event Organizer as components of the OCE with which Participants interact.

3.1.12. ***Course***- predetermined route between start and finish areas at OCE, that include Obstacles intended for Participants. The Course also includes any start, finish or other event areas.

3.1.13. ***Water Element***- component of an Obstacle that has water with which Participants interact.

3.1.14. ***Structural Element***- Any component of an Obstacle that upon structural failure, overload, or collapse, would cause hazard(s) to persons.

3.1.15. ***Hazardous Obstacle Element***- A component of an Obstacle that can cause significant injury or death to Participants, including but not limited to; fall from height, high impact fall onto another Participant, water submersion, electricity, fire or smoke.

3.1.16. ***Emergency Action Plan***- a formal written plan, developed by the Event Organizer that identifies potential emergency conditions at the event site and prescribes the procedures to be followed to minimize or prevent injury, loss of life and property.

4. Obstacle Requirements

4.1. ***Obstacle Risk Assessment and Mitigation Plan*** - Obstacles must have a Risk Assessment and Mitigation Plan created and written by a Qualified Risk Assessor before the Obstacle is opened on the course. The Risk Assessment and Mitigation Plan shall identify hazardous obstacle elements, hazards, probability and severity of harm, and risk mitigation plans associated with Participants' use of the Obstacle.

4.1.1. For any Obstacle with a fall from height Hazardous Obstacle Element, the Risk Assessment and Mitigation Plan shall take into account the following factors: assessment of height of fall, relevant landing surface, mechanism of Participant fall, Participant body orientation throughout Obstacle, Participants falling on each other, appropriate fall warning signage, and landing surface maintenance.

4.1.2. For Obstacles with a Water Element over 4 feet in water depth, the Obstacle Risk Assessment and Mitigation Plan shall outline water personnel schedules, rescue response guidelines, chain of command, and the appropriate number of Lifeguards and Rescue Divers based on the following factors: length, width, depth of the water and the expected Participant load on the Obstacle.

4.2. ***Operating Document***–A written Operating Document must be created for an Obstacle before that Obstacle is open on Course. The Operating Document outlines proper use of the Obstacle by Participants, operation of the Obstacle by Event Personnel, Obstacle monitoring requirements, and Obstacle-specific emergency response and rescue guidelines as applicable.

4.3. Engineer Approval

4.3.1. All Obstacles that include a Structural Element require a stamp or written approval from a Qualified Engineer of the Obstacle designs approving the Obstacle for the proposed use before being used at OCEs.

4.3.2. When approving Obstacle drawings, Qualified Engineers shall specify the design loads for Obstacles taking into account the following factors, including but not limited to: anticipated environmental factors, wind, Participant volume, and Participant interaction.

4.4. Build, Strike and Inspection

4.4.1. Obstacles with a Structural Element must be built according to Qualified Engineer approved designs.

4.4.2. Event Organizers must conduct and document a pre-event inspection of the Obstacles before each day of the OCE. The Structural Obstacles inspections must ensure the Structural Obstacles comply with the Qualified Engineer approved drawings and designs and the Operating Guideline for the Obstacle. Inspections shall be completed by a Qualified Risk Assessor or Qualified Engineer.

4.4.3. Any modifications to Structural Obstacles that change the overall structural integrity of the Obstacle relative to Qualified Engineer approved designs shall be approved and documented by a Qualified Engineer before intended use.

4.4.4. All Obstacles shall have an alternative route around the Obstacle for Participants if they choose not to attempt or complete the Obstacle.

4.5. Periodic and Ongoing Operation and Maintenance

4.5.1.1. Event Organizer or Event Personnel, or both, shall create a process by which the Obstacles are monitored throughout the OCE for intended operation.

4.5.1.2. Event Organizer will create and document a process by which all appropriate Obstacle materials are inspected, throughout the Obstacle material's use, for structural integrity and operability. This process will also address seminal events that alter materials' structural integrity and operability.

5. Course Design Standards

5.1. Course Risk Assessment and Mitigation Plan

A Qualified Risk Assessor shall prepare a general Course Risk Assessment and Mitigation Plan. The Course Mitigation Plan shall include an end of operation course sweep to ensure the Obstacles and the Course are cleared of all Participants and spectators before the Course is closed.

5.1.1. Course design shall consider the health and safety of Participants and spectators including but not limited to the following factors: medical access to the Course, spectator areas and access, Course and Obstacle marking, water stations, water Obstacle placement, weather mitigation protocols, terrain assessments, evacuation routes, course checks and sweep procedures, and pre-event walk through.

6. Water Quality and Safety

6.1. Water Depth Staffing/Signage/Alternate Route

6.1.1. Obstacles with a Water Element greater than 4 ft. in water depth require the following staffing in which the number of personnel shall be determined by the medical service provider:

6.1.1.1. Over 4 ft. Water Depth: Lifeguard(s)

6.1.1.2. Over 6 ft. Water Depth: Rescue Divers and Lifeguards. Minimum 2 Rescue Divers staffed. When Rescue Divers are present, a written and clearly defined search and rescue plan shall be prepared.

7. Signage

7.1.1. Obstacles containing a Water Element greater than 4 ft. in water depth shall have signage posted by the Event Organizer prior to the entry to the Obstacle communicating a variation of the message 'If you cannot swim, go around this Obstacle.'

7.1.2. Obstacles containing a Water Element, shall have signage posted by the Event Organizer prior to the entry of the Obstacle communicating a variation of the message 'No diving'.

7.2. Water Quality

7.2.1. The Event Organizer shall maintain reasonably appropriate water quality within the OCE where Participants can reasonably be expected to ingest or contact water volume sufficient to pose a substantial health risk.

7.2.2. The Event Organizer shall notify Participants of the inherent risks of contact with Obstacles with Water Elements and mud.

8. Event Day Operations Safety

8.1. An Emergency Action Plan shall be developed by the Event Organizer in the following areas for any OCE:

8.1.1. Severe Weather (monitoring lightning, wind and heat index throughout the Event)

8.1.2. Natural Disaster

8.1.3. Mass Casualty

8.1.4. Obstacle Failure

8.1.5. Lost Person

8.1.6. Fire Emergency

8.1.7. Active shooter

8.1.8. Bomb Threat

8.1.9. Medical Emergency

8.1.10. Critical Communications Failure

8.1.11. Critical Power Failure

8.1.12. Venue Evacuation

8.2. Event Instruction/Orientation

8.2.1. The Event Organizer shall brief the Event Personnel on their assigned roles before being deployed on Course. The brief shall include but not be limited to the following:

8.2.1.1. OCE Medical staff shall be briefed about rescue protocols, obstacle specific risks, communication protocols, Course and Obstacle access points, no drive zones, locations of life saving equipment, important emergency response protocols for Potentially Hazardous Obstacle Elements, and Emergency Action Plans.

8.2.1.2. Event Personnel with driving responsibilities shall be briefed about driving protocol, Emergency Action Plans, and overall site safety.

8.2.2. Participants shall be informed prior to being allowed on the Course how to access medical care on the Course and their ability to bypass any Obstacle if they choose to do so.

8.3. Event Infrastructure and Equipment Maintenance

8.3.1. Event Organizers must employ security protocols appropriate for the Event size, location and type.

8.3.2. Event Organizers must employ parking and transit protocols appropriate for Event size, location and type and have emergency egress and ingress identified.

8.3.3. The Event Organizer shall store fuel sources safely and securely.

8.3.4. The Event Organizer ensures that electrical energy sources are used and maintained safely and securely.

9. Medical Provision

9.1. The Event Organizer shall be prepared to deliver medical care at the Event. The Event Organizer ensures that a Qualified Medical Planner shall be involved in the planning of the medical aspects of the Event. The Event Organizer shall ensure that a Qualified Medical Manager shall be involved in administering of the medical care at the Event. Medical provisions shall take into account the following factors including but not limited to: size of Event, risk of Obstacles, likelihood of potential injuries, weather, environmental terrain, advanced medical response, and wildlife.

9.2. The Event Organizer shall provide a central medical treatment location that provides shelter from the environment and has: Adequate space based on predicted patient volume, Adequate lighting, HVAC as appropriate, Clean treatment areas, Working treatment furniture (cots, beds, chairs, etc.), Electrical sources, Potable water source.

9.3. The Event Organizer shall provide a method for transporting patients to the medical facility in a timely fashion for both ambulatory and non-ambulatory patients.

9.4. The Event Organizer shall provide adequate first aid and immediate lifesaving equipment at the Event.

9.4.1. The Event Organizer shall ensure as a minimum of one automatic external defibrillator (AED) onsite in each medical treatment facility, pre-event designated medical rover(s) and ensure there are AEDs able to reach any location on the Course. The Event Organizer shall provide an AED located at each electrified Obstacle.

9.4.2. The Event Organizer shall ensure adequate rescue and extraction capabilities for all Obstacles and for ambulance inaccessible areas of the Course (i.e. backcountry or rugged terrain areas).

9.5. Prior to Event, the Event Organizer and the Qualified Medical Manager shall create a procedure for transfer of patients into the local healthcare system for those requiring an advanced level of care.