



## THE COMMONWEALTH OF MASSACHUSETTS

William Francis Galvin

Secretary of the Commonwealth

**Regulation Filing** *To be completed by filing agency*CHAPTER NUMBER: 520 CMR 5.00CHAPTER TITLE: Amusement DevicesAGENCY: Department of Public SafetySUMMARY OF REGULATION: *State the general requirements and purposes of this regulation.*

The purpose of 520 CMR 5.00 is to provide reasonable standards for the design, construction, inspection and operation of amusement devices for the safety of the public. 520 CMR 5.00 provides reasonable standards for safety with regard to the design, construction, and inspection and operation of amusement devices. Further, the DPS commissioner is statutorily required by G.L. c. 140, § 205A to establish the the safety standards of mechanical strength, rigidity, and control established by the Commissioner that the amusement device must meet.

REGULATORY AUTHORITY: G.L. c. 140, § 205AAGENCY CONTACT: Stephen Carley PHONE: 617-826-5216ADDRESS: One Ashburton Place, Room 1301, Boston, MA, 02108**Compliance with M.G.L. c. 30A**EMERGENCY ADOPTION - *if this regulation is adopted as an emergency, state the nature of the emergency.*

PRIOR NOTIFICATION AND/OR APPROVAL - *If prior notification to and/or approval of the Governor, Legislature or others was required, list each notification, and/or approval and date, including notice to the Local Government Advisory Commission.*

**Approval by Executive Office for Administration & Finance: 1/28/16****LGAC Notice: 2/4/16**

PUBLIC REVIEW - *M.G.L. c. 30A sections 2 and/or 3 requires notice of the hearing or comment period, including a small business impact statement, be filed with the Secretary of the Commonwealth, published in appropriate newspapers, and sent to persons to whom specific notice must be given at least 21 days prior to such hearing or comment period.*

Date of public hearing or comment period: 3/10/16

FISCAL EFFECT - *Estimate the fiscal effect of the public and private sectors.*

For the first and second year: \_\_\_\_\_

For the first five years: \_\_\_\_\_

No fiscal effect: \_\_\_\_\_

SMALL BUSINESS IMPACT - *M.G.L. c. 30A section 5 requires each agency to file an amended small business impact statement with the Secretary of the Commonwealth prior to the adoption of a proposed regulation. If the purpose of this regulation is to set rates for the state, this section does not apply.*

Date amended small business impact statement was filed: 1/9/17

CODE OF MASSACHUSETTS REGULATIONS INDEX - *List key subjects that are relevant to this regulation:*

**Amusement devices**

**Challenge courses**

**Climbing walls**

PROMULGATION - *State the action taken by this regulation and its effect on existing provisions of the Code of Massachusetts Regulations (CMR) or repeal, replace or amend. List by CMR number:*

**Amend 520 CMR 5.00**

ATTESTATION - *The regulation described herein and attached hereto is a true copy of the regulation adopted by this agency.* ATTEST:

SIGNATURE: SIGNATURE ON FILE DATE: Mar 10 2017

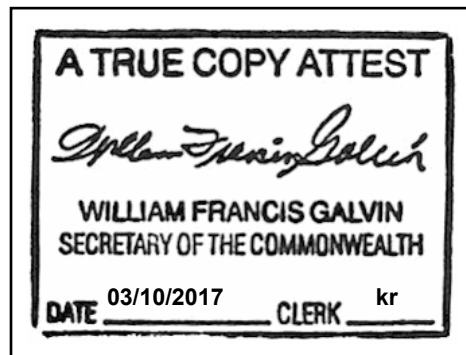
Publication - *To be completed by the Regulations Division*

MASSACHUSETTS REGISTER NUMBER: 1335 DATE: 03/24/2017

EFFECTIVE DATE: 03/24/2017

CODE OF MASSACHUSETTS REGULATIONS

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520 CMR 5.00: AMUSEMENT DEVICES

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- 5.14: Challenge Courses
- 5.15: Climbing Wall Facilities

5.01: General Provisions

(1) Scope. 520 CMR 5.00 is promulgated by the Department of Public Safety (Department) pursuant to authority granted by M.G.L. c. 140, § 205A.

The purpose of 520 CMR 5.00 is to provide reasonable standards for the design, construction, inspection and operation of amusement devices for the safety of the public.

520 CMR 5.00 shall apply to amusement devices as defined by 520 CMR 5.01.

520 CMR 5.02, 5.04, 5.05, 5.07, and 5.08 shall not apply to inflatable devices challenge courses, or climbing wall facilities as defined in 520 CMR 5.01, except that 520 CMR 5.02(2) shall apply.

520 CMR 5.00 shall not apply to:

- (a) A manually, mechanically or electrically operated, coin-operated ride, which is customarily placed, singly or in groups, in a public location and which does not normally require the supervision or services of an operator; or
- (b) A rider- or gravity-propelled ride that is not a mechanical device, or is not limited to a fixed or restricted course, and is not located in an amusement area or park.

Where there is a conflict between 520 CMR 5.00 and any referenced standard other than American Society for Testing and Materials (ASTM), 520 CMR 5.00 shall govern.

(2) Definitions. The following words and terms, when used in 520 CMR 5.00, shall have the following meanings unless the context clearly indicates otherwise or the term is redefined for a specific section or purpose.

ACCT. The Association for Challenge Course Technology.

ACS Number. An identifying number issued by the Department and associated with a specific artificial climbing structure included on an artificial climbing structure floor plan.

Agreement of Non-disclosure. A document provided by and approved by the Department of Criminal Justice Information Services binding the executing parties to request, access and review criminal offender record information to the extent authorized by the Department of Criminal Justice Information Services and not to reveal, transmit or republish in whole or in part any information obtained as the result of a criminal offender records information report that would be in violation of M.G.L. c. 6, §§ 168 through 178B.

AIMS. Amusement Industry Manufacturers and Suppliers International.

Amusement Device. A fixed or portable mechanical device similar to, but not limited to ferris wheels, carousals, rock walls, euro-bungee or similar devices, inclined railways or similar devices, including inflatables, challenge courses, and artificial climbing structures, as well as amusement devices as defined by ASTM. Coin operated devices, skill games or playground equipments that have no mechanical devices are not within 520 CMR 5.01(2): Amusement Device. Go karts, concession go karts, and other mechanical devices that are confined to one path of travel shall be considered an amusement device per path of travel.

5.01: continued

Amusement Park. A location that has 35 or more amusement devices that may be operated.

Amusement Park Operator. Any person, firm or corporation that owns, leases, manages or operates an amusement park.

Application. A standard form of application, issued by the Department, for a license to operate an amusement device as defined by 520 CMR 5.00.

A.N.S.I. American National Standards Institute.

Artificial Climbing Structure (ACS). Sports equipment exclusively designed and originally built to simulate rock climbing and not located in an amusement park or carnival. ACSs may be designed and used for lead climbing, top rope climbing, and/or bouldering. ACSs may be temporary or permanent. ACSs may be considered Challenge Course elements when used as part of a supervised educational/recreational curriculum.

A.S.M.E. American Society of Mechanical Engineers.

ASTM. American Society for Testing and Materials International.

Automatic Mode. The ability, after initialization, of the amusement ride or device to start, operate, move, *etc.* with limited or no operator intervention.

A.W.S. American Welding Society.

Belay Systems. Systems of equipment, and corresponding techniques, which control a climbing rope, lanyard, cable or other material to provide fall protection to a moving climber. Belay systems may employ a variety of equipment and techniques and may be human-operated or automatic mechanical systems.

Block System. A system on an amusement device with separate vehicles designed to limit the number of vehicles in a certain area of the ride.

Carnival. A mobile enterprise principally devoted to offering amusement or entertainment to the public in, upon, or by means of portable amusement devices or temporary types of structures in any number or combination, whether or not associated with other structures or forms of public attraction.

Certificate of Competency. A certificate issued to individuals pursuant to M.G.L. c. 146, § 62.

Certified Inflatable Device Mechanic. An individual designated by the owner of an inflatable device as the person responsible for overseeing the maintenance of an inflatable device and who has a valid NAARSO Level I or II certification, AIMS Level I or II maintenance certification or a person holding a B.S. in engineering with a minimum of three years experience in the amusement industry, or a person certified by the Department as an inflatable device mechanic in accordance with 520 CMR 5.09(1)(j).

Certified Inspector. A person who has obtained a Massachusetts Certificate of Competency to inspect amusement devices or to inspect climbing walls and challenge courses, and who is not an employee of the Department.

Certified Maintenance Mechanic. An individual designated by the owner of an amusement device as the person responsible for overseeing the assembly, set up and maintenance of amusement devices and who has been certified by the Department as a certified maintenance mechanic in accordance with 520 CMR 5.02.

5.01: continued

Challenge Course. A facility or facilities not located in an amusement park or carnival consisting of one or more elements that challenge participants as part of a supervised educational/recreational curriculum.

Challenge Course Manager. A person who is 21 years of age or older and is primarily responsible for the oversight, management, and general operation of the Challenge Course, including, but not limited to, developing and maintaining operating policies and procedures, supervision and training of staff, performance evaluation, routine maintenance and inspection of the facility and equipment, and general record keeping.

Challenge Course Staff. A person located on-site during the operation of the challenge course who is 18 years of age or older who works under the supervision of the Challenge Course Manager and is responsible for day-to-day operation of the Challenge Course, including but not limited to supervision of Staff Assistants, routine maintenance and inspection of equipment and general equipment record keeping.

Challenge Course Staff Assistant. A person who may operate Challenge Course elements only under the direct supervision of Challenge Course Staff.

CIK. Commission International de Karting.

Climbing Wall Facility. A facility not located in an amusement park or carnival designed and built for the sport of rock climbing, including ascending, descending, and traversing over simulated rock surfaces that use belay systems in their normal operation.

Climbing Wall Facility Manager. A person who is 21 years of age or older and is primarily responsible for the oversight, management, and general operation of the Climbing Wall Facility, including, but not limited to, developing and maintaining operating policies and procedures, supervision and training of staff, performance evaluation, routine maintenance and inspection of the facility and equipment, and general record keeping.

Climbing Wall Facility Staff. A person located on-site during the operation of the Climbing Wall Facility who is 18 years of age or older who works under the supervision of the Climbing Wall Facility Manager and is responsible for the day-to-day operation of the climbing wall, including but not limited to supervision of Staff Assistants, routine maintenance and inspection of equipment and general equipment record keeping.

Climbing Wall Facility Staff Assistant. A person who may assist in the operation of an Artificial Climbing Structure only under the direct supervision of Climbing Wall Facility Staff.

Climbing Wall Operating Manual. A document that includes policies and procedures for the orientation of patrons, belay training and testing of patrons, care and use of facility-owned climbing equipment, and emergency procedures.

Commissioner. The Commissioner of the Department of Public Safety.

Containment. The features in an amusement device which accommodate the patron for the purpose of riding the ride. This may include but is not limited to the seats, side walls, walls or bulkheads ahead of the rider(s), floors, objects within the vicinity of the rider(s), restraint systems and cages.

CORI. Criminal Offender Record Information.

Criminal History Inquiry Procedure. A document required to be produced by an applicant for licensure that establishes the applicant's policy for conducting criminal history inquiries and providing subsequent notification to applicants of their suitability for employment.

5.01: continued

CWA. Climbing Wall Association.

Daily Equipment Inspection Log. A form for use on Challenge Courses and in Climbing Wall Facilities completed by the Challenge Course Staff or Climbing Wall Facility Staff which documents that the equipment has been inspected before each day's use.

Daily Maintenance Inspection Log. A form completed by the certified maintenance mechanic or the maintenance technician which details the results of the maintenance inspection.

Daily Operator's Inspection Log. A form completed by the ride operator which details the results of the operator's inspection.

DCJIS. Department of Criminal Justice Information Services.

Department. The Department of Public Safety.

Department of Criminal Justice Information Services CORI Request Form. A form produced by the Department of Criminal Justice Information Services which, when executed by an applicant, grants authority to a Department of Criminal Justice Information Services-authorized party to access information regulated by the Department of Criminal Justice Information Services and maintained by the Board of Probation regarding the criminal history of the applicant within the Massachusetts Court system.

Element. An apparatus which may include but not be limited to, equipment designed to simulate rock climbing, beams, bridges, cable traverses, climbing walls, nets, platforms, ropes, swings, towers, or zip wires that employ fall protection systems in their operation. Elements may be installed on or in trees, poles, portable structures, buildings or be a part of a self-supporting structure.

Element Number. An identifying number issued by the Department and associated with a specific element or artificial climbing structure included on a challenge course site plan.

Employee CORI Reports. Documents generated as a result of the process of requesting, receiving, and evaluating criminal offender record information.

Employee Training Documentation. A form that details specific training received by operators of amusement devices.

Fastening Devices. Bolts, nuts, pins, clips or any other component that secures one part to another.

Fence. A type of barrier consisting of, but not limited to, posts, boards, wire, stakes, or rails that is used to inhibit patrons from coming into undesirable contact with the moving portion or restricted portion of an amusement ride or device.

FIA. Federation International de l'Automobile.

First Aid. The one-time treatment or subsequent observation of scratches, cuts not requiring stitches, burns, splinters, contusions and minor complaints. For purposes of 520 CMR 5.00, "first aid" shall not include first response to a serious injury.

Fixed Amusement Device. An amusement device which stays at one location during the term of the licensed year.

Floor Plan. A document which includes a graphic representation of sufficient clarity to identify all ACS, the corresponding ACS number beginning at 01 for the first element and continuing sequentially until all ACS are numbered and the plan indicates the approximate location in a specified facility.

Gate. A section of fencing that may be opened.

Hand Mode. The ability of the amusement ride or device to start, operate, move, *etc.* only with operator intervention.



5.01: continued

**IKF.** International Karting Federation.

**Illness.** Personal discomfort resulting in treatment including personal illness, food poisoning, drug abuse, toxic inhalation, insect stings or other similar occurrence.

**Inflatable.** A device of any size that incorporates a structural and mechanical system and employs a high strength fabric or film that achieves its strength, shape, and stability by tensioning from internal air pressure. **Inflatable** shall not include devices which are privately owned and/or operated or similar inflatable devices that are used for professional exhibition or stunt work, safety and rescue activities, aerial or aviation structures or devices, exhibit floats or similar inflatable devices.

**Injury.** Sustained bodily harm resulting in treatment such as trauma, cuts, bruises, burns, and sprains.

**Injury and Incident Documentation.** A form detailing all specific information regarding any injury or incident that may have occurred.

**Itinerary.** A form provided to the Department, by an owner which lists the locations and dates where the owner intends to use an amusement device, as well as the intended amusement devices to be used at that location.

**Key Component.** A component or system that has been designated by the manufacturer as requiring special fabrication, maintenance, inspection or operation due to its importance to the continued proper and safe operation of the amusement device.

**Large Inflatable.** An inflatable that has a surface that is designed to enable patrons to stand, sit or climb to a height of 12 feet or higher.

**Latched.** Held securely against opening except by intentional action of the rider, operator or other means.

**License.** A certificate issued by the Department to an owner after the owner's application has been submitted to and approved by the Department.

**Local Operating Procedures.** Site specific information and procedures that are based upon the Standard Operating Procedure and reviewed by the Certified Inspector which establish minimum acceptable criteria for all Challenge Course programming at the site. The documents are developed by the Challenge Course Manager and shall define policies, procedures and practices and shall include, but not be limited to, appropriate operating procedures for specific elements and the Daily Equipment Inspection Log

**Low Element.** A Challenge Course element or activity where participant is spotted if needed to limit risk, and where the use of a belay system is not required.

**Maintenance Repair Log.** A log completed by the certified maintenance mechanic, the maintenance technician, the Challenge Course Staff, or the Climbing Wall Facility Staff which details all work performed on the amusement ride, artificial climbing structure, or challenge course.

**Maintenance Technician.** A person who is appropriately trained in the maintenance, repair, and upkeep of amusement devices and their components and has received training appropriate to their job function.

**Major Modification.** Any change in either the structural or operational characteristics of a ride which alters its performance from that specified in the manufacturer's design criteria.

**Manufacturer.** A person who has responsibility for the manufacture of any amusement device to be used or installed in the Commonwealth, or sold for use in the Commonwealth.

5.01: continued

Manufacturer's Bulletins. Documents provided by the manufacturer to owners regarding alerts and maintenance modifications after an amusement device has been manufactured.

Manufacturer's Maintenance Manual. A document provided by the manufacturer that details the maintenance requirements and procedures of the amusement device.

Manufacturer's Operators Manual. A document provided by the manufacturer that details the operational requirements of an amusement device.

Manufacturer's Set-up and Assembly Manual. A document provided by the manufacturer of an amusement device that details the requirements and procedures to properly erect the amusement device.

Mechanical Malfunction. A structural failure of a load bearing element, a mechanical or electrical failure of a drive or control system component or a failure of a restraint system that compromises ride safety.

Minor Injury/Illness. Injuries and illnesses which may or may not require emergency first aid or significant treatment, or both, but cannot be otherwise classified as a serious injury or illness. This category includes incidents where treatment is limited to such things as the dispensation of over-the-counter medication or plastic adhesive strips, cleansing, rest, and other similar duties or assistance.

Minor Modification. Any change that does not alter the structural or operational characteristics of the ride or change its performance from that specified in the manufacturer's design criteria.

MSA. Motor Sports Association.

NAARSO. National Association of Amusement Ride Safety Officials.

NDT "Non-destructive Testing". To examine and evaluate parts, areas, or items for defects at or below the surface.

NDT Statement. A non-destructive testing plan or a statement from the manufacturer that NDT is not required.

Operating Manual. The document that contains the required procedures and forms for the safe operation of an amusement device at the stated site.

Operator. *See* Ride Operator.

Operator Assistant. A person 16 years of age or older whose duties include, but are not limited to, loading and unloading riders of amusement devices, including inflatable devices, collecting tickets, checking seatbelts, lap bars and other restraints and occupying the entrance or exit areas to prevent intrusion while the amusement device or the inflatable is in operation, but who is not the operator.

Operator Presence Device. A device which, when activated, requires an operator to remain in contact with the switch during the entire ride cycle.

Owner. A person who owns, leases, or manages the operations of amusement devices, including individuals, partnerships, and corporations.

Park. *See* Amusement Park.

Parking Brakes. Brakes that are used to keep the amusement device from moving once the ride has stopped.

5.01: continued

Participant. An individual who engages in activities on a Challenge Course element under the supervision of Challenge Course Staff.

Patron. *See Rider.*

Permit. A sticker with a unique number, assigned by the Department and adhered to the Unique State Identification (USID) plate of an amusement device at the beginning of each amusement season. *See USID.*

Portable Amusement Device. An amusement device which is transported to different locations within the term of the licensed year.

Primary Circulation Area. An area leading directly to the entrance or exit of a ride that is normally traveled by patrons. These areas would not include emergency exit routes, maintenance areas, or other areas not normally on the route of the patron.

Qualified Challenge Course Professional. An individual who is trained in providing Challenge Course services including any one or combination of the following: design, installation, inspection and training services and who has been certified by the ACCT, an equivalent organization, or submits evidence of comparable qualification that is approved by the Commissioner. Evidence of qualification to be a Qualified Challenge Course Professional may include, but shall not limited to: a person holding a B.S. in engineering with a minimum of one year experience in the design, engineering, or manufacturing of challenge courses, or a person with a minimum of three years experience in the design, engineering, or manufacturing of challenge courses.

Qualified Manufacturer's Representative. The person or persons qualified by prior experience, education, or training, and designated by the manufacturer, to inspect artificial climbing structures. The Qualified Manufacturer's Representative shall be trained by the manufacturer to conduct inspections of artificial climbing structures, and may be trained to inspect related personal protective equipment. Evidence of qualification to be a Qualified Manufacturer's Representative may include, but shall not limited to: a person holding a B.S. in engineering with a minimum of one year experience in the design, engineering, or manufacturing of artificial climbing structures, or a person with a minimum of three years experience in the design, engineering, or manufacturing of artificial climbing structures.

Reassembly. The installation, erection, or reconstruction of an amusement device following transportation or storage and prior to operation.

Records. Documents that an owner shall be in possession of, and shall make available to inspectors of the Department upon request.

(a) In accordance with the requirements of 520 CMR 5.04(5); 5.09(2)(d); 5.13(17)(d), such documents shall include, but are not limited to:

1. Manufacturer's set up and assembly manual;
2. Manufacturer's maintenance manual;
3. Manufacturer's bulletins;
4. Manufacturer's operators manual;
5. Daily maintenance inspection logs (except for inflatables);
6. Daily operator inspection logs;
7. Maintenance repair logs;
8. Amusement incident reports;
9. Employee training documentation;

(b) In accordance with the requirements of 520 CMR 5.14(2)(d)(challenge courses) and 5.15(3)(d)(climbing walls) such documents shall include, but are not limited to:

1. Local operating procedures;
2. Site plans;
3. Daily equipment inspection logs;
4. Staff training plans; and
5. Maintenance repair logs.

5.01: continued

Reduction Brakes. Brakes designed to slow the motion of the amusement device.

Redundant Restraint Devices. Independent restraints in the sense that the secondary device, for example, lap bar, containment enclosure, is able to restrain the patron in case of failure of the primary restraint.

Renter. An individual who executes a contract with the owner of an inflatable device for the temporary use of the device.

Repair. To restore an amusement device component with like components or materials that meet or exceed current design specifications for the amusement device.

Restraint. The system, device or characteristic that is intended to inhibit or restrict the movement of the patron(s).

Retarding Brakes. A device that prevents the ride from exceeding a determined speed by means of friction or induction magnets.

Ride. *See Amusement Device.*

Ride Operator. Any person 18 years of age or older, engaged in or directly controlling the operations of an amusement device, including large inflatable devices.

Rider. A person riding on or utilizing an amusement device, including inflatable devices and artificial climbing structures.

Safety Bulletin. A supplemental notification delivered by the manufacturer to an owner that contains new information or new recommendations for inspections, testing, repair, operation or training. This term includes, but is not limited to, Safety Alerts, Service Bulletins, and Notifications as indicated in ASTM F-853.

SCCA. Sports Car Club of America.

Serious Injury/Illness. A personal injury/illness that results in death, dismemberment, significant disfigurement, permanent loss of the use of a body organ, member, function, or system, a compound fracture, or other significant injury/illness that requires immediate admission and overnight hospitalization and observation by a licensed physician.

Site Plan. A document which includes a graphic representation of sufficient clarity to identify individual Challenge Course Elements, the corresponding element number beginning at 01 for the first element and continuing sequentially until all elements are numbered and the approximate location in a specified course or facility.

Small Inflatable. An inflatable that has a surface that is designed to enable patrons to stand, sit or climb at a height of less than 12 feet.

Staff Training Plan. A written document that records the professional and internal training history and training requirements for Climbing Wall Facility personnel or Challenge Course personnel. The training requirements must be completed prior to Climbing Wall Facility personnel or Challenge Course personnel being allowed to operate an Artificial Climbing Structure or Challenge Course. The Staff Training Plan shall be created by the Challenge Course Manager or the Climbing Wall Facility Manager in conjunction with the Qualified Challenge Course Professional or Qualified Manufacturer's Representative and shall at a minimum adhere to training standards set forth within *ACCT Challenge Course Standards*, 8<sup>th</sup> Edition for challenge course personnel or *CWA Industry Practices A Sourcebook for the Operation of Manufactured Climbing Walls*, 3<sup>rd</sup> Edition, 2007, for climbing wall staff or equivalent standards as approved by the Commissioner.

5.01: continued

Standard Operating Procedure. A document approved by the Qualified Challenge Course Professional that establishes general minimum acceptable standards of operation for the Challenge Course in accordance with ACCT or equivalent standards as approved by the Commissioner. Standard Operating Procedures are not designed to address issues that are specific to individual Challenge Course programs.

State Inspector. An inspector of the Department of Public Safety assigned by the Commissioner, who has been trained by the Department in the inspection of amusement devices to ensure compliance with ASTM standards and 520 CMR 5.00.

Trailer Mounted Kiddie Ride. An amusement device designed primarily for use by children up to 12 years of age which is mounted on a trailer and is designated as a kiddie ride by the manufacturer.

Traveler. A binder or electronic file in a universally accepted format that travels with the amusement device and which shall contain the records and state or certified inspection reports performed on the ride for the past 30 days.

Trim Brakes. See Retarding Brakes.

UIAA. International Climbing and Mountaineering Federation (*Union Internationale des Associations d'Alpinisme*).

USID Number. A unique identifying number assigned to each ride at the time the first permit is issued.

WKA. World Karting Association.

(3) Standards Adopted. The standards listed below are adopted and incorporated as part of 520 CMR 5.00. Devices constructed in accordance with the ASTM standards or other recognized engineering standards in effect at the time of the device's manufacture shall be considered constructed in accordance with the following standards. In the event that any provision in any of the following standards, other than ASTM, conflicts with a provision of 520 CMR 5.00, 520 CMR 5.00 shall govern.

29 CFR OSHA	Part 1910	OCCUPATIONAL SAFETY AND HEALTH STANDARDS
ACCT		Subpart O -- Machinery and Machine Guarding
ANSI B11.19	2010	<i>Challenge Course Standards 8<sup>th</sup> Edition</i>
ASTM F770 - 11		<i>Performance Criteria for Safeguarding</i>
		<i>Standard Practice for Ownership and Operation of Amusement Rides and Devices</i>
ASTM F846-92		<i>Standard Guide for Testing Performance of Amusement Rides and Devices (2009)</i>
ASTM F853 - 05		<i>Standard Practice for Maintenance Procedures for Amusement Rides and Devices</i>
ASTM F1159-11		<i>Practice for Design and Manufacture of Patron Directed, Artificial Climbing Walls, Dry Slide, Coin Operated and Purposeful Water Immersion Amusement Rides and Devices and Air-supported Structures</i>
ASTM F1193 - 06		<i>Practice for Quality, Manufacture, and Construction of Amusement Rides and Devices</i>
ASTM 1772 - 12		<i>Standard Specifications for Harnesses for Rescue, Safety, and Sport Activities</i>
ASTM F2374 - 10		<i>Standard Practice for Design, Manufacture, Operation, and Maintenance of Inflatable Amusement Devices</i>
ASTM F2974-13		<i>Standard Guide for Inspection of Amusement Rides and Devices</i>
AWS D1.1/D1.1M	2010	STRUCTURAL WELDING CODE - STEEL
AWS D1.2/D1.2M	2008	STRUCTURAL WELDING CODE - ALUMINUM
AWS D1.3	2008	STRUCTURAL WELDING CODE - SHEET STEEL

## 5.01: continued

CWA Industry Practices. *A Sourcebook for the Operation of Manufactured Climbing Walls*, 3<sup>rd</sup> Edition (2007)

CWA Climbing Wall Association Standard. *General Specification for the Design and Engineering of Artificial Climbing Structures*, 1<sup>st</sup> Edition (January 2009)

CWA Climbing Wall Association Standard. *Specification for the Structural Inspection of Artificial Climbing Structures*, 1<sup>st</sup> Edition (March 2009)

EN 12277 - 07                *Mountaineering Equipment - Harnesses - Safety Requirements and Test Methods*

EN 12572 - 07                *Artificial Climbing Structures - Safety Requirements and Test Methods for Bouldering Walls*

EN 12492 - 12                *Mountaineering Equipment - Helmets for Mountaineers - Safety Requirements and Test Methods*

These standards are on file with the Secretary of State and are incorporated by reference in the 520 CMR 5.00.

The following standards are adopted in 520 CMR 5.00 and are available from the National Fire Protection Association:

NFPA 10 2013                *Portable Fire Extinguishers*

NFPA 70 2014                *National Electrical Code*

UIAA 105-04                *International Climbing and Mountaineering Federation Standards for Harnesses*

UIAA 106-04                *International Climbing and Mountaineering Federation Standards for Helmets*

5.02: General Administrative Provisions

(1) Scope. 520 CMR 5.02 establishes general administrative provisions including license and permit issuance, fees, inspections, and variances for all amusement devices other than inflatables, Challenge Courses and Artificial Climbing Structures.

(2) Amusement Advisory Board. There shall be a voluntary board appointed by the Commissioner, which shall hold at least one meeting annually and at such other times as it may determine, to review issues relative to 520 CMR 5.00 and safety of amusement devices. The Board shall submit recommendations regarding changes to 520 CMR 5.00 as it deems necessary and appropriate. Such recommendations may be adopted at the discretion of the Commissioner. The Board shall consist of 16 members, one of whom shall be the Commissioner of Public Safety or his or her designee, two of whom shall be owners of traveling amusement devices, two of whom shall represent owners of permanent amusement devices, one of whom shall represent the kart industry, one of whom shall be a member of the New England Association of Amusement Parks and Attractions, one of whom shall be a member of the Amusement Industry Manufacturers and Suppliers International, one of whom shall be a member of the American Society for Testing and Materials, one of whom shall be a district engineering inspector, one of whom shall be a state building inspector, one of whom shall be a local building inspector, one of whom shall be a member on the Board of Fire Prevention Regulations specializing in electrical components and connectors, one of whom shall be a third party inspector, one of whom shall represent the Challenge Course industry, and one of whom shall represent the Climbing Wall industry. Board members shall serve for a term of four years and may be removed at the discretion of the Commissioner. The Commissioner of Public Safety or his or her designee shall serve as the Chairman.

(3) Signage. Signage shall be posted in accordance with the Amusement Device Manual. The owner shall comply with the established minimum and/or maximum height requirements of the manufacturer. In pre-existing rides whereby the manufacturer no longer exists, and minimum height requirements were not provided, the owner shall establish the minimum height requirements based on nationally recognized standards or from design criteria stamped by a professional engineer which shall reference height restrictions from nationally recognized publications. Such height restrictions shall be provided to the Department by the owner or manufacturer prior to issuance of the license.

## 5.02: continued

- (4) New Amusement Devices. Owners applying for a license that includes a request for a permit for a new amusement device coming into the Commonwealth for the first time shall also be required to submit the following information with the application:
- (a) The plans for the new amusement device; and
  - (b) A copy of the manufacturer's maintenance and operating manuals for the new amusement device.
- (5) Issuance of Annual License and Ride Permits; Denials; Appeals.
- (a) No person shall manufacture or sell for use in the Commonwealth, operate, arrange for, or cause to be used, any ride that is not in compliance with 520 CMR 5.00.
  - (b) Prior to any amusement owner being licensed to operate in the Commonwealth, the owner shall provide the following documents to the Department:
    1. Completed application as provided by the Department;
    2. Required Fees in accordance with the fee schedule set forth in 801 CMR 4.02: *Fees for Licenses, Permits, and Services to Be Charged by State Agencies*;
    3. Certified Inspector Report;
    4. Itinerary (except for trailer mounted kiddie rides and permanent amusement parks);
    5. Certificate of insurance demonstrating compliance with M.G.L. c. 140, § 205A, and 520 CMR 5.00;
    6. A list of all Certified Maintenance Mechanics and a Certificate issued by the Department pursuant to 520 CMR 5.02(14);
    7. A list of the operators trained in conformance with the manufacturer's specifications and attested to annually by the owner. Such list shall include the names of the certified operators who are 18 years of age or older and the devices for which they have been trained and certified to operate.
    8. A list of staff operating belay systems for portable, fabricated non-inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor, who have been provided training as specified by the climbing wall manufacturer and/or belay system manufacturer. The owner shall require a certification signed by the belay operator indicating the ride name and level of training. This certification shall be kept on file by the owner for at least three years.
    9. A manufacturer's data report for each amusement device (if not currently on file with the Department).
    10. A completed criminal offender record information (CORI) Request Form,
    11. A criminal history inquiry procedure in accordance with 520 CMR 5.04(16).
    12. For portable, fabricated non-inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor; the owner shall affirm that:
      - a. Anchor supports for the wall comply with manufacturer specifications, EN12572 or CWA Engineering Specifications;
      - b. Only automatic belay systems are used;
      - c. Anchor supports for climbing wall meet the requirements of the auto belay manufacturer;
      - d. Harnesses that conform to either the rock wall manufacturer recommendations ASTM F1772, UIAA105, or EN12277 are used by all patrons;
      - e. Helmets that conform to either the rock wall manufacturer recommendations, EN12492 or UIAA106 or equivalent ASTM standards are used by all patrons.
    13. An operating fact sheet per ASTM F770 – 06a for each device.
    14. Maintenance requirements, maintenance schedules, inspection requirements, and inspection schedules each in a checklist format on a ride by ride basis per ASTM F770–06a and ASTM F 853-98 for each device.
  - (c) The owner shall apply for an annual license at least ten days prior to commencing operations each year on a form supplied by the Department. An annual license shall be valid for a period of one year or until the expiration of the insurance certificate, whichever occurs sooner.
  - (d) Licensure shall be conditioned upon the completion of a CORI inquiry by the Department pursuant to authorization granted by the DCJIS in accordance with M.G.L. c. 6, § 172(b) and in accordance with the Department's guidelines for evaluating CORI reports.

5.02: continued

(e) Upon approval, the Department shall issue a license to the owner to operate in the Commonwealth and permits for the amusement devices identified in the application. The owner shall affix the permit to the USID plate(s) upon receipt for each approved amusement device.

(f) No amusement device shall be operated without a valid annual license and permit.

(g) Denial; Appeals.

1. The Commissioner may refuse to issue a license to an applicant based on the following grounds:

- a. Submittal of an incomplete application or submittal of an application on a form not authorized by the Department;
- b. Failure to submit a completed CORI Request Form;
- c. Failure to submit a criminal history inquiry procedure;
- d. Failure to submit required fees;
- e. The knowing submission of false, invalid, incorrect or fraudulent information;
- f. If at the time of application, the applicant is under investigation by the Department or other law enforcement agency in connection with the operation of amusement devices;
- g. If the Commissioner finds that the applicant does not possess the integrity and general fitness to operate amusement devices in a safe manner and in the public interest consistent with 520 CMR 5.00 or M.G.L. c. 140, § 205A.

2. If the Commissioner refuses to issue a license, he shall notify the applicant in writing, setting forth the reasons for the denial. Within 21 days of receipt of the denial, the applicant may make written demand upon the Commissioner for a hearing before the Commissioner or his designee to determine the reasonableness of the Commissioner's action. The hearing shall be held promptly and in accordance with M.G.L. c. 30A and 801 CMR 1.02: *Informal/Fair Hearing Rules*.

3. If, after a hearing, the Commissioner denies the issuance of the license, he shall notify the applicant in writing. Such notice shall be sent by certified mail and first class mail and shall contain the reasons supporting the denial. Within 30 days after receipt of the notice, the applicant may appeal such denial to Superior Court in accordance with M.G.L. c. 30A, § 14.

(6) Modification. When a ride with a valid permit undergoes a major modification, the owner of the ride shall take the ride out of service and re-apply to the Department for a new permit.

(a) The application for a new permit shall include the following:

1. One copy of the original license issued by the Department;
2. All supplemental safety bulletins, safety alerts, or notifications issued following the issuance of the original license;
3. One full set of drawings, designs, specifications, and other construction documents, signed and sealed by the manufacturer or a Massachusetts registered professional engineer, that demonstrate compliance with 520 CMR 5.00; and
4. An inspection report from the certified inspector.

(b) The differences between the information submitted in support of the original license and that provided with the application for a modification shall be clearly shown by the applicant.

(7) Fees. A fee shall be paid by the applicant for each amusement device, other than non-mechanical amusement devices, listed in the application in accordance with the fee schedule as set forth in 801 CMR 4.02: *Fees for Licenses, Permits, and Services to be Charged by State Agencies*.

(8) Insurance.

(a) Except as provided for owners of fixed carousels in 520 CMR 5.02(8)(b), the owner of an amusement device shall furnish proof that all individual amusement devices permitted by the Department are insured and shall further furnish proof of financial responsibility to satisfy claims for damages on account of any physical injury or property damage suffered by any person during the authorized operation of the amusement device by way of commercial general liability insurance in the minimum amount of \$1,000,000.00 per occurrence limit with a \$2,000,000.00 general aggregate limit written on an occurrence form, a bond or other substantially equivalent proof approved by the Commissioner.



## 5.02: continued

(b) Owners of an amusement device which is a fixed carousel shall furnish proof of financial responsibility to satisfy claims of damages on account of any physical injury or property damage suffered by any person by way of commercial general liability insurance in the minimum amount of \$1,000,000.00 per occurrence written on an occurrence form, bond or other substantially equivalent proof approved by the Commissioner.

(c) Certified inspectors shall also furnish proof of general liability insurance in the minimum amount of \$1,000,000 per occurrence limit written on an occurrence form.

1. Certified inspectors shall notify the Department within 14 days of changes in general liability insurance coverage, including but not limited to cancellation of the policy for which proof was previously provided to the Department.

2. Certified inspectors shall provide proof of insurance to the Department upon obtaining general liability coverage that varies in any way from the proof originally provided to the Department for initial certification. Reasons for providing proof of new insurance may include but shall not be limited to relocation and new employment.

(9) State Identification Numbers.

(a) Each amusement device shall be identified using a USID number permanently affixed to the amusement device. Amusement devices shall not operate unless affixed with a USID number plate.

(b) When an amusement device is approved for an annual permit, the owner shall affix an annual permit to the USID plate to identify to the public that the amusement device conforms with the requirements to be licensed for that year.

(c) New amusement devices that do not have a USID number plate shall receive such plate upon application for the annual permit along with the submission of the corresponding manufacturer's data sheet. Such plate will be placed on the amusement device by a state inspector. The owner shall facilitate the installation of the plate by the state inspector.

(d) The owner shall notify the Department in writing immediately upon discovery that a previously issued USID number plate is missing from an amusement device. The Department shall issue a new USID number and number plate upon resubmission of the following:

1. A Completed Application;
2. Certified Inspector Report;
3. A Certificate of insurance demonstrating compliance with M.G.L. c. 140, § 205A and 520 CMR 5.00; and
4. A list of the names of the certified operators who are 18 years of age or older and the devices for which they have been trained and certified to operate; and
5. A manufacturer's data report for each amusement device (if not currently on file with the Department).

(10) Inspector and Police Admission to Grounds. As a condition of the license, owners shall grant unlimited access to any law enforcement officers, fire officials or inspector(s) of the Department to the grounds and amusement devices covered by 520 CMR 5.00 in the performance of their duties.

(11) Inspections

(a) All amusement devices shall undergo an annual inspection that shall include but is not limited to all components specified by the manufacturer. All manufacturer recommendations pertaining to specialized testing and inspection procedures shall be followed and comply with ASTM F2974.

(b) Inspection by the Certified Inspector.

1. All amusement devices shall be inspected by a certified inspector prior to being allowed to operate in the Commonwealth.

2. The certified inspector shall ensure that the manufacturer's specifications and recommendations as they pertain to parts to be disassembled, inspected, and replaced are followed.

3. The certified inspector shall review maintenance records for the ride from the previous year and ensure that all pertinent safety bulletins and manufacturer specified repairs/modifications/upkeep requirements have been implemented where necessary.

## 5.02: continued

4. The certified inspector will document, both in report form and photographs, any unusual issue that may be discovered. The inspector shall notify the owner and shall not certify the ride until the issues are abated.
5. Upon completion of the inspection, the certified inspector shall document any and all findings that require attention as per the manufacturer, as well as any areas that are of concern to the certified inspector for further observation.
6. The certified inspector shall:
  - a. Conduct an in-depth physical/visual inspection that may require disassembly of the ride and its components, and may also require the services of a person certified or trained in a specialty. The inspection shall include:
    - i. Moving parts;
    - ii. Integrity of bolts, pins, clips and nuts;
    - iii. Leveling system;
    - iv. Proper guarding of motors, belts and drives;
    - v. Structural integrity;
    - vi. Brakes;
    - vii. Hydraulic and pneumatic systems;
    - viii. Vehicle integrity;
    - ix. Electrical components; and
    - x. Review of any specialty inspection report.
  - b. Review of the certification that the manufacturer has tested the ride in accordance with applicable ASTM standards and determined that the ride is satisfactory. This certification shall remain with the ride.
  - c. Review of all maintenance documentation concerning ride repairs, all modifications and standard upkeep for the previous year;
  - d. Review of operator training records for the previous year;
  - e. Review of any specialist's reports not already cited in the certified inspector's report;
  - f. Conduct operational tests of all rides, including but not limited to block checks, redundant safety systems, emergency brakes, anti-roll back systems; and
  - g. Observe test cycles of all rides.
  - h. For portable, fabricated non-inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor; the inspector shall confirm that:
    - i. Anchor supports for the wall comply with manufacturer specifications, EN12572 or CWA Engineering Specifications;
    - ii. Only automatic belay systems are used;
    - iii. Anchor supports for climbing walls meet the requirements of the auto belay manufacturer;
    - iv. Harnesses provided conform to either the rock wall manufacturer recommendations ASTM F1772, UIAA105, or EN12277;
    - v. Helmets provided conform to either the rock wall manufacturer recommendations, EN12492 or UIAA106 or equivalent ASTM standards.
7. The certified inspector shall document any issues of concern and notify the owner of such concerns. Issues directly affecting the safety and integrity of the ride shall be immediately addressed. The certified inspector shall not certify a ride until the issues have been appropriately abated.
8. The certified inspector shall submit a report to the Department on a form provided by the Department. This report shall:
  - a. Identify all major modifications performed on the ride for the past year;
  - b. Confirm the review of the following records;
  - c. Specialty inspection reports;
  - d. Maintenance logs from the previous year;
  - e. Operator training logs from the previous year;
  - f. Provide documentation of all non-destructive examinations performed in the past year;
  - g. Identify items found to be out of compliance and what was done to bring the device into compliance;
  - h. Include the signature of the certified inspector; and

## 5.02: continued

- i. State the name and Massachusetts Certificate of Competency License Number of the certified inspector printed legibly.
- (c) Acceptance Inspection.
  - 1. An acceptance inspection shall be performed on all newly constructed and manufactured rides which are brought in to the Commonwealth for the first time. The acceptance inspection may be performed by either the certified inspector or the manufacturer's representative. The acceptance inspection shall include the following:
    - a. A review of the operator training records and owner certification;
    - b. A review of the certification that the manufacturer has tested the ride in accordance with applicable ASTM standards and determined that the ride is satisfactory. This certification shall remain with the ride;
    - c. A check of redundant safety systems; and
    - d. An operating inspection, during which all safety systems shall be checked and the ride shall be cycled as during normal operation.
  - 2. The results of the Acceptance Inspection shall be submitted to the owner and the Department using the "New Ride Acceptance Form".
  - 3. For all other amusement devices brought into the Commonwealth for the first time, an inspection shall be performed by the certified inspector in accordance with the requirements of 520 CMR 5.02(11)(b) before the ride may operate. Such inspections shall be documented and submitted to the Department using the "New Ride Acceptance Form".
- (d) Maintenance Inspection.
  - 1. A maintenance inspection shall be performed by a certified maintenance mechanic or a maintenance technician working under the direction of a certified maintenance mechanic. The inspection and tests shall be based on any manufacturer requirements and shall include but not be limited to the operation of control devices, speed limiting devices, brakes and other equipment provided for safety. It shall be performed at a frequency required by the manufacturer, but not less than each day, prior to the amusement device being open to the general public. Such inspections shall be conducted at the location at which the amusement device is being operated. Maintenance inspections shall be documented in the daily maintenance inspection logs and shall be kept on location with the amusement device for one year. The daily maintenance inspection logs shall be retained by the owner for the life of the ride unless the amusement device is transferred to a new owner pursuant to 520 CMR 5.04(14).
  - 2. Trailer mounted kiddie rides and inflatables may be inspected at the owner's designated location prior to the device being transported to the location where it will be operated.
  - 3. Maintenance inspections shall include, but not be limited to:
    - a. A review of the maintenance records including daily maintenance inspection logs, maintenance repair logs;
    - b. A physical inspection of the device including:
      - i. Inspection of all passenger carrying devices including all restraints, latches, pins, clips, fasteners, padding, and pinch points;
      - ii. Function test of all block systems, signal systems, brakes and control devices;
      - iii. Visual inspection of fencing and guards;
      - iv. Visual inspection of stairways, ramps and platforms for potential hazards;
      - v. Visual inspection of ride structure and moving parts including fasteners, safety pins, clips and keys;
      - vi. Blocking, support braces and jack stands;
      - vii. Inspection of the leveling system;
      - viii. Inspection for adjacent hazards and interferences;
      - ix. Inspection of proper bracing, anchors and guy lines;
      - x. Inspection of proper guarding on motors, belts and drives;
      - xi. Inspection of wheels, sprockets, chains, belts and pulleys for excessive wear;
      - xii. Visual inspections of the brakes for excessive wear;
      - xiii. Inspection of the hydraulics and pneumatic systems for leaks; and
      - xiv. Inspection for apparent electrical problems and to ensure that the amusement device is properly grounded.

## 5.02: continued

- c. For portable, fabricated non-inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor; the inspector shall confirm that:
  - i. Anchor supports for the wall comply with manufacturer specifications, EN12572 or CWA Engineering Specifications;
  - ii. Only automatic belay systems are used;
  - iii. Anchor supports for climbing walls meet the requirements of the auto belay manufacturer;
  - iv. Harnesses provided conform to either the rock wall manufacturer recommendations ASTM F1772, UIAA105, or EN12277;
  - v. Helmets provided conform to either the rock wall manufacturer recommendations, EN12492 or UIAA106 or equivalent ASTM standards.
- d. In addition to 520 CMR 5.02(11)(d)3.b., the maintenance inspection shall also include any additional inspectional requirements contained in the manufacturer's manual for that ride.
- e. Completion of the maintenance inspection log, which shall include the following:
  - i. The name of the ride;
  - ii. The printed name of the certified maintenance mechanic reviewing the inspection log;
  - iii. The signature of the certified maintenance mechanic reviewing the inspection log;
  - iv. If the inspection is performed by a maintenance technician under the direction of the certified maintenance mechanic, the maintenance inspection log shall include the printed name and signature of both the maintenance technician and the certified maintenance mechanic.
  - v. Date and time of the inspection;
  - vi. A summary of deficiencies found and corrected during the inspection of the device;
  - vii. The results of the maintenance inspection.
- (e) Inspections by the State Inspector.
  1. Prior to the use of any amusement device, the state inspector may inspect the general safety of all amusement devices, to ensure that they are in compliance with 520 CMR 5.00. The Department may charge a fee in accordance with the fee schedule as set forth in 801 CMR 4.02: *Fees for Licenses, Permits, and Services to be Charged by State Agencies*.
  2. Trailer mounted kiddie rides and inflatables may be inspected at the owner's designated location prior to the device being transported to the location where it will be operated.
  3. This general safety inspection may include:
    - a. A review of the maintenance records for the past 30 days, including daily maintenance logs;
    - b. A review of the daily operator logs;
    - c. A review of the operator training records and operator identification;
    - d. A visual inspection of the device including:
      - i. Safety belts, bars, locks and other passenger restraining devices;
      - ii. Proper operation of all automatic and manual safety devices, including safety lockout switches;
      - iii. Proper operation of all signal system, and control devices, including emergency stops and overspeed systems;
      - iv. Proper bolting, safety pins and keys that are normally disassembled and re-assembled at each setup;
      - v. Fencing, guards, stairways and ramps;
      - vi. Ride structure and moving parts;
      - vii. Inspection of the blocking and leveling system;
      - viii. Inspection of proper bracing, anchors and guy lines;
      - ix. Identification of the ride;
      - x. Inspection for adjacent hazards and interferences;
      - xi. Inspection of proper guarding on motors, belts and drives;
      - xii. Inspection of the ride for obvious excessive wear;
      - xiii. Inspection of the brakes;
      - xiv. Inspection of the hydraulics and air systems for obvious leaks;

## 5.02: continued

- xv. Inspection of the containment for obvious sharp points and pinch points;
- xvi. Inspection for obvious electrical problems.
- e. An inspection of the device in operation.
- f. For portable, fabricated non-inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor; the inspector shall confirm that:
  - i. Anchor supports for the wall comply with manufacturer specifications, EN12572 or CWA Engineering Specifications;
  - ii. Only automatic belay systems are used;
  - iii. Anchor supports for climbing walls meet the requirements of the auto belay manufacturer;
  - iv. Harnesses provided conform to either the rock wall manufacturer recommendations ASTM F1772, UIAA105, or EN12277;
  - v. Helmets provided conform to either the rock wall manufacturer recommendations, EN12492 or UIAA106 or equivalent ASTM standards.
- 4. State inspectors shall not be responsible for dismantling amusement devices and are not expected to remove panels that, by design, are not intended to be regularly removed, such as those riveted or welded in place.

The state inspector shall document any issues of concern and immediately notify the owner, or owner's representative, of such concerns. Issues directly affecting the safety and integrity of the ride shall be immediately addressed. Upon completion of the inspection, the state inspector shall provide the owner, or owner's representative, with a written inspection report. No ride shall be permitted to operate without correction of all issues listed by the inspector on the inspection report unless expressly authorized in writing by the inspector. Such authorization shall include a specific date within which to abate the violation; however, in no case shall a ride be permitted to operate at another location until the violation has been cleared.

If through no fault of the owner, a state inspector does not perform the inspection at the scheduled time, the owner may operate the amusement device(s) only after receiving explicit written authorization from the Commissioner or his or her designee.

(f) Ride Preparation.

1. The owner shall ensure that the ride is ready for the state inspection and operation at the scheduled time for the state inspection.
2. Prior to the state inspection being performed, the owner or his designee shall provide the state inspector with a completed Daily Maintenance Inspection Log.
3. Prior to the state inspection being performed the certified maintenance mechanic shall certify by signing the Amusement Device Checklist that the ride(s) to be inspected comply with 520 CMR 5.00 and are ready for state inspection and operation.
4. Personnel shall be available to operate the ride during the state inspection.
5. Where required, power shall be provided to operate the ride.
6. If the ride is not ready at the time of the scheduled state inspection, it shall be deemed to have failed the inspection. The ride shall not operate until such time that it has passed the state inspection.
7. Rides shall not be allowed to operate until all violations have been resolved to the satisfaction of the Commissioner or his designee.
8. If a ride is not certified at the time of inspection, the state inspector performing the inspection shall state on the Amusement Device Checklist whether a re-inspection is required after the violation has been resolved.

(g) Re-inspection. Where a ride is not certified for operation at the time of inspection and requires a re-inspection, an owner shall apply to the Department for a re-inspection of the device. The Department may charge a fee for the re-inspection in accordance with the fee schedule as set forth in 801 CMR 4.02: *Fees for Licenses, Permits, and Services to be Charged by State Agencies.*

(h) Operator Inspection. An operator inspection shall be performed prior to the operator placing a ride into operation for the first time that day. The operator shall make subsequent inspections when the owner determines that further inspections are required. The operator inspection shall include, but not be limited to:

1. Safety belts, bars, locks and other passenger restraining devices;
2. All automatic and manual safety devices, as designated by the owner;
3. Signal systems, brakes and control devices;
4. Safety pins and keys as designated by the owner;

5.02: continued

5. Fencing, guards, stairways and ramps;
6. Ride structure and moving parts as designated by the owner;
7. Blocking, support braces and jackstands to ensure the ride is level as designated by the owner;
8. Confirmation with the certified maintenance mechanic that the ride is properly grounded;
9. Confirmation with the certified maintenance mechanic that the ride is properly lubricated per the manufacturer's recommendations;
10. Testing communication equipment necessary for operation (if applicable);

## 5.04: continued

(e) Persons engaged in the assembly or disassembly of amusement devices shall use tools of proper size and design to enable work to be done in a proper manner. Broken, damaged and unsuitable tools shall not be used.

(f) The public shall not be allowed to enter the area in which assembly or disassembly is being performed.

(5) Records.

(a) The manuals for each amusement device shall be kept with the amusement device and shall be available for use by the Department.

(b) A record of all maintenance, inspections and tests shall be documented immediately upon completion of the test, inspections and maintenance performed, and shall be kept with the amusement device and available to the Department for one year. After one year, such records shall be maintained by the owner and may be stored off site for the life of the ride, unless the ride is transferred to a new owner in accordance with 520 CMR 5.04(14).

(c) Daily Operator's Inspection logs shall be kept with the amusement device and available to the Department for one month. After one month, such records shall be maintained by the owner for one year and may be stored off site.

(d) The owner shall retain current records of all maintenance, inspections and tests including those required by 520 CMR 5.00 and by the manufacturer for each amusement device at the amusement site. These records shall include but not be limited to:

1. The date and nature of all tests, including the identity of the tester, the purpose of the test and the results of the test;

2. The date and nature of all inspections, including the identity of the inspector, the purpose of the inspection and the results of the inspection;

3. The date and nature of all maintenance, including the identity of the individual who performed the maintenance, and the purpose of the maintenance;

4. The date and nature of all breakdowns or repairs of a mechanical part, including the identity of the individual who completed the repair, and a reference to the specific manufacturer's procedure which was followed. If the manufacturer does not provide a procedure for repair, the owner shall have a professional engineer create a procedure and shall notify the Department in writing of the new procedure which shall be added to the permanent record of the ride; and

5. Daily Maintenance Inspection Log. The certified maintenance mechanic or the maintenance technician shall complete the daily maintenance inspection log each day before the ride is allowed to operate. A daily maintenance inspection log shall be kept for each ride. The daily maintenance inspection log shall be signed by the certified maintenance mechanic. The daily maintenance inspection entry shall include, but not be limited to:

- a. The name of the ride;

- b. The printed name of the certified maintenance mechanic reviewing the inspection log;

- c. The signature of the certified maintenance mechanic reviewing the inspection log;

- d. If the inspection is performed by a maintenance technician under the direction of the certified maintenance mechanic, the maintenance inspection log shall include the printed name and signature of both the maintenance technician and the certified maintenance mechanic;

- e. Date and time of the inspection;

- f. A summary of deficiencies found and corrected during the inspection of the amusement device;

- g. The results of the maintenance inspection.

6. Maintenance Repair Log. The certified maintenance mechanic or the maintenance technician shall complete the maintenance repair log. A maintenance repair log shall be kept for all work performed on each ride. The maintenance repair log shall be completed each time maintenance is performed on the amusement device. Each maintenance repair log entry shall be made within 48 hours of performing work. The maintenance repair log shall be signed by the certified maintenance mechanic. The maintenance repair log shall include but is not limited to:

- a. The name of the ride on which maintenance was performed;

- b. The date on which the maintenance was performed;

- i. The legible name of the person who performed the maintenance and a copy of any licenses or certificates held by such persons;

## 5.04: continued

- ii. Details of any repairs performed (for example, malfunction, repair, adjustment, lubrication, set-up, inspection, violation abatement, *etc.*);
  - c. An attachment of other repair related records such as welded repairs and NDT including but not limited to the manufacturer's authorized procedure.
- 7. Daily Operator's Inspection Log. Operators shall complete a daily operator inspection log before allowing patrons on a ride for the day. If a ride has been non-operational for any period of time and at the discretion of the owner, the operator shall perform a re-inspection and document their findings in the inspection log before placing the ride into operation again. The operator inspection log shall include, but not be limited to:
  - a. The name of the ride being inspected;
  - b. The legible name and signature of person completing the log;
  - c. The date of the inspection;
  - d. A detailed list and description of all items being checked; and
  - e. Details of testing within the timeframe specified in the operating manual of all control devices, speed-limiting devices, block system, emergency brakes, automatic and manual lowering devices and any other equipment provided for safety.
- 8. Itinerary.
  - a. At least ten business days prior to the first date of intended operation of an amusement device, the owner shall submit a complete itinerary to the Department on the form provided by the Department for this purpose. Itineraries for trailer mounted kiddie rides and inflatables shall be provided at least two business days prior to the first date of intended operation.
  - b. The itinerary shall:
    - i. Be in writing;
    - ii. Identify the intended ride by the USID number;
    - iii. Include scheduled rain date;
    - iv. Include requested time and date of inspection;
    - v. State the date the amusement device is scheduled to arrive at the location;
    - vi. State the date the amusement device is scheduled to begin operation;
    - vii. State the last date the amusement device is scheduled to be in operation at that location; and
    - viii. State the specific locations of use including the municipality, street and street number or block and lot.
  - c. Fees. The owner shall submit to the Department the fee for inspection as established by the fee schedule set forth in 801 CMR 4.02: *Fees for Licenses, Permits, and Services to be Charged by State Agencies.*
  - d. Amendments to the Itinerary.
    - i. The owner shall submit to the Department any additional dates and locations to the original itinerary at least ten days prior to the first date of intended operation on a form provided by the Department for this purpose.
    - ii. The owner of trailer mounted kiddie rides shall submit to the Department any additional dates and locations to the original itinerary at least two business days prior to the first date of intended operation on a form provided by the Department for this purpose.
    - iii. The owner shall submit any deletions to the original itinerary to the Department as soon as the owner becomes aware of such deletions.
    - iv. The owner shall submit any substitutions for amusement devices previously identified in the itinerary to the Department as soon as the owner is aware of the substitution. All substituted amusement devices shall have a valid permit.
  - e. Owners shall not set up at a location unless they have submitted a proper itinerary for that location. Owners shall not rely on or use itineraries of other companies in order to set up at a location. Each owner is responsible for submitting a proper and timely itinerary for its amusement devices.
- (6) Training and Certification of Ride Operators.
  - (a) The owner shall ensure that all operators comply with the requirements of 520 CMR 5.00.
  - (b) In order to obtain a permit, the owner shall ensure that, at the time of initial operation in the Commonwealth, at least one operator is trained in conformance with the manufacturer's specifications, and has been issued an operator's certification by the owner, in a format approved by the Department.



## 5.04: continued

- (c) Only individuals who have been certified and who possess the required identification may operate the amusement device for which they have been trained and certified.
- (d) The owner shall ensure that operators are trained to operate the ride based on manufacturer requirements covered by the operational manual and any supplemental safety bulletins, safety alerts or other notices related to operational requirements. The owner shall ensure that operators are trained annually.
- (e) The owner shall that all staff operating belay systems for portable, fabricated inflatable and non-inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor, have been provided training as specified by the climbing wall manufacturer and/or belay system manufacturer. The owner shall require a certification signed by the belay operator indicating the ride name and level of training. This certification shall be kept on file by the owner for at least three years.
- (f) The owner shall ensure that ride operators operate no more than one ride at any given time.
- (g) The owner shall instruct all operators to give their full attention to any ride they operate.
- (h) The owner shall ensure that anyone who operates a ride shall have demonstrated the ability to operate the ride in compliance with all applicable requirements of 520 CMR 5.00.
  - 1. The owner shall ensure that each operator has read and understood the manufacturer's recommendations for the operation of the ride and, if applicable, any operations manual provided by the owner;
  - 2. Knows the safety-based limitations, including height, weight or other rider requirements regarding who may ride the ride;
  - 3. Is well versed on emergency procedures;
  - 4. Has had adequate training to operate the ride;
  - 5. Knows how to do the pre-startup operational ride checks as required by the manufacturer or as established by the owner in compliance with 520 CMR 5.00;
  - 6. Knows how to verify that the daily maintenance inspection log has been done prior to operating the ride;
  - 7. Has knowledge of the use and function of all normal and emergency operating controls and the proper use of the ride; and
  - 8. Has signed a ride specific certification attesting to 520 CMR 5.04(6)(g)1. through 7.
- (i) Operator certification must be worn by the operator and be readily visible to the general public. This certification must indicate whether the operator is over 18 years of age, display the operator's photograph, and indicate the amusement device for which the certification has been issued.

(7) Control of Operation. All amusement rides shall have an operating manual. The owner of an amusement ride shall operate the ride in accordance with the manufacturer's operating manual. In the absence of a manufacturer's operating manual, the owner shall write an approved operating manual, which shall be submitted to the Commissioner for review and approval. Where any conflict occurs between the operating manual and 520 CMR 5.00, 520 CMR 5.00 shall govern. The operating manual shall be kept at the site where the ride is in use and shall be available for use by the Department.

(8) Certified Maintenance Mechanics.

- (a) Every owner of amusement devices shall engage at least one individual as a certified maintenance mechanic. The certified maintenance mechanic shall be responsible for the maintenance and oversight of all amusement devices including ensuring that the proper maintenance repair logs and daily maintenance inspections logs are completed and are accurate.
- (b) The certified maintenance mechanic shall not perform or direct another person to perform any maintenance on a ride that does not comply with the manufacturer's specifications or 520 CMR 5.00.
- (c) During the term of the license period, owners shall notify the Department within 14 days of a change in the person engaged by the owner as the certified maintenance mechanic, including the dismissal from the owner's employment of any individual that served as a certified maintenance mechanic and the employment of a new individual as a certified maintenance mechanic.

(9) Riders or Operators Under the Influence of Alcohol or Drugs.

- (a) The owner or operator of an amusement device shall not permit a person who appears to be under the influence of alcohol or drugs to enter or ride an amusement ride.

## 5.04 continued

(b) Drug and Alcohol Policy. All owners shall have a drug and alcohol policy that prohibits employees from using or being under the influence of drugs or alcohol while operating amusement devices.

(10) Rider Accident Reporting Requirement. The owner shall designate an office or location as a site for reporting accidents or injuries. The office shall be open during operating business hours and shall be marked with clear signage. The owner shall be responsible for ensuring that the amusement incident report, or a form supplied by the owner containing the same information, has been completed. More than one office or location may be required so that the locations are within reasonable walking distance from any ride.

(11) Required Notices of Rider Responsibility.

(a) Printed notices advising the rider of the reporting requirements shall be in English, easily accessible to the general public, in areas where rides covered by 520 CMR 5.00 are operating, including all entrances, exits, and shall identify locations for receiving forms and the first aid station(s).

(b) Owners shall post warnings and directions for each ride which comply with the manufacturer's requirements. Such warnings shall be clearly legible and shall be in a conspicuous location.

(c) This sign shall be next to, above, below or may be combined with the required signs regarding accident reporting, rider conduct and warnings.

(12) Rider Conduct.

(a) The owner shall have the right to refuse any member of the public admission to a ride if his or her conduct might endanger himself, herself or other members of the public.

(b) The owner shall have the right to refuse admittance to any rider if the intended rider's health or physical condition makes it unsafe to use the ride.

(c) The owner shall refuse a rider admission to a ride if the rider cannot meet a companion, height, or other physical restriction.

(13) Serious Injury/Investigation.

(a) Notification. Within one hour from the time that a serious injury or mechanical malfunction becomes known or should have been known, the owner or his or her representative shall report the incident to the following telephone number: 508-820-1444. The amusement device shall not be moved from the site of the serious injury until approval is granted by a state inspector. The only exceptions to this requirement are for preservation of life and property, the removal of injured persons or bodies, or to permit the flow of emergency vehicles. The amusement device and area surrounding the amusement device shall not be disturbed, cleaned, or altered in any way that will impede the investigation. The Department shall investigate the incident pursuant to M.G.L. c. 140, § 205A.

(b) Investigation.

1. In the event that a serious injury or mechanical malfunction (major damage to device without injury) incident occurs as a result of a malfunction of an amusement device or a serious injury incident results in major damage to the amusement device or any of its component systems, the amusement device shall be immediately shut down and secured until a state inspector has completed an investigation. No person shall move or alter the serious injury incident scene or the amusement device, except to remove the victim(s), until the state inspector has determined that the ride is safe. If a serious injury incident occurs on an amusement device as the result of the malfunction of the device or a serious injury results in major damage to the amusement device or any of its component systems, a report shall be submitted to the Department within 48 hours as required under M.G.L. c. 140, § 205A.

2. In the event of a serious injury incident/mechanical malfunction, the owner and operator of the amusement device shall be responsible for securing the amusement device and shall be accessible to the Department and its state inspector.

(14) Transfer of Ownership. Upon the transfer of ownership of any amusement device, the owner of the amusement device being transferred shall notify the Department in writing of the transfer, and shall transfer all records pertaining to that amusement device to the new owner. The new owner shall obtain a new license and permit prior to operating the amusement device.

5.05: continued

2. Information as necessary for those rides that have individual approval or supplemental modification certification based on the manufacturer's documentation supplied by the owner or responsible person; and
3. Other documents requested by the Department as a result of an incident involving a ride.

(6) Departmental Remedies for Non-compliant Manufacturers. The Department shall have the authority to prohibit the use of any amusement device in the Commonwealth until such time that the manufacturer has:

- (a) Complied with the orders of the Department requiring engineering analysis to be prepared and submitted to the Department;
- (b) Submitted to the Department all safety bulletins issued on the amusement device or classes of amusement devices, as well as all operational and maintenance manuals for the amusement device; and
- (c) Complied with any orders imposed by the Department in order to bring the amusement device into compliance with 520 CMR 5.00.

5.06: Revocation and Suspension of Licenses and Permits

(1) Scope. 520 CMR 5.06 establishes the suspension and revocation procedures for all licenses and permits, including those for inflatables, challenge courses and artificial climbing structures.

(2) Suspension or Revocation of Amusement Device License or Permit.

(a) An owner may have his or her license or permit suspended or revoked after a hearing for:

1. Unauthorized operation of an amusement device;
2. Failure to properly maintain records as required by 520 CMR 5.00;
3. Failure to repair any amusement device as ordered or noted by a certified inspector or state inspector;
4. Negligence of the owner, operator or certified maintenance mechanic, or certified inflatable device mechanic in connection with the maintenance, repair or operation of an amusement device;
5. Continuing to operate an amusement ride without the Department's authorization when an incident or accident occurs that is required to be reported by 520 CMR 5.00;
6. Failure to notify the Department of any incident or accident as required by 520 CMR 5.00;
7. Modifying a ride without approval by the Department;
8. Operating in a manner likely to cause injury;
9. The knowing submission of false, invalid, incorrect or fraudulent information related to the maintenance or design of the ride or its safe operation;
10. Failure to provide the Department with a proper or timely itinerary or modified itinerary in accordance with 520 CMR 5.04(5);
11. Failure to maintain the required insurance;
12. Failure to comply with the provisions of 520 CMR 5.00 or M.G.L. c. 140, § 205A;
13. Permitting an employee to work, other than on a provisional basis, as a certified maintenance mechanic, certified inflatable device mechanic, maintenance technician, ride operator, or operator assistant without having first conducted a criminal history check on that employee as required by 520 CMR 5.04(16) and 5.09(2)(h); and
14. Failure to abide by a term of the criminal history inquiry procedure submitted to the Department pursuant to 520 CMR 5.04(16) and 5.09(2)(h).

(b) Any owner who has a permit or license suspended or revoked pursuant to 520 CMR 5.06(2) shall not operate the affected amusement device or devices until the supervisory period is over or such license and/or permit is restored by the Department through the regular application process.

(3) Notice of Violations; Hearing and Appeals.

(a) Notice of Violation. The Department shall send written notice of the alleged violation(s) to the owner.

(b) Hearings. All hearings held pursuant to 520 CMR 5.06(3) shall be conducted in accordance with M.G.L. c. 30A and 801 CMR 1.02: *Informal/Fair Hearing Rules*.

5.06: continued

(c) Appeal. Any person aggrieved by a determination of the Commissioner or his or her designee may appeal to the Superior Court in accordance with M.G.L. c. 30A, § 14.

(d) Immediate Shutdown of an Amusement Device. The Commissioner or his or her designee shall immediately shut down an amusement device if:

1. An injury requiring medical treatment has occurred on an amusement device, reasonably due to a defect or malfunction in the amusement device; or
2. If the amusement device constitutes a hazard to life, limb or property as determined by the Commissioner or his or her designee or by an agent of the insurance carrier.

(4) Re-inspections Following a Shut Down. The amusement device shall remain closed until all necessary repairs have been completed to the satisfaction of the Commissioner or his or her designee and the insurance carrier. Operation of the amusement device shall not be resumed until the amusement device has been re-inspected by the Department and found to be safe for operation.

5.07: Design and Construction

(1) Scope. 520 CMR 5.07, in addition to the national standards adopted by 520 CMR 5.00, establishes minimum criteria, information and procedures for the design and construction of amusement devices other than inflatables.

(2) Passenger Tramways. Passenger tramways are not amusement devices and are not subject to the requirements of 520 CMR 5.00.

(3) Fire Prevention. All aspects of fire prevention shall be in accordance with 780 CMR: *The Massachusetts State Building Code* and 527 CMR 1.00: *Massachusetts Comprehensive Fire Safety Code*.

(4) Construction Requirements. Any building or structure associated as a functional part of or housing the ride shall be constructed in conformance with 780 CMR 1.00: *Scope and Administration*.

(5) Pressure Vessels, Air Compressors, and Hydraulic Systems. Pressure vessels shall conform to the requirements of 522 CMR 7.00, 522 CMR 8.00 and M.G.L. c. 146, §§ 34 through 41. Air tanks and other receptacles used in connection with air compressors shall be inspected in accordance to M.G.L. c. 146, § 39 and the certificate of inspection issued by the Department shall be kept in the maintenance repair log at the ride at all times.

(6) Manufacturer's Data Plate.

(a) The manufacturer shall affix a data plate to each ride in compliance with 520 CMR 5.00.

(b) Every amusement device shall be identified by a data plate which contains the information required by ASTM F 698. This includes, but is not limited to:

1. The name and address of the manufacturer;
2. A trade or descriptive name of the ride;
3. The manufacturer's serial number;
4. The maximum safe number of riders;
5. The maximum safe speed at which the ride can operate;
6. The minimum and maximum safe weight limit per vehicle or per rider (if applicable);
7. The recommended direction of travel; and
8. The minimum and maximum height restrictions or weight restrictions for riding alone and riding accompanied.

(c) This data plate information shall be legibly impressed on a metal plate or equivalent and permanently affixed in a location on the ride visible at all times.

(d) Where no data plate exists, the owner shall apply a new data plate in conformance with the manufacturer's instructions with approval of the Department.

(7) Electrical Requirements. The Department hereby adopts by reference the *2008 National Electrical Code* as it pertains to amusement devices.

As indicated in the *National Electric Code*, the following should be noted:

(a) All Controls Shall Be Lockable. Operator switches are not a substitute for lockable controls.

## 5.07: continued

- (b) Local electrical inspectors have the authority to inspect any electrical device to ensure that it is safe and installed in accordance with the currently accepted code.
- (c) During assembly/disassembly, no energized points/surfaces shall be exposed to any personnel.

(8) Chain.

- (a) The chain factor of safety shall be defined as the ultimate tensile strength of the chain divided by the maximum steady state tension.
- (b) Chain and related accessories shall be selected and designed for specified design loads, speed, corrosion, operating environmental and dynamic conditions, and for wear and fatigue.
- (c) Chain manufacturer's specifications shall include dimensions, strength, grade, and nominal breaking strength-working load limit, and shall be included in the maintenance instructions.
- (d) The capacity of the chain and related accessories, for example, terminations, adapters, shall be verifiable either by certificates, manufacturer's markings, or testing.
- (e) Chains in the primary load path that do not pass around sprockets or wheels shall have a minimum factor of safety of five.
- (f) Chains in the primary load path that pass around sprockets or wheels shall have a minimum factor of safety of six.
- (g) A method shall be used to maintain proper chain contact with sprocket teeth and pulleys.
- (h) The amusement device manufacturer shall include in the maintenance instructions the method to measure chain wear and the maximum allowable change in pitch length.
- (i) Metallic chain guides shall be lined or appropriately protected.
- (j) The amusement device manufacturer shall include cleaning and lubrication details in the maintenance instructions.
- (k) Chains on lift hills shall be retained in the trough.

(9) Wire Rope.

- (a) Wire rope may be used in systems such as drive, suspension, tension, braking, and counterweight.
- (b) Wire rope consists of individual wires that are twisted into strands that form the rope.
- (c) Wire rope and wire rope accessories, including terminations, adapters, and clamps, shall be designed for the specified design drive configuration, cycles, load(s), corrosion, dynamics, environment, wear, fatigue, and service conditions.
- (d) Wire rope and wire rope accessories in the primary load patch shall have a minimum factor of safety of six.
- (e) The wire rope factor of safety is defined as the ultimate tensile strength of the wire rope divided by the maximum steady state tension.
- (f) The capacity of the wire rope and related accessories, for example, terminations, adapters, shall be verifiable either by certificates, manufacturer's markings or testing.
- (g) Wire rope systems shall be configured to minimize the forming of kinks or knots on any part of the wire rope system from normal use, and shall be designed to avoid excessive local stressing of individual elements. For example, individual wires or strands within the rope.
- (h) All splices shall be done according to the rope manufacturer's wire rope splice specifications.
- (i) A method shall be used to maintain proper rope contact with sheaves and pulleys.
- (j) Wire rope guides shall be lined or appropriately protected.
- (k) The wire rope manufacturer shall recommend the type and frequency of lubrication and corrosion protection. Ropes that have little or no motion, such as ropes in static tension systems, anchors, and guys, require special consideration for protection against corrosion.
- (l) Wire rope on amusement rides shall be thoroughly examined periodically, by a maintenance mechanic. Wire rope found to be damaged shall be replaced with new rope of proper design and capacity as per the manufacturer's specifications. Any of the following conditions shall be cause for replacement:
  1. In running ropes, six randomly distributed broken wires in one rope lay or three broken wires in one strand in one rope lay;
  2. In pendants or standing ropes, evidence of more than one broken wire in one rope lay;
  3. Any condition which causes the loss of more than  $\frac{1}{3}$  of the original diameter of the outside individual wires;
  4. Severe corrosion;
  5. Kinking, crushing, bird-caging, or other damage resulting in distortion of the rope structure;

## 5.07: continued

- 6. Heat damage;
  - 7. Reduction from normal diameter of more than 3/64 inch for diameters up to and including 3/4 inch, 1/16 inch for diameters, 7/8 inch to 1 1/8 inches, 3/32 inch for diameters 1 1/4 inches to 1 1/2 inches;
  - 8. Birdcaging or other distortion resulting in some members of the rope structure carrying more load than others; or
  - 9. Noticeable rusting or development of broken wires in the vicinity of attachments. When this condition is localized in an operational rope, it may be eliminated by making a new attachment.
- (m) Wire ropes used to support, suspend, bear or control forces and weights involved in the movement and utilization of tubs, cars, chairs, seats, gondolas, other carriers, the sweeps, or other supporting members of an amusement ride shall not be lengthened or repaired by splicing. In addition, these shall have a redundant support system capable of carrying the full load. Redundancy of the support system may also be accomplished with a design that includes a higher safety factor in the manufacture of the support system.
- (n) Rides utilizing vehicles hanging or suspended from a wire rope shall relocate the vehicles on an annual basis as required by manufacturer's specifications.
- (o) Previous fastening points shall be clearly marked for identification when disassembling.
- (10) Machine Guards.
- (a) The manufacturer shall provide machine guards or other appropriate measures to inhibit employees and patrons from undesirable contact with belts, chains, pulleys, gears, drive lines, and similar moving machinery.
  - (b) Drive shafts shall be provided with safety containment.
  - (c) Chain and sprocket guards shall be provided in compliance with ANSI/ASME B15.1, Safety Standards for Mechanical Power Transmission and Conveyors and Related Equipment.
- (11) Stopping and Emergency Brakes. Emergency brakes and anti-rollback devices shall be provided and maintained in compliance with the manufacturer's specifications. If any apparent damage beyond normal wear, as indicated in the maintenance manual, is occurring to the anti-rollback dogs, the ride shall be shut down and repaired.
- (12) Parking Brakes. Parking brakes shall keep the ride from moving during loading and unloading. In some cases, the brake may be a dynamic brake that stabilizes the ride.
- (13) Fencing.
- (a) General. All amusement devices shall be provided with fences or other apparatus and controls as may be necessary to do the following:
    - 1. Confine operating staff and patrons within the boundaries of the device to safe areas.
    - 2. Ensure the safety of persons in the vicinity of the amusement device, but not immediately participating in the activity of the amusement device; and
    - 3. Ensure the safety of the operating staff.
  - (b) Fencing. When fences and gates are designed and manufactured to provide protection to spectators and riders, they shall be constructed to meet the following minimum requirements:
    - 1. They shall be a height of at least 42 inches above the surface on which the inspectors and riders stand.
    - 2. They shall be constructed in such a fashion so as to reject a four inch ball at all openings;
    - 3. They shall be designed, constructed, and erected to inhibit overturning by spectators;
    - 4. Where used, entrance, exit, and loading gates shall open away from the ride or device unless equipped with a positive latching device;
    - 5. Gates shall be designed such that if opened during the amusement ride cycle, the gate will not come into contact with the amusement ride or cause a hazard to riders; and
    - 6. Fences and gates shall be constructed as to inhibit spectator contact with the ride or rider contact with fences or gates, or both.
- (14) Means of Access and Egress. Safe and adequate means of access to and egress from a ride shall be provided. Stairways or ramps and connecting landings or platforms shall be provided where the entrance to or exit from a ride is not at grade.

## 5.07: continued

(15) Welding. All welding on structural parts of an amusement device or on sections of amusement devices that effect the mechanical safety of the device shall conform to 520 CMR 5.07(15).

Welding procedures shall be in accordance with American National Standards Institute/American Welding Society (ANSI/AWS) or American Society of Mechanical Engineers (ASME), or equivalent standards. All welding used as a method of fabrication or assembly shall be in accordance with the appropriate American Welding Society (ANSI/AWS D1 specification).

(16) Mechanical Fastening. All fasteners and replacement fasteners shall be in accordance with the ride design specifications per the manufacturer.

(17) Foundations for and Siting of Rides at Fixed Locations.

(a) Before any ride is sited for the first time or moved, a copy of the permit application submitted to the local building department, including all plans and specifications, shall be submitted to the Department for review. The submission shall include the following:

1. Foundation drawing(s) and calculations signed and sealed by a licensed professional engineer or a letter signed and sealed by a Massachusetts registered professional engineer certifying that the existing foundation, pad, or other support structure will support the ride in all design conditions;
2. A soil report for rides that require new foundation work; and
3. Site specific environmental information, if this information was not already submitted to the Department. Site specific environmental information shall not be required for rides when the design covers all environmental design conditions found in the Commonwealth.

(b) After the ride is erected, but prior to opening to the public, a copy of the inspection report by the designer or its representative shall be submitted to the Department.

(c) If a ride, which is designed for traveling, is set up for three months or more, the following information shall be submitted to the Department for review: Documentation of the manufacturer's set-up requirements, including documentation regarding the weather or other conditions under which the ride may safely operate and the environmental design conditions. When those conditions are exceeded, the ride shall be taken down.

(18) Internal Combustion Engines.

(a) Internal combustion engines shall be of adequate type, design, and capacity to handle the design load.

(b) Where fuel tanks of internal combustion engines for amusement rides are not of adequate capacity to permit uninterrupted operation during normal operating hours, the amusement ride shall be closed down and unloaded or evacuated during the refueling procedure. The fuel supply shall not be replenished while the engine is running.

(c) Where an internal combustion engine for an amusement ride is operated in an enclosed area, the exhaust fumes shall be discharged to the outside.

(d) Internal combustion engines for amusement rides shall be located to allow proper maintenance and shall be protected by guards, fencing or enclosure.

(19) Warning Signs.

(a) On rides that expose a rider to high speed, substantial centrifugal force or a high degree of excitement, the owner shall post a conspicuous warning sign at the entrance of the ride advising the public of the potential risk to riders.

(b) The signs required shall be in sharply contrasting colors and be legible to a person of normal vision standing at a point of entrance to the ride.

(c) The limitations shall be as specified by the manufacturer.

(d) Operators and operator assistants are responsible for the maintenance of signage in or around the ride. Rides and attractions requiring signs inside each vehicle instructing riders of the safest way to ride shall be maintained at all times. If any vehicle is missing the safety signage, the ride shall not be allowed to operate unless the owner has submitted and received approval from the Department for a policy that requires the vehicle to be positively locked and tagged out to prevent inadvertent use.

(e) If a sticker or on-ride signage is missing, the individual car or vehicle will be locked out utilizing a procedure that has been approved by the Commissioner or his designee. In lieu of such a program, the entire ride shall be taken "out of service" and not allowed to be operated until the proper signage is in place.

5.08: Operation of Amusement Devices(1) Scope.

(a) 520 CMR 5.08 establishes the procedures for owners, operators and manufacturers of amusement devices other than inflatables to follow during the operation of an amusement device in Massachusetts to assure that the ride is properly set-up, maintained and will be safe for the riding public.

(b) All rides shall be maintained in conformance with the manufacturer's specifications and the approved design.

(2) Daily Maintenance and Operator Inspections and Test.

(a) Operators shall not operate any ride that has not had a daily maintenance inspection and operator's inspection done prior to opening to the public on that day.

(b) The Department shall not inspect or issue a permit for a ride without a current copy of the following items being on site and available to the inspector:

1. The manufacturer's set up and assembly manual;
2. The manufacturer's maintenance manual;
3. The manufacturer's operation manual;
4. The daily maintenance inspection and checklist;
5. The daily operational inspection and checklist;
6. The maintenance log; and
7. The NDT plan, if applicable.
8. The maintenance log shall be done prior to the ride being opened to the public. The maintenance log may be completed by the same person that will be operating the ride as long as that individual is qualified to complete the maintenance log.

(c) Individual tubs, sweeps, vehicle chassis, bents, towers, and supports to ground shall be uniquely identified and marked with no more than a combination of six characters or numbers to facilitate identification during maintenance and inspection.

(3) DIGSAFE Number. When any excavating is to be performed or ground rods are to be used, DIGSAFE shall be called and the DIGSAFE number shall be identified on the local building permit (use of premise permit). DIGSAFE requires 72 hours prior notice before work can be started. The DIGSAFE telephone number to be called to obtain this number is 888-344-7233.

(4) Site Layout.

(a) The site on which rides are to be erected shall be reasonably:

1. Free of large rocks and debris that might pose a hazard;
2. Well maintained to ensure safe operation;
3. Free of holes that might pose a hazard;
4. Sufficiently level to allow safe operation of the ride; and
5. Far enough away from vehicle traffic to provide a safe environment for the public.

(b) Wherever required by the manufacturer, proper protection between the amusement device and the ground shall be provided.

(c) Whenever foundations are required for a ride, the owner shall submit the required documentation to the local building department.

(5) Ride Operator.(a) Control of Operation.

1. The correct number of operators necessary to safely operate the ride, based on the operating manual, shall be on site and in the correct location(s).
2. An operator shall not leave the ride unattended without disabling the controls so that the ride cannot be started by unauthorized persons. If the ride is left unattended and disabled during an operational day, the operator, upon returning, shall run a complete cycle of the ride, prior to re-opening the ride.
3. The operator or operator assistants shall check each and every restraint, constraint, seatbelt, lap bar and any other device used in securing riders into a vehicle individually to assure that it is locked properly and that the rider fits properly in the safety system.
4. Additional operation start button(s) shall be provided where loading and unloading operations are being performed in an extended area where safety restraints, harness and other devices are required to prevent ejection from the ride during operations. The start button(s) shall work in series in that all button(s) shall be depressed by operators before the ride will start.



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5. The operator or operator assistant shall check the height, weight or size of riders, as applicable, with the height mark, scale or other means of measurement provided by the owner. The means of measurement shall enable the operator to determine whether a rider meets the required limit in a "go, no go" fashion. No one who does not meet the required limits shall be permitted to ride the ride.
    - a. When the weight of a rider is used to determine entry to or use of a ride, an accurate scale shall be provided.
    - b. A rider not meeting the approved height restriction may be accompanied by a companion if provided for in the manufacturer's operations manual or otherwise specified by the manufacturer. Companions shall meet any requirements given in the manufacturer's specifications. The larger person shall be by the exit door to ensure it stays closed and latched during operation unless this arrangement of riders creates a conflict with 520 CMR 5.08(5)(a)5.c.
    - c. Where riders are of disparate sizes, riders shall be placed in the ride such that any action caused by centrifugal forces shall push the weight of the lighter rider into the heavier rider.
    - d. Riders at or above the maximum weight may be allowed if such riders are provided for in the manufacturer's operations manual. Distribution of such riders shall be as per the operations manual.
  6. All powered rides shall be equipped with a properly functioning operator presence device.
    - a. The operator shall be in constant contact with the operator presence device at all times during normal operation of the ride. 520 CMR 5.08(5)(a)6. shall not be construed to prohibit riders from using ride operating controls designed for use by a rider.
    - b. The operator presence device shall be tested at each inspection.
    - c. Where, by design, no operator presence device is available, the operator shall remain within arms' reach (a safety zone) of the ride's control panel while monitoring the ride during normal operation. The safety zone will be highlighted by contrasting color which shall delineate the operator's area of allowable movement.
  7. The ride operator shall exercise control over the ride to prevent dangerous actions by a rider.
  8. In the event of an emergency stop, routine stop (for the purpose of loading or unloading of a rider), or a stop for any other reason, the operator or operator assistants shall assure that no other riders have exited their vehicles unexpectedly.
- (b) Operator Qualifications.
1. The ride operator shall be 18 years of age or older.
  2. The ride operator or operator assistant shall not operate any ride while under the influence of drugs or alcohol.
  3. The operator and all operator assistants shall have a complete knowledge of the operation of the restraint system, lap bar locking system, seatbelts and the proper way to seat a rider in a vehicle.
- (c) Operator Training.
1. The ride operator shall be properly trained before being assigned the duties of operating a ride as specified in 520 CMR 5.04(6). The owner shall require a certification to be signed by each ride operator and operator assistant indicating the ride name and operator's level of authority regarding the ride. This certification shall be kept on file by the owner for at least three years.
  2. The staff operating belay systems for portable, fabricated non-inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor, have been provided training as specified by the climbing wall manufacturer and/or belay system manufacturer. The owner shall require a certification signed by the belay operator indicating the ride name and level of training. This certification shall be kept on file by the owner for at least three years.
  3. The ride operator shall wear a tag identifying they have successfully completed the training program for the ride they are operating. Any such identification shall include their full name, that they are 18 years of age or older, a photo and the name of the device for which they are certified.
  4. The ride operator shall have access to a copy of the manual and shall have the ability to read and understand the manual as written by the manufacturer and to safely operate and communicate safe riding policies to the public for the ride.

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5. The operator and all operator assistants shall be trained to be aware of the motions and sounds attributed to the normal operation of the ride. The operator shall be familiar with how the ride looks when it is functioning normally, and be alert to any unusual conditions. If there are any changes in the normal operating condition, operation shall cease and the owner shall be called immediately. The owner will decide the appropriate action to be taken.

6. Operators and operator assistants shall know the whereabouts of all safety equipment such as fire extinguishers, emergency main electrical disconnect, lock-out point and nearest telephone for routine or emergency assistance.

(6) Lock-out Procedure.

(a) All owners shall have in place a written lock-out procedure.

(b) All amusement device disconnecting devices shall be provided with a means of lock-out. Where rides have mechanical, pneumatic or hydraulic energy, these systems shall have a means of being locked out when necessary for doing maintenance and inspections.

(c) The ride operator or maintenance mechanic shall lock-out the disconnect switch when restoration of power to an amusement ride could create a hazard to persons during the performance of maintenance, repair, inspection or an emergency evacuation of riders, and ensure that it remains locked-out until such time that restoration of power will not create a hazard.

(d) A lock-out shall not be removed by any person other than the person, who installed it, except as allowed by the written procedure for lock-outs. Lock-outs put in place by the Department shall be removed only by the Department.

(7) Set Up, Maintenance and Repair Operations Affecting Structural Integrity or Key Components.

(a) Rides shall have no excessive corrosion or pitting affecting structural integrity or the functioning of key components.

(b) Rides shall be operated and maintained in compliance with the manufacturer's specifications for fatigue loading. No holes shall be drilled into tubing that might compromise the integrity of the structure without written permission from the manufacturer. In the event the manufacturer does not exist, a Massachusetts registered professional engineer shall review and approve, in writing, the actions and reasons for said actions. The manufacturer or the professional engineer shall demonstrate to the Department upon request, from materials standards or from the maintenance manual, that the proposed hole sizes and locations will not compromise the integrity of the structure.

(c) No structural shaft may be cross-drilled or welded without the written permission of the manufacturer. In the event the manufacturer does not exist, a Massachusetts registered professional engineer shall review and approve, in writing, the actions and reasons for said actions.

(d) During installation, set-up to begin seasonal operation or assembly after disassembly for mechanical malfunction, an owner shall use or order to be used fasteners supplied by or the equivalent to those specified by the manufacturer.

1. All pins used shall adhere to manufacturer's specifications in length, hardness and type.

2. All safety pins, such as "R" keys, and "cotter pins", shall be as per manufacturer's specifications.

3. All fasteners shall be tightened to manufacturer's specified torque values.

(e) Before being used by the public, rides shall be so placed or secured with blocking, cribbing, outriggers, guys or other means as to be stable under all operating conditions.

(f) Any and all welding done on the amusement ride shall be performed by a welder certified by the American Welding Society (AWS) or an acceptable alternative welding certification with proof of certification on site at all times.

(g) Any and all work performed by a machine shop, repair facility, or a third party of any kind for any reason shall be done to the documented specifications of the manufacturer or of a Massachusetts registered professional engineer, as appropriate, based on a written repair plan.

(h) All work done shall be done to manufacturer's specifications.

(i) Prior to re-inspection following a repair, the owner shall provide the Department with documentation that the repair was performed in accordance with the maintenance manual or any instruction from the manufacturer.

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1. When requested by the Department, copies of all correspondence regarding a specific repair not covered in the manual shall be sent to the Department. Copies of subsequent correspondence shall be sent as they occur.
  2. If a manufacturer no longer exists or no other manufacturer has taken over responsibility for the technical support of the ride, then the ride owner shall make the repair following accepted engineering practice. Notice of such repair, including a description of the repair procedure, shall be given to the Department.
- (8) Vehicle Integrity.
- (a) The interior and exterior parts of all rider carrying rides with which a rider may come in contact shall be smooth and rounded, free from sharp, rough or splintered edges and corners, with no protruding studs, bolts, screws or other projections which might cause injury.
  - (b) Interior parts upon which a rider may be forcibly thrown by the action of the ride shall be adequately padded.
  - (c) Seatbelts, lap bars, straps, shoulder harnesses, chains, secondary locking devices and any other form of restraint, constraint or containment device shall be in proper working order or the entire device shall be removed from service and tagged "Out of Service". The only allowable exception shall be the use of an approved "seat lockout" program to be utilized to shut down an individual seat where a repair is needed. In *lieu* of such a program, the entire device shall be shut down until a repair has been made.
  - (d) Handholds, bars, footrests and other equipment as may be necessary for safe entrance and exit to and from amusement rides shall be provided and maintained in a safe condition. Such equipment shall be of sufficient strength to support the riders.
  - (e) Where only individual units of a ride, such as cars, seats or other carriers are defective and not in compliance with 520 CMR 5.00, the entire device shall be taken out of service and clearly marked with a sign reading "Out of Service", unless the owner has submitted and received approval from the Department for a seat lockout program.
- (9) Voice Communication and Signal System.
- (a) Voice communication shall be provided between the ride operators at the entrance, intermediate points, and the termination of an amusement ride where voice communication improves control of the ride by reducing a hazardous condition created by distance or lack of visibility between these points.
  - (b) An additional operator and a signal system shall be provided where the operator of the ride does not have a clear view of the point at which riders are loaded or unloaded. The additional operator shall be stationed so as to be able to observe all areas not visible to the operator of the ride.
  - (c) For rides and attractions which require verbal instruction or warning prior to operation, this instruction shall be given in a manner that is clearly audible to all riders prior to the start of each ride cycle. This instruction shall be consistent with the operation manual.
  - (d) Any code of signals adopted for the operation of any ride shall be printed and kept posted at both the operator and signalman's stations. All persons who may use these signals shall be carefully instructed in their use.
  - (e) Signals for the movement or operation of a ride shall not be given until all riders and other persons who may be endangered are in a position of safety.
- (10) Proximity to High Voltage Lines. It is the responsibility of the owner to ensure that amusement devices are located so that they do not come in close proximity to high voltage lines, which could result in electrocution or ride damage.
- (11) Ride Loading and Unloading. The means of loading and unloading from each ride shall be maintained in compliance with the manufacturer's specifications.
- (12) Protection Against Moving Parts or Other Hazards and Clearance Envelopes.
- (a) Owners, operators and operator assistants shall be aware of any construction equipment or vehicles operating in the immediate vicinity. Any equipment encroaching on the normal range of motion of the ride shall be removed to a safe distance or the ride shall not be operated.
  - (b) A ride shall not be used or operated while any person is so located as to be endangered by it. Areas in which persons may be so endangered shall be fenced, barricaded or otherwise guarded against public intrusion.

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- (c) Where a public access, queuing, loading or unloading area is under the ride, overhead protection from objects that might reasonably be expected to fall from a ride (for example, items carried or worn by riders) shall be provided, unless otherwise allowed by the Commissioner.
- (d) Machinery used in or with an amusement ride shall be enclosed, barricaded or otherwise effectively guarded against contact. Guards removed for maintenance purposes shall be replaced before normal operation is resumed.
- (e) Rides which are self-powered and which are operated by a rider shall have the driving mechanism so guarded and the guard so secured in place as to prevent riders from gaining access to the mechanism.
- (f) Each ride shall be rendered inoperable when not attended or in use.
- (g) Clearance envelopes shall be maintained as per manufacturer's specifications at all times during the operation of an amusement ride.
- (h) Decorations, such as flags, or lighting fixtures shall be secured in a fashion that they will not create a hazard to riders or members of the public in the event of high winds or normal vibration caused by moving equipment and shall be placed far enough from the ride so as not to encroach on the clearance envelope.

(13) Rider Restraint, Restrictions, Containment. Restraining, containing or cushioning devices shall be maintained in compliance with the manufacturer's specifications.

(14) Overload and Over Speed.

- (a) An amusement device shall not be overcrowded or loaded in excess of its safe carrying capacity. The maximum safe number of riders listed in the manufacturer's operations manual and on the data plate affixed to the ride shall govern loading.
- (b) Amusement device and attractions clearly suitable for children only shall not carry adults, unless allowed by the manufacturer's operations manual.
- (c) Amusement device shall not be operated at an unsafe speed or at any speed beyond that recommended by the manufacturer. The maximum safe operating speed of an amusement device can be found in the operations manual provided by the manufacturer and on the data plate affixed to the ride.
- (d) An amusement device capable of exceeding its maximum safe operating speed shall be provided with a maximum speed limiting device.
  - 1. An amusement device requiring a maximum speed-limiting device shall have the device connected in the control circuit immediately bringing the ride to a safe stop if the ride exceeds the maximum safe operating speed or the device is disabled or malfunctioning.
  - 2. The speed-limiting device shall not be by-passed or disabled in any way.
  - 3. The Department, when necessary, shall require the testing of speed limiting devices by the owner or owner's representative for reasons of ensuring proper functioning of these devices.

(15) Wind and Storm Hazards.

- (a) Operators and operator assistants shall be aware of weather conditions including, but not limited to, wind, rain, lightning and any approaching storm.
- (b) An amusement device which is exposed to wind or storm shall not be operated under dangerous weather conditions except to release or discharge riders.
- (c) Manufacturer wind and weather related restrictions shall be followed during periods of wind or storm. The restrictions shall be addressed in the operation manual, which shall be on site at all times.

(16) Lighting.

- (a) Amusement devices, including access and egress, while in operation or occupied, shall be provided with illumination by natural or artificial means sufficient to guard against injuries to the public.
- (b) All florescent lighting shall have the proper guarding to minimize shattering of glass on patrons.

5.09: Inflatable Devices(1) General Administrative Procedures.

(a) Scope. 520 CMR 5.09(1) establishes general administrative provisions including license and permit issuance, fees, and inspections for inflatable devices.

(b) Issuance of Annual License and Permits Denials; Appeals.

1. No person shall manufacture or sell for use in the Commonwealth, operate, arrange for, or cause to be used, any inflatable device that is not in compliance with 520 CMR 5.09.

2. Prior to any amusement owner being licensed to operate in the Commonwealth, the owner shall provide the following documents to the Department:

- a. Completed application as provided by the Department;
- b. Required fees in accordance with the fee schedule set forth in 801 CMR 4.02: *Fees for Licenses, Permits, and Services to be Charged by State Agencies*;
- c. Certified Inspector Report (except for small inflatables);
- d. Certificate of insurance demonstrating compliance with M.G.L. c. 140, § 205A, and 520 CMR 5.09.
- e. A list of the ride operators trained in conformance with the manufacturer's specifications and certified by the owner. Such list shall include the names of the certified ride operators who are 18 years of age or older and the devices for which they have been trained and certified to operate.
- f. A list of staff operating belay systems for portable, fabricated inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor, who have been provided training as specified by the climbing wall manufacturer and/or belay system manufacturer. The owner shall require a certification signed by the belay operator indicating the ride name and level of training. This certification shall be kept on file by the owner for at least three years.
- g. A list of Certified Inflatable Device Mechanics and a Certificate issued by the Department pursuant to 520 CMR 5.09(1)(j) for each Certified Inflatable Device Mechanic.
- h. A completed Criminal Offender Record Information (CORI) Request Form.
- i. A Pre-employment criminal history inquiry procedure in accordance with 520 CMR 5.09(2)(h).
- j. For portable, fabricated inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor; the owner shall affirm that:
  - i. Anchor supports for the wall comply with manufacturer specifications, EN12572 or CWA Engineering Specifications;
  - ii. Only automatic belay systems are used;
  - iii. Anchor supports for climbing wall meet the requirements of the auto belay manufacturer;
  - iv. Integral base and guardrail systems are provided as required by the manufacturer;
  - v. Harnesses that conform to either the rock wall manufacture recommendations ASTM F1772, UIAA105, or EN12277 are used by all patrons;
  - vi. Helmets that conform to either the rock wall manufacturer recommendations, EN12492 or UIAA106 or equivalent ASTM standards are used by all patrons.

3. The owner shall apply for an annual license at least ten days prior to commencing operations each year on a form supplied by the Department. An annual license shall be valid for a period of one year or until the expiration of the insurance certificate, whichever occurs sooner.

4. Licensure shall be conditioned upon the completion of a CORI inquiry by the Department pursuant to authorization granted by the DCJIS in accordance with M.G.L. c. 6, § 172(b) and (c) and in accordance with the Department's guidelines for evaluating CORI reports.

5. Upon approval, the Department shall issue a license to the owner to operate in the Commonwealth and permits for all inflatable devices identified in the application. The owner shall mark each inflatable device with a designated number for each approved inflatable device.

6. No inflatable device shall be operated without a valid annual license and permit.

7. Denial; Appeals. The Commissioner may refuse to issue a license to an applicant based on the following grounds:

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- a. Submittal of an incomplete application or submittal of an application on a form not authorized by the Department;
  - b. Failure to submit a Pre-employment criminal history inquiry procedure;
  - c. Failure to submit required fees;
  - d. Knowingly submitting false, invalid, incorrect or fraudulent information;
  - e. Failure to submit a CORI Request Form;
  - f. If at the time of application, the applicant is under investigation by the Department or other law enforcement agency in connection with the operation of inflatable devices;
  - g. If the Commissioner finds that the applicant does not possess the integrity and general fitness to operate amusement devices in a safe manner and in the public interest consistent with 520 CMR 5.00 or M.G.L. c. 140, § 205A.
8. If the Commissioner refuses to issue a license, he shall notify the applicant in writing, setting forth the reasons for the denial. Within 21 days of receipt of the denial, the applicant may make written demand upon the Commissioner for a hearing before the Commissioner or his or her designee to determine the reasonableness of the Commissioner's action. The hearing shall be held promptly and in accordance with M.G.L. c. 30A and 801 CMR 1.02: *Informal/Fair Hearing Rules*.
9. If, after a hearing, the Commissioner denies the issuance of the license, he or she shall notify the applicant in writing. Such notice shall be sent by certified mail and first class mail and shall contain the reasons supporting the denial. Within 30 days after receipt of the notice, the applicant may appeal such denial to Superior Court in accordance with M.G.L. c. 30A, § 14.
- (c) Fees. A fee shall be paid by the applicant for each inflatable device listed in the application in accordance with the fee schedule as set forth in 801 CMR 4.02: *Fees for Licenses, Permits and Services to Be Charged by State Agencies*.
- (d) Insurance Requirements.
1. Large Inflatables. The owner of a large inflatable device shall furnish proof of financial responsibility to satisfy claims for damages on account of any physical injury or property damage suffered by any person by way of commercial general liability insurance in the minimum amount of \$1,000,000.00 per occurrence limit with a \$2,000,000.00 general aggregate limit written on an occurrence form.
  2. Small Inflatables. The owner of a small inflatable device shall furnish proof of financial responsibility to satisfy claims for damages on account of any physical injury or property damage suffered by any person by way of commercial general liability insurance in the minimum amount of \$1,000,000.00 per occurrence written on an occurrence form.
  3. Certified inspectors shall also furnish proof of general liability insurance in the minimum amount of \$1,000,000 per occurrence limit written on an occurrence form.
- (e) State Identification Numbers.
1. Each inflatable device shall be identified using a number issued by the Department and marked on each device.
  2. When an inflatable device is approved, the Department shall assign an annual permit number to each device which shall be kept by the Department to identify that the inflatable device conforms with the requirements to be licensed for that year.
  3. New inflatable devices that do not have a Departmental issued number shall receive such number upon application for the annual permit along with other documentation required by 520 CMR 5.00.
- (f) Inspector and Police Admission to Grounds. As a condition of the license, owners shall grant unlimited access to any law enforcement officers fire officials or inspector(s) of the Department to the grounds and devices covered by 520 CMR 5.09 in the performance of their duties.
- (g) Inspections.
1. All large inflatable devices shall undergo an annual inspection that shall include but is not limited to all components specified by the manufacturer. All manufacturer recommendations pertaining to specialized testing and inspection procedures shall be followed.
  2. Inspection by the Certified Inspector.
    - a. All large inflatable devices shall be inspected by a certified inspector prior to being allowed to operate in the Commonwealth. Small inflatables are not required to be inspected by a certified inspector prior to operation.

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- b. The certified inspector shall ensure that the manufacturer's specifications and recommendations as they pertain to parts to be disassembled, inspected, and replaced are followed.
  - c. The certified inspector shall review all maintenance records for the inflatable device from the previous year and ensure that all pertinent safety bulletins and manufacturer specified repairs/modifications/upkeep requirements have been implemented where necessary.
  - d. For portable, fabricated inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor; the inspector shall confirm that:
    - i. Anchor supports for the wall comply with manufacturer specifications, EN12572 or CWA Engineering Specifications;
    - ii. Only automatic belay systems are used;
    - iii. Anchor supports for climbing wall meet the requirements of the auto belay manufacturer;
    - iv. Integral base and guardrail systems are provided as required by the manufacturer;
    - v. Harnesses provided conform to either the rock wall manufacturer recommendations ASTM F1772, UIAA105, or EN12277;
    - vi. Helmets provided conform to either the rock wall manufacturer recommendations, EN12492 or UIAA106 or equivalent ASTM standards.
  - e. The certified inspector will document, both in report form and photographs, any unusual issue that may be discovered. The inspector shall notify the owner and shall not certify the inflatable device until the issues are abated.
  - f. Upon completion of the inspection, the certified inspector shall document any and all findings that require attention as per the manufacturer, as well as any areas that are of concern to the certified inspector for further observation.
  - g. The certified inspector shall review all maintenance documentation concerning device repairs, all modifications and standard upkeep for the previous year. The certified inspector shall document any issues of concern and notify the owner of such concerns. Issues directly affecting the safety and integrity of the device shall be immediately addressed. The certified inspector shall not certify a device until the issues have been appropriately abated.
  - h. The certified inspector shall submit a report to the Department on a form provided by the Department. This report shall:
    - i. Identify all major modifications performed on the ride for the past year;
    - ii. Confirm the review of the maintenance logs from the previous year;
    - iii. Identify items found to be out of compliance and what was done to bring the device into compliance;
    - iv. Include the signature of the certified inspector; and
    - v. State the name and Massachusetts Certificate of Competency License Number of the certified inspector printed legibly.
- (h) Acceptance Inspection.
1. An acceptance inspection shall be performed on all newly constructed and manufactured large inflatable devices which are brought in to the Commonwealth for the first time. The acceptance inspection shall be performed by either the certified inspector or the manufacturer's representative. The acceptance inspection shall include the following:
    - a. A review of the operator training records and owner certification;
    - b. A review of the certification that the manufacturer has tested the device in accordance with applicable ASTM standards and determined that the ride is satisfactory. This certification shall remain with the ride;
    - c. A check of redundant safety systems; and
    - d. An operating inspection.
  2. Such documentation shall be submitted to the owner and the Department using the "New Ride Acceptance Form".
  3. For all other large inflatable devices brought in to the Commonwealth for the first time, an inspection shall be performed by the certified inspector in accordance with the requirements of 520 CMR 5.09(1)(g)2. before the ride may operate. Such inspections shall be documented and submitted to the Department using the "New Ride Acceptance Form".

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(i) Inspections by the State Inspector.

1. a. Small Inflatables. All small inflatable devices may be inspected by a state inspector at any time during the season as deemed necessary by the Commissioner to ensure that they are in compliance with 520 CMR 5.09. Small Inflatable devices may be inspected at the owner's designated location. The Department may charge a fee for inspections in accordance with the fee schedule set forth in 801 CMR 4.02: *Fees for Licenses, Permits, and Services to Be Charged by State Agencies*.
- b. Large Inflatables. Prior to the use of any large inflatable device, the state inspector may inspect the general safety of all large inflatable devices at the location of the set up to ensure that they are in compliance with 520 CMR 5.09.
2. The general safety inspection for all inflatable devices may include:
  - a. A review of all maintenance records;
  - b. A review of the daily operator logs;
  - c. A visual inspection of the device including:
  - d. Identification of the ride;
  - e. Inspection for adjacent hazards and interferences;
  - f. Inspection of the ride for obvious excessive wear;
  - g. Review of the blower, motor, and cord;
  - h. Anchorage points and stakes and/or weights.
  - i. For portable, fabricated inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor; the inspector shall confirm that:
    - i. Anchor supports for the wall comply with manufacturer specifications, EN12572 or CWA Engineering Specifications;
    - ii. Only automatic belay systems are used;
    - iii. Anchor supports for climbing wall meet the requirements of the auto belay manufacturer;
    - iv. Integral base and guardrail systems are provided as required by the manufacturer;
    - v. Harnesses provided conform to either the rock wall manufacturer recommendations ASTM F1772, UIAA105, or EN12277;
    - vi. Helmets provided conform to either the rock wall manufacturer recommendations, EN12492 or UIAA106 or equivalent ASTM standards.
3. The state inspector shall document any issues of concern and immediately notify the owner, or his representative, of such concerns. Issues directly affecting the safety and integrity of the device shall be immediately addressed. Upon completion of the inspection, the state inspector shall provide the owner, or his representative, with a written inspection report.
4. If a ride is not certified at the time of inspection, the state inspector performing the inspection shall state on the Amusement Device Checklist whether a re-inspection is required after the violation has been resolved.
5. Re-inspection. Where a ride is not certified for operation at the time of inspection and requires a re-inspection, an owner shall apply to the Department for a re-inspection.
6. The Department may charge a fee for re-inspection of a device in accordance with the fee schedule set forth in 801 CMR 4.02: *Fees for Licenses, Permits, and Services to Be Charged by State Agencies*.
7. Device Preparation.
  - a. The owner shall ensure that the large inflatable device is ready for the state inspection and operation at the scheduled time for the state inspection.
  - b. If the large inflatable device is not ready at the time of the scheduled state inspection, it shall be deemed to have failed the inspection. The inflatable device shall not operate until all violations have been resolved to the satisfaction of the Commissioner or his or her designee.
  - c. Personnel shall be available to operate all inflatable devices during the state inspection.
8. Variance.
  - a. If the owner or manufacturer believes that full compliance with 520 CMR 5.09 is overly burdensome, the owner or manufacturer may apply to the Commissioner for a variance from 520 CMR 5.09. The burden is on the applicant to demonstrate in writing to the Department that the granting of the variance would not compromise public safety or otherwise undermine the purpose of 520 CMR 5.09. Application for a variance shall be made on a form provided by the Department for this purpose shall contain such information as is required by the Department, and shall be signed by the applicant.



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b. Upon receipt of an application for a variance, the Commissioner, or his designee may:

- i. Grant the application with whatever conditions are deemed appropriate;
- ii. Deny the application without a hearing;
- iii. Any person aggrieved by this decision may file a request for an adjudicatory hearing with the Department within 30 days of receipt of the decision. All adjudicatory hearings shall be held in accordance with the provisions of M.G.L. c. 30A and 801 CMR 1.02: *Informal/Fair Hearing Rules*. Any person aggrieved by a decision made after a hearing may appeal to the Superior Court in accordance with M.G.L. c. 30A, § 14.

(j) Certified Inflatable Device Mechanic State Certification. Any individual who performs maintenance on inflatable devices for an owner may apply to the Department to be certified as a Massachusetts certified inflatable device mechanic through an examination administered by the Department, except that an individual who holds a NAARSO or AIMS Level I or II certification may be certified by the Department by providing proof of said certification in lieu of taking an examination. A certificate shall continue in force until the date of birth of the holder occurring more than 12 months but not more than 24 months after the effective date of such certificate unless suspended or revoked for incompetence or untrustworthiness of the holder. If any such certificate expires in an even year, any subsequent renewal shall expire on the next anniversary of the holder's date of birth occurring in an even year. If any such certificate or renewal thereof expires in an odd year, any subsequent renewal shall expire on the next anniversary of the holder's date of birth occurring in an odd year. A certificate issued to a person born on February 29<sup>th</sup> shall, for the purposes of 520 CMR 5.09(1)(j), expire on March 1<sup>st</sup>.

Certificate Extension - Military Service. If the certificate holder is on active duty with the armed forces of the United States, as defined in M.G.L. c. 4, § 7, clause forty-third, the certificate shall remain valid until the certificate holder is released from active duty and for a period of not less than 90 days following that release. For 520 CMR 5.09(1)(j) to apply, the certificate holder must be given an Honorable Discharge, a General Discharge, or an Under Other than Honorable Conditions (UOTHC) Discharge, as noted on their discharge and separation papers.

(2) Owner Responsibility.

(a) Scope. 520 CMR 5.09(2) establishes the responsibilities of owners of inflatable devices regarding the safe operation and maintenance of such devices.

(b) Device Equipment.

1. The owner shall not install, operate, or allow to be operated, any inflatable device that does not have a valid license and permit issued pursuant to 520 CMR 5.09.
2. Existing equipment shall be maintained in accordance with 520 CMR 5.09.

(c) All owners of inflatable devices shall comply with *ASTM Standards*.

(d) Records.

1. Copies of all manufacturer's bulletins or recommendations received by the owner shall be forwarded to the Department within 14 days of receipt.
2. The manuals for all large inflatable devices shall be kept with the device and shall be available for use by the Department.
3. The manuals for all small inflatable devices shall be kept with the owner at a designated location and shall be available to the Department upon request and available to the certified insurance inspector.
4. A record of all maintenance, inspections and tests for all inflatables shall be documented immediately upon completion of the test, inspections and maintenance performed, and shall be available to the Department for one year. After one year, such records shall be maintained by the owner and may be stored off site for the life of the device, unless the inflatable device is transferred to a new owner in accordance with 520 CMR 5.09(2)(k).

(e) Maintenance Repair Log. The certified inflatable mechanic or the maintenance technician shall complete the maintenance repair log each time maintenance is performed on the inflatable device. The maintenance repair log shall be signed by the certified inflatable device mechanic. The maintenance repair log shall include:

1. The name of the inflatable device on which maintenance was performed;

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2. The legible name of the person who performed the maintenance and a copy of any licenses or certificates held by such persons;
  3. Details of any repairs performed;
  4. An attachment of other repair related records such as welded repairs and NDT including but not limited to the manufacturer's authorized procedure.
- (f) Daily Inspection Log.
1. The daily inspection shall be performed by the ride operator for each day before allowing patrons on a large inflatable device for the day. The inspection log shall include:
    - a. The name of the device being inspected;
    - b. The legible name and signature of person completing the log;
    - c. The date of the inspection;
    - d. A detailed list and description of all items being checked.
- (g) Itinerary.
1. At least two business days prior to the first date of intended operation of a large inflatable device, the owner shall submit a complete itinerary to the Department on the form provided by the Department for this purposes. The itinerary shall:
    - a. Be in writing;
    - b. Identify the intended device by the USID number;
    - c. Include scheduled rain date;
    - d. Include requested time and date of inspection;
    - e. State the date the inflatable device is scheduled to arrive at the location;
    - f. State the date the inflatable device is scheduled to begin operation;
    - g. State the last date the inflatable device is scheduled to be in operation at that location; and
    - h. State the specific locations of use including the municipality, street and street number or block and lot.
    - i. Fees. The owner shall submit to the Department the fee for inspection as established by the fee schedule set forth in 801 CMR 4.02: *Fees for Licenses, Permits, and Services to Be Charged by State Agencies.*
  2. Amendments to the itinerary.
    - a. The owner shall submit to the Department any additional dates and locations to the original itinerary at least two business days prior to the first date of intended operation on a form provided by the Department for this purpose.
    - b. The owner shall submit any deletions to the original itinerary to the Department as soon as the owner becomes aware of such deletions.
    - c. The owner shall submit any substitutions for devices previously identified in the itinerary to the Department as soon as the owner is aware of the substitution. All substituted devices must have a valid permit.
  3. Owners shall not set up at a location unless they have submitted a proper itinerary for that location. Owners shall not rely on or use itineraries of other companies in order to set up at a location. Each owner is responsible for submitting a proper and timely itinerary for its inflatable devices.
- (h) Criminal History Inquiries.
1. All Owners shall submit for the Department's approval, a pre-employment criminal history inquiry procedure as a condition of their license. At a minimum, the procedure shall include the following provisions:
    - a. The owner will conduct criminal history inquiries of all individuals 18 years of age or older seeking employment for the positions of certified maintenance mechanic, certified inflatable device mechanic, maintenance technician, ride operator, and operator assistant pursuant to M.G.L. c. 6, § 172(c).
    - b. The owner will make all reasonable efforts to complete the inquiry prior to making an offer of employment for these positions.
    - c. The owner may offer provisional employment to an applicant not to exceed a period of 14 days, provided that the criminal history inquiry has been initiated and that the provisional employees is at all times under the direct supervision of an employee for whom a criminal history inquiry has been completed.
    - d. The owner will require that each applicant for employment for these positions provides consent to a CORI inquiry on a form provided by the DCJIS as part of his or her application for employment.

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- e. The owner will inform the applicant that the CORI may be utilized by the owner in the determination of suitability for employment. The Department may periodically review the records of CORI inquiry requests made by owners to ensure compliance with M.G.L. c. 6, §§ 168 through 175.
- f. The signature of the owner or the owner's designee certifying the licensee's intent to comply with the provisions included in the criminal history inquiry procedure submitted to the Department.
2. Owners may collect additional criminal offender information on employees for these positions provided that such information is lawfully obtained and that the procedure to collect such information is submitted to and approved by the Department prior to licensure of the owner.
3. Owners shall comply with all terms outlined in procedures submitted to the Department pursuant to 520 CMR 5.09(2)(h)2.
- (i) Ride Operators.
  1. The owner shall provide a ride operator for all large inflatable devices and may provide ride operators for small inflatables.
  2. Qualifications.
    - a. The ride operator shall be 18 years of age or older.
    - b. The ride operator shall not operate any inflatable device while under the influence of drugs or alcohol.
    - c. The ride operator shall have a complete knowledge of the operation of the inflatable device.
  3. Training. The owner shall properly train all ride operators to operate the inflatable based on manufacturer requirements covered by the operational manual and any supplemental safety bulletins, safety alerts or other notices related to operational requirements.
  4. The owner shall ensure that each ride operator:
    - a. Has read and understood the manufacturer's recommendations for the operation of the ride and, if applicable, any operations manual provided by the owner;
    - b. Knows the safety-based limitations, including height, weight or other rider requirements regarding who may use the device;
    - c. Is knowledgeable on emergency procedures;
    - d. Staff operating belay systems for portable, fabricated inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor, have been provided training as specified by the climbing wall manufacturer and/or belay system manufacturer. The owner shall require a certification signed by the belay operator indicating the ride name and level of training. This certification shall be kept on file by the owner for at least three years.
  5. Ride Operator Identification. The operator of a large inflatable shall wear a tag identifying they have successfully completed the training program for the large inflatable device they are operating. Any such identification shall include their full name, that they are 18 years of age or older, their photograph, and the name of the device for which they are certified.
  6. The owner shall ensure that a ride operator is monitoring the structure and the activities within the structure anytime a patron is entering, inside or exiting the structure. Such ride operator shall ensure that the number of patrons in the structure does not exceed the manufacturer's recommendations. To ensure public safety, the ride operator shall reserve the exclusive right to limit the number of patrons in the device and to order patrons out of the inflatable device. In the event of deflation, or injury, the ride operator shall immediately order all patrons out of the inflatable device, and shall ensure that the appropriate medical attention is taken for those injured.
- (j) Serious Injury/Investigation.
  1. Notification. Any serious injury or mechanical malfunction which occurs on an inflatable device shall be reported to the following telephone number 508-820-1444 within one hour of the serious injury or mechanical malfunction or discovery of the serious injury or mechanical malfunction, except where the inflatable device has been rented. The inflatable device shall not be moved from the site of the serious injury until approval is granted by a state inspector. The only exceptions to 520 CMR 5.09(2)(j) is for preservation of life and property, the removal of injured persons or bodies, or to permit the flow of emergency vehicles. The inflatable device and area surrounding the device shall not be disturbed, cleaned, or altered in any way that will impede the investigation.

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2. Investigation. In the event that a serious injury occurs on an inflatable device, or any of its component systems, the inflatable device shall be immediately shut down and secured until a state inspector has completed an investigation. No person shall move or alter the serious injury incident scene or the inflatable device, except to remove the victim(s), until the state inspector has determined that the device is safe. If a serious injury incident occurs on an inflatable device as the result of the malfunction of the device or a serious injury results in major damage to the inflatable device or any of its component systems, a report shall be submitted to the Department within 48 hours as required under M.G.L. c. 140, § 205A.
- (k) Transfer of Ownership. Upon the transfer of ownership of any inflatable device, the owner of the device being transferred shall notify the Department in writing of the transfer, and shall transfer all records pertaining to that inflatable device to the new owner. The new owner shall obtain a new license and permit prior to operating the inflatable device.
- (3) Manufacturer Responsibility.
  - (a) Scope. 520 CMR 5.09(3) establishes the responsibilities of the manufacturer of inflatables for operation in the Commonwealth.
  - (b) All inflatables shall comply with the standard set forth in ASTM F-2374-10: *Standard Practice for Design, Manufacture, Operation and Maintenance of Inflatable Amusement Devices*.
  - (c) Notification, Bulletins and Other Information as Required by the Department.
    1. When the manufacturer is notified by an owner of an incident, whether in the Commonwealth or elsewhere, involving a serious injury or a critical structural or mechanical component of a ride, the manufacturer shall promptly evaluate the information in that notification and, if necessary, provide, in the form of a safety bulletin, the results of that evaluation, together with any recommendations to eliminate or prevent the situation that created the incident, to the Department and to all known owners of the ride in the Commonwealth.
    2. The manufacturer of a ride shall also provide to the Department and to all known owners of the ride in the Commonwealth:
      - a. All bulletins, and notifications on inflatables;
      - b. Information as necessary for those inflatables that have individual approval or supplemental modification certification based on the manufacturer's documentation supplied by the owner or responsible person; and
      - c. Other documents requested by the Department as a result of an incident involving an inflatable device.
  - (d) Departmental Remedies for Non-compliant Manufacturers. The Department shall have the authority to prohibit the use of any inflatable device in the Commonwealth until such time that the manufacturer has:
    1. Submitted to the Department all safety bulletins issued on the inflatable, as well as all operational and maintenance manuals for the inflatable device; and
    2. Complied with any orders imposed by the Department in order to bring the inflatable device into compliance with 520 CMR 5.09.
- (4) Inflatables for Rent.
  - (a) Scope. 520 CMR 5.09(4) establishes additional responsibilities of the owner who offers inflatable devices for rent in the Commonwealth.
  - (b) Inspection by State Inspector of Large Inflatables for Rent. Prior to the rental of any large inflatable device, the state inspector may inspect the general safety to ensure that they are in compliance with 520 CMR 5.09 at the location of the set up.
  - (c) Inspection by State Inspector of Small Inflatables for Rent. Prior to the rental of any small inflatable device, the state inspector may inspect the general safety to ensure that they are in compliance with 520 CMR 5.09 at the owners designated location.
    1. The general safety inspection for all inflatable devices may include:
      - a. A review of all maintenance records;
      - b. A review of the daily operator logs;
      - c. A visual inspection of the device including:
      - d. Identification of the ride;
      - e. Inspection for adjacent hazards and interferences;
      - f. Inspection of the ride for obvious excessive wear;

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- g. Review of the blower, motor, and cord;
  - h. Anchorage points and stakes and/or weights;
  - i. For portable, fabricated inflatable rock walls with a height in excess of 12 feet measured from the landing surface to the highest anchor; the owner shall affirm that:
    - i. Anchor supports for the wall comply with manufacturer specifications, EN12572 or CWA Engineering Specifications;
    - ii. Only automatic belay systems are used;
    - iii. Anchor supports for climbing wall meet the requirements of the auto belay manufacturer;
    - iv. Integral base and guardrail systems are provided as required by the manufacturer;
    - v. Harnesses that conform to either the rock wall manufacturer recommendations ASTM F1772, UIAA105, or EN12277 are used by all patrons;
    - vi. Helmets that conform to either the rock wall manufacturer recommendations, EN12492 or UIAA106 or equivalent ASTM standards are used by all patrons.
  - 2. The state inspector shall document any issues of concern and immediately notify the owner, or his or her representative, of such concerns. Issues directly affecting the safety and integrity of the device shall be immediately addressed. The state inspector shall not certify a device until the issues have been appropriately abated. Upon completion of the inspection, the state inspector shall provide the owner, or his or her representative, with a written inspection report.
- (d) Re-inspection. If the device is not certified by the state inspector, the owner may apply to the Department for re-inspection. The Department may charge a fee in accordance with the fee schedule set forth in 801 CMR 4.02: *Fees for Licenses, Permits, and Services to Be Charged by State Agencies*.
- (e) Ride Operators.
- 1. Small Inflatables. Owners of small inflatable devices who choose to rent the inflatable devices may provide a Ride Operator or Operator assistant and shall provide training and instruction to the individual who rented the device to ensure that each rented inflatable device is erected and anchored in accordance with manufacturers' specifications and shall document instruction has taken place on a form furnished by the Department.
  - 2. Large Inflatables. Owners of large inflatable devices who choose to rent the inflatable devices shall provide a Ride Operator to operate the device. The Ride Operator shall be properly trained to ensure that each rented inflatable device is erected and anchored in accordance with manufacturers' specifications.
- (f) Operating Instructions. Owners of inflatable devices for rent shall provide renters with complete operating instructions. Such instructions shall include instructions for the attendant, maximum capacity, safety guidelines for those entering the structure, and shall include a list of the potential hazards involved in renting this device, and instructions to minimize the potential for injury. Such instructions shall also include the accident notification requirement as listed in 520 CMR 5.09(2)(j).
- (g) Serious Injury/Investigation.
- 1. Notification.
    - a. Large Inflatable. The owner or attendant shall be responsible for notifying the following telephone number 508-820-1444 within one hour of any serious injury incident or the discovery of a serious injury incident on a large inflatable for rent. The owner or attendant shall be responsible for securing the device and shall be accessible to the Department and its state inspector. The inflatable device shall not be moved from the site of the serious injury until approval is granted by a state inspector. The only exceptions to this requirement are for preservation of life and property, the removal of injured persons or bodies, or to permit the flow of emergency vehicles. The inflatable device and area surrounding the inflatable device shall not be disturbed, cleaned, or altered in any way that will impede the investigation.

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b. Small Inflatable.

i. In the event of a serious injury incident on a small inflatable device for rent, the individual renting the inflatable device shall be responsible for securing the device and shall be accessible to the Department and its state inspector. The inflatable device shall not be moved from the site of the serious injury until approval is granted by a state inspector. The only exceptions to this requirement is for preservation of life and property, the removal of injured persons or bodies, or to permit the flow of traffic. The inflatable device and area surrounding the inflatable device shall not be disturbed, cleaned, or altered in any way that will impede the investigation.

ii. The owner shall notify the Department as soon as it becomes aware or should have been aware of such an incident.

2. Investigation. The Department shall investigate all incidents pursuant to M.G.L. c. 140, § 205A.

In the event that a serious injury incident occurs on an inflatable device, or any of its component systems, the inflatable device shall be immediately shut down and secured until a state inspector has completed an investigation. No person shall move or alter the serious injury incident scene or the amusement device, except to remove the victim(s), until the state inspector has determined that the ride is safe. If a serious injury incident occurs on an inflatable device as the result of the malfunction of the device or a serious injury results in major damage to the inflatable device or any of its component systems, a report shall be submitted to the Department within 48 hours as required under M.G.L. c. 140, § 205A.

5.10: Trackless Trains or Similar Devices

Operators must have a valid driver's license and must be 18 years of age or older. All new design criteria list in 520 CMR 5.10 shall apply to devices constructed after March 18, 2005.

(1) Data Plate. Each trackless train shall have prominently displayed a manufacturer's data plate. Such plate shall include the maximum number of cars the train or device can pull safely and maintain proper braking. It shall also include the maximum number of passengers, as well as the national tracking identification number.

(2) Design Grades. Where designed for a specific terrain or road configuration, that the power, traction and stability of the system shall provide adequate margins for safety. The limiting characteristics of the system as designed shall be permanently marked in a prominent position within the cabin on the manufacturer's data plate if provided.

(3) Couplings and Safety Chains. Towing mounts, hitches, balls and ball couplers shall be capable of towing the loads placed on them. Safety chains or ropes shall be installed in accordance with the manufacturer's specifications.

(4) Brakes. A trackless train or similar device shall be fitted with the following minimum braking requirements:

(a) Travel Brake. Prime movers shall be fitted with a travel brake system capable of stopping the fully loaded towed train under all designed conditions.

(b) Parking Brake. Prime movers shall be fitted with an additional braking system capable of holding the fully loaded train stationary. A combination travel/parking brake may be used only with the prior approval of the Department and for devices carrying less than eight patrons.

(5) Steering. The carriage steering configuration shall provide stability under all conditions of operation, and the turning circles of the prime mover and carriages shall be compatible and suitable for the application of the train.

(6) Drawbar Capacity. The capacity and configuration of the drawbar shall be consistent with the designer's or manufacturer's recommendation for the number of carriages to be towed in any particular application.

## 5.10: continued

(7) Center of Gravity. The center of gravity of any carriage should be as close to the operating surface as possible, and information regarding the maximum allowable sideways inclination should be displayed within the cabin.

(8) Use of Spring Suspension. Spring suspension shall not be used without some shock absorbing and movement limiting devices.

(9) Additional Safety Features. Wheels should not protrude beyond the sides of the carriages and the gaps between carriages should be fitted with safety screens to prevent access between carriages and across the drawbar. These additional safety features are to ensure that there are no accessible pinch points or hazards that could catch a patron's clothing or long hair.

(10) Other Traffic. Where the train or similar device is operated with other vehicle traffic present, doors shall be fitted with catches which are operable only from the outside of the carriages. If trains or similar devices are operated on open public roads, they shall be fitted with vehicle and trailer signal systems. Where trains or similar devices are operated with other foot traffic, the operator shall drive the device in a manner that does not present a safety hazard to pedestrians. Operators driving recklessly shall have their permit to operate immediately revoked and shall not be re-issued a permit until a Department hearing has taken place and the appropriate action has been taken to ensure rider and pedestrian safety.

5.11: Go-karts and Facilities(1) Karts and Kart Tracks.

(a) The following requirements are for karts powered by either battery or internal combustion and driven on permanently installed indoor or outdoor tracks.

(b) Karts. Karts shall be constructed mainly of non-combustible material with sufficient strength to sustain the weight of patrons and to withstand stress induced by normal operation, collision with other karts or collision with any part of the surrounding structure. The center of gravity of the kart shall be as low as possible to minimize the possibility of a roll-over. The component parts of a kart shall comply with the following requirements:

1. Guarding. Guarding shall be provided to prevent wheels from riding up or becoming enmeshed with the wheels or protrusions of other karts. Guarding shall also be provided to prevent patrons or track attendants contacting any hot or moving parts.

2. Roll-over. Roll-over protection shall be provided to protect patrons in the event of a roll-over, unless a documented hazard identification and risk assessment has been carried out by a competent person, and demonstrates that such a requirement to be unnecessary.

3. Headrests. Headrests shall be provided to protect patrons in the event of a rear-end collision, unless a documented hazard identification and risk assessment has been carried out by a competent person, and demonstrates that such a requirement to be unnecessary.

4. Kart Protection. Effective protection shall be provided to prevent the engine surfaces, transmission, fuel tank and exhaust system from coming into contact with the track or its surroundings in the event of a roll-over or collision.

5. Steering Wheels. Steering wheels shall be oval or round in shape and shall be sufficiently padded.

6. Steering Column Support. Where used, a steering column support shall be positioned to avoid contact by the patron in the event of a collision.

7. Steering Limits. Steering shall be limited in accordance with the design specifications for the steering gear.

8. Seats. Seats shall be constructed so that they retain patrons in place under normal driving and turning conditions.

9. Dual-occupancy Karts. Where a kart is designed to carry two patrons, adequate hand and foot rests shall be provided for the second patron.

10. Seat Belts. Seat belts of the lap/sash type configuration shall be fitted to all karts.

11. Brakes. Brakes which operate effectively to bring the kart to a stop in a safe manner and within a safe distance shall be provided.

## 5.11: continued

12. Fuel Tanks. Fuel tanks shall be fitted with filler caps designed to eliminate any possibility of fuel leakage under any condition of operation or if overturned. The material used in the construction of the fuel tank and associated fittings shall be suitable for the intended function. The material shall be chemically resistant to and compatible with all commercial grades of fuel, including additives normally encountered. The material shall also be suitable for the environmental and operational conditions to which the fuel tank may be exposed.

13. Speed Limit. The maximum attainable speed by any kart shall not exceed that which has been determined by a documented hazard identification and risk assessment performed by a competent person.

14. Vehicle Identification. Each kart shall be marked in accordance with 520 CMR 5.00.

(c) Kart Tracks. The design and manufacture of kart tracks shall comply with the following:

1. Track Design. The track shall be designed and delineated in such a way as to prevent any kart from leaving one portion of the track and entering another portion of the track unless via a designated track route.

2. Track Surface. The surface of the track shall provide consistent traction characteristics throughout its entire length.

3. Track Width. The width of the track should be sufficient to allow a kart to pass two other karts laid end to end across the track.

4. Barriers. Barriers which are capable of stopping a kart traveling at full speed in a manner so as to protect patrons against injury shall be installed around the entire length of the track, unless run-off areas of sufficient size are provided to bring a kart to a halt in a safe manner. Barriers shall be fire resistant and constructed such that the karts cannot climb up the sides of the barrier. Barriers shall be installed to prevent any kart entering spectator areas and inside areas of the track where operating staff are stationed. Barriers shall be in a condition that would not create a hazard or enable a patron to injure themselves if they came in contact with the barrier.

5. Fencing. Fencing shall be provided around the perimeter of the track at a sufficient distance to prevent a barrier from striking the fence should a kart strike a barrier. Any area containing persons other than operating staff or patrons shall be enclosed by fencing not less than three feet in height, similarly located behind a barrier.

6. Loading/Unloading Area. An area separated from the track shall be provided for the loading and unloading of patrons. This area should be arranged to prevent unauthorized entry.

7. Fuel Storage. An area separate from the track and loading/unloading area shall be provided for fuel storage.

8. Ventilation. Ventilation that complies with 780 CMR: *Massachusetts State Building Code* shall be provided during the operation of indoor kart facilities.

9. Lighting. The track and surrounding area shall be sufficiently illuminated as to allow the supervision of the track, provide adequate visibility and to enable patrons to safely negotiate the course. Light and fittings shall be erected clear of any item with which a kart may collide.

5.12: Concession Racing Karts and Facilities

520 CMR 5.12 applies to the design, manufacture and operation of concession karts and their associated operating facilities where qualified drivers (driver) can take part on concession kart racing and/or lapping sessions.

520 CMR 5.12 does not apply to vehicles specifically offered for use by the General Public to replicate competitive motor sports in an amusement facility setting (concession go-karts), sanctioned racing or racing schools (race karts) or used for general purpose by private owners (fun karts).

Significance and Use. 520 CMR 5.12 is intended to delineate information for the design, manufacture and operation of concession racing karts and related track facilities.



## 5.12: continued

(1) Definitions.

Barrier System. A device installed on the concession racing kart track which defines the boundaries of the track and/or run-off areas and whose primary purpose is to contain the vehicles within pre-determined boundaries.

Concession Go-kart. A motorized vehicle with four wheels that is driver controlled with respect to acceleration, speed, braking and steering. This vehicle operates within the containment system of a defined track and is intended to simulate competitive motor sports for members of the general public for a fee. A concession go-kart has a maximum capacity of two persons and no cargo capacity.

Concession Racing Kart. A motorized vehicle with four non-aligned wheels in contact with the ground, two of which control the steering while the other two transmit the power. A concession racing kart is a vehicle, with or without bodywork, controlled by the driver with respect to acceleration, speed, braking and steering. Concession racing karts are classified by speed and are driven and/or raced on tracks. Speeds for Class One and Class Two concession racing karts shall not exceed 35 mph and 55 mph respectively. Speed qualification of concession racing karts shall be based upon speed measured on a flat and level track surface.

Concession Racing Kart Track Staff. Staff required to operate a concession racing kart facility. Duties include, but are not limited to, registering and briefing drivers, assisting drivers in and out of karts and managing all track operations.

Discussion. Specifically excludes similar devices that are intended for use in an amusement facility setting (concession go-karts), race schools or sanctioned racing (racing karts), devices such as electronically or rail guarded amusement rides and bumper cars or other similar amusement devices that operate under circumstances where there is no defined direction of travel.

Driver. The person who manipulates and controls the direction of travel, braking and speed of a concession racing kart.

In order to drive a Class One concession racing kart, the driver shall have either attended a class and taken and passed a practical test to establish his or her competency or be 18 years of age or older and hold a valid internationally recognized drivers' license.

In order to drive a Class Two concession racing kart, the driver shall either hold an applicable valid competition license from a recognized motor sport sanctioning body, have taken part in a minimum of six competition events in a Class One concession racing kart or have attended a class and taken and passed a practical test.

In all cases the driver (and his or her parent/legal guardian if the driver is 18 years old) shall sign a full release and waiver of liability and acknowledgement that he or she are taking part in competitive motor sports and understands the risk of possible injury and/or death.

Fun Kart. A motorized vehicle with four wheels, sold commercially as consumer goods and intended for private personal recreational use by the consumers for off-road use on suitable terrain, as recommended by the manufacturer.

Lapping Session. Any laps driven at a concession racing kart facility in either a race or practice session.

Pit. A defined area for the purpose of drivers getting in and out of the vehicles at the beginning, during or end of any lapping session and where refueling of concession racing karts may take place.

Race Kart. A motorized vehicle with four wheels designed for use in either Sanctioned Racing on tracks, streets, or other areas of competition or in a Racing School facility. Racing Karts are defined and classified by recognized motor sports sanctioning bodies, such as FIA, CIK, WKA, IKF, MSA, SCCA, *etc.* Anyone operating such vehicles shall comply with the requirements for safety equipment as mandated by the Sanctioning body.

5.12: continued

Track. A defined path for the operation of concession racing karts that has either a concrete or asphalt surface.

Significance and Use. 520 CMR 5.12 is intended to delineate information for the design, manufacture and operation of concession racing karts and related track facilities.

(2) Concession Race Kart and Safety Equipment Specification.

(a) Chassis.

1. Concession racing karts shall be of an adequately strong construction and shall present no undue hazard to its driver or other driver. In particular, steering, brakes, and wheels shall be adequate for speeds that are likely to be attained.
2. The concession racing kart chassis shall be constructed from magnetic steel tubing. Cross section is free. It shall be of one-piece construction either welded or brazed.