ADMINISTRATIVE REGULATIONS OF THE ARKANSAS AMUSEMENT RIDE AND AMUSEMENT ATTRACTION SAFETY INSURANCE ACT

Regulation 1. Definitions

1.1 "Amusement attraction" shall mean any building or structure around, over, and through which persons may be moved by vehicle or mechanically driven device integral to the building or structure, and which provides amusement, pleasure, thrills, or excitement, but this term does not include theatres, museums, or enterprises principally devoted to the exhibition of products of agriculture, industry, education, science, religion, or the arts.

1.2 "Amusement ride" shall mean any mechanical device which carries or conveys passengers along, around, or over a fixed route or course or within a defined area for the purpose of giving the passengers amusement, pleasure, thrills, or excitement and includes the following:

a. Bungee rides or bungee operations which utilize as a component a bungee cord, which is an elastic rope made of rubber, latex, or other elastic-type materials whether natural or synthetic; and

b. Go-kart, which means a ride in which a vehicle controlled or driven by patrons specifically designed for and run on a fixed course; and

c. Inflatable attractions such as "space walks", inflatable slides, or inflatable jousting or boxing rings; and

d. Any wave pool, water slide, or other similar attraction that totally or partially immerses a patron in water; and

e. Artificial climbing walls; and

1.3 "Board" shall mean the Amusement Ride Safety Advisory Board.

1.4 "Department" shall mean the Arkansas Department of Labor.

1.5 "Director" shall mean the Director of the Arkansas Department of Labor.

1.6 "Major modification" shall mean any change in either the structural or operational characteristics of the ride or attraction which will alter its performance from that specified in the manufacturer's design criteria.

1.7 "Nondestructive testing" is the development and application of technical methods, including, but not limited to, radiographic, magnetic particle,

ultrasonic, liquid penetrant, electromagnetic, neutron radiographic, acoustic emission, visual, and leak testing to examine materials or components in ways that do not impair their future usefulness and serviceability in order to:

a. Detect, locate, measure, and evaluate discontinuities, defects, and other imperfections;

b. Assess integrity, properties, and composition; and

c. Measure geometrical characters.

1.8 "Owner" shall mean any person who owns an amusement ride or attraction, or in the event that the amusement ride or attraction is leased, the lessee.

1.9 "Red-tag" shall mean a notice and order prohibiting the use or operation of an amusement ride or attraction, or any such device that restricts access to a particular part of any amusement ride or attraction.

1.10 "Serious physical injury" shall mean a personal injury 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 that requires immediate admission and overnight hospitalization and observation by a licensed physician.

Regulation 2. Exemptions

2.1 Pursuant to Ark. Code Ann. § 23-89-503, the following amusement rides or attractions are exempt from the provisions of this subchapter:

a. Non-mechanized playground equipment including, but not limited to, swings, seesaws, stationary spring-mounted animal features, rider-propelled merry-go-rounds, climbers, slides, trampolines, swinging gates, and physical fitness devices except where an admission fee is charged for usage or an admission fee is charged to immediate areas where the equipment is located;

b. An amusement ride or amusement attraction which is owned and operated by a nonprofit religious, educational, or charitable institution or association, or a fair if the ride or attraction is subject to inspection by the State Fire Marshal or by any political subdivision of the state under its building, fire, electrical, and related public safety ordinances;

c. Coin-operated amusement rides or amusement attractions located on the premises of retail business establishments;

d. An amusement ride or amusement attraction which is owned and operated by the State of Arkansas or any political subdivision thereof.

2.2 The term "amusement attraction" does not include theatres, museums, or enterprises principally devoted to the exhibition of products of agriculture, industry, education, science, religion, or the arts.

Regulation 3. Adopted Codes and Standards

3.1 The Department hereby adopts and incorporates the following minimum safety standards for manufacture, design and operation of amusement rides and attractions existing as of the effective date of these regulations:

a. American Society for Testing and Materials F-24 (ASTM F-24) Standards Amusement Rides and Devices, Seventh Edition, 2004. *For rides covered under Regulation 3.1, only the following sections of Designation F 2291-04 shall apply:*

i. Section 6 Patron Restraint, Clearance Envelope, and Containment Design Criteria. Only subsections 6.3.2, 6.3.3, and 6.3.3.1 shall apply.

ii. Section 12 Electrical Requirements.

iii. Section 13 Mechanical Systems and Components

iv. Section 14 Fencing, Guardrails, and Handrails for Amusement Rides and Devices. This section shall apply to all existing rides notwithstanding date of manufacture. This section shall not apply to amusement rides and attractions that retain the original manufacturer's fencing, guardrails, and/or handrails so long as an equivalent degree of safety is determined to exist by an Arkansas Department of Labor Amusement Ride investigator.

v. Section 15 Welding

vi. Section 16 Fasteners

vii. Appendixes X3, X4, and X5

b. National Electrical Code (NEC), 2002 Edition.

c. National Fire Protection Code 101 (NFPA 101) Life Safety Code, 2003 Edition.

d. National Fire Protection Code 30 (NFPA 30) Flammable and Combustible Liquids Code, 2000 Edition.

e. American Society for Testing and Materials (ASTM) Standards E 543, Standard Practice for Agencies Performing Nondestructive Testing, 1996 Edition.

f. American Society for Nondestructive Testing (ASNT) Document SNT-TC-1A, Personnel Qualification and Certification in Nondestructive Testing, 1996 Edition.

g. United States Consumer Products Safety Commission Safety Bulletins and alerts that reference amusement rides and attractions.

h. Manufacturer's specifications for each amusement ride or attraction and subsequent updates and bulletins in reference to that ride or attraction.

3.2 The Department hereby adopts and incorporates the following minimum safety standards for manufacture, design and operation of amusement rides and attractions manufactured or subjected to a major modification after the effective date of these regulations:

a. American Society for Testing and Materials F-24 (ASTM F-24) Standards Amusement Rides and Devices, Seventh Edition, 2004.

b. National Electrical Code (NEC), 2002 Edition.

c. National Fire Protection Code 101 (NFPA 101) Life Safety Code, 2003 Edition.

d. National Fire Protection Code 30 (NFPA 30) Flammable and Combustible Liquids Code, 2000 Edition.

e. American Society for Testing and Materials (ASTM) Standards E 543, Standard Practice for Agencies Performing Nondestructive Testing, 1996 Edition.

f. American Society for Nondestructive Testing (ASNT) Document SNT-TC-1A, Personnel Qualification and Certification in Nondestructive Testing, 1996 Edition.

g. United States Consumer Products Safety Commission Safety Bulletins and alerts that reference amusement rides and attractions.

h. Manufacturer's specifications for each amusement ride or attraction and subsequent updates and bulletins in reference to that ride or attraction.

3.3 In the absence of current manufacturer's specifications, an amusement ride or attraction shall meet the standards adopted above.

3.4 In the event there are updates and/or new editions to the above standards, the Department shall, after notice and public hearing, adopt such changes and/or editions that it determines are necessary to ensure the public health and safety.

3.5 The Director may determine certain other situations constitute a condition that affects patron safety by administrative directive.

3.6 These statewide standards shall guarantee a uniform minimum standard for the operation of all amusement attractions and rides covered by these regulations.

3.7 See Appendix B for information on obtaining copies of these standards.

Regulation 4. Bungee Operations

See Appendix A for regulations pertaining to Bungee operations.

Regulation 5. Inspections

5.1 Pursuant to Ark. Code Ann. § 23-89-506, The Director of the Department of Labor is authorized to inspect each person or entity to ensure compliance with this subchapter. The director shall employ amusement ride inspectors certified by the National Association of Amusement Ride Safety Officials.

5.2 Twice per calendar year, the Director or any officer of the Department designated by the Director shall inspect all permanently placed operational amusement rides or attractions located in this state being operated for profit or charity.

5.3 All portable amusement rides or attractions shall be inspected by the Director or any officer of the Department designated by the Director every time they are moved to a new location in Arkansas and before they are permitted to commence operation or open to the public.

5.4 Inflatable attractions, self-contained mobile playgrounds, artificial climbing walls, and other patron propelled amusement rides or attractions shall be inspected every six (6) months, unless a more frequent schedule of inspections is established by regulation of the director for certain types of inflatable attractions and self-contained mobile playgrounds.

5.5 Self-contained mobile playgrounds, artificial climbing walls, and other patron propelled amusement rides or attractions shall be inspected pursuant to subdivision (a)(4)(A) of this section only if such playgrounds contain no mechanical or electrical parts, structures, or additions such as blowers or lights.

5.6 The director shall charge a fee pursuant to Ark. Code Ann. § 23-89-506 to be paid by the owner of any amusement ride or amusement attraction for all amusement ride safety inspections performed by any employee of the Department.

5.7 If the director or an authorized employee of the department finds that any amusement ride or attraction is defective in a manner affecting patron safety or unsafe pursuant to the adopted codes and standards found in Regulation 3 and/or 4, he or she shall attach to the amusement ride or attraction a notice and order prohibiting its use or operation.

a. Operation of such an amusement ride or attraction shall not resume until the unsafe or hazardous condition is corrected and the director or his or her authorized representative permit such operation. The authorized employee shall immediately report the ride or attraction and its condition to the Department of Labor.

b. If such a notice or order is attached to any amusement ride or attraction, any owner or operator who operates that amusement ride or attraction in violation of this order shall be subject to a cease and desist order and an administrative penalty pursuant to Regulation 12.

5.8 If the director or an authorized employee of the department finds that any amusement ride or attraction does not meet minimum safety standards, but such defect does not pose an immediate danger to patron safety but is otherwise unsafe, then such defect may be corrected within a reasonable time designated by the inspector.

5.9 A red-tag shall be applied to any ride or attraction if the owner or operator fails to correct defects described in Regulation 5.8.

Regulation 6. Cease and Desist Orders

6.1 If the director or authorized employee of the Department finds that an operator or owner has failed to comply with Ark. Code Ann. §§ 23-89-501 through 23-89-518, or any regulations adopted thereunder, he or she may order the operator or owner to immediately cease operating the amusement attraction or ride and may impose upon the operator or owner an administrative penalty of not more than ten thousand dollars ($10,000).

6.2 Situations that constitute grounds for a cease and desist order include, but are not limited to:

a. failure to notify Director of intent to operate within the state;
b. operation of a ride without minimum amount of liability insurance;
c. operation without obtaining a current safety inspection report made at the time of set-up of the attraction or ride;
d. refusal of an owner or operator to allow a safety inspection:
e. operation of any ride or attraction after the ride or attraction has been red-tagged;
f. operation of a particular section of a ride or attraction after that section has been red-tagged;
g. removal of a red-tag from an amusement ride or attraction;
h. failure to make requested repairs to an amusement ride or attraction;
i. any other violation of Ark. Code Ann. §§ 23-89-501 through 23-89-518.

Regulation 7. Emergency Review

If, after inspection, any amusement ride or attraction is prohibited from operation due to violation of the Adopted Codes and Standards, the owner or operator of such ride or attraction may request emergency review with the Director or designee of the Director to determine whether the ride or attraction may operate.

Regulation 8. Variances

8.1 The Director in any particular case may grant exceptions and variances which shall only be granted where it is clearly evident that they are necessary in order to prevent undue hardship or where the existing conditions prevent compliance with the literal requirements of the rules and regulations. In no case shall any exception or variation be granted unless, in the opinion of the Director or any officer of the Department designated by the Director, reasonable safety will be secured thereby.

a. An application for a variance shall be submitted by the owner or lessee to the Department on a form supplied by and approved by the Department. The application shall include an application for variance with plans and specifications for the variance.

b. The Department shall review the application for variance and its attachments. The Department shall conduct an on-site inspection of any amusement ride or attraction in existence. The Department shall prepare a staff report and recommendation which shall include a copy of any inspection report and copies or citations to any applicable adopted standards.

c. The Director or any officer of the Department designated by the Director shall review the application, staff report and recommendation, and any other relevant documents. Based upon review of these documents, the Director or any officer of the Department designated by the Director shall grant or deny the variance.

d. If a variance is denied upon initial review, the applicant may request a hearing before the Director or any officer of the Department designated by the Director.

e. If a hearing is requested, the department shall notify the applicant for the variance of the date, time, and place of the hearing before the Director or any officer of the Department designated by the Director. Such notice shall include a copy of the Department's staff report and recommendation.

f. After hearing the Director or any officer of the Department designated by the Director shall grant or deny the variance. The Director or any officer of the Department designated by the Director may grant a variance conditioned upon the provision of alternate means of providing for public safety.

8.2 If the Director or any officer of the Department designated by the Director grants a variance, the Department shall issue a variance certificate. Such a certificate shall reflect on its face the following:

a. the owner, operator, or lessee to whom the variance is granted;
b. the type of equipment for which it is issued:
c. any conditions imposed by the Director or any officer of the Department designated by the Director.

8.3 The owner or lessee shall maintain the variance certificate at the location of the amusement ride or attraction and make it accessible to any Department inspector.

Regulation 9. Required Insurance

9.1 Each person or entity desiring to operate any amusement attraction or amusement ride in this state, other than those specifically exempted in this subchapter, shall be covered by a policy of insurance issued by an insurance company authorized to do business in Arkansas or by a surplus lines insurer approved in Arkansas and insuring the owner or operator against liability for personal injury or property damage arising out of the use or operation of the amusement attraction or ride, in the minimum amount of one million dollars ($1,000,000) for each incident or occurrence.

9.2 The required insurance policy shall specifically cover each owner/operator. Group policies do not meet the insurance requirement of this subchapter and regulations unless each owner operator is insured fully under requirements of Regulation 9.1.

Regulation 10. Accidents, Reporting injuries or death, Investigations

10.1 Any mechanical, structural, or electrical defects directly affecting patron safety for which an amusement ride is closed to patron use for a period of time more than three (3) hours, must be reported in writing personally or by facsimile by the owner or operator to the Department of Labor within twenty-four (24) hours after the closing of the amusement ride.

10.2 The operator of an amusement ride shall immediately cease to operate any ride involved in a fatality or serious physical injury. The owner or operator shall notify the department of such accident within four (4) hours of its occurrence by telephone or facsimile. The owner or operator shall file a written accident report personally or by facsimile with the department within twenty-four (24) hours of the accident.

10.3 Within twenty-four (24) hours after receipt of such report, the department shall initiate an investigation of the occurrence and an inspection of the ride. The department shall perform the inspection in a manner that proceeds with all practicable speed and minimizes the disruption of the amusement facility at which the amusement ride is located.

10.4 Unless authorized in writing by the department, no amusement ride may be operated, moved, altered, repaired, or tampered with, except to protect life, limb, and property, following an accident involving a serious injury or death until the department has completed its inspection and investigation.

Regulation 11. Recordkeeping

Each owner or operator shall retain on the premises or with a portable amusement ride the following records:

a. Proof of insurance coverage as required by this subchapter;
b. The latest safety inspection report by the department and by the owner or operator's insurer;
c. All maintenance and repair records for a period of one (1) year;
d. All accident records for a period of one (1) year on premises although such records shall be maintained and subject to being made available to the director for a period of three (3) years;

e. A record of employee/operator training for each employee authorized to operate, assemble, disassemble, transport, or conduct maintenance on an amusement ride or attraction;

f. A copy of any affidavit of nondestructive testing required by this subchapter; and

g. Any variance certificate granted by the agency pursuant to Regulation 8.

Regulation 12. Administrative Penalties

12.1 Administrative Penalties

a. Any person or entity that violates provisions of Ark. Code Ann. § 23-89-501 through 23-89-518, or any regulations issued thereunder shall be subject to an administrative penalty up to ten thousand dollars ($10,000) for each violation. Each day the violation continues shall constitute a separate offense.

b. Any person or entity that violates provision of Ark. Code Ann. § 23-89-504(c), or any regulations issued thereunder, shall be subject to an administrative penalty up to five thousand dollars ($5,000) for each violation. Each day the violation continues shall constitute a separate offense.

c. The amount of all civil penalties will be determined in accordance with 12.2 of these regulations.

d. In administrative penalty cases, the Administrator of the Safety Division shall notify the person or entity charged with the violation(s) by certified mail of the following:

1. the nature of the violation;
2. the date(s) of the violation,;
3. the amount of the administrative penalty;
4. the administrative penalty determination shall be final, unless within fifteen (15) days after receipt of this notice, the person or entity charged with the violation(s) notifies the Director of the Department of Labor in writing that he/she contests the penalty; and
5. the procedure for contesting an administrative penalty is provided in 12.3 of these regulations.

e. If the person or entity charged with the violation has not filed notice that he/she contests the administrative penalty within fifteen (15) days after receiving notice in accordance with 12.1(d) of this regulation, the penalty assessment by the Safety Division becomes the final determination of the Director of Labor.

f. Notice of the administrative penalty may also be delivered in the same manner as summons in civil cases.

12.2 Administrative Penalty Assessment

a. If upon inspection or investigation, the Director or authorized employee finds that a person or entity has violated provisions of Ark. Code Ann. § 23-89-501 through 23-89-518, or any regulations issued thereunder, the Administrator of the Safety Division may assess an administrative penalty for each violation.

b. The amount of an administrative penalty shall be assessed based on the Violation Fine Schedule in Regulation 12.3.

c. The Violation Penalty Schedule is only a guideline to assist in consistent application of civil monetary penalties. The Board shall only be bound by the statutory fine scale described in Ark. Code Ann. § 23-89-504(c) and Ark. Code Ann. § 23-89-505(d).

d. The maximum amount of an administrative penalty will be based on the nature and the gravity of the violation(s). Matters which are indications of the gravity of a violation and which justify maximum civil penalty assessments are:

1. the likelihood of injury and the seriousness of the potential injuries to the public;
2. multiplicity of violations by a owner or operator;
3. recurring violations;
4. falsification and/or concealment of documentation and information regarding the operation/insurance/training/ NDT testing
5. failure to assure future compliance.

e. All administrative penalties upon any person or entity shall permanently remain on record with the Department.

f. No civil penalty assessments older than two (2) years shall be used as the basis for a progressive discipline pursuant to the Violation Penalty Schedule in Regulation 12.3.

12.3 Violation Penalty Schedule

Violation	Statute or Regulation Provision	1st	2nd
Failure to notify Director of intent to operate within the State of Arkansas	23-89-505	$2,500	$5,000
Operation of ride or attraction without proper liability insurance	23-89-504	$5,000	$10,000
Operation of ride or attraction without current safety inspection report	23-89-504	$2,500	$10,000
Operation of ride or attraction in violation of a cease and desist order	23-89-504	$10,000	$10,000
Operation of a ride or attraction that has been "red-tagged", or removal of a "red-tag" before approval by a Department inspector	23-89-506	$10,000	$10,000
Failure to report a fatality or serious physical injury	23-89-510	$10,000	$10,000
Operation of ride or attraction by a unqualified person	23-89-511	$2,500	$10,000
Failure to maintain proper records with ride or attraction	23-89-516	$1,000	$5,000
Other violations of Ark. Code Ann. §§ 23-89-501 through 23-89-518		Discretionary	Discretionary

NOTE: Any third or greater offense will receive the maximum statutory administrative penalty of $10,000, except that failure to notify of intent to operate carries a maximum penalty of $5,000.

12.4 Contesting an Administrative Penalty

a. The person or entity may contest the imposition of an administrative penalty by filing a written request for a hearing with the Director of Labor, 10421 West Markham, Little Rock, Arkansas 72205. The written request must be made within thirty (30) days after receipt of notification of the administrative penalty or the assessment will become final.

b. A written request for a hearing shall be referred to a hearing officer designated by the Director.

c. The person or entity shall be provided at least twenty (20) days notice of the hearing. Such notice shall include:

(1) a statement of the time, date, place, and nature of the hearing;
(2) a statement of the legal authority and jurisdiction under which the hearing is to be held;
(3) a short and plain statement of the matters of fact and law asserted; and
(4) a statement that the person, firm, or corporation may, upon written request, obtain the issuance of a subpoena by the Director for the attendance and testimony of witnesses and the production of documents.

d. The designated hearing officer shall, after consideration of the evidence, issue a decision and issue an order setting forth findings of fact and conclusions of law. Such decision shall become the final determination of the Director, unless judicial review is sought within thirty (30) days pursuant to the Administrative Procedures Act, Ark. Code Ann. § 25-15-212.

e. If any person, firm, or corporation against whom an administrative penalty has been imposed fails to pay the penalty within sixty (60) days of the final determination, the Director of the Arkansas Department of Labor may file an action in a court of competent jurisdiction to collect the administrative penalty, without paying costs or giving bonds for costs.

12.5 In addition to the legal action in 12.3 of this Regulation, no safety inspection shall be performed for any amusement ride or attraction if the owner, operator, or lessee of such amusement ride or attraction has failed to pay assessed administrative fines.

Regulation 13. Effective Date

The effective date of these regulations is August 15, 2005.

APPENDIX A
REGULATIONS PERTAINING TO BUNGEE OPERATIONS

A.1 Scope and application

a. This subchapter applies to the site, equipment, personnel, operating procedures and emergency provisions for bungee jumping. This subchapter applies in addition to all other applicable requirements in this chapter.

b. Prohibited Jumping. The following bungee operations are prohibited:

1. A bungee operation conducted with balloons, blimps, helicopters, or other aircraft;

2. Sand bagging, which is the practice of holding onto any object, including another person, while bungee jumping, for the purpose

of exerting more force on the bungee cord to stretch it further, and then releasing the object during the jump causing the jumper to rebound with more force than could be created by the jumper's weight alone;

3. Tandem or multiple bungee jumping, except for rides that the manufacturer has designed for multiple patrons; and

4. Bungee jumping from any bridge, overpass, or any other structure not specifically designed as an amusement ride or attraction;

A.2 Definitions. For the purpose of this appendix:

a. "Air bag" means a device which cradles the body and which uses an air release breather system to dissipate the energy due to a fall, thereby allowing the person to land without an abrupt stop or bounce.

b. "Binding" means the material used to hold the bungee cord threads in place.

c. "Bungee cord" means the elastic rope to which the jumper is attached and which lengthens and shortens to produce the bouncing action.

d. "Bungee jumping" means a procedure where a person free falls from a height and the descent is limited by attachment to a bungee cord.

e. "Catapulting" means a procedure where a person is held on the ground while the bungee cord is stretched, and when the person is released, he or she is propelled upwards.
Note: Catapulting is also referred to as launching or reverse jumping.

f. "Dynamic load" means the load placed on the rigging and attachments by the initial free fall of the jumper and the bouncing movements of the jumper.

g. "Equipment" means power or manually operated devices used to raise, lower and hold loads.

h. "Failure" means breakage, separation of components, or the point where the ultimate strength is exceeded.

i. "Hoist" or "hoisting" means all functions such as lowering, lifting, swinging or suspending a platform.

j. "Jump harness" means an assembly which is worn by a jumper and attached to a bungee cord.

k. "Jump height" means the distance from the jump platform to the bottom of the jump zone.

l. "Jump master" means a person who has responsibility for the bungee jumping operation and who prepares the jumper for the actual jump.

m. "Jump operator" means a person who assists the jump master to prepare a jumper for jumping and operates the lowering system.

n. "Jump zone" means the space bounded by the maximum designed movements of the jumper or any part of the jumper.

o. "Jumper" means the person who falls or jumps from a height when attached to a bungee cord.

p. "Landing area" means the surface area of a net, air bag or water where the jumper lands.

q. "Lowering system" means any manual or mechanical equipment capable of lowering a jumper to the designated landing area.

r. "Maximum intended load" means the total load of all persons, tools, materials and other loads reasonably anticipated to be applied to a platform or platform component at any one time.

s. "Platform" means the area attached to a structure from which the jumper falls or jumps.

t. "Rigging system" means the bungee cord plus any webbing or rope connected to the bungee cord.

u. "Recovery area" means an area next to the landing area, where the jumper may recover from the jump before returning to the public area.

v. "Safety harness" means an approved assembly to be worn by an operator and which is designed to be attached to a lanyard and prevent the jump site operator from falling.

w. "Safety space" means a space extending beyond the jump zone as a safety factor.

x. "Sandbagging" means the practice of a jumper holding onto any object, including another person, during the initial descent after jumping off of a platform, for the purpose of exerting more force on the bungee cord in order to stretch it further, and then releasing the object at the bottom of the jump causing the jumper to rebound with more force than could be created by the jumper's weight alone.

y. "Site operating manual" means the document containing the procedures and forms for the operation of all bungee jumping activities and equipment.

z. "Structure" means the apparatus supporting the platform.

aa. "Tandem jumping" means the practice of 2 people harnessed together while jumping simultaneously from the same jump platform.

A.3 Site and operating approval. Plans specifications and site operating manuals for all bungee jumping operations shall be submitted to the department before construction commences.

A.4 Safety space

a. Each bungee jump site shall maintain a side safety space of 30 feet in all directions.

b. Where jumps occur over water, the water shall be at least 9 feet deep. The vertical safety space shall be at least 60 inches above the water. However, if the depth of the water is greater than 9 feet, no vertical safety space is needed.

c. Where jumps occur over land, an air bag or net shall be used. The vertical safety space shall be at least 5 feet or 5 percent of the jump height above the air bag or net, whichever is greater.

A.5 Platforms

a. The safe working load of the platform shall be determined by the maximum weight on the platform at any one time, with a safety factor of at least 5 times the rated load capacity of the platform.

b. The platform shall not be loaded in excess of its rated load capacity.

c. The number of persons occupying the platform shall not exceed the number required for the jump, plus one observer.

d. Materials and tools shall be secured to prevent displacement, and they shall be evenly distributed within the confines of the platform when the platform is suspended.

e. When the platform is not an integral part of the structure, the attachment devices and the part of the structure to which they are attached shall have a safety factor of at least 5 times the rated load capacity of the platform.

f. The platform shall have a non-slip surface.

g. The platform shall have anchor points for safety harnesses, designed and placed to best suit the movements of anyone on the platform.

h. The platform shall be equipped with a permanent fence at least 42 inches high. The fence shall be enclosed at least from the toeboard to mid-rail with either solid construction or expanded metal having openings no greater than 1/2 inch.

i. There shall be a gate across the point at which the jumper leaves the platform, and it shall remain closed when a jumper is not present. The gate shall be equipped with a restraining device to prevent accidental opening.

j. A grab rail shall be installed inside the entire perimeter of the platform.

k. Headroom shall be provided to allow persons to stand upright in the platform.

l. The platform shall be conspicuously posted with a plate or other permanent marking to indicate the weight of the platform and its rated load capacity.

A.6 Structures and towers

a. ROPE. In human-powered retrieval system or in a friction lowering system an 11 mm or larger static or dynamic rock climbing rope shall be used.

b. LOCKING MECHANISM. In a human-powered retrieval system, an approved locking mechanism, such as an ascender or jumar, shall be used to stop and hold the jumper in one place once the applied force on the retrieval rope is removed.

c. CONSTANT PRESSURE SWITCH. In a friction lowering system, there shall be a constant pressure switch or locking mechanism that will stop the lowering action of the system if the person in charge of lowering the jumper becomes unable to perform the lowering duties safely.

d. CORD ATTACHMENT. Bungee cords shall be attached at all times to the structure when the cords are in the connection area.

e. LOWERING SYSTEM. The system for lowering the jumper to the landing pad shall be operated by either the jump operator or jump master.

f. ALTERNATIVE LOWERING SYSTEM. There shall be an alternative method of jumper recovery if the main lowering system fails.

g. ANNUAL INSPECTION. A thorough, annual inspection of the hoisting machinery and cables shall be made by an independent third party. The operator shall provide a record of the dates and results of inspections for each hoisting machine and piece of equipment.

h. ENGINE EXHAUST. Whenever internal combustion engine powered equipment exhausts in enclosed spaces, tests shall be made and recorded to see that persons are not exposed to unsafe concentrations of toxic gases or oxygen deficient atmospheres.

i. WINDOWS. All windows in cabs shall be of safety glass or its equivalent which introduces no visible distortion that interferes with the safe operation of the hoisting machine.

j. FUEL TANK FILLER PIPE. The fuel tank filler pipe shall be located in such a position, or protected in such manner, as to not allow spill or overflow to run onto the engine, exhaust or electrical equipment of any machine being fueled.

k. MODIFICATIONS. No modifications or additions which affect the capacity or safe operation of the equipment may be made by the employer without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation and maintenance instruction plates, tags or decals shall be changed accordingly. In no case shall the original safety factor of the equipment be reduced.

l. JIB STOPS. All jibs shall have positive stops to prevent their movement of more than 5 degrees above the straight line of the jib and boom.

m. TOWER OPERATORS. Portable tower operators shall have a minimum of 80 documented hours operating the machine used for bungee jumping. Operators shall be familiar with inspection criteria and nomenclature, including wire rope inspection methods.

n. **Note:** Industry certification as an operating engineer is recommended.

A.7 Hoisting of Platforms

a. APPLICATION. This section applies to movable platforms that are raised and lowered from the structure.

b. Hoisting of the platform shall be performed in a slow, controlled, cautious manner with no sudden movements of the platform.

c. Load and boom hoist drum brakes, swing brakes and locking devices such as pawls or dogs shall be engaged when the occupied platform is in a stationary working position.

d. Portable towers shall be uniformly level within one percent of level grade and located on firm footing. Portable towers shall be equipped with outriggers. The outriggers shall be fully deployed following manufacturer's specifications when hoisting.

e. The total weight of the loaded platform and related rigging shall not exceed 50 percent of the rated load capacity for the radius and configuration of the portable tower.

f. The use of a machine having a boom in which lowering is controlled by a brake without aid from other devices which slow the lowering speed is prohibited. **Note:** This type of prohibited boom is commonly called a live boom.

g. Portable towers with variable angle booms shall be equipped with a boom angle indicator, readily visible to the operator.

h. A positive-acting device, such as an anti-two-blocking device, shall be used to prevent contact between the load block or overhaul ball and the boom tip, or a system shall be used to deactivate the hoisting action before damage occurs in the event of a two-blocking situation.

i. The load-line hoist drum shall have a controlled-load lowering system or device on the power train, other than the load hoist brake, which regulates the lowering rate of speed of the hoist mechanism. Free fall is prohibited.

A.8 Platform Design Criteria

a. The hoisting mechanism shall be equipped with a dual cable suspension system. The platform and dual suspension system shall be designed by a qualified engineer or a qualified person competent in structural design.

b. The dual cable suspension system shall be designed to minimize tipping of the platform due to movement of persons occupying the platform.

A.9 Platform Rigging

a. If a wire rope bridle is used to connect the platform to the load line, each bridle leg shall be connected to a master link or shackle to ensure that the load is evenly divided among the bridle legs.

b. Hooks on overhaul ball assemblies, lower load blocks or other attachment assemblies shall be of a type that can be closed and

locked, eliminating the hook throat opening, except that an alloy anchor type shackle with a bolt, nut and retaining pin may be used.

c. Wire rope, shackles, rings, master links and other rigging hardware shall be capable of supporting at least 5 times the maximum intended load applied or transmitted to that component. Where rotation resistant rope is used, the rope and hardware shall be capable of supporting without failure at least 10 times the maximum intended load.

d. All eyes in the wire rope slings shall be fabricated with thimbles.

e. Bridles and associated rigging for attaching the platform to the hoist line shall be used only for that purpose.

A.10 Trial Lift, Inspection, and Proof Testing

a. A trial lift with the unoccupied platform loaded at least to the anticipated liftweight shall be made from ground level, or any other location where persons will enter the platform, to each location at which the platform is to be hoisted and positioned. The trial lift shall be performed immediately prior to placing personnel on the platform. The operator shall determine that all systems, controls and safety devices are activated and functioning properly, that no interferences exist, and that all configurations necessary to reach each location will allow the operator to remain under the 50 percent limit of the hoist's rated load capacity. A single trial lift may be performed at one time for all locations that are to be reached from a single set up position.

b. The trial lift shall be repeated daily, or when the portable tower is moved and set up in a new location or returned to a previously used location.

c. Persons shall not be hoisted unless:
   1. Hoist ropes are free of kinks;
   2. Multiple part lines are not twisted around each other; and
   3. The primary attachment is centered over the platform.

d. The hoisting system shall be inspected if the load rope is slack to ensure all ropes are properly seated on drums and in sheaves.

e. A visual inspection of the portable tower, rigging, platform and the tower base support or ground shall be conducted by a person designated by the jump master immediately after the trial lift to determine whether the testing has exposed any defect or produced any adverse effect upon any component or structure.

f. Any defects found during inspections which create a safety hazard shall be corrected before hoisting personnel.

g. Documentation of the trial lift and daily pre-operational lift shall be made available to the department.

A.11 Jump Practices

a. Persons shall keep all parts of the body inside the platform during raising, lowering and positioning.

b. Tag lines shall be used unless their use creates an unsafe condition.

c. The portable tower operator shall remain at the controls at all times when the tower engine is running and the platform is occupied.

A.12 Bungee cord requirements

a. MAXIMUM G-FORCE. The maximum G-force allowable on a jumper using waist and chest harness shall be 4.5 G's. The maximum G-force allowable on a jumper using an ankle harness shall be 3.5 G's.

b. FACTOR OF SAFETY. The minimum factor of safety for any bungee cord configuration attached to a jumper shall be no less than 5. **Note:** A factor of safety of no less than 5 means that the maximum dynamic load possible for a jumper to exert on a bungee cord configuration is no greater than 20 percent of that cord configuration's minimum breaking strength.

c. BUNGEE CORD DESIGN. The owners of bungee jumping facilities shall use bungee cords that meet the following specifications:

1. In a single bungee cord system, the binding shall hold the cord threads in the designed positions. The binding shall have the same characteristics as the cord itself. In a multiple bungee cord system, the cord shall be bound together to prevent potential jumper entanglement. The bindings shall not damage or affect the performance of the bungee cords.

2. All bungee cords shall be designed and tested to perform within the prescribed limits of the maximum G-force and factor of safety specified in A.12(a) and A.12(b).

3. Conclusive ultimate tensile strength testing shall beperformed on a representative amount of all manufactured bungee cords. All tests shall be performed or supervised by an independent certified testing authority or an independent certified engineer. Test results shall be made available to purchasers of the bungee cords and the department upon request. The testing authority shall determine the ultimate tensile strength of each test specimen and

use the lowest failure value recorded as the ultimate tensile strength value for the corresponding lot of bungee cords tested. The ultimate tensile strength is reached when the applied load reaches a maximum before failure.

4. A load versus elongation curve resulting from the test specified in A.12(c)(3) shall be used to calculate the maximum G-force and factor of safety of the corresponding lot of bungee cords tested. The test results shall be made available to purchasers or users of the bungee cords and the department upon request.

5. Owners shall follow the inspection and testing recommendations set forth by the bungee cord manufacturer or distributor. These tests shall be completed utilizing the maximum load the bungee cords are designated for.

6. Owners shall obtain specifications on the maximum allowable usage of bungee cords expressed in number of jumps.

d. CORD MATERIAL AND SHEATHING. The bungee cord material and sheathing to be used shall be clearly specified in the site operating manual.

e. WHEN TO DESTROY CORD. The bungee cord owner shall destroy the bungee cord and its non-metallic connectors when one of the following conditions occur:

1. Exposure to daylight exceeds 250 hours, unless the bungee cord cover of the sleeve fully protects all of the cord from visible and ultra-violet exposure;

2. Six months has elapsed from the date of manufacture;

3. Bungee cord threads exhibit wear, such as bunched threads or uneven tension between threads or thread bands;

4. The number of broken threads exceeds 5%;

5. A bungee cord has had contact with solvents, corrosives or abrasives;

6. Other flaws in a bungee cord are found;

7. When the dynamic load capacity becomes less than the maximum designed dynamic load; (**Note:** As the bungee cord stretches over the course of its jump life, the dynamic load required to extend the bungee to 4 times its unloaded length will reduce.)

8. After a bungee cord has been used a maximum of 500 jumps; or

9. When the bungee cord or its connectors do not comply with the manufacturer's specifications.

f. CORD RECORDS. Owners of bungee jumping facilities shall have a system for recording the number of jumps on each individual bungee cord in use.

g. BUNGEE CORD DESTRUCTION. Bungee cords retired from use shall be destroyed by cutting the cord into 5-foot lengths.

h. BUNGEE CORD END CONNECTIONS. Bungee cord end connections shall have a minimum safety factor of 5 times the maximum dynamic load for that cord configuration. All end connections shall be of a size and shape to allow easy attachment to the jump harness and to the rigging. On multiple bungee cord systems, each cord shall have its own independent end connection.

i. CORD INSPECTION. Bungee cords shall be examined daily. Before starting the day's operations, the jump master shall visually inspect the entire length and circumference of the bungee cord for signs of wear. The inspection shall be repeated at least 4 times during daily operation and recorded in the site log.

Note: The performance criteria and system requirements contained in this section are for 2 types of bungee cords: Cotton or nylon sheathed cords and synthetic or natural rubber cords. Cotton or nylon sheathed bungee cords, called "preloaded" style cords, are rubber cords originally developed for military use. These cords are made in conformance with military specifications and are often referred to as "Mil. Spec." However, some non-military specification cords currently in use meet the specifications contained in this section and are considered an approved variation. Synthetic or natural rubber bungee cords, called "New Zealand" style cords, are made with continuous loops of strands of natural or synthetic rubber.

A.13 Jump harness

a. GENERAL. A jump harness shall be either a full body harness, a sit harness with shoulder straps, or an ankle harness.

b. JUMP HARNESSES. All harnesses used in bungee jumping shall be:

1. Full-body designed either as a full body harness or a waist harness worn in conjunction with a chest harness; or

2. Ankle-designed either as an ankle harness or an ankle strapping that is tied off to secure the jumper to the bungee cord end

connection. The ankle harness or strapping shall provide evidence of redundancy. A link to a waist harness or "swami belt" shall be required. A harness shall not cause bruising.

c. Harnesses shall be available to fit the range of jumper sizes accepted for jumping.

d. The harness shall have a minimum breaking strength of 4000 pounds, be suitable for the type of jumping conducted and be manufactured by an organization approved to manufacture similar harnesses.

e. HARNESS INSPECTION. All harnesses shall be inspected by the jump master prior to harnessing a jumper. Harnesses shall be removed from service when they exhibit signs of excessive wear, have been damaged, or when they have met the manufacturer's maximum usage allowance expressed in number of days or in number of jumps. A system shall be developed for recording the number of days or jumps.

A.14 Ropes. All ropes for holding or lowering the jumper shall have a minimum breaking strength of at least 6,000 pounds.

A.15 Hardware and equipment

a. GENERAL. All hardware and equipment used for the purpose of bungee jumping shall be approved for that purpose by the original manufacturer.

b. CARABINERS. Carabiners shall be the screw gate type, manufactured of hardened steel, with a minimum breaking strength of at least 6,000 pounds.

c. PULLEYS AND SHACKLES. Pulleys and shackles shall be manufactured of hardened steel and shall have a minimum breaking strength of at least 6,000 pounds. All pulleys shall be compatible with the rope size.

d. WEBBING. Webbing shall be flat or tubular mountaineering webbing or equivalent with a minimum breaking strength of at least 6,000 pounds. If military specification bungee cords are used, all webbing shall have redundant connections.

e. ANCHORS

1. There shall be 2 anchors that attach the bungee cord to the structure. Each shall have a minimum breaking strength of at least 8,000 pounds or shall be designed with a factor of safety of 5, whichever is greater. There shall be a carabiner that attaches

each anchor to the bungee cord end. The 2 carabiners shall not be connected to each other.

2. Where wire rope is used, it shall have swaged ends with a thimble eye or be continuous. Other connection systems are acceptable if they meet the strength specifications in A.15(e)(1). Wire clips are not acceptable.

3. All materials used for anchoring systems shall be manufactured by an organization approved to manufacture similar devices.

4. Daily inspections of the anchors shall be conducted by the jump master, and any equipment showing signs of excessive wear shall be removed from service immediately.

A.16 Testing and inspection

a. GENERAL. All jump rigging, harnesses, lowering system and safety gear shall be regularly inspected and tested as set forth in the operating manual. Inspections, findings and corrective action shall be recorded in the site log.

b. HARDWARE. Hardware subject to abnormal loadings, impacts against hard surfaces or having surface damage shall be replaced immediately.

c. ROPES AND WEBBING. All ropes, webbing and bindings shall be inspected visually and by feel for signs of wear, fraying, or damage by corrosive substances in accordance with the site operating manual.

A.17 Replacement equipment

a. AVAILABLE EQUIPMENT. Replacement equipment available at the site shall include bungee cords and binding, all ropes, rigging hardware, ankle strapping for jumpers, jump harnesses, safety harnesses, and life lines and clips.

b. WHEN TO REPLACE. Items of equipment, rigging or personal protective equipment found to be defective shall be replaced immediately.

c. CEASE JUMPING. Jumping shall cease immediately when a defective item cannot be replaced.

A.18 Identification of rigging, bungee cords and safety equipment

a. All rigging, bungee cords and safety equipment shall have a permanent identification number.

b. The form of identification shall not affect the performance of the material.

c. The identification shall be clearly visible to the operators during daily operations.

d. The identification shall be recorded in the site operating manual.

A.19 Landing and recovery areas

a. JUMPS OVER LAND. The following requirements apply where the landing area is over land:

1. A net or air bag shall be used. The net or air bag shall be designed to provide adequate coverage of the jump zone, and its specifications shall be included in the site operating manual. The net or air bag shall be rated for the maximum free fall height possible from the platform during operation.

2. The net or air bag shall be in position before jumper preparation commences on the platform.

3. Air bags shall be equipped with an audible alarm in case of loss of air bag pressure.

4. Upon completion of a jump, the jumper shall be lowered onto the net, air bag or landing pad.

5. The landing area shall be free of spectators at all times.

6. The landing area shall be free of any equipment or staff when a jumper is being prepared on the jump platform and until the bungee cord is at its static extended state.

7. A place for the jumper to sit and recover shall be provided close to, but outside, the landing area.

b. JUMPS OVER WATER. The following requirements apply where the landing area is over a body of water:

1. A landing and recovery vessel shall be positioned to recover jumpers.

2. The landing vessel shall have a landing pad which is at least 5 feet by 5 feet. The landing pad shall be placed within the vessel.

3. One person may operate the landing vessel and assist the jumper to land if the vessel is docked or moored. If the vessel is not

docked or moored, one person shall pilot the vessel while another person assists the jumper to land.

4. The vessel shall be equipped with Coast Guard approved life jackets and rescue equipment.

5. The landing area shall be free of other vessels, floating or submerged objects, the public, and any spectators. When the landing area is in open waters, it shall be marked by the deployment of buoys. A sign of appropriate size which reads "BUNGEE JUMPING — KEEP CLEAR" shall be attached to the 4 sides of the landing vessel.

c. JUMPS OVER A POOL. The following requirements apply where the landing area is a pool specifically constructed for bungee jumping:

1. The pool size shall be at least equal to the size of the safety space.

2. Rescue equipment shall be available and the landing area shall be secured.

3. Only the operators of the bungee jump shall be within the landing area.

A.20 Site requirements

a. STORAGE. Adequate storage shall be provided to protect equipment from physical, chemical and ultra-violet ray damage. The storage area shall be secured against unauthorized entry.

b. COMMUNICATIONS. There shall be a public address system in operation during all hours of business. Voice, telephone, radio or other communications shall be maintained between all operations personnel involved with the actual jump.

c. FENCE. The site shall be enclosed by a fence at least 42 inches in height. The fence shall be designed and constructed to prevent people, animals and objects from entering the site.

d. STAFF IDENTIFICATION. All staff shall be identified so that they can be readily recognized by the public.

e. STAFF BRIEFING. Staff shall be briefed for each day's operation, including the assignment of the designated jump master where more than one jump master is on site.

f. EMERGENCY SERVICES. There shall be a means of communication to local emergency services within 200 feet of the operation.

g. JUMP CONTROL. Owners of bungee jumping facilities shall allow jumps only under the direct control of a jump master.

h. JUMPER WEIGHT. The weight of the jumper shall be checked by 2 independent scales at the jump site. Scales shall be calibrated at least 3 times each year, or when in doubt as to accuracy. Adjustments for the weight of each jumper shall be made by the jump master's selection of bungee cord and the length of webbing or rope attached to the bungee cord.

i. JUMPER INSTRUCTIONS AND RESTRICTIONS. A clearly visible sign shall be posted at the site that lists instructions to jumpers and all medical, age and weight restrictions for jumpers.

j. JUMPER REGISTRATION. Jumpers shall register with the registration clerk before jumping. Registration information shall include the jumper's name, address, city, county, state, zip code, telephone number, medical factors, age and weight.

k. JUMPER PREPARATION. The area where the jumper is prepared for jumping shall be separate from the jump zone. Jumper preparation shall include information to the jumper on jumping, landing, lowering, and recovery procedures; completing harness or binding activities; final inspection by jump master; return of the jumper to the public area; and retrieval of the bungee cord to the platform or storage location.

l. SAFE OPERATION. The jump master shall stop the jumping operation when the wind speed or other conditions affect safe operation of the jump platform or the recovery area.

A.21 Safety and loss control management

a. COORDINATOR. A jump master shall be designated safety, health and loss control coordinator.

b. KNOWLEDGE OF REGULATIONS. The jump master shall be thoroughly familiar with the bungee jumping regulations in this subchapter.

c. EMERGENCY PLAN. A comprehensive written emergency plan shall be developed, practiced, maintained and posted at the site entrance.

A.22 Staff and duties

a. MINIMUM AGE. The minimum age for employment at a bungee jumping site shall be 18 years.

b. JUMP MASTER QUALIFICATIONS.

1. To qualify as a jump master for a bungee jumping site, a person shall have completed a minimum of 25 jumps and 30 hours of training, including 10 hours of site operating manual training, 10 hours of on-the-job experience and 4 hours of procedural review and additional education.

2. A jump master shall have a knowledge of rescue procedures and ground operator procedures, as well as emergency procedures for an accident or illness, for unruly or hysterical jumpers, and for any failure before or after the bungee jump.

c. STAFF ROLES. The staff of a bungee jumping operation shall include at least 4 persons, with the following roles:

1. Jump master. The designated jump master shall have control over the operation and is responsible and accountable for the operation of the site. This person shall be in complete control when jumping occurs. A jump master shall be the only person who takes the jumper through the final stages of preparation to the jump takeoff. The jump master shall have a thorough knowledge of the site, equipment, procedures and staff. The jump master shall be responsible for checking selection of the bungee cord and adjusting the rigging at each jump platform. A jump master shall be located at each jump platform.

2. Jump operator. The jump operator shall assist the jump master to prepare the jumper, assist the jumper into the jump harness, attach the jumper to the rigging, and operate the lowering system. The jump operator may carry out landing and recovery duties and assist in controlling the public.

3. Landing and recovery operator. The landing and recovery operator shall assist the jumper to land on the landing pad or air bag, assist the jumper to the recovery area, and assist in controlling the public.

4. Registration clerk. The registration clerk shall register the jumper, weigh the jumper, control the movement of the jumper to the jump platform, and assist in controlling the public.

5. Vessel operator. The landing vessel operator shall operate the landing or emergency vessel.

d. STAFF TRAINING. Staff training shall be conducted by, or under the direct supervision of, a jump master.

e. STAFF SUPERVISION. Staff who are in training shall be directly supervised at all times.

A.23 Site operating manual

a. CONTENTS OF MANUAL. The site operating manual shall describe the system of operation to be used and shall include, but not be limited to, a complete description of the following:

1. A site plan containing a plan view of the site with all components in place, with fencing and the jump zone defined.

2. A site plan containing a profile of the jump zone.

3. All components in the rigging system which shall include a manufacturer's specification or laboratory test certificate of each component.

4. All operator, jumper and passenger safety equipment.

5. All rescue equipment.

6. Jobs of all personnel employed on the site with the minimum qualifications of each person and complete detail of work periods required.

7. Personnel selection criteria and the process for verifying the qualifications of job applicants.

8. Rules concerning the health and safety of staff, patrons and the public.

9. The owner's requirements regarding personnel use of drugs or alcohol and testing procedures which may be required.

10. The training program of personnel.

11. Standard operating procedures.

12. Emergency procedures to be taken in all possible scenarios which may occur.

13. The rescue training and qualifications required for all staff where the site includes moving water or swift water.

14. The reporting to authorities of incidents resulting in injury.

15. The reporting procedures for any incidents which do not result in injury but which were not in accord with normal operating procedures.

16. Equipment inspection procedures and the logging of those inspections.

17. Maintenance procedures.

18. Redundancy criteria and procedures for all equipment.

19. Purchasing procedures.

20. The method of identifying or labeling all equipment.

b. FOLLOWING MANUAL. The site shall follow the procedures described in the manual at all times.

c. CHANGES IN PROCEDURES. Any requested change in procedures from the site operating manual shall be submitted in writing to the department. Approval shall be obtained from the department prior to implementation.

A.24 Emergency provisions and procedures

a. EMERGENCY PLAN. Each site shall have an emergency plan.

b. FIRST AID KIT. A first aid kit and blankets shall be maintained on site.

c. FIRST AID CERTIFICATION. All jump masters shall have current first aid and CPR certification and complete an annual refresher course.

d. LIFE SAVING CERTIFICATION. At sites where the jump or recovery is over water, the jump master and all landing and recovery staff shall be holders of a current life saving certificate and shall have passed the equivalent for in-water rescue of injured persons.

e. EMERGENCY LIGHTING. Emergency lighting shall be provided at all jump sites that operate one-half hour prior to sunset until one-half hour after sunrise. The emergency lighting system shall illuminate the jump platform, the jump zone and the landing area. The emergency lighting system shall have its own power source.

APPENDIX B
OBTAINING ADOPTED CODES AND STANDARDS

1. American Society for Testing and Materials F-24 (ASTM F-24) Standards Amusement Rides and Devices, Seventh Edition, 2004. A copy of the adopted ASTM standards can be obtained by writing the American Society for Testing and Materials at 100 Barr Harbor Drive, West Conshohocken Pennsylvania, 19428; Phone (610) 832-9500.

2. National Electrical Code (NEC), 2002 Edition. A copy of the adopted NEC standards can be obtained by writing the National Fire Protection Association at 1 Batterymarch Park, Quincy Mass. 02269-0901; Phone 1 (800) 344-3555.

3. National Fire Protection Code 101 (NFPA 101) Life Safety Code, 2003 Edition. A copy of the adopted NFPA standards can be obtained by writing the National Fire Protection Association at 1 Batterymarch Park, Quincy Mass. 02269-0901; Phone 1 (800) 344-3555.

4. National Fire Protection Code 30 (NFPA 30) Flammable and Combustible Liquids Code, 2000 Edition. A copy of the adopted NFPA standards can be obtained by writing the National Fire Protection Association at 1 Batterymarch Park, Quincy Mass. 02269-0901; Phone 1 (800) 344-3555.

5. American Society for Testing and Materials (ASTM) Standards E 543, Standard Practice for Agencies Performing Nondestructive Testing , 1996 Edition. A copy of the adopted ASTM standards can be obtained by writing the American Society for Testing and Materials at 100 Barr Harbor Drive, West Conshohocken Pennsylvania, 19428; Phone (610) 832-9500.

6. American Society for Nondestructive Testing (ASNT) Document SNT-TC-1A, Personnel Qualification and Certification in Nondestructive Testing, 1996 Edition. A copy of the adopted ASNT standard can be obtained by writing the American Society For Nondestructive Testing, 1711 Arlingate Lane, Post Office Box 28518, Columbus, Ohio 43228-0518; Phone 1(800) 222-2768 .

7. United States Consumer Products Safety Commission Safety Bulletins and alerts which reference Amusement rides and attractions. Washington, D.C. 20207-0001