(D) If there is a slack rope condition, the rope is properly seated on the drum and in the sheaves.

(iii) During hoisting, care should be taken that:

(A) There is no sudden acceleration or deceleration of the moving load.

(B) The load does not contact any obstructions.

(iv) Side loading of booms shall be limited to freely suspended loads. Cranes shall not be used for dragging loads sideways. Derricks shall not be used for side loading.

(v) The operator shall not lift, lower, swing or travel while any person is on the load or hook unless notification is filed with the Department pursuant to paragraph (6) of subdivision (q) of this section. The operator shall not carry loads over people or over any occupied building unless the top two floors are vacated or overhead protection with a design live load of 300 psf is provided.

(vi) On truck cranes, loads shall be lifted over the front area only as recommended by the manufacturer and submitted to the department of buildings.

(vii) The operator shall test the brakes each time a load approaching the rated load is handled by raising it a few inches and applying the brakes.

(viii) For mobile cranes, outriggers shall be used when the load to be handled at that particular radius exceeds the rated load without outriggers as given by the manufacturer for that crane and approved by the department of buildings.

(ix) Neither the load nor the boom shall be lowered below the point where less than three full wraps of rope remain on their respective drums.

(x) When two or more cranes are used to lift one load, one appointed person shall be responsible for the operation. He shall analyze the operation and instruct all personnel involved in the proper positioning, rigging of the load, and the movements to be made.

(xi) In transit, the following additional precautions for mobile cranes shall be exercised:

(A) The boom shall be carried in line with the direction of motion.

(B) The superstructure shall be secured against rotation. When negotiating turns or when the boom is supported on a dolly, the superstructure may be rotated by a licensed crane operator only.

(C) The empty hook shall be lashed or otherwise restrained so that it cannot swing freely.

(xii) Before traveling a crane with a load, proposed travel should be shown on a plan of operation and approved by the department. Such data shall be filed with an application for on-site inspection.

(xiii) A crane shall not be traveled with the boom so high that it may bounce back over the cab.

(xiv) When rotating the crane or derrick, sudden stops shall not be made. Rotational speed shall be such that the load does not swing out beyond the radii at which it can be controlled. A tag or restraint line shall be used when rotation of the load is hazardous.

(xv) When a crane is to be operated at a fixed radius, the boom hoist pawl or other positive locking device shall be engaged.

(xvi) Use of winch heads:

(A) Ropes shall not be handled on a winch head without knowledge of the operator.

(B) While a winch is being used, the operator shall be within convenient reach of the power unit control lever.

(4) Holding the load.

(i) The operator shall not leave his position at the controls while the load is suspended.

(ii) People shall not be permitted to stand or pass under a load.

(iii) If the load must remain suspended for any considerable length of time, the operator shall hold the drum from rotating in the lowering direction by activating the positive controllable means at the operator's station.

(iv) In all cases, when booms are raised or lowered from the horizontal, load blocks including hooks and weight balls shall be left on the ground or deposited to the ground before raising or lowering booms.

(5) Securing derrick booms.

(i) Dogs, pawls, or other positive braking mechanism on the hoist shall be engaged. When not in use, the derrick boom shall:

(A) Be laid down;

(B) Be secured to a stationary member, as nearly under the head as possible, by attachment of a sling to the load block; or

(C) Hoisted to a vertical position and secured to the mast.

(6) Hoisting Personnel. Written notification shall be submitted to the commissioner at least three (3) business days prior to the date the hoisting equipment may be used to move personnel. In addition to the requirements of this section, the applicant shall also comply with all applicable OSHA requirements.

(i) The applicant shall be an engineer or a licensed master rigger. However, where the boom length, including jibs and any other extensions, is greater than 250 ft, the applicant shall be an engineer.

(ii) The notification shall include the following:

(A) A description of work,

(B) The start date and duration of the work,

(C) Manufacturer's information on the personnel platform used to perform the work,

(D) The number of people who will be on the platform,

(E) The actual pick load and the maximum radius of the pick,

(F) The allowable pick load for maximum radius from load chart approved by the commissioner,

(G) Description of how the person/people on the platform and the hoisting machine operator will communicate,

(H) Designation of Site Safety coordinator,

(I) Equipment user's company name, and address, and

(J) The name and title of principal from the equipment user company.

(iii) Where the applicant is an engineer, the request shall also include a copy of the Certificate of On-Site Inspection.

(iv) Where the applicant is a master rigger, the request shall also include:

(A) The make, model number and Certificate of Operation of the Hoisting Machine.

(B) A sketch or description of the foundation for the hoisting machine.

(v) **Exception:** If the boom length, including jibs and any other extensions, is less than 100 ft and the lift is supervised by a master rigger, written notification is not required.

(r) Signals.

(1) A signalman shall be provided when the point of operation is not in full and direct view of the operator unless an approved mechanical signaling or control device is provided for safe direction of the operator.

(2) Only persons who are dependable and fully qualified by experience with the operation shall be used as signalmen.

(3) A signalman or other appropriate controls shall be provided when operations or equipment on or adjacent to a highway create a traffic hazard.

(4) Signalmen shall wear high visibility gloves.

(5) A uniform hand signal system shall be used on all operations of a similar nature. The system in use by the U.S. Corps of Engineers (EM 385-1-1) may be used as the model.

(6) Manual hand signals may be used when the distance between the operator and the signalman is not more than 60 feet, but manual hand signals shall not be used when atmospheric conditions prevent clear visibility to the operator.

(7) Mechanical signal systems shall be protected against unauthorized use, breakage, weather or obstruction which will interfere with safe operation. In the event of any malfunction, all motion shall be stopped immediately.

(s) Miscellaneous.

(1) Ballast or counterweight. Cranes shall not be operated without the full amount of any ballast or counterweight in place as specified by the maker, and approved by the department.

(2) Wind speed limitations. No crane or derrick operator shall start an operation when the wind speed exceeds 30 m.p.h., or when the wind is predicted to reach 30 m.p.h. before the operation can be completed. The U.S. weather bureau data from the nearest reporting station may be used for the determination of wind speed.

(3) Operating near electric power lines.

(i) No crane or derrick shall be operated in such a location that any part of the machine or of its load shall at any time come within 15 feet of an energized power line.

(ii) Before the commencement of operations near electrical lines, the appointed person responsible for the operation shall notify the owners of the lines or their authorized representatives providing them with all pertinent information and requesting their cooperation.

(iii) Any overhead wire shall be considered to be an energized line unless and until the person owning such line or the electrical utility authorities certify that it is not an energized line.

(4) Electrical equipment.

(i) General.

(A) Wiring and equipment shall comply with the electrical code of the City of New York.

(B) The voltage used on control circuits shall not exceed 750 volts.

(ii) Equipment.

(A) Electric equipment shall be so located or enclosed that live parts will not be exposed to accidental contact.

(B) All motor, controller and switch frames shall be grounded.

(C) Electric equipment shall be thoroughly protected from dirt, grease and oil, and where exposed to the weather, shall be thoroughly protected therefrom.

(D) Guards for live parts shall be substantial and so located that they cannot be deformed so as to make contact with the live parts.

(E) Name plates shall not be removed.

(iii) Controllers.

(A) Each cage operated crane and derrick shall be provided with a device which will disconnect all motors from the line on failure of power and will not permit any motor to be restarted until the controller handle is brought to the "off " position, or a reset switch or button is operated.

(B) Lever operated controllers shall be provided with a notch or latch which in the "off" position prevents the handle from being inadvertently moved to the "on" position.

(C) The controller operating handle shall be located within convenient reach of the operator.

(D) As far as practicable, the movement of each controller handle shall be in the same general directions as the resultant movements of the load.

(E) For floor operated cranes and derricks, the controller or controllers, if rope operated, shall automatically return to the "off" position when released by the operator.

(iv) Grounding. Each crane, which may be operated in the vicinity of a live power line, shall be effectively grounded as hereinafter provided. The crane shall be provided with a permanent clamp or other means for convenient and effective attachment of a grounding conductor. The cable connecting the clamp to the ground shall be equivalent to a No. 2 AWG or larger single conductor, superflexible, rope stranded copper, composed of not less than 1,600 individual wires, with 600 volt covering for mechanical protection and with terminal parts that insure a good connection with hand type screw clamps. An effective ground shall be one having a resistance of 25 ohms or less, which shall be measured, or a connection to a continuous underground metallic water piping system.

(5) Demolition.

(i) Crane or derrick operation when used for mechanical demolition shall comply with Section 3306 of the New York City Building Code and,

in addition, a crane or derrick operating with a demolition ball shall meet the following requirements:

(A) The weight of the demolition ball shall not exceed fifty percent of the rated capacity of the boom length at its maximum radius.

(B) The swing of the boom shall not exceed thirty degrees from the centerline, front to back of the crane mounting.

(C) The load line and attachment of the demolition ball to the load line shall be checked at least twice daily.

(D) Truck cranes without outriggers extended shall not be used to swing a demolition ball.

(t) Storage.

(1) Necessary clothing and personal belongings shall be stored in or about the crane or derrick in such a manner as to not interfere with access or operation.

(2) Tools, oil cans, waste, extra fuses, and other necessary articles shall be stored in a tool box and shall not be permitted to lie loose in or about the cab or cage.

(u) Refueling.

(1) Refueling shall comply with Section 3320.3.2 of the New York City Building Code. For the purposes of satisfying this requirement, the term "material handling equipment" in such section shall be read to mean "crane or derrick."

(2) Machines shall not be refueled with the engine running.

(v) Fire Extinguishers.

(1) A carbon dioxide, dry chemical or equivalent fire extinguisher shall be kept in the cab or in the vicinity of the crane or derrick.

(2) Operating and maintenance personnel shall be familiar with the use and care of the fire extinguishers provided.

(w) Filing for Prototype Equipment. Where the equipment is a duplicate of equipment previously filed with design information and approved by the department, the previous approval shall be accepted for the design. Evidence shall be submitted that the welding and other manufacturing processes affecting the structural integrity of the crane

were performed in accordance with applicable specifications and that required controls were maintained and tests performed.

(x) Waiver of Modification of Rules and Regulations. The commissioner may, at his discretion, modify or waive any of the foregoing requirements where practical difficulties in complying with particular sections exist and the public safety is not endangered thereby.

(y) Referenced standards. The standards referenced in this section are considered part of the requirements of this section to the prescribed extent of each such reference. Where differences occur between provisions of this section and referenced standards, the provisions of this section shall apply.

Standard	Name	Year
American Society of Civil Engineers (ASCE)		
ASCE 7	Minimum Design Loads for Buildings and Other Structures	2005
American Society of Mechanical Engineers (ASME)		
ASME B30.3	Tower Cranes	2004, 2009, & 2012
ASME B30.5	Mobile Cranes	1968, 1982, 1989, 1994, 2000, 2004, 2007, 2011, & 2014
ASME B30.6	Derricks	2003 & 2010
ASME B30.22	Articulating Boom Cranes	2005 & 2010
ASME B30.29	Self-Erecting Tower Cranes	2012
European Standards (EN)		
EN 996	Piling Equipment	2009 & 2014
EN 13000	Mobile Cranes	2004, 2010, & 2014
EN 14439	Tower Cranes	2006 & 2009
International Organization for Standardization (ISO)		

ISO 9001		2008
SAE International (SAE)		
SAE J765	Crane Load Stability Test Code	1990
SAE J987	Lattice Boom Cranes-Method of Test	1967 & 2003
SAE J1063	Cantilevered Boom Crane Structures - Method of Test	1993

§3. This rule shall take effect on January 1, 2016.