



Promulgation Details for 1 RCNY 104-23

This rule became effective on January, 5, 2018.

Since such date, one or more amendments have been made to this rule. Each rule amendment has its own effective date and Statement of Basis and Purpose.

Below you will find one or more rule amendments (the most recent appearing at the top), followed by the original rule.

The effective date of each amendment and the original rule can be found at the top of each "NOTICE OF ADOPTION OF RULE."

NOTICE OF ADOPTION OF RULE

NOTICE IS HEREBY GIVEN, pursuant to the authority vested in the Commissioner of the Department of Buildings by Section 643 of the New York City Charter and in accordance with Section 1043 of the Charter, that the Department of Buildings hereby adopts the amendments to sections 104-09 and 104-23 of Subchapter D of Chapter 1 and sections 3316-01 and 3319-01 of Chapter 3300 of Title 1 of the Official Compilation of the Rules of the City of New York, regarding technical cleanup amendments to rules governing the licensing of hoisting machine operators and the rules governing cranes and derricks, adding language on peer review of cranes and amending the rule regarding rigging operations.

This rule was published in the City Record on March 2, 2020 and a virtual public hearing was held on June 4, 2020.

Dated: June 16, 2020
New York, New York



Melanie E. La Rocca
Commissioner

Statement of Basis and Purpose of Rule

The amendments:

- Make technical cleanups to rules governing the licensing of hoisting machine operators, as follows:
 - Sections 1 and 4 of the amendments correct a logical inconsistency in sections 104-09 and 104-23 of chapter 100 of Title 1 of the Rules of the City of New York. The amendments prevent a misinterpretation that would prohibit some applying credits obtained on larger machinery towards obtaining more limited licenses.
 - Article 405 of Title 28 of the New York City Administrative Code does not establish pre-requisite licensing in order to obtain a Class A or a Class C Hoisting Machine Operator license.
 - Only people applying for a Class B Hoisting Machine Operator license must first be licensed as a Class A Hoisting Machine Operator.
 - Individuals who originally intended to get a Class A license but ultimately choose to apply for a Class C license have previously been allowed to credit experience obtained on larger Class A machinery in applying for the more limited Class C license.
 - Similarly, individuals who originally intended to obtain a Class C license but ultimately choose to train on larger Class A machinery and apply for a Class A license have not been required to first obtain a Class C license.
 - Sections 2 and 3 of the amendments remove a distinction between a certification for a tower crane and a self-erecting tower crane. This amendment mirrors current national crane certifications, which do not distinguish between tower cranes and self-erecting tower cranes.
- Include additional rigging best practices (Sections 5 and 6).
- Make technical cleanups to rules governing cranes and derricks, as follows:
 - Section 8 of the amendments require additional engineering information to be submitted to the department for tower crane prototype review; these values were inadvertently left out of the current rules.
 - Section 9 corrects terminology related to a “phase” or “jump.”
 - Section 10 clarifies that a licensed master or tower crane rigger can witness a tower crane load test.
 - Section 12 clarifies that cranes or derricks that are used under the supervision of a master rigger must maintain the same jobsite logs as a crane that requires a certificate of on-site inspection.
 - Section 13 clarifies the title and scope of a particular section of the rule.

- Codify requirements contained in Buildings Bulletin 2019-005 regarding peer review for cranes and derricks in Sections 7 and 11. The department requires certain cranes or derricks with complex or out of the ordinary loading, load paths, configurations, operations, or site conditions, or whose setup requires coordination among city agencies to be subject to a peer review. During a peer review, an independent New York State professional engineer reviews the application submitted by the crane or derrick notice engineer and provides an additional verification that the crane or derrick design indicated on the submitted crane or derrick notice application is in general conformance with New York City Codes, rules, and regulations for cranes and derricks. This rule provides uniform requirements for crane and derrick peer reviewers and crane and derrick peer reviews.

The Department of Buildings' authority for these rules is found in sections 643 and 1043 of the New York City Charter, section 28-104.7.11 of Chapter 1 and Article 405 of Chapter 4 of the City Administrative Code and sections BC 3316 and BC 3319 of the New York City Building Code.

New material is underlined.

[Deleted material is in brackets.]

Section 1. Subparagraph (ii) of paragraph (4) of subdivision (a) of section 104-09 of Subchapter D of Chapter 100 of Title 1 of the Rules of the City of New York is amended to read as follows:

- (ii) Class C license applicants. An applicant for a Class C Hoisting Machine Operator license must provide proof demonstrating that the two (2) years of experience required by Section 28-405.3 of the New York city administrative code was acquired operating hoisting machines under the supervision of a Hoisting Machine Operator licensed by the Department or by another jurisdiction within the United States that regulates crane operators. The experience must have been obtained on hoisting machines of a type, size, and capacity authorized to be operated by the Class C Hoisting Machine Operator license sought; however, nothing in this section prohibits an individual from crediting experience obtained on Class A machinery in accordance with the provisions of section 104-23 of these rules towards obtaining the Class C license. At least one (1) year of the experience must have been undertaken in the City of New York or in an urban area of comparable density within the United States, as determined by the Commissioner, and, for applications for a Class C1 Hoisting Machine Operator license submitted on or after July 1, 2019, have been in the operation of wheel mounted cranes with a manufacturer's rated capacity in excess of 3 tons (2.72 t).

§2. Paragraph (4) of subdivision (d) of section 104-09 of Subchapter D of Chapter 100 of Title 1 of the Rules of the City of New York is amended to read as follows:

- (4) Derricks. No licensed hoisting machine operator may operate a derrick, or supervise the operation of a learner on a derrick, unless the licensee possesses a tower crane certification [(not self-erecting)], and such certification has been listed on the hoisting machine operator's license by the department.

§3. Table 1 of subdivision (d) of section 104-09 of Subchapter D of Chapter 100 of Title 1 of the Rules of the City of New York is amended to delete the row entitled "Self-erecting tower crane" and to delete footnotes 3 and 4, renumber footnote 5 as footnote 3, and renumber footnote 6 as footnote 4.

§4. Subdivision (l) of section 104-23 of Subchapter D of Chapter 100 of Title 1 of the Rules of the City of New York is amended to read as follows:

- (l) Type, size, and capacity of hoisting machine operated by learner to be within scope of license sought. The learner may only operate hoisting machinery that is authorized by the scope of the license sought. Only a person who possesses a Class A hoisting machine operator license may operate as a learner on hoisting machinery that is authorized to be operated only by a Class B hoisting machine operator. Nothing in this section prohibits an individual who began training to obtain a Class C hoisting machine operator license from pursuing a Class A hoisting machine operator license instead and from operating Class A machinery as a trainee in accordance with the provisions of this section.

§5. Subdivision (d) of section 3316-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended to add a new paragraph (6) to read as follows:

- (6) Trimming and balancing loads.** Loads must be securely slung and balanced before they are set in motion. Loads must be trimmed to prevent the dislodgment of any part during raising, lowering, swinging, or transit.

§6. Subdivision (d) of section 3316-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended to add a new paragraph (7) to read as follows:

- (7) Load suspended beneath another load ("Christmas treeing") prohibited.** No load may be suspended directly beneath an existing load.

§7. Subdivision (b) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended by adding new definitions, in alphabetical order, as follows:

- INDEPENDENT (peer reviewer).** A person who does not engage in any activities that may conflict with their objective judgement or integrity, including but not limited to having a financial and/or other interest in the design, construction, installation, manufacturer, or maintenance of the crane or derrick they are reviewing.

QUALIFIED (peer reviewer). A New York State professional engineer who has the education, training, and experience required for the design of structures of a similar complexity and size as the crane or derrick notice application to be peer reviewed and to perform a complete review of the means, methods, and design proposed by the crane or derrick notice engineer.

§8. Clause (C) of subparagraph (iv) of paragraph (5) of subdivision (d) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended to read as follows:

(C) Contain the following information from the manufacturer for the given in-service, out-of-service, and, where applicable, full, unreduced, design wind speed at the center of the tower:

1. The maximum moment;
2. The slewing moment; and
3. Corresponding vertical loads at the foundation.]

1. Wind load base shear.
2. Wind load overturning moment at the base.
3. Vertical loads at the base.
4. Overturning moment at the base center due to vertical loads.
5. Maximum tower and boom displacements due to wind.
6. The slewing moment.

§9. Subparagraph (ii) of paragraph (7) of subdivision (g) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended to read as follows:

(ii) **Continued validity of the certificate of on-site inspection for a phase or jump.** Where a crane or derrick project includes multiple phases or jumps, the continued validity of the certificate of on-site inspection is contingent upon the crane or derrick passing the inspection and tests required by subparagraphs (i) and (ii) of paragraph (8) below for each phase or jump. Upon successful passage of such inspections and tests, and submittal of the inspection report in accordance with subparagraph (iv) of paragraph (8) below, the certificate of on-site inspection is deemed to cover such phase or jump.

Exception: A phase does not include the relocation of a mobile crane to another location at the site, provided such relocation is indicated on the approved crane or derrick notice plans, and provided such relocation does not require the crane to be assembled or disassembled.

§10. Item number 5 of clause (D) of subparagraph (i) of paragraph (8) of subdivision (g) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended to read as follows:

5. [For] A licensed master or tower crane rigger, or, for a derrick, a licensed master rigger[,] or a master rigging foreman.

§11. Subdivision (g) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended by adding a new paragraph (13) to read as follows:

(13) Peer review. Peer reviews for crane or derrick notice applications must be in accordance with the requirements of subparagraphs (i) through (xiii) below.

(i) Peer review required. A crane or derrick notice application is subject to a peer review when the crane or derrick notice application proposes any one of the following:

(A) The use of a mobile crane with a boom, including jibs and any other extensions to the boom, equal to or greater than 300 feet (91.44 m) in length.

(B) The use of a mobile crane in a configuration where the manufacturer requires, at a wind speed of 20 mph (32.19 kph) or less (sustained or gust):

1. The boom or boom/jib combination to be laid down;

2. The boom or boom/jib combination to be placed in a jackknife position; or

3. Other special protective measures to be implemented.

(C) The placement of a mobile crane with a maximum manufacturer rated capacity in excess of 10 tons (9.07 metric tons) on any elevation of a building above grade.

In addition, where other out of the ordinary or complex loading, load paths, configurations, operations, or site conditions exist, or where the crane application requires coordination among city agencies, the commissioner may require peer review.

(ii) Peer reviewer. The peer review must be performed by a qualified and independent New York State professional engineer who has been retained by or on behalf of the equipment user.

(A) Peer reviewer to be acceptable to crane or derrick notice engineer. The peer reviewer's qualifications must be acceptable to the crane or derrick notice engineer.

(B) Department reserves right to reject peer reviewer. The department reserves the right to reject a peer reviewer on the grounds of lack of qualification or independence.

- (iii) Responsibility of crane or derrick notice engineer.** The crane or derrick notice engineer retains sole responsibility for the crane or derrick design indicated on the submitted crane or derrick notice application. The activities and reports of the peer reviewer do not relieve the crane or derrick notice engineer of any responsibility for the crane or derrick design indicated on the submitted crane or derrick application.
- (iv) Standard of care for of peer reviewer.** The standard of care to which the peer reviewer must be held in the performance of the peer review and report must be equal to the level of skill and care required to prepare and submit the crane or derrick notice application.
- (v) Scope of the peer review.** The peer reviewer must perform an independent review and analysis of the crane or derrick design indicated on the submitted crane or derrick notice application to confirm the design is in general conformance with New York City Codes, rules, and regulations for cranes and derricks. The review and analysis to determine general conformance shall include but not be limited to the following:
- (A)** Confirm that drawings are complete, existing conditions and base building construction loading have been accurately represented on the drawings, and that any structures including, but not limited to, vaults, adjacent buildings, overhead wires, transit structures, and utilities are accurately represented on the drawings.
 - (B)** Confirm that approved load charts have been included and maximum picks represented correctly.
 - (C)** Where applicable, review the project's geotechnical report design recommendations and inspection reports to determine that appropriate design criteria for dunnage or foundations has been utilized. If no design criteria have been specified on the crane or derrick notice application design drawings, the peer reviewer must state any assumptions or criteria utilized in the analysis of the crane or derrick notice application design.
 - (D)** Confirm the assembly/disassembly plan is complete, specific to the configurations shown in the crane or derrick notice application, and able to be fully implemented based upon site conditions.
 - (E)** Confirm the wind action plan is complete, specific to the configurations shown in the crane or derrick notice application, and able to be fully implemented based upon site conditions.
 - (F)** Where applicable, confirm that complete pre-operational test procedures, including load test procedures, are included.

- (G) Confirm that the crane or derrick has a complete load path into the base building structure or ground.
 - (H) Perform independent calculations for all structural members, connections and systems included in the load path determined in item vii above and verify the foundation and structural elements' ability to support the crane or derrick loads.
 - (I) Other items required by the commissioner.
- (vi) Design criteria and assumptions not shown.** If the design criteria and design assumptions are not shown on the crane or derrick notice application drawings or in the computations, the crane or derrick notice engineer must provide a statement of these criteria and assumptions to the peer reviewer. In addition, the crane or derrick notice engineer must provide other information and/or calculations if requested by the peer reviewer.
- (vii) Peer review report.** The peer reviewer must submit a report to the department stating his or her opinion regarding the design of the crane or derrick proposed in the crane or derrick notice application and detailing whether or not the crane or derrick design indicated on the submitted crane or derrick notice application is in general conformance with New York City Codes, rules, and regulations for cranes and derricks. The determination of general conformance shall be based upon the review and analysis performed in accordance with subparagraph (v) of this paragraph.
- (A) Report contents.** The peer review report must, at a minimum, contain the following information:
1. Confirmation that the crane or derrick notice application:
 - A. Complies with each of the items listed in subparagraph (v) of this paragraph.
 - B. All design loads and their combinations are adequate and compliant with New York City codes, rules, and regulations for cranes and derricks and specific project conditions.
 - C. The crane and its supporting elements can safely sustain the design loads.
 2. In the introduction to the peer review report, the peer reviewer must list his or her qualifications and include a statement that he or she is independent from the crane or derrick notice engineer.
 3. All calculations, specific conclusions and results of verification calculations performed by the peer reviewer.

4. A listing of all drawings and reports used in verification (including revision numbers and dates). Where the peer reviewer relied upon reports or data prepared by others, including but not limited reports by specialty consultants (e.g. geotechnical reports), or reports prepared by the crane or derrick manufacturer, the reliance must be disclosed in the peer review report. Such reports or data must be maintained by the peer reviewer for a minimum of six years after the date of project completion, and must be provided to the department upon request.

(B) Conclusions. The peer review report must provide a clear conclusion either:

1. Accepting that the crane or derrick design indicated on the submitted crane or derrick notice application is in general conformance with New York City Codes, rules, and regulations for cranes and derricks; or
2. Rejecting the design.

(C) Positive statements to be unequivocal. Positive evaluations with conclusions that contain exceptions will not be accepted by the department.

(D) Basis of report. The peer review report must be based on and reference only the set of documents submitted to the department with the crane or derrick notice application; all drawings and the latest revision dates must be clearly enumerated in the peer review report.

(E) Changes to be enumerated. Peer review reports must enumerate the changes, if any, made by the crane or derrick notice engineer as a result of discussions following an initial structural peer review evaluation.

(F) Cover statement. The peer review report must include a cover letter provided by the department and completed by the peer reviewer.

(G) Signed and sealed. The peer review report and cover statement must be signed and sealed by the peer reviewer.

(vii) Copy to be provided to equipment user. The peer reviewer must provide a copy of submitted peer review reports and cover statements to the equipment user.

(ix) Phased submission. If the crane or derrick notice application is to be submitted in phases, the peer review and report must be phased. The crane or derrick notice engineer must provide the peer reviewer with

sufficient information to make a peer review of the phased submission. The phased peer review report submission must cover the documents submitted for that phase, and must be without any exclusion that would make the review incomplete.

- (x) Log of discussions.** The peer reviewer must keep a log of any discussions with the crane or derrick notice engineer. The log must be made available to the commissioner upon request.
- (xi) Modifications to the design.** Amendments to the crane or derrick notice application that include changes that substantially modify the basis of the peer review evaluation will not be approved by the department until an amended peer review report and cover statement is submitted to the department by the peer reviewer. The report must provide a statement of acceptance that the design indicated in the amended crane or derrick notice application is in general conformance with New York City codes, rules, and regulations for cranes and derricks. It is the responsibility of the crane or derrick notice engineer to clearly identify on the plans the changes that are substantial and to notify the peer reviewer of any such changes.
- (xii) Disputes.** When a dispute arises between the crane or derrick notice engineer and the peer reviewer regarding compliance with New York City Codes, rules, or regulations for cranes and derricks, and which cannot be resolved by the parties, the dispute must be reported to the department in the form of a letter from the crane or derrick notice engineer.
- (xiii) Changes in designated peer reviewer.** The peer reviewer cannot be changed without the express consent of the department. The current peer reviewer must submit a written request for withdrawal to the department detailing the reason for the withdrawal request and a report of the peer review findings to date.

§12. Subdivision (h) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended to read as follows:

(h) Crane or derrick log. For a crane or derrick that requires a certificate of on-site inspection, or that is used under the direct and continuing supervision of a licensed master rigger, the equipment user must maintain, for the duration of the job, a crane or derrick log. The log may be maintained in an electronic format acceptable to the commissioner. The log must, at a minimum, contain the following information:

§13. Clause (A) of subparagraph (i) of paragraph (1) of subdivision (k) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended to read as follows:

- (A) [Mobile cranes, other than an articulating boom crane, and dedicated pile drivers.] Mobile cranes and dedicated pile**


drivers, other than articulating boom cranes. [For a mobile crane, other than an articulating boom crane, and for dedicated pile drivers] For mobile cranes and dedicated pile drivers, other than articulating boom cranes:

NOTICE OF ADOPTION OF RULE

NOTICE IS HEREBY GIVEN, pursuant to the authority vested in the Commissioner of the Department of Buildings by Section 643 of the New York City Charter and in accordance with Section 1043 of the Charter, that the Department of Buildings hereby adopts new Section 104-23 in Chapter 100 and the amendment to Section 3319-01 of Chapter 3300 of Title 1 of the Official Compilation of the Rules of the City of New York, regarding the training of individuals learning to become a hoisting machine operator.

This rule was first published on October 18, 2017 and a public hearing thereon was held on November 17, 2017

Dated: 11.28.17
New York, New York



Rick D. Chandler, P.E.
Commissioner

Statement of Basis and Purpose of Rule

This rule proposes to establish criteria governing the training of individuals learning to become a hoisting machine operator by adopting requirements of the United States Department of Labor Occupational Safety and Health Administration (OSHA) contained in 29 CFR 1926.1427(f) and making modifications for New York City. The purpose of this rule is to ensure protection of the general public.

The New York City specific modifications include:

- Establishing basic knowledge requirements for learners
- Requiring the supervising licensee to be present in or near the cab or operator's station when the learner is operating a tower crane
- Prohibiting a learner from operating a hoisting machine when the supervising licensee is on break
- Clarifying that the supervising licensee is responsible for performing New York City mandated inspections and maintain New York City mandated logs
- Prohibiting a learner from performing multiple-lift rigging operations, critical picks, or any operation related to the erection, climbing, jumping, or dismantling of a tower crane
- Clarifying the scope of equipment that can be operated and supervised based on the license type being sought and the license held by the supervising licensee

The Department of Buildings' authority for these rules is found in sections 643 and 1043 of the New York City Charter and Article 405 of Chapter 4 of Title 28 of the New York City Administrative Code.

New material is underlined.

[Deleted material is in brackets.]

“Shall” and “must” denote mandatory requirements and may be used interchangeably in the rules of this department, unless otherwise specified or unless the context clearly indicates otherwise.

Section 1. Subchapter D of Chapter 100 of Title 1 of the Rules of the City of New York is amended by adding a new Section 104-23, to read as follows:

§104-23 Hoisting machine operator learners and supervision of learners.

(a) Applicability. The operation of hoisting machines by a learner must be in accordance with the requirements of this section.

(b) Definitions. For the purposes of this section, the following terms have the following meanings:

Hoisting machine. See Section 3302.1 of the New York city building code.

Hoisting machine operator. An individual licensed as a hoisting machine operator in accordance with Article 405 of Chapter 4 of Title 28 of the New York city administrative code.

Learner. An individual learning to become a hoisting machine operator.

Supervising licensee. The hoisting machine operator who is supervising the learner.

(c) Basic requirements for learners. Learners must, at a minimum:

(1) Be at least 18 years of age;

(2) Hold a valid driver's license;

(3) Be able to communicate in the language of the supervising licensee;

(4) Be able to read plans and load charts;

(5) Be familiar with the controls, operating characteristics, and emergency procedures of the hoisting machine to be operated; and

(6) Meet the physical qualifications of section 5-3.1.2(a) of ASME B 30.5-2014, as verified by passing a physical exam and a substance abuse test.

(d) Supervision by licensee. The learner must be in the presence of and under the direct supervision of a licensed hoisting machine operator during all times the learner is operating the hoisting machine, as follows:

(1) The supervising licensee and the learner must be in direct communication with each other, either verbally or by hand signals, at all times; and

(2) For hoisting machines other than tower cranes, the supervising licensee and the learner must be in the direct line of sight of each other at all times. For a tower crane, the supervising licensee must be present in or near the crane cab or operators station.

(e) Breaks. The learner may not operate the hoisting machine when the supervising licensee is on a break. The hoisting operation must stop and the hoisting machine must be properly secured before the supervising licensee goes on break.

(f) Responsibility of supervising licensee. The supervising licensee must:

(1) Ensure the learner safely operates the hoisting machine in accordance with all department regulations, manufacturer specifications, and approved permits or certificates; and

(2) Perform the frequent inspection and the parking/securing inspection for the crane or derrick in accordance with subdivision (k) of section 3319-01 of these rules and maintain the log for the crane or derrick in accordance with subdivision (h) of section 3319-01 of these rules.

(g) **Authority to stop operation.** The supervising licensee has the authority to issue orders to the learner, order the learner to stop operation, and, if necessary, prohibit the learner from operating the hoisting machine.

(h) **Attention to monitoring.** While supervising the learner, the supervising licensee may not perform any tasks that detract from his or her ability to monitor the learner.

(i) **Tasks within learners ability.** The tasks performed by the learner while operating the hoisting machine must be within the learner's ability.

(j) **Restrictions on learners operation.** The learner may not operate a hoisting machine in any of the following circumstances:

(1) If any part of the hoisting machine, load line, or load (including rigging and lifting accessories), if operated up to the hoisting machine's maximum working radius in the work zone as established by clause (A) of subparagraph (ii) of paragraph (3) of subdivision (s) of section 3319-01 of these rules, could get within 20 feet of a power line that is up to 350 kV, or within 50 feet of a power line that is over 350 kV;

(2) If the hoisting machine is used to hoist personnel;

(3) In multiple-equipment lifts;

(4) If the hoisting machine is used over a shaft, cofferdam, or in a tank farm;

(5) In multiple-lift rigging operations;

(6) If the pick is a critical pick as defined in Section 3302.1 of the New York city building code; or

(7) If the operation is related to the erection, climbing, jumping, or dismantling of a tower crane.

(k) **Type, size, and capacity of hoisting machine supervised is within scope of license.** Licensed hoisting machine operators may only supervise the operation of a learner on hoisting machinery that is authorized to be operated by the licensee, and where a certification for the operation of a type of hoisting machine has been established in rules promulgated by the

commissioner, the licensee possesses the certification for that type of hoisting machine, and such certification has been listed on the hoisting machine operator's license by the department.

(1) Type, size, and capacity of hoisting machine operated by learner to be within scope of license sought. The learner may only operate hoisting machinery that is authorized by the scope of the license sought. Only a person who possesses a Class A hoisting machine operator license may operate as a learner on hoisting machinery that is authorized to be operated only by a Class B hoisting machine operator.

§2. Exception number 3 to Paragraph (1) of Subdivision (i) of Section 3319-01 of Title 1 of the Rules of the City of New York is hereby amended to read as follows:

3. Learners in the presence of and under the direct supervision of a licensed operator[.] in accordance with section 104-23 of these rules.