NEW YORK CITY DEPARTMENT OF BUILDINGS

Notice of Public Hearing and Opportunity to Comment on Proposed Rules

What are we proposing? The Department of Buildings (DOB) is proposing the second phase of its multi-phase update of its cranes and derricks rules.

When and where is the hearing? DOB will hold a public hearing on the proposed rule. The public hearing will take place at 10am on 3/20/17. The hearing will be in the 2nd floor auditorium at 125 Worth Street.

This location has the following accessibility option(s) available: Wheelchair accessibility.

How do I comment on the proposed rules? Anyone can comment on the proposed rules by:

- **Website.** You can submit comments to the DOB through the NYC rules website at http://rules.cityofnewyork.us.

- **Email.** You can email comments to dobrules@buildings.nyc.gov.

- **Mail.** You can mail comments to the New York City Department of Buildings, Office of the General Counsel, 280 Broadway, 7th floor, New York, NY 10007.

- **Fax.** You can fax comments to the New York City Department of Buildings, Office of the General Counsel, at 212-566-3843.

- **Speaking at the hearing.** Anyone who wants to comment on the proposed rule at the public hearing must sign up to speak. You can sign up before the hearing by calling 212-393-2085. You can also sign up in the hearing room before the hearing begins on 3/20/17. You can speak for up to three minutes.

Is there a deadline to submit comments? Yes, you must submit comments by 3/20/17.

Do you need assistance to participate in the hearing? You must tell the Office of the General Counsel if you need a reasonable accommodation of a disability at the hearing. You must tell us if you need a sign language interpreter. You can tell us by mail or email at the addresses given above. You may also tell us by telephone at 212-393-2085. You must tell us by 3/6/17.

Can I review the comments made on the proposed rules? You can review the comments made online on the proposed rules by going to the website at http://rules.cityofnewyork.us/. A few days after the hearing, copies of all comments submitted online, copies of all written comments and a summary of oral comments concerning the proposed rule will be available to the public at the Office of the General Counsel.

What authorizes DOB to make this rule? Sections 643 and 1043(a) of the City Charter and section 3319.1 of the City Building Code authorize DOB to make this proposed rule. This proposed rule was not included in DOB's regulatory agenda for this Fiscal Year because it was not contemplated when DOB published the agenda.

Where can I find DOB's rules? DOB's rules are in Title 1 of the Rules of the City of New York.

What rules govern the rulemaking process? DOB must meet the requirements of Section 1043 of the City Charter when creating or changing rules. This notice is made according to the requirements of Section 1043(b) of the City Charter.

Statement of Basis and Purpose of Proposed Rule

In 2015, the Department of Buildings established the Crane Rule Advisory Committee ("the committee"), made up of over three dozen representatives of crane and derrick manufacturers, filing engineers, operating engineers, riggers, and construction firms. The committee has been engaged in a multi-phase effort to update the city's rules for cranes and derricks, which are contained in 1 RCNY 3319-01. Phase 1 was completed in January 2016. The rule amendments herein proposed represent the second phase of this effort. The department anticipates a third phase to culminate in additional rule amendments in the second half of 2017.

The proposed amendments incorporate recommendations made by the Department's June 2009 High Risk Construction Oversight ("HRCO") study that pertain to cranes and derricks, as well as recommendations made by the Crane Safety Technical Working Group ("TWG"), appointed by Mayor Bill de Blasio and Buildings Commissioner Rick Chandler following the February 2016 crane collapse in Tribeca.

These proposed amendments address the following issues related to cranes:

- Safety related to high winds
- Inspections
- Documentation
- Engineering plans
- Operations near powerlines

Highlights of the proposed amendments include:

subdivision (b)

- Adds new and revises existing definitions.
- Revises the definition for self-erecting tower cranes to clarify that self-erecting tower cranes are a subset of tower cranes and cannot be considered a mobile crane. The proposed amendments also recognize that self-erecting tower cranes are different from

standard tower cranes and include proposed amendments which apply or exclude existing tower crane requirements to self-erecting tower cranes, as appropriate. This reflects the recommendation of the TWG to create rules that apply to self-erecting tower cranes (TWG Recommendation #7).

subdivision (c)

- Clarifies existing circumstances where a certificate of on-site inspection is not required and consolidates them under paragraph (1). Currently, exceptions 1.1, 1.2, and 2.3 are found in paragraph (5) of subdivision (g) of the rule; exceptions 2.1 and 2.2 are found in paragraph (3) of subdivision (g) of the rule; exception 1.4 was found in 27-1057(d)(4) of the New York City administrative code.
- Adds new provisions to restrict the use of exception 1.4 only to instances where the crane imposes a limited load on the ground, and does not impact underground infrastructure such as vaults or subway tunnels.
- Adds Exception 1.3, which authorizes work related to the placement of a sidewalk shed or the initial level of a construction hoist without a certificate of on-site inspection.
- Establishes a new requirement, Paragraph (5) of subdivision (c), to notify the Department in advance of specified crane or derrick activities. The notification requirement was recommended by HRCO (HRCO Recommendation C-17).

subdivision (d)

- Clarifies the rule to specify the type of information that the filing engineer for a tower crane installation in New York City must provide to the manufacturer of the tower crane, as well as the information the tower crane manufacturer must submit to the city.

subdivision (e)

- Recognizes European standard, EN 16228, for the design of pile drivers.
- Recognizes recent editions of standards published by the American Society of Mechanical Engineers (ASME) for the design of cranes and derricks.
- These and other instances throughout the proposed amendments where model standards are adopted reflect the recommendation of the TWG to adopt relevant model standards for cranes and rigging (TWG Recommendation #8).

subdivision (g)

- Completely revises the provisions in subdivision (g) related to the certificate of on-site inspection, which authorizes the use of a crane or derrick at a specific location within New York City.
- Identifies the types of plans, calculations, and supporting documents that must be submitted with the application for a certificate of on-site inspection.
- Requires that bolt and torque information be shown on the crane or derrick notice plan, as recommended by HRCO (HRCO Recommendation C-2).

- Requires that load test procedures in subparagraph (iii) of paragraph (2) to be submitted as part of the application for a certificate of on-site inspection, as recommended by HRCO (HRCO Recommendation C-15).
- Requires in subparagraph (v) of paragraph (2) that a New York State professional engineer must detail the wind restrictions for the crane or derrick, as well as the procedures to secure the crane or derrick in the event of wind. The requirement for a wind action plan was recommended by the TWG (TWG Recommendation #19).
- In Paragraph (6), allows the foundation, anchor stool, and first mast section of a tower crane to be installed prior to the approval of the application for the certificate of on-site inspection; this provision ensures proper alignment of the tower crane to the foundation and was recommended by HRCO (HRCO Recommendation C-9).
- In Paragraphs (7) and (8) establishes a new signoff inspection for the certificate of on-site inspection. This signoff will require a representative of the filing engineer and other specified personnel to inspect the crane or derrick at the job site to verify conformance with the approved plans. This was recommended by the TWG (TWG Recommendation #13).
- Requires an engineer to observe the tie-in installation as part of the signoff process, as recommended by HRCO (HRCO Recommendation C-8).

subdivision (h)

- Establishes a new requirement for a crane or derrick log to be maintained at the job site. The log must contain specified meeting and inspection records, as well as other applicable information. The existing requirements in subdivision (h) are currently superseded by the requirements of Chapter 2 of Title 28 of the New York City administrative code.

subdivision (i)

- Consolidates and clarifies existing requirements for the licensing and training of personnel associated with the use of a crane or derrick in subdivision (i).
- Exceptions 1 and 2 to paragraph (1) cross reference existing code exemptions. Exception 3 is currently found in paragraph (1) of subdivision (p). Exception 4 is currently found in subdivision (a), and is rewritten to cross reference parallel requirements in the building code. Exceptions 5 and 6 are new proposals. Exception 5 mirrors exception 1.3 of paragraph (1) of subdivision (c). Exception 6 authorizes dedicated pile drivers to be operated by individuals who hold a recognized national certification for pile drivers.
- Paragraphs (6) and (7) adopt requirements from OSHA 1926 Subpart CC regulations related to personnel who assemble or disassemble a crane or derrick and add additional New York City training requirements. Among other things, these paragraphs require that an assembly/disassembly director must be designated, and that the assembly/disassembly director is charged with ensuring compliance with the approved assembly/disassembly plan; this was recommended by the TWG (TWG Recommendation #12).

subdivision (k)

- Revised the existing provisions related to crane and derrick inspections in subdivision (k).
- Adopts in Paragraph (1) of subdivision (k) ASME requirements for frequent crane or derrick inspections, with modifications to account for unique conditions in New York City. The requirement for the frequent inspection of the crane to be performed prior to each shift, and to be documented, was recommended by the TWG (TWG Recommendation #15).
- Establishes in Paragraph (2) a new requirement for the hosting machine operator to inspect their machine at the end of the shift to verify it has been properly secured for out of service conditions. This inspection was recommended by the TWG (TWC Recommendation #18).
- Renumbers in Paragraphs (3) and (4) existing text related to periodic inspections and inspections of cranes or derricks that have been idle for a specified period of time. Edits were made to reflect the structure of the revised rule. The technical specifications of the inspections will be revisited in a future phase of the crane rule revision process.
- Creates a new section (Paragraph (6)) which requires certain special inspections be performed on cranes and derricks. This was recommended by HRCO (HRCO Recommendations C-8 & C-9).

subdivision (r)

- Adopts ASME requirements for signals, and cross references existing training and certification requirements for signalpersons in the New York City building code.

subdivision (s)

- Adopts in Paragraph (1) provisions from HRCO (HRCO Recommendation C-5) related to crane counterweights.
- Adopts in Paragraph (3) requirements from OSHA 1926 Subpart CC regulations concerning crane operations near a power line. NYC's existing regulations for crane operations near a power line are currently superseded by these OSHA requirements. The proposed amendment also requires that certain information related to crane operations near a power line must be submitted as part of the application for a certificate of on-site inspection.
- Paragraphs (5), (6) and (7) cross reference existing provisions related to cranes used in demolition, as well as to existing Department of Transportation requirements.
- Moves existing provisions from subdivisions (t), (u), and (v) to subdivision (s).

subdivision (t)

- Consolidates and clarifies wind and weather restrictions for cranes and derricks in subdivision (t).
- Relocates the requirement currently found in paragraph (2) of subdivision (s) prohibiting the operation of cranes and derricks in winds of over 30mph to subdivision (t), and clarifies in paragraphs (3) and (4) the difference between start of work and in-service scenarios.

- Creates a new requirement in paragraph (7) that the wind be measured via an anemometer installed on the crane or at the site, as recommended by the TWG (TWG Recommendation #4).
- Clarifies in Paragraphs (1) and (2) of subdivision (t) that the hoisting machine operator must review and follow the requirements of the wind action plan and the applicable procedures of the equipment manufacturer.
- Expands in Paragraph (5) the wind and weather restrictions that apply to assembly/disassembly operations.

subdivision (u)

- Requires that plans and documents must be maintained at the site, available to the hoisting machine operator, lift director, and assembly/disassembly director.

subdivision (w) and (x)

- Cross references existing requirements of the New York City administrative code.

The Department of Buildings' authority for these rules is found in sections 643 and 1043 of the New York City Charter and section 3319.1 of the New York City Building 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. The exceptions in subdivision (a) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York are amended as follows:

(a) **Applicability.** The design, construction, permitting, installation, removal, adjustment, repair, inspection, maintenance, operation and use of cranes and derricks must conform to the requirements of Section 3319 of the New York City Building Code and this section. This includes, but is not limited to, cranes and derricks used for hoisting and/or rigging purposes; or used for construction, alteration, demolition, excavation and maintenance purposes, including for buildings, highways or sewers; or used for the installation of piles; or used for the hoisting or lowering of any article on the outside of any building or structure. This also includes any equipment that meets the definition of a crane or derrick, including, but not limited to, dedicated pile drivers and manufactured or custom designed hoisting machines.

[Exceptions]Exception:

[(1)] Cranes and derricks listed in the exceptions set forth in Section 3319.3 of the New York City Building Code.

[(2) Operators of cranes described in exceptions 3 and 4 of Section 3319.3 of the New York City Building Code are exempt from any licensing requirements where the cranes are used in connection with the installation or maintenance of street lighting or public utility overhead power distribution systems.]

§2. 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:

ACCEPTANCE OR ACCEPTED (Construction documents). See Section 28-101.5 of the Administrative Code.

APPROVAL OR APPROVED (Construction documents). See Section 28-101.5 of the Administrative Code.

ARCHITECT. A person licensed and registered to practice the profession of architecture under the education law of the state of New York.

ASSEMBLY/DISASSEMBLY (ASSEMBLED OR DISASSEMBLED). The installation or removal of structural components or attachments to a crane or derrick, or the installation or removal of elements that connect or attach a crane or derrick to a building or structure. The term assembly/disassembly includes the erection, climbing, jumping, or dismantling of a tower crane. The term assembly/disassembly does not include operations exclusive to the installation or removal counterweights, or to the unfolding and pinning of a boom or swing-away jib. The term assembly/disassembly also does not include the setup or breakdown of a self-erecting tower crane provided the setup of the self-erecting tower crane does not require a boom, mast, or jib section, or other attachment, to be installed at the site.

CRANE OR DERRICK NOTICE ENGINEER. The engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who filed the crane or derrick notice application.

DELIVERY. The dropping off or retrieval of materials or equipment to or from a site. Delivery does not include the performance of any construction or demolition work, including but not limited to holding steel, HVAC equipment, hoist towers, scaffolding, sidewalk shed components, or any other loads in place while they are bolted or otherwise affixed, or to the securing or lowering materials during the course of demolition work.

DIRECT AND CONTINUING SUPERVISION. See Section 28-401.3 of the Administrative Code.

OPERATION (OPERATED). Any work or activity performed by a crane or derrick, including but not limited to the lifting, lowering, or swinging of loads.

PILE DRIVER. A dedicated pile driver; or a crane or derrick equipped with an attachment or otherwise outfitted to drive, hammer, press, or vibrate piles into the earth ("pile drive"). However, the definition of a pile driver does not include excavating or earth-moving equipment fitted with a pile driving attachment.

REGISTERED DESIGN PROFESSIONAL. An architect or engineer.

RIGGING FOREMAN. See section 104-20 of these rules.

§3. The definition of "crane" in 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 a new sub definition for "service crane", as follows:

SERVICE CRANE. A mobile crane utilized exclusively to perform one or more of the following auxiliary tasks at a site: (1) repairing or maintaining construction machinery, (2) delivering material within the confines of the site, (3) moving material within the site to a central location so that it may be lifted to the required areas of construction, or (4) moving within the site matting, dunnage, or equivalent from one location to another. A service crane does not include a crane used to make a delivery to the site by hoisting it into the site from a point external to the site, or a crane used to hoist or lower articles to or from a building or structure during the course of construction or demolition.

§4. The sub definition of "self-erecting tower crane" in subdivision (b) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended, as follows:

SELF-ERECTING TOWER CRANE. A tower crane that adjusts its operating radius by means of a trolley traversing a jib and that; (i) possesses a vertical or nearly vertical [masts] tower or mast that [are] is bottom slewing and mounted on fixed, traveling, or mobile bases; and (ii) is capable of folding and unfolding to facilitate transit from [job]site to [job]site with minimal assembly. A self-erecting tower crane is not considered to be a mobile crane, even if the self-erecting tower crane otherwise meets the definition of a mobile crane.

§5. The definition of "dedicated pile driver" in subdivision (b) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended, as follows:

DEDICATED PILE DRIVER. A power-operated machine that is designed [exclusively] primarily to drive, hammer, press, or vibrate piles into the earth ("pile drive") and which typically possess the ability to both hoist the material that will be pile driven and to pile drive that material.

§6. Subdivision (c) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended, as follows:

(c) Permit and notification requirements for cranes and derricks.

(1) Certificates of approval, operation, and on-site inspection. Cranes and derricks must possess a certificate of approval, certificate of operation, and certificate of on-site inspection when required by Section 3319 of the Building Code.

Exceptions:

1. A certificate of on-site inspection is not required for:

1.1 A pile driver that:

1.1.1 Is set up and operated entirely within a site that is closed to the public; and

1.1.2 Does not impart a load on the ground in excess of 500 psf (23.94 kPa), including the load of the platform, matting, or dunnage utilized to support the equipment.

1.2 A clamshell that:

1.2.1 Is set up and operated entirely within a site that is closed to the public;

1.2.2 Is set up and operated at locations within the site that are set back from the edge of the excavation by a distance that is equal to or greater than the depth of the excavation; and

1.2.3 Does not impart a load on the ground in excess of 500 psf (23.94 kPa), including the load of the platform, matting, or dunnage utilized to support the equipment.

1.3 A mobile crane that has a boom length of 135 feet (41.15 m) or less, and is utilized at the site exclusively to:

1.3.1 Install, adjust, maintain, repair, or remove a sidewalk shed; or

1.3.2 Install or dismantle the initial level of a single or dual cab hoist, provided:

1.3.2.1 Such installation or dismantling is limited to the hoist cars, counterweights, and initial mast sections needed for the car;

1.3.2.2 Car or motor components to be hoisted are equipped with lifting lugs; and

1.3.2.3 No object is hoisted more than 20 feet (6.1 m) above the bed of the delivery truck during such installation or dismantling operation.

2. A certificate of on-site inspection is not required for a mobile crane that is utilized under the direct and continuing supervision of a licensed master rigger, provided:

2.1 Onsite supervision is provided by the licensee or a master rigging foreman, except that for a critical pick the licensee must provide the onsite supervision;

2.2 A drawing indicating pertinent site features, obstacles, and restrictions, the location and configuration of the crane at the site, required matting or dunnage, and pedestrian and traffic control to be provided as per the requirements of the Department of Transportation, is prepared by or on behalf of the licensed master rigger and kept at the site, available to the commissioner upon request;

2.3 The licensed master rigger is responsible for ensuring compliance with the drawing; and

2.4 Such mobile crane:

2.4.1 Does not exceed 250 feet (76.2 m) in boom length, including jibs and any other attachments;

2.4.2 Is utilized for work that is not related to the construction of a new building, the full demolition of an existing building, or the vertical or horizontal enlargement of an existing building, including but not limited to the installation or removal of boilers or tanks at a new building, full demolition, or vertical or horizontal enlargement site;

2.4.3 In all conditions of loading, is provided with adequate footing so as to not exceed the bearing capacity of the ground or subsurface elements;

2.4.4 Does not impose a bearing pressure, including dunnage, exceeding 3,500 psf (167.85 kPa);

2.4.5 Is not set up on a vault or similar subsurface structure;

2.4.6 Is not set up on a steel platform, excluding mats or dunnage at the street or ground level; and

2.4.7 Is not set up and operated in a location that requires approval of the New York City Transit Authority.

3. Provided an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, files an on-site waiver with the department on behalf of the equipment user, supported by plans and calculations upon request, certifying compliance with the items specified below, a certificate of on-site inspection is not required for:

3.1 A mobile crane that:

3.1.1 Is located at the site for no more than 48 hours;

3.1.2 Does not exceed 160 feet (48.76 m) in boom length, including jibs and any other attachments;

3.1.3 Is set up and operated entirely within a safety zone where the distance from the crane to the boundary of the safety zone is equal to or greater than the length of the boom, jib, and any other attachments, and all areas and structures within the safety zone are closed to the public; and

3.1.4 In all conditions of loading, is provided with adequate footing so as to not exceed the bearing capacity of the ground or subsurface elements.

3.2 A service crane that:

3.2.1 Is set up and operated entirely within a site that is closed to the public;

3.2.2 Does not exceed 110 feet (33.53 m) in boom length, including jibs and any other attachments; and

3.2.3 In all conditions of loading, is provided with adequate footing so as to not exceed the bearing capacity of the ground or subsurface elements.

3.3 A pile driver or clamshell that:

3.3.1 Is set up and operated entirely within a site that is closed to the public;

3.3.2 Imparts a load on the ground in excess of 500 psf (23.94 kPa) but not exceeding 2,500 psf (119.7 kPa), including the load of the platform, matting, or dunnage utilized to support the equipment;

3.3.3 In all conditions of loading, is provided with adequate footing so as to not exceed the bearing capacity of the ground or subsurface elements; and

3.3.4 Is set up on ground that is able to support the load, as demonstrated to the satisfaction of the department on the basis of borings filed by the engineer.

(2) Temporary construction equipment permit. A temporary construction equipment permit, such as an Alt II permit or a CD-5 permit, is required for:

(i) A mobile crane that meets exception numbers 3 or 4 of Section 3319.3 of the New York City Building code, but does not meet any other exception of Section 3319.3 of the New York City Building code, and is used in conjunction with the construction, alteration, or demolition of a building[, and that does not meet any exception other than numbers 3 or 4 of Section 3319.3 of the New York City Building Code].

(ii) Cranes and derricks with a manufacturer's rated capacity of 1 ton (907 kg) or less and used in conjunction with the installation, alteration, maintenance, repair, or removal of a building, building systems, or equipment located on a building.

(3) Noncompliance. Where a crane or derrick requiring one or more of the certificates or permits is found not to be in compliance with one or more of the required certificates or permits, the use of such crane or derrick must cease. The crane or derrick must not be used until it has been brought into conformance with the certificates or permits, or amended certificates or permits have been issued by the department to reflect the state of the crane or derrick.

(4) Construction documents. Plans, calculations, inspection reports, and other documents filed in conjunction with a certificate of approval, certificate of operation,

certificate of on-site inspection, on-site waiver, or temporary construction equipment permit are considered to be construction documents subject to the provisions of Article 104 of Title 28 of the Administrative Code. Expect as otherwise specified, the terms "approval" or "approved" in conjunction with such plans, calculations, inspection reports, and other documents will also mean "acceptance" or "accepted."

(5) Notification.

(i) Notification prior to certain activities. For a crane or derrick that requires a certificate of on-site inspection or an on-site waiver, or that is used under the direct and continuing supervision of a licensed master rigger, the equipment user must notify the department at least one day, but no more than two days, before an activity listed below:

(A) The arrival of the crane or derrick at the site;

(B) Any assembly/disassembly operation; except that for the erection, climbing, jumping, or dismantling of tower crane, the notification requirements of Section 3319.8.4 of the Building Code instead apply; or

(C) The pouring of a concrete foundation for a tower crane.

(ii) Cancellation and rescheduling of notification. If a scheduled activity pursuant to subparagraph (i) of this paragraph above is canceled after a notification is made to the department, the equipment user must notify the department no later than the date for which the activity was scheduled. The equipment user must notify the department of the new intended commencement date at least one day but no more than two days before such activity.

(iii) Notification of departure of equipment. For a crane or derrick that requires a certificate of on-site inspection or an on-site waiver, or that is used under the direct and continuing supervision of a licensed master rigger, the equipment user must notify the department of the departure of the crane or derrick from the site no more than two days following such departure.

Exception: Where the crane or derrick is anticipated to be at the site for 48 hours or less, notification of departure of the equipment pursuant to this subparagraph is not required provided the anticipated short duration of the crane or derrick at the site is indicated at the time of notification pursuant to subparagraph (i) of this paragraph. However, if the job extends for more than 48 hours, the department must be immediately notified of such extension, and notification of the departure of the equipment pursuant to this subparagraph is required.

§7. 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 repealed and replaced with a new subparagraph (iv), as follows:

(iv) Site specific wind analysis for a tower crane. For a tower crane, other than a self-erecting tower crane, the manufacturer must submit a site specific wind analysis to the department prior to the approval of the crane or derrick notice application. Such analysis must:

(A) Cover each configuration for which crane or derrick notice application approval is sought;

(B) Be based upon the following information, with such information submitted to the manufacturer by the engineer who files the crane or derrick notice application:

1. Project address;

2. Crane make and model;

3. Maximum lifting capacity;

4. Distance of the crane from the building;

5. Proposed tie-in spacing;

6. Elevations and sections detailing the location and configuration of the crane at the site, in both plan view and elevation view, with dimensions indicated;

7. Where an environmental load reduction is utilized in accordance with Chapter 16 of the New York City Building Code:

   7.1. A copy of the action plan required by Chapter 16 of the New York City Building Code;

   7.2. Proposed tie-in spacing for the action plan configuration; and

   7.3. Elevations and sections detailing the action plan configuration of the crane at the site, in both plan view and elevation view, with dimensions indicated.

8. New York City wind load conditions, including exposure category and height distribution of the wind. Such information

must be in accordance with Chapter 16 of the New York City Building Code, and based on the following:

8.1. An in-service wind speed of at least 45 mph;

8.2. An out-of-service wind speed that is not less than that allowed by Chapter 16 of the New York City Building Code; and

8.3. Where an environmental load reduction is utilized in accordance with Chapter 16 of the New York City Building Code, an out-of-service wind speed equal to that required by Chapter 16 of the New York City Building Code for the full, unreduced, design wind speed.

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

1. The maximum moment;

2. The slewing moment; and

3. Corresponding vertical loads at the foundation.

(D) Contain a certification from the manufacturer that the information provided per clause (C) above is based on the information provided by the engineer per clause (B) above;

(E) Contain a certification from the manufacturer that, in accordance with the requirements of the standard listed in the certificate of approval for the design and construction of the crane (e.g. ASME B30-3 or EN 14439), the boom, mast, jib, attachments, and working deck of the crane will sustain the wind loads specified in (B)(8) above; and

(F) Note any special conditions in which the crane may not be used or installed (e.g. crane configuration, height, exposure, etc.).

§8. Subparagraph (i) of paragraph (1) of subdivision (e) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended, as follows:

(i) Design and construction standards for cranes or derricks whose prototype application is submitted on or after January 1, 2016. Cranes and derricks, and their components, whose prototype application is submitted on or

after January 1, 2016 must, in their entirety, be designed and constructed in accordance with the following:

(A) Mobile cranes, other than an articulating boom crane. For a mobile crane, other than an articulating boom crane, ASME B30.5 (2004, 2007, 2011, or 2014 editions), or EN 13000 (2004, 2010, or 2014 editions).

(B) Tower cranes, other than a self-erecting tower crane. For a tower crane, other than a self-erecting tower crane, ASME B30.3 (2004, 2009, [or] 2012, or 2016 editions), or EN 14439 (2006 or 2009 editions).

(C) Derricks. For a derrick, ASME B30.6 (2003, [or] 2010, or 2015 editions).

(D) Articulating boom crane. For an articulating boom crane, ASME B30.22 (2005, [or] 2010, or 2016 editions).

(E) Self-erecting tower crane. For a self-erecting tower crane, ASME B30.29 (2012 edition), or EN 14439 (2009 edition).

(F) Dedicated pile drivers. EN 996 (2009 or 2014 editions) or EN 16228 (2014 edition).

(G) Equivalent standards. For any type of crane or derrick, such other standard as the commissioner deems equivalent to the ASME or EN standards listed above.

§9. Paragraph (2) of subdivision (e) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended, as follows:

(2) Manuals and load rating chart standards. Manuals and load rating charts for cranes and derricks must be in English, with United States customary units, or where acceptable to the commissioner, metric units, and be in accordance with [the requirements of the standard utilized for the design and construction of the crane or derrick] an applicable standard listed in paragraph (1) of subdivision (e) of this section. Manuals and load rating charts must also include manual or chart numbers, and page numbers.

§10. Subdivision (f) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended by re-lettering subdivision (i) as subdivision (f) and replacing the heading and text of subdivision (f) with that of subdivision (i), as follows:

(f) [**Certificate of operation. Reserved.] [(i)] Annual renewal of the certificate of operation.** Application for renewal of a certificate of operation, as stipulated in Section 3319.5 of the New York City Building Code, must be accompanied by inspection and maintenance

records in accordance with paragraph (1) of subdivision (k) of this section and paragraph (1) of subdivision (m) of this section. Upon approval of the application, a new certificate of operation will be issued after a satisfactory inspection by a department inspector.

§11. Subdivision (g) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is repealed and replaced with a new subdivision (g), as follows:

(g) Certificate of on-site inspection.

(1) Conformity with the certificate of approval and certificate of operation. No certificate of on-site inspection, or an extension, renewal, or amendment to such certificate, will be granted for a crane or derrick which requires, but does not possess, a certificate of approval or certificate of operation, or which is not in conformance with the certificate of approval or certificate of operation.

(2) Application for a certificate of on-site inspection. To apply for a certificate of on-site inspection in accordance with Section 3319.6 of the New York City Building Code, an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, must file, on behalf of the equipment user, a crane or derrick notice application with the department.

(i) Crane or derrick notice plans. The application must be accompanied by one or more plans, as applicable, showing the following information for each configuration for which crane or derrick notice application approval is sought:

(A) Ground and subsurface elements. Elevations and sections detailing all pertinent ground and subsurface elements, with dimensions, slopes, estimated bearing values, loads imposed, and surcharges indicated, including, as applicable:

1. Soil;
2. Streets, sidewalks, public plazas, and equivalent spaces;
3. Foundations;
4. Retaining walls;
5. Excavations;
6. Sheeting, shoring, and bracing;
7. Vaults;
8. Manholes;

9. Subways, stations, and entrances;

10. Tunnels; and

11. For a tower crane:

11.1. Utilities impacted by the tower crane foundation; and

11.2. The water table level.

(B) Site conditions. Elevations and sections detailing all pertinent site conditions, with dimensions indicated, including, as applicable:

1. North arrow;

2. Buildings and structures at the site and adjacent to the site, with projections, setbacks, and equipment and structures located on the roof or setback indicated;

3. Temporary construction, such as platforms, runback structures, scaffolds, mast climbers, hoists, horizontal netting, cocoon systems, climbing formwork, sidewalk sheds, fences, and barricades;

4. Pedestrian and traffic control to be provided as per the requirements of the Department of Transportation;

5. Other cranes or derricks at the site, with swing radii indicated;

6. Trees and other natural obstructions; and

7. Above ground utilities and infrastructure, including but not limited to, street lights, traffic lights, bollards, bus shelters, street furniture, traffic signs, hydrants, electrical lines with voltage values indicated, phone lines, bridges, viaducts, subway exits, elevated subways and railroads, elevated transit platforms, and towers.

(C) Location and configuration. Elevations and sections detailing the location and configuration of the crane or derrick at the site, in both plan view and elevation view, with dimensions indicated, including, as applicable:

1. The proposed location of the crane or derrick, including areas where the crane or derrick will be assembled, disassembled, operate, or travel;

2. The configuration of the crane or derrick;

3. Outrigger location and configuration;

4. The swing radius of the tail or counterweights;

5. The maximum and minimum swing radius and load path of the boom and load;

6. Minimum clearance of all parts of the crane or derrick, including loads to be picked, from any structure or obstruction. If necessary, operation restrictions necessary to prevent contact must be clearly shown; and

7. Pick and landing zones.

(D) Footing, foundation, tie-ins, and supporting elements. Elevations and sections detailing the footing or founding of the crane or derrick and any foundations, tie-ins, or other structures supporting the crane or derrick, with dimensions, materials, bearing values, loads imposed, reactions, and concrete strengths to be obtained prior to installation indicated, including, as applicable:

1. For a crane:

    1.1. Matting, dunnage, or equivalent;

    1.2. Ramps;

    1.3. Platforms, and all connections between the platform and the base building or structure;

    1.4 Foundations and all connections between the foundation, the base building or structure, and the crane; and

    1.5. Tie-in connections, including but not limited to the tie-in, base building or structure, collar, pin, inner bracings or similar reinforcement, and any rope or structure supporting the tie-in collar to the tower leg.

2. For a derrick, platforms or dunnage, and all connections between the platforms or dunnage, the base building or structure, and the derrick.

3. For any crane or derrick:

3.1. Bracing;

3.2. Roofs, setbacks, or equivalent upon which the crane or derrick is located;

3.3. Modifications required to the base building or structure, other structural elements, or to adjacent retaining walls, excavations, or foundations; and

3.4 Level or plumb tolerances, which may not exceed the recommendations of the crane or derrick manufacturer.

(E) Bolted connections. For a bolted connection utilized in a platform or dunnage that supports a crane or derrick, or utilized in the footing, foundation, tie-ins, or supporting elements of a derrick or a tower crane, details of such bolted connection, including elevations and sections, with dimensions indicated, including, as applicable:

1. Bolts;

2. Bolt hole sizes;

3. Bolt grades and specifications;

4. Bolt torque values;

5. Re-torqueing schedule and procedures;

6. Plates;

7. Rods, with pre-tensioning information;

8. Dowels;

9. Clamping forces; and

10. Grout or steel bushings.

(F) Anchors. Elevations and sections detailing anchored connections to a structure, with dimensions indicated, including, as applicable:

1. Type of anchor;

2. Anchor size;

3. Anchor hole size;

4. Epoxy or grout specifications;

5. Installation instructions; and

6. Pull out testing criteria.

(G) Welded connections. For a welded connection utilized in a platform or dunnage that supports a crane or derrick, or utilized in the footing, foundation, tie-ins, or supporting elements of a derrick or a tower crane, details of such welded connection, including elevations and sections, with dimensions indicated, including, as applicable:

1. Material information;

2. Welding specifications; and

3. Welding procedures.

(H) Structural steel. Where the plans call for the use of structural steel, for example in the foundation, platform, dunnage, or tie-in connections, and such structural steel is not provided by the manufacturer of the crane or derrick, or an entity authorized by the manufacturer, the shape, size, and grade of the steel must be specified on the plans.

(I) Counterweights. Where a crane utilizes removable counterweights, or where a derrick requires counterweights, the required weight, dimensions, and acceptable materials for the counterweights must be specified on the plans. Such information must be based on the requirements of the manufacturer of the crane or derrick.

(J) Aviation hazards. Aircraft warning lights and markings must be indicated on the plans when such lights and markings are required by the Federal Aviation Administration.

(K) Electrical information. For a tower crane, other than a self-erecting tower crane, the crane's electrical requirements must be indicated on the plans, including voltage, amperage, phasing, grounding, and any other electrical information specific to the tower crane.

(L) Special inspections. All materials, equipment, installation, fabrication, erection, or placement of components and connections, as well as construction operations subject to special inspection in accordance with paragraph (6) of subdivision (k) of this section must be identified on the plans.

(M) Range of tolerances. Where a plus or minus range of tolerances is considered to be acceptable by the crane or derrick notice engineer, specific values indicating the numerical range of tolerance must be indicated.

(ii) Assembly/disassembly plan. For a crane or derrick that requires components to be assembled or disassembled at the site, the application must include an assembly/disassembly plan.

(A) Content. The assembly/disassembly plan must include the following information:

1. All information listed in subparagraph (i) of paragraph (2) of this subdivision for a crane or derrick notice plan that is relevant to the assembly/disassembly operation, including but not limited to:

    1.1. Location where the crane or derrick will be assembled/disassembled, including any areas of travel;

    1.2. Pertinent ground, subsurface, and site conditions, including but not limited to pedestrian and traffic control to be provided as per the requirements of the Department of Transportation; and

    1.3. The configuration of the crane or derrick at the start and completion of the assembly/disassembly operation, and at all phases throughout the work.

2. Procedures, including sequencing, for the assembly/disassembly operation, including but not limited to counterweight placement or removal;

3. Weight, dimensions, and center of gravity for components that will be hoisted or lowered during the assembly/disassembly operation;

4. Location and configuration of assist cranes or derricks;

5. The maximum wind threshold at which assembly/disassembly operations may occur; and

6. For the erection, climbing, jumping, or dismantling of a tower crane, information required by Section 3319.8.1 of the New York City Building Code.

(B) Self-contained document. The assembly/disassembly plan must be a complete, self-contained document.

(C) Maximum assembly/disassembly wind threshold. The maximum assembly/disassembly wind threshold listed in the assembly/disassembly plan cannot exceed 30mph (3-second gust). This threshold must take into account the wind action plans for each assist crane or derrick, and where such a threshold is lower than that for the assembly/disassembly operation generally, this lower threshold must be listed as the threshold for the assembly/disassembly operation.

(D) Specific to configurations. The assembly/disassembly plan must include all applicable information for each configuration for which crane or derrick notice application approval is sought. Where multiple configurations are included, the assembly/disassembly plan must clearly identify the applicable procedures for each configuration.

(E) Able to be fully implemented based upon site conditions. The assembly/disassembly plan must account for all site conditions and be able to be fully implemented based upon site conditions. Where the manufacturer's specifications can be fully implemented at the site, the plan must incorporate this information. Where site conditions prevent full implementation of the manufacturer's specifications, the engineer must contact the manufacturer and develop alternate procedures, as appropriate, and incorporate them into the assembly/disassembly plan.

(iii) Pre-operational test procedures, including load test. For a tower crane and a derrick, the application must be accompanied by procedures for the pre-operational test. The pick zones for the load test portion of the pre-operational test must also be indicated. For a tower crane, the application must also be accompanied by procedures for the setting of pre-limiting and limiting devices. The procedures required by this sub paragraph must be in accordance with the manufacturer's specifications and the following, and in no case may the weight utilized during the load test exceed the manufacturer's specifications:

(A) For a tower crane, other than a self-erecting tower crane, ASME B30.3 (2016 edition) Section 3-1.7.

(B) For a self-erecting tower crane, ASME B30.29 (2012 edition) Section 29-1.1.3.

(C) For a derrick, ASME B30.6 (2015 edition) Sections 6-2.2.1 and 6-2.2.2.

(iv) Loads imposed. Where the crane or derrick imparts a load on a building or structure, the application must be accompanied by either:

(A) Crane or derrick notice plans that:

1. Are sealed and stamped "reviewed for loads imposed" by the registered design professional of record for the project; and

2. Contain a note, signed and sealed by the registered design professional of record for the project, indicating that all permanent modifications or supporting elements required to be added to the base building or structure, including but not limited to rebar, have been incorporated into the plans and/or shop drawings for the base building or structure;

(B) A signed and sealed letter from the registered design professional of record for the project that includes the following:

1. A statement that he or she has reviewed the submitted crane or derrick notice plans for the loads imposed on the building or structure;

2. The drawing numbers and dates of the crane or derrick notice plans indicating the bracing and modifications required for the building or structure to support the loads imposed;

3. A statement attesting to the adequacy of the building or structure to support the loads imposed; and

4. A statement that all permanent modifications or supporting elements required to be added to the base building or structure, including but not limited to rebar, have been incorporated into the plans and/or shop drawings for the base building or structure; or

(C) For a project for which there is no registered design professional of record for the project, a signed and sealed letter from the crane or derrick notice engineer that includes the following:

1. A statement that he or she has investigated the design of the building or structure;

2. The drawing numbers and dates of the crane or derrick notice plans indicating the bracing and modifications required for the building or structure to support the loads imposed;

3. A statement attesting to the adequacy of the building or structure to support the loads imposed; and

4. A statement that he or she will verify that such bracing and modifications have been completed in accordance with the approved crane or derrick notice plans before loads are imposed by the crane or derrick.

(v) Wind action plan. The application must be accompanied by a wind action plan.

(A) Content. The wind action plan must include the following information:

1. Load reductions, if any, due to wind;

2. The maximum in-service wind threshold;

3. Wind thresholds, configurations, and procedures, including angles and sequencing, for parking and securing the crane in each applicable out-of-service position (e.g. retracted, parked, jackknifed, laid down, and/or other special protective measures for wind); and

4. The communication protocol for safeguarding the crane or derrick in the event of changes of forecasts over weekends or longer stoppage periods.

(B) Self-contained document. The wind action plan must be a complete, self-contained document.

(C) Maximum in-service threshold. The maximum in-service wind threshold listed in the wind action plan cannot exceed 30 mph (3-second gust) or the threshold specified by the manufacturer, whichever is lower.

Exceptions: The 30 mph (3-second gust) criterion does not apply to:

1. A mobile crane where the crane is set up and operated entirely within a safety zone, provided:

   1.1 The distance from the crane to the boundary of the safety zone is equal to or greater than the length of the boom, jib, and any other attachments; and

   1.2 All areas and structures within the safety zone are closed to the public.

2. A tower crane, where the crane is set up and operated entirely within a safety zone, provided:

   2.1 The distance from the crane to the boundary of the safety zone is equal to or greater than the height of the mast and the length of the boom, jib, and any other attachments; and

   2.2 All areas and structures within the safety zone are closed to the public.

(D) Specific to configurations. The wind action plan must include all applicable thresholds and procedures for each configuration for which crane or derrick notice application approval is sought. Where multiple configurations are included, the wind action plan must clearly identify the applicable thresholds and procedures for each configuration.

(E) Able to be fully implemented based upon site conditions. The wind action plan must account for all site conditions and be able to be fully implemented based upon site conditions. Where the manufacturer's specifications can be fully implemented at the site, the plan must incorporate this information. Where site conditions prevent full implementation of the manufacturer's specifications (e.g. site conditions make it impossible to point the boom into the wind), the engineer must contact the manufacturer and develop alternate procedures and/or thresholds, as appropriate, and incorporate them into the wind action plan.

(F) Emergency action plan. Where load reductions are utilized in accordance with Section 1618 of the Building Code, the emergency action plan required by Section 1618.3 of the Building Code must also be included in the wind action plan.

(vi) Certifications. The application must be accompanied by the following certifications:

(A) Investigation of conditions. Certification from the crane or derrick notice engineer that he or she has investigated the ground, subsurface, and site conditions, and has accounted for them in the submitted plans and procedures.

(B) Loads. Certification from the crane or derrick notice engineer that:

1. The loads, surcharges, and values indicated in the crane or derrick notice application account for all conditions of loading, including wind.

2. The crane or derrick, including any footing, foundation, tie-in, or supporting element, in all proposed conditions of loading, including assembly/disassembly or traveling, will not exceed the bearing capacity of the ground or subsurface elements, or any footing, foundation, tie-in, or supporting element.

3. The crane or derrick, including any footing, foundation, tie-in, or supporting element, when secured and stowed in accordance with the submitted procedures will be able to sustain, without failure, the specified wind loads.

(C) Clearances. Certification from the crane or derrick notice engineer that the crane or derrick, in all proposed configurations, including assembly/disassembly, traveling, and operations with loads on the hook, will clear all site obstructions.

(vii) Calculations. The application must be accompanied by the following calculations from the crane or derrick notice engineer, verifying:

(A) The stability of the crane if outriggers must be set at asymmetrical positions.

Exception: Calculations are not required if an analysis, conducted by a computer program authorized by the crane manufacturer, verifies the stability of the crane.

(B) Indicated loads imposed and surcharges.

(C) Indicated reaction forces.

(D) Any other supporting calculations upon request.

(viii) Power lines. When operating near overhead power lines, including during assembly/disassembly or traveling, the crane or derrick notice plan or the

assembly/disassembly plan, as applicable, must indicate compliance with the applicable provisions of paragraph (3) of subdivision (s) of this section, and, where applicable, the application must be accompanied by the determination and procedures required by paragraph (3) of subdivision (s) of this section.

(3) Approval of the crane or derrick notice application. The crane or derrick notice application will be approved in accordance with the provisions of Article 104 of chapter 1 of Title 28 of the Administrative Code.

(i) Transit authority approval. For a crane or derrick that requires approval of the New York City Transit Authority, no crane or derrick notice application will be approved by the department until a copy of the approval from the Transit Authority has been filed with the department.

(ii) Site specific wind analysis for tower cranes. For a tower crane, other than a self-erecting tower crane, no crane or derrick notice application will be approved by the department until the information required by subparagraph (iv) of paragraph (5) of subdivision (d) of this section has been submitted to the department.

(iii) Prohibition on approval of multiple pieces of equipment under one application. No crane or derrick notice application that seeks approval for more than one piece of equipment will be approved. For the purposes of this subparagraph, this includes referencing multiple certificates of approvals for a piece of equipment, but does not include referencing multiple certificates of operation for a piece of equipment.

(4) Phased filings. Information required to be filed with the crane or derrick notice application per paragraph (2) of subdivision (g) of this section may be filed in phases, and approval of the crane or derrick notice application per paragraph (3) of subdivision (g) of this section may be granted in phases, provided all information filed for the phase is complete and covers all aspects of the crane or derrick in such phase.

(5) Amendments. See Article 104 of Title 28 of the Administrative Code.

(6) Prohibition on arrival at the site. No crane or derrick that requires a certificate of on-site inspection may be present at a site until the department has approved the crane or derrick notice application.

Exceptions:

1. **Tower crane foundation.** Where a tower crane foundation needs to be constructed, the foundation may be installed prior to the approval of a crane or derrick notice application, provided:

1.1 Plans for the tower crane foundation, signed and sealed by the crane or derrick notice engineer, are filed with and accepted by the department prior to the installation of the tower crane foundation. Such plans do not need to reference a specific crane or crane configuration, however, the plans must indicate the dimensions, materials, and bearing value of the foundation, along with anticipated loads imposed and reaction forces of the tower crane on the foundation;

1.2 Special inspection reports for the installed foundation are filed with the department prior to the approval of the crane or derrick notice application; and

1.3 The foundation, as installed, and any subsequent modifications required to account for the specific tower crane to be utilized, is indicated on the crane or derrick notice plans.

2. **Tower crane anchor stool and first mast section.** The anchor stool and first mast section of a tower crane, other than a self-erecting tower crane, may be installed prior to the approval of a crane or derrick notice application and the crane or derrick device application, provided:

2.1 The anchor stool and first mast section are indicated on the plans filed and accepted under exception 1.1 above;

2.2 An inspection report for the anchor stool and first mast section is accepted by the department prior to their installation;

2.3 A survey report, attesting that the anchor stool and first mast section, as installed, is plumb, is submitted as part of the crane or derrick notice application. Such survey report must be based upon a survey performed by a surveyor who meets the definition of a qualified person, and must be signed and dated as accepted by the licensed rigger who supervised the installation of the anchor stool and first mast section;

2.4 Where a special inspection is required by paragraph (6) of subdivision (k) of this section, the special inspection reports for the foundation are submitted as part of the crane or derrick notice application;

2.5 Where the anchor stool is not provided by the manufacturer of the crane, the crane or derrick notice engineer notes, on the crane or derrick notice plans, his or her acceptance of the anchor stool; and

2.6 The anchor stool and first mast section, as installed, and any subsequent modifications required to account for the specific tower crane to be utilized, is indicated on the crane or derrick notice plans.

(7) Issuance, renewal, and continued validity of the certificate of on-site inspection.

(i) Issuance of the certificate of on-site inspection. Prior to the initial use at the site of a crane or derrick that requires a certificate of on-site inspection, the crane or derrick must be inspected and tested as required by subparagraphs (i) and (ii) of paragraph (8) below. Upon successful passage of such inspections and tests, and submittal of the inspection report in accordance with subparagraph (iv) of paragraph (8) below, a certificate of on-site inspection is deemed to be issued.

(ii) Continued validity of the certificate of on-site inspection for a phase. Where a crane or derrick project includes multiple phases, 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. 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.

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.

(iii) Renewal of the certificate of on-site inspection after one year. Where the crane or derrick remains at the site for a period of one (1) year or longer, the continued validity of the certificate of on-site inspection is contingent upon the crane or derrick passing the inspections and tests required by subparagraph (iii) of paragraph (8) below, and submittal of the inspection report in accordance with subparagraph (iv) of paragraph (8) below, at least eleven (11) months but no more than one (1) year following the last inspection performed in accordance with subparagraphs (i) or (ii) above or this subparagraph.

(8) Inspections and tests for a certificate of on-site inspection.

(i) Inspections and tests required for the issuance of the certificate of on-site inspection and the continued validity of the certificate of on-site inspection for a phase. When required by subparagraphs (i) or (ii) of paragraph (7) of subdivision (g) of this section, the following inspections and tests must be performed.

(A) Engineer's inspection. Prior to and following the setup, assembly, erection, jumping, or climbing of a crane or derrick, the crane or derrick notice engineer, or a qualified person employed and supervised by such engineer, must perform an inspection and verify compliance with the approved crane or derrick notice plans, including but not limited to:

1. Ground, subsurface, and site conditions match the approved crane or derrick notice plans;

2. Loads imposed conditions match those as indicated on the approved crane or derrick notice plans;

3. Modifications, including bracing, required for the base building or structure, other structural elements, or to adjacent retaining walls, excavations, or foundations have been completed and are in accordance with the approved crane or derrick notice plans;

4. Concrete elements that will sustain crane or derrick loads, for example, foundations or tie-in floors, have obtained sufficient strength in accordance with the approved crane or derrick notice plans; and

5. The footing, foundation, and supporting elements of the crane or derrick, including but not limited to, ramps, platforms, matting, dunnage, or installed tie-in connections are free from damage or deformation, free from debris and standing water, and are in accordance with the approved crane or derrick notice plans. This inspection may be accomplished by visual observation. Where bolts, anchors, welds, or steel for such items are detailed on such approved plans, this includes verification that such elements are in accordance with the approved plans.

Exceptions:

1. The engineer's inspection is not required prior to the installation of a tower crane foundation, anchor stool, or first mast section installed in accordance with the provisions of the exceptions to paragraph (6) of subdivision (g) of this section.

2. The engineer's inspection does not have to include items required inspected by another entity, as indicated in the clauses below.

(B) Inspection of bolts, pins, links, and straps.

1. Tower cranes. Where a tower crane was erected, climbed, or jumped, the licensed rigger responsible for supervising such operation must perform an inspection prior to and following such operation and verify that all bolts and pins installed on the

tower crane during the course of erection, jumping, or climbing, including during previous such sessions, as well as all tie-in collars, inner bracings or similar reinforcement for the tie-in connection, and ropes or structures supporting the tie-in collar to the tower leg:

1.1 Are in place;

1.2 Are free from damage or deformation. This inspection may be accomplished by visual observation; and

1.3 Meet the requirements and tolerances of the manufacturer and, where applicable, the approved crane or derrick notice plans.

Exception: Bolts and pins located beyond the connection point of the tie-in connection to the collar, or below the first mast section. Such bolts and pins must instead be inspected as part of the engineer's inspection per clause (A) above.

2. Self-erecting tower cranes. Following the setup of a self-erecting tower crane, including any subsequent setup operations at the site, a qualified person designated by the equipment user must verify that the pins and interlocks have been placed and set in accordance with the manufacturer specifications.

Exception: Where the self-erecting tower crane was set up by or under the direct and continuing supervision of a licensed master or tower crane rigger, such licensed rigger must perform the inspection.

3. All other cranes and derricks. Prior to and following the assembly of a crane or derrick, the assembly/disassembly director must perform an inspection and verify that all bolts, pins, links, and straps installed on the crane or derrick during the setup or assembly, including during previous such sessions:

2.1 Are in place (or, if applicable, removed, e.g. from areas if luffing jib is not to be utilized);

2.2 Are free from damage or deformation. This inspection may be accomplished by visual observation; and

2.3 Meet the requirements and tolerances of the manufacturer and, where applicable, the approved crane or derrick notice plans.

Exceptions:

1. Tower cranes and self-erecting tower cranes are subject to the applicable provisions of items numbers 1 or 2 above.

2. For a derrick, bolts, pins, links, and straps located at or beyond the connection point to the base building or structure. Such bolts and pins must instead be inspected as part of the engineer's inspection per clause (A) above.

(C) Surveyor's inspection for a tower crane. Following the erection, jumping, or climbing of a tower crane, other than a self-erecting tower crane, a surveyor who meets the definition of a qualified person and who is acceptable to the licensed rigger responsible for climbing or jumping the tower crane must survey the tower crane and verify it is plumb within tolerances specified on the approved crane or derrick notice plans.

(D) Pre-operational test, including load test. Following the initial setup, assembly, or erection of a tower crane or a derrick, and following any subsequent setup, assembly, erection, jumping, or climbing that would necessitate a pre-operational test, the crane or derrick must pass a pre-operational test in accordance with the approved pre-operational test procedures submitted with the crane or derrick notice application. The pre-operational test must be witnessed by, and verification that the crane or derrick has passed the test made by either:

1. The crane or derrick notice engineer;

2. A qualified person employed and supervised by such engineer;

3. A qualified person employed by the equipment owner;

4. A qualified person employed by the crane or derrick manufacturer or a manufacturer authorized service center, distributor, or service provider; or

5. For a derrick, a licensed master rigger, or a master rigging foreman.

(E) Special inspections. Special inspections must be completed in accordance with paragraph (6) of subdivision (k) of this section. Prior to and following the setup, assembly, erection, jumping, or climbing of a crane or derrick, the crane or derrick notice engineer, or a qualified person employed and supervised by such engineer, must verify required special inspections have been successfully completed.

(F) Unassembled inspection. Prior to an assembly/disassembly operation, the assembly/disassembly director must perform an unassembled inspection to verify that:

1. The components to be installed match those listed on the Certificate of Operation; and

2. Structural components to be installed are free from damage or deformation. This inspection may be accomplished by visual observation.

(G) Assembled inspection. Following an assembly/disassembly operation, the assembly/disassembly director must perform an assembled inspection to verify that:

1. Mechanical, hydraulic, and electrical components of the crane or derrick (e.g. rope reeving system, electrical and hydraulic connections) are properly assembled and connected; and

2. Structural components, except for those inspected as part of the engineer's inspection per clause (A) above, are free from damage or deformation. This inspection may be accomplished by visual observation.

(ii) Inspection of tie-in connection to the base building or structure. When required by subparagraphs (i) or (ii) of paragraph (7) of subdivision (g) of this section, the crane or derrick notice engineer, or a qualified person employed and supervised by such engineer, must observe the tie-in installation during the installation of a tie-in connection for a tower crane and verify that the tie-in is connected to the base building or structure in accordance with the approved crane or derrick notice plans. This includes, but is not limited to, the location and size of bolt holes, the condition of the floor slab, the leveling of the tie-in, that bolts and threaded rods have been pre-tensioned, and that specified bolts and plates have been installed.

(iii) Inspections and tests required for annual renewal. When required by subparagraph (iii) of paragraph (7) of subdivision (g) of this section, the following inspections and tests must be performed to renew the certificate of on-site inspection.

(A) Engineer's inspection. The crane or derrick notice engineer, or a qualified person employed and supervised by such engineer, must perform an inspection and verify:

1. Continued compliance with the approved crane or derrick notice plans, except for those items required to be inspected by another entity, as indicated in the clauses below; and

2. Where a temporary load reduction is utilized per Section 1618 of the New York City Building Code, that the installation complies with the requirements of the approved construction documents for the temporary installation and the action required plan required by Section 1618.3 of the New York City Building Code:

    2.1. Is still in effect;

    2.2. Has been revised to reflect current conditions of the installation; or

    2.3. Is no longer required, as the installation has been retrofitted to comply with the loads for new construction without any reduction.

(B) Inspection of bolts, pins, links, and straps. Where the crane or derrick was assembled at the site, a qualified person designated by the equipment user must perform an inspection and verify the applicable items listed in clause (B) of subparagraph (i) of paragraph (8) of subdivision (g) of this section.

Exception: For a tower crane that was erected, climbed, or jumped by or under the direct and continuing supervision of a licensed master or tower crane rigger, the inspection must be performed by a licensed master or tower crane rigger, or a master rigging foreman.

(C) Surveyor's inspection for a tower crane. For a tower crane, other than a self-erecting tower crane, a surveyor who meets the definition of a qualified person and who is acceptable to the licensed rigger responsible for inspecting the tower crane in accordance with clause (B) above must survey the tower crane and verify it is plumb within tolerances specified on the approved crane or derrick notice plans.

(D) Pre-operational test for a derrick, including load test. A derrick must pass a pre-operational test in accordance with the approved

pre-operational test procedures submitted with the crane or derrick notice application, or where the approved crane or derrick notice application did not include specifications for the test, in accordance ASME B30.6 (2015 edition) Sections 6-2.2.1 and 6-2.2.2, except that in no case may the weight of the load exceed 100% of the rated capacity of the derrick. The pre-operational test must be witnessed by, and verification that the crane or derrick has passed the test made by either:

1. The crane or derrick notice engineer;

2. A qualified person employed and supervised by such engineer;

3. A qualified person employed by the equipment owner;

4. A qualified person employed by the crane or derrick manufacturer or a manufacturer authorized service center, distributor, or service provider; or

5. A licensed master rigger or a master rigging foreman.

(iv) Certificate of on-site inspection report. The results of the applicable inspections and tests required by subparagraphs (i) through (iii) above must be documented in a certificate of on-site inspection report.

(A) Content. The report must, at a minimum:

1. Detail the results of the applicable inspections or tests required by subparagraphs (i) through (iii) above, and contain a certification of the results from the individual who performed the inspection; and

2. If the crane or derrick initially failed an inspection or test, including but not limited to a deviation from the approved crane or derrick notice plans, before passing a subsequent inspection or test, this information must be detailed, along with a description of any adjustment, modification, maintenance, repair, or other corrective action taken, including amending the approved crane or derrick notice plans.

(B) Signing, dating, and sealing. The certificate of on-site inspection report must be signed and dated by the individuals who performed the inspection or witnessed the test. Where such individual is required to be supervised or authorized by a professional engineer or a licensed rigger, such licensed individual must also sign and date such sections of the report, and for a professional engineer, affix his or her seal to such sections of the report.

(C) Submitting and maintaining reports. After the crane or derrick successfully passes the inspections and tests required by subparagraphs (i) through (iii) above, the certificate of on-site inspection report must be submitted to the department.

(v) Reporting a failed inspection or test. If the crane or derrick fails an inspection or test required by subparagraphs (i) through (iii) above, and the condition that led to the failure is not corrected by the end of the inspection or test, such condition must be reported to the department at the conclusion of the inspection or test.

Exception: Issues that pose an immediate hazard to the safety of the public or property must immediately be reported to the department.

(9) Deviation from approved plans. Where deviations from the approved crane or derrick notice plans are identified, the crane or derrick may not operate until it is brought into compliance with the approved plans, or an amendment to the crane or derrick notice plans to reflect conditions at the site has been approved by the department.

(10) Suspension or revocation of a certificate of on-site inspection. The department may suspend or revoke a certificate of on-site inspection in accordance with the provisions of Section 28-105.10 of the New York City Administrative Code.

(11) United States customary units. All calculations and measurements submitted as part of a crane or derrick notice application, amendment, inspection or test report, or similar documentation, must be in United States customary units.

(12) Conformance with the building code. All loads, material strengths, and calculations provided or utilized in connection with the crane or derrick notice application, or an amendment to such application, must be in accordance with the New York City Building Code.

Exception: Loads, material strengths, and calculations provided by the manufacturer of the crane or derrick.

§12. Subdivision (h) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is repealed and replaced with a new subdivision (h), as follows:

(h) Crane or derrick log. For a crane or derrick that requires a certificate of on-site inspection, 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:

(1) Equipment user custody of the crane or derrick, as evidenced by an entry noting the corporate name of the equipment user and the date and time the equipment user takes or relinquishes custody over the crane or derrick. Such entry must be signed and dated by an authorized representative of the equipment user;

(2) Records of inspections required by paragraphs (1) and (2) of subdivision (k) of this section. Such records must be signed and dated by the hoisting machine operator who performed the inspection;

(3) The meeting log for the erection, climbing, jumping, or dismantling of a tower crane required by Section 3319.8.6 of the New York City Building Code;

(4) The date and time of pre-shift meetings held in accordance with section 3319-02(j) of these rules, along with the names, titles, and company affiliations of those who participated in the meeting; and

(5) The assembly/disassembly director for the assembly/disassembly operation, as evidenced by an entry noting the name and contact information of the assembly/disassembly director. Such entry must be signed and dated by the assembly/disassembly director. If the assembly/disassembly director changes prior to the completion of the operation, this must be noted in the log, with the name and contact information of the new assembly/disassembly director entered, signed and dated by the new assembly/disassembly director.

§13. Subdivision (i) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is relettered and moved to subdivision (f) of this section, and a new subdivision (i) is added, as follows:

(i) Personnel.

(1) Operators. Operators of cranes and derricks must be licensed in accordance with Article 405 of Title 28 of the Administrative Code.

Exceptions:

1. Operators exempted by Article 405 of chapter 4 of Title 28 of the Administrative Code.

2. Operators exempted by Section 3319 of the New York City Building Code.

3. Learners in the presence of and under the direct supervision of a licensed operator.

4. Operators of cranes described in exceptions 3 and 4 of Section 3319.3 of the New York City Building Code, provided the crane is used in

connection with the installation or maintenance of street lighting or public utility overhead power distribution systems.

5. Operators of a mobile crane that has a boom length of 135 feet (41.15 m) or less, and that is utilized at the site to exclusively to:

    1. Install, adjust, maintain, repair, or remove a sidewalk shed; or

    2. Install or dismantle the initial level of a single or dual cab hoist, provided:

        2.1 Such installation or dismantling is limited to the hoist cars, counterweights, and initial mast sections needed for the car;

        2.2 Car or motor components to be hoisted are equipped with lifting lugs; and

        2.3 No object is hoisted more than 20 feet (6.1 m) above the bed of the delivery truck during such installation or dismantling operation.

6. Operators of dedicated pile drivers, provided that, beginning January 1, 2019, such operator possesses a valid certification for the operation of the pile driver issued by an organization acceptable to the commissioner and accredited by the National Commission for Certifying Agencies (NCCA) or the American National Standards Institute (ANSI).

(2) Rigging supervisor. Rigging work must be supervised in accordance with Section 3316.9.1 of the New York City Building Code, and where required, riggers must be licensed in accordance with Chapter 4 of Title 28 of the New York City Administrative Code.

(3) Rigging crew. Members of the rigging crew, including signalpersons, must be trained or certified in accordance with Section 3316.9.2 of the New York City Building Code, or must work under the direct and continuing supervision of a licensed rigger.

(4) Lift director. Where a lift director is designated, the lift director will possess the responsibility and authority as indicated in section 3319-02 of these rules.

(5) Flagpersons and pedestrian traffic managers. Flagpersons and pedestrian traffic managers must meet the requirements of the Department of Transportation.

(6) Assembly/disassembly director. No crane or derrick that requires a certificate of on-site inspection may be assembled or disassembled unless an assembly/disassembly director provides continuous, onsite supervision of such assembly/disassembly operation,

and ensures compliance with the approved assembly/disassembly plan, and as applicable, relevant rigging plans.

(i) Designation and qualifications. The assembly/disassembly director must be designated by the equipment user and must be a person who meets the criteria for both a competent person and a qualified person, or a competent person who is assisted by one or more qualified persons; where the assembly/disassembly operation is to be supervised by a licensed master or tower crane rigger or a master rigging foreman, such licensee or foreman must be designated as the assembly/disassembly director.

(ii) Training and licensing. Where the assembly/disassembly operation involves the hoisting or lowering of articles, the assembly/disassembly director must either be a licensed master or tower crane rigger, a master rigging foreman, be trained or certified as a rigging supervisor in accordance with Section 3316.9.2 of the New York City Building Code, or have completed the training requirements of Section 3319.10 of the New York City Building Code.

Exception: The erection, jumping, climbing, or dismantling of a tower crane must be supervised by a licensed master or tower crane rigger; such licensed rigger must be trained in accordance with Section 3319.10 of the New York City Building Code.

(iii) Review of the assembly/disassembly plan. The assembly/disassembly director must review the approved assembly/disassembly plan, and as applicable, relevant rigging plans, immediately prior to the commencement of the assembly/disassembly operation. It is the responsibility of the equipment user to verify that the assembly/disassembly director has reviewed the materials, as required above.

(7) Assembly/disassembly crew. Before beginning assembly/disassembly operations for a crane or derrick that requires a certificate of on-site inspection, the assembly/disassembly director must ensure that all members of the assembly/disassembly crew, including signalpersons, understand their tasks and hazards associated with their tasks. Where the assembly/disassembly operation involves the hoisting or lowering of articles, the individuals who attach or detach articles from the hook of hoisting equipment utilized in conjunction with the assembly/disassembly operation, and signalpersons, must either be trained or certified as a rigging crew member in accordance with Section 3316.9.2 of the New York City Building Code, or have completed the training requirements of Section 3319.10 of the New York City Building Code.

Exception: Individuals who erect, jump, climb, or dismantle a tower crane must be trained in accordance with Section 3319.10 of the New York City Building Code.

(8) Specialty crews. Notwithstanding the foregoing, specialty crews must comply with the requirements of section 104-20 of these rules.

§14. Subdivision (j) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is renumbered as paragraph (3) of subdivision (p) of this section, and subdivision (j) is reserved.

§15. Subdivision (k) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is repealed and replaced with a new subdivision (k), as follows:

(k) Inspections. Cranes and derricks must be inspected in accordance with the following.

(1) Frequent inspection. Prior to each shift the hoisting machine operator must perform a frequent inspection.

(i) Inspection items. The frequent inspection must include a check of the following:

(A) Mobile cranes, other than an articulating boom crane, and dedicated pile drivers. For a mobile crane, other than an articulating boom crane, and for dedicated pile drivers:

1. Items (a)-(c), (e) and (g)-(j) of Section 5-2.1.2 of ASME B30.5 (2014 edition);

2. Safety devices and operational aids for malfunction;

3. Attachments for damage or deformation. This inspection may be accomplished by observation from the ground without lowering the boom unless deficiencies are suspected;

4. Ground conditions around the equipment for proper support, including ground settling under and around outriggers/stabilizers and supporting foundations, ground water accumulation, or similar conditions;

5. The equipment for level position within the tolerances specified in the approved crane or derrick notice plans, or, where plans are not required, by the equipment manufacturer's recommendations. This inspection must be performed both before each shift and after each move and setup;

6. Operator cab windows for significant cracks, breaks, or other deficiencies that would hamper the operator's view;

7. For a dedicated pile driver, pile driving rig for cracks, damage, deformation, or excessive wear;

8. For a friction crane, deterioration or leakage in air systems; and

9. For a friction crane, hoist brakes, clutches, and operating levers for proper functioning.

(B) Tower cranes, other than a self-erecting tower crane. For a tower crane, other than a self-erecting tower crane:

1. Items (a) – (h) and (j) – (l) of Section 3-2.1.3 of ASME B30.3 (2016 edition); and

2. Operator cab windows for significant cracks, breaks, or other deficiencies that would hamper the operator's view.

(C) Derricks. For a derrick, items (a) – (e) and (g) – (i) of Section 6-2.1.2 of ASME B30.6 (2015 edition).

(D) Articulating boom cranes. For an articulating boom crane:

1. Items (a) – (d) and (f) – (l) of Section 22-2.1.3 of ASME B30.22 (2016 edition); and

2. Items 3 through 6 in clause (A) above.

(E) Self-erecting tower cranes. For a self-erecting tower crane:

1. Items 1-4, 6-7, and 9 of Section 29-2.1.3(b) of ASME B30.29 (2012 edition);

2. Items 3 through 6 in clause (A) above;

3. Structural members for damage or deformation. This inspection may be accomplished by observation from the ground without lowering the mast/boom unless deficiencies are suspected; and

4. Rope reeving for compliance with crane manufacturer’s specifications.

(ii) Record of inspection. Where the crane or derrick requires a certificate of on-site inspection, at the conclusion of the inspection, the hoisting machine operator must record the results of the inspection in the crane or derrick log

required by subdivision (h) of this section. Any deficiencies must be clearly noted.

(iii) Defects. Any defects revealed by the inspection must be corrected. Where such defects constitute a safety hazard, the crane or derrick cannot be operated until such defects are corrected.

(2) Parking/securing inspection. The hoisting machine operator must perform a parking/securing inspection at the end of the shift, including the end of an assembly/disassembly operation where the crane or derrick will not immediately begin operation, and any other time the crane or derrick is taken out of service and parked or secured, including but not limited due to inclement weather.

Exceptions:

1. When the crane or derrick is removed from the site.

2. When the telescopic or articulating boom is fully retracted.

3. When the self-erecting tower crane has been fully broken down.

(i) Inspection items. The inspection must verify that the crane or derrick is in a proper out of service configuration for occurring and forecasted winds and weather conditions, and its controls have been secured.

(ii) Record of inspection. Where the crane or derrick requires a certificate of on-site inspection, at the conclusion of the inspection, the hoisting machine operator must record the following information in the crane or derrick log required by subdivision (h) of this section:

(A) The out of service configuration in which the crane was left (e.g. boomed up with boom and jib angles specified, boom or boom/jib combination laid down, boom or boom/jib combination jackknifed, or other special protective measures implemented);

(B) A reference to the approved wind action plan drawing, or, where such a plan is not required, the page of the manufacturer's manual that specifies the indicated out of service configuration; and

(C) The maximum wind speed allowed for such configuration as indicated in the approved wind action plan, or, where such a plan is not required, the manufacturer's manual.

(3) Periodic inspection. A periodic inspection of the crane or derrick must be performed at one to twelve month intervals, or as specifically recommended by the manufacturer, depending upon its activity, severity of service, and environment.

(i) Inspection items. At a minimum, the periodic inspection must include a check of all of the items listed for a frequent inspection by paragraph (1) above, and a check for the following:

(A) Deformed, cracked or corroded members in the crane or derrick structure and boom.

(B) Loose bolts or rivets.

(C) Cracked or worn sheaves and drums.

(D) Worn, cracked or distorted parts such as pins, bearings, shafts, gears, rollers and locking devices.

(E) Excessive wear on brake and clutch system parts, linings, pawls and ratchets.

(F) Load, boom angle and other indicators over their full range, for any significant inaccuracies.

(G) Gasoline, diesel, electric or other power plants for improper performance or non-compliance with safety requirements.

(H) Excessive wear of chain drive sprockets and excessive chain stretch.

(I) Crane or derrick hooks. Magnetic particle or other suitable crack detecting inspection should be performed at least once each year by an approved inspection agency retained by the owner. Certified inspection reports are to be made available to the department upon request.

(J) Travel steering, braking and locking devices, for malfunction.

(K) Excessively worn or damaged tires.

(L) Derrick gudgeon pin for cracks, wear and distortion each time the derrick is to be erected.

(M) Foundation or supports must be inspected for continued ability to sustain the imposed loads.

(ii) Defects. Any defects revealed by inspection must be corrected. Where such defects constitute a safety hazard the crane or derrick must not be operated until such defects are corrected.

(4) Cranes and derricks not in regular use.

(i) Where a crane or derrick has been idle for one month or more, but less than six months, the equipment owner must perform an inspection that meets the requirements of paragraph (1) of this subdivision and subparagraph (i) of paragraph (1) of subdivision (m) of this section (a "frequent inspection" for the crane or derrick and for the ropes) before submitting an application for a certificate of on-site inspection in accordance with Section 3319.6 of the New York City Building Code.

(ii) Where a crane or derrick has been idle for six months or longer, the equipment owner must perform an inspection that meets the requirements of paragraph (3) of this subdivision and subparagraph (ii) of paragraph (1) of subdivision (m) of this section (a "periodic inspection" for the crane or derrick and for the ropes) before submitting an application for a certificate of on-site inspection in accordance with Section 3319.6 of the New York City Building Code.

(5) Inspections for a certificate of on-site inspection. See paragraph (8) of subdivision (g) of this section.

(6) Special inspections. Special inspections for cranes and derricks, as well as special inspectors and special inspection agencies must meet the requirements of Chapter 1 of Title 28 of the Administrative Code, Chapter 17 of the New York City Building Code, and any rules thereunder promulgated by the commissioner.

(i) Special inspection required. The following special inspections are required for cranes and derricks:

(A) Inspection of fabricated steel. Fabricated steel, including welds made at the fabricators facility, must be in accordance with Section 1704.2 of the New York City Building Code.

Exceptions:

1. Steel fabricated by the manufacturer of the crane or derrick, or an entity authorized by the manufacturer.

2. Fabricated steel for which the shop drawings for the steel are signed, sealed, and stamped as reviewed by the crane or derrick notice engineer, and such shop drawings are kept at the site and made available to the commissioner upon request.

(B) Tower crane foundations. Foundations for a tower crane are subject to the following types of special inspection, as applicable:

1. Steel welding of field welds;

2. Structural steel high strength bolts, except for those provided or authorized by the crane manufacturer;

3. Concrete construction;

4. Subsurface conditions; and

5. Deep foundations.

(C) Modifications to the base building or structure, other structural elements, or to adjacent retaining walls, excavations, or foundations. Modifications to the base building or structure, other structural elements, or to adjacent retaining walls, excavations, or foundations, including but not limited to reinforcing provided to sustain tie-in connection loads, are subject to the following types of special inspection, as applicable:

1. Steel welding of field welds;

2. Structural steel high strength bolts;

3. Concrete construction;

4. Subsurface conditions;

5. Deep foundations; and

6. Excavations.

(D) Platforms, dunnage, or ramps. Platforms, dunnage, or ramps that support a crane or derrick, and connections between such platform, dunnage, or ramp and the base building or structure are subject to the following types of special inspection, as applicable:

1. Steel welding of field welds;

2. Structural steel high strength bolts; and

3. Concrete construction.

(ii) Concrete placement less than 50 cubic yards. Concrete special inspections are required even if the total concrete placement on the given project is less than 50 cubic yards (38 m^3).

(iii) Permanent elements. Special inspection of items listed in subparagraph (i) above and that will remain as permanent construction with the base building or structure, including but not limited to tower crane foundations and rebar embedded in floors, must be performed by the special inspector for the base building or structure.

(iv) Providing copies of records to the crane or derrick notice engineer. The special inspector must provide all documentation relating to the special inspection, including but not limited to documentation of the inspection results, to the crane or derrick notice engineer upon request by such engineer.

§16. Subdivision (p) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended by renumbering subdivision (j) as paragraph (3) and adding it to subdivision (p), as follows:

[(j)](3) **Load rating chart for tower and climber cranes.** A substantial, durable and clearly legible rating chart [shall] must be provided with each tower and climber crane and securely affixed in the cab. The chart [shall] must include load ratings approved by the department for specific lengths of components, counterweights, swing, and radii.

§17. Subdivision (r) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is repealed and replaced with a new subdivision (r), as follows:

(r) Signals.

(1) Requirements. Signals must comply with the following:

(i) Mobile cranes, other than an articulating boom crane, and dedicated pile drivers. For a mobile crane, other than an articulating boom crane, and for dedicated pile drivers, ASME B30.5 (2014 edition) Section 5-3.3, except for sections 5-3.3.3 and 5-3.3.7.

(ii) Tower cranes, other than a self-erecting tower crane. For a tower crane, other than a self-erecting tower crane, ASME B30.3 (2016 edition) Section 3-3.3, except for section 3-3.3.3;

(iii) Derricks. For a derrick, ASME B30.6 (2015 edition) Section 6-3.4;

(iv) Articulating boom crane. For an articulating boom crane, ASME B30.22 (2016 edition) Section 22-3.3, except for section 22-3.3.3.

(v) Self-erecting tower crane. For a self-erecting tower crane, ASME B30.29 (2012 edition) Section 29-3.2, except for section 29-3.2.3.

(2) Qualifications. All signalpersons must complete the training or certification required by Section 3316.9.2 of the New York City Building Code, or, where working under the direct and continuing supervision of a licensed rigger or sign hanger, have been deemed by the licensee to be knowledgeable as to the operations to be undertaken and the signals to be utilized.

§18. Paragraph (1) of subdivision (s) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is repealed and replaced with a new paragraph (1), as follows:

(1) Ballast or counterweight. No crane may be assembled, operated, or disassembled without the amount and position of counterweight and/or ballast in place as specified by the approved crane or derrick notice plans, or the approved assembly/disassembly plan, or, where such plans are not required, by the specifications of the crane or derrick manufacturer.

(A) Labeling or stenciling of removable counterweight modules. Where counterweight modules can be removed, each counterweight module must be labeled or stenciled in a format acceptable to the commissioner to indicate the weight of the module. The label or stencil must be visible when the module is in its assembled state.

(B) Certified weight for removable counterweight modules. A certified weight for each removable counterweight module must be provided to the department upon request. The certified weight must be determined by the manufacturer, an entity authorized by the manufacturer, or an entity acceptable to the commissioner.

Exception: Removable counterweight modules provided by the crane manufacturer, or a manufacturer authorized service center, distributor, or service provider.

(C) Enclosing concrete counterweights. Concrete counterweights must be enclosed to protect against damage and spalling.

§19. Paragraph (2) of subdivision (s) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is repealed and reserved.

§20. Paragraph (3) of subdivision (s) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is repealed and replaced with a new paragraph (3), as follows:

(3) Operating near electric power lines. Operations near overhead power lines, including during assembly or disassembly, must be in accordance with the following.

(i) Power line safety (up to 350 kV) – assembly and disassembly.

(A) Options. Before assembling or disassembling equipment, the equipment user must determine if any part of the equipment, load line, or load (including rigging and lifting accessories) could get, in the direction or area of assembly/disassembly, closer than 20 feet (6.1 m) to a power line during the assembly/disassembly process. If so, the equipment user must meet the requirements in Option (1), Option (2), or Option (3), as follows:

1. **Option (1) – Deenergize and ground.** Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the site.

2. **Option (2) – 20 foot clearance.** Ensure that no part of the equipment, load line or load (including rigging and lifting accessories), gets closer than 20 feet (6.1 m) to the power line by implementing the measures specified in clause (B) below.

3. **Option (3) – Table A clearance.**

   3.1 Determine the line's voltage and the minimum clearance distance permitted under Table A of this paragraph; and

   3.2 Determine if any part of the equipment, load line, or load (including rigging and lifting accessories), could get closer than the minimum clearance distance to the power line permitted under Table A of this paragraph. If so, then the equipment user must follow the requirements in clause (B) below to ensure that no part of the equipment, load line, or load (including rigging and lifting accessories), gets closer to the line than the minimum clearance distance.

(B) Preventing encroachment/electrocution. Where encroachment precautions are required under Option (2), or Option (3) of this subparagraph, all of the following requirements must be met:

1. Conduct a planning meeting with the assembly/disassembly director, hoisting machine operator, assembly/disassembly crew and the other workers who will be in the assembly/disassembly area to review the location of the power line(s) and the steps that will be implemented to prevent encroachment/electrocution.

2. If tag lines are used, they must be nonconductive.

3. At least one of the following additional measures must be in place. The measure selected from this list must be effective in preventing encroachment. The additional measures are:

    3.1 Use a dedicated spotter who is in continuous contact with the equipment hoisting machine operator. The dedicated spotter must:

        3.1.1 Be equipped with a visual aid to assist in identifying the minimum clearance distance. Examples of a visual aid include, but are not limited to: A clearly visible line painted on the ground; a clearly visible line of stanchions; a set of clearly visible line-of-sight landmarks (such as a fence post behind the dedicated spotter and a building corner ahead of the dedicated spotter);

        3.1.2 Be positioned to effectively gauge the clearance distance;

        3.1.3 Where necessary, use equipment that enables the dedicated spotter to communicate directly with the hoisting machine operator; and

        3.1.4 Give timely information to the hoisting machine operator so that the required clearance distance can be maintained.

    3.2 Reserved.

    3.3 A device that automatically warns the hoisting machine operator when to stop movement, such as a range control warning device. Such a device must be set to give the hoisting machine operator sufficient warning to prevent encroachment.

    3.4 A device that automatically limits range of movement, set to prevent encroachment.

    3.5 An elevated warning line, barricade, or line of signs, in view of the hoisting machine operator, equipped with flags or similar high-visibility markings.

(C) Assembly/disassembly below power lines prohibited. No part of a crane or derrick, load line, or load (including rigging and lifting accessories), whether partially or fully assembled, is allowed below a power line unless the equipment user has confirmed that the utility owner/operator has deenergized and (at the site) visibly grounded the power line.

(D) Assembly/disassembly inside Table A clearance prohibited. No part of a crane or derrick, load line, or load (including rigging and lifting accessories), whether partially or fully assembled, is allowed closer than the minimum approach distance under Table A of this paragraph to a power line unless the equipment user has confirmed that the utility owner/operator has deenergized and (at the site) visibly grounded the power line.

(E) Voltage information. Where Option (3) of this subparagraph is used, the utility owner/operator of the power lines must provide the requested voltage information within two working days of the equipment user's request.

(F) Power lines presumed energized. The equipment user must assume that all power lines are energized unless the utility owner/operator confirms that the power line has been and continues to be deenergized and visibly grounded at the site.

(G) Posting of electrocution warnings. There must be at least one electrocution hazard warning conspicuously posted in the hoisting machine operator's cab or at the operator's station so that it is in view of the operator and (except for overhead gantry and tower cranes) at least two on the outside of the equipment.

(ii) Power line safety (up to 350 kV) – equipment operations.

(A) Hazard assessments and precautions inside the work zone. Before beginning equipment operations, the equipment user must:

1. Identify the work zone by either:

1.1 Demarcating boundaries (such as with flags, or a device such as a range limit device or range control warning device) and prohibiting the hoisting machine operator from operating the equipment past those boundaries; or

1.2 Defining the work zone as the area 360 degrees around the equipment, up to the equipment's maximum working radius.

2. Determine if any part of the equipment, load line or load (including rigging and lifting accessories), if operated up to the equipment's maximum working radius in the work zone, could get closer than 20 feet (6.1 m) to a power line. If so, the equipment user must meet the requirements in Option (1), Option (2), or Option (3), as follows:

2.1 **Option (1) – Deenergize and ground.** Confirm from the utility owner/operator that the power line has been deenergized and visibly grounded at the site.

2.2 **Option (2) – 20 foot clearance.** Ensure that no part of the equipment, load line, or load (including rigging and lifting accessories), gets closer than 20 feet (6.1 m) to the power line by implementing the measures specified in clause (B) below.

2.3 **Option (3) – Table A clearance.**

2.3.1 Determine the line's voltage and the minimum approach distance permitted under Table A of this paragraph; and

2.3.2 Determine if any part of the equipment, load line or load (including rigging and lifting accessories), while operating up to the equipment's maximum working radius in the work zone, could get closer than the minimum approach distance of the power line permitted under Table A of this paragraph. If so, then the equipment user must follow the requirements in clause (B) below to ensure that no part of the equipment, load line, or load (including rigging and lifting accessories), gets closer to the line than the minimum approach distance.

(B) Preventing encroachment/electrocution. Where encroachment precautions are required under Option (2) or Option (3) of this subparagraph, all of the following requirements must be met:

1. Conduct a planning meeting with the hoisting machine operator and the other workers who will be in the area of the equipment or load to review the location of the power line(s), and the steps that will be implemented to prevent encroachment/electrocution.

2. If tag lines are used, they must be non-conductive.

3. Erect and maintain an elevated warning line, barricade, or line of signs, in view of the hoisting machine operator, equipped with flags or similar high-visibility markings, at 20 feet (6.1 m) from the power line (if using Option (2) of this subparagraph) or at the minimum approach distance under Table A of this paragraph (if using Option (3) of this subparagraph). If the hoisting machine operator is unable to see the elevated warning line, a dedicated spotter must be used as described in 4.2 below in addition to implementing one of the measures described in 4.3 or 4.4 below.

4. Implement at least one of the following measures:

4.1 Reserved.

4.2 A dedicated spotter who is in continuous contact with the hoisting machine operator. Where this measure is selected, the dedicated spotter must:

4.2.1 Be equipped with a visual aid to assist in identifying the minimum clearance distance. Examples of a visual aid include, but are not limited to: A clearly visible line painted on the ground; a clearly visible line of stanchions; a set of clearly visible line-of-sight landmarks (such as a fence post behind the dedicated spotter and a building corner ahead of the dedicated spotter);

4.2.2 Be positioned to effectively gauge the clearance distance;

4.2.3 Where necessary, use equipment that enables the dedicated spotter to communicate directly with the hoisting machine operator; and

4.2.4 Give timely information to the hoisting machine operator so that the required clearance distance can be maintained.

4.3 A device that automatically warns the hoisting machine operator when to stop movement, such as a range control warning device. Such a device must be set to give the hoisting machine operator sufficient warning to prevent encroachment.

4.4 A device that automatically limits range of movement, set to prevent encroachment.

4.5 Reserved.

Exception: The requirements of item number 4, above, do not apply to electric power transmission and distribution work.

(C) Voltage information. Where Option (3) of this subparagraph is used, the utility owner/operator of the power lines must provide the requested voltage information within two working days of the equipment user's request.

(D) Operations below power lines. No part of the equipment, load line, or load (including rigging and lifting accessories) is allowed below a power line unless the hoisting machine operator has confirmed that the utility owner/operator has deenergized and (at the site) visibly grounded the power line.

Exceptions:

1. Electric power transmission and distribution work.

2. For equipment with non-extensible booms: The uppermost part of the equipment, with the boom at true vertical, would be more than 20 feet (6.1 m) below the plane of the power line or more than the Table A of this paragraph minimum clearance distance below the plane of the power line.

3. For equipment with articulating or extensible booms: The uppermost part of the equipment, with the boom in the fully extended position, at true vertical, would be more than 20 feet (6.1 m) below the plane of the power line or more than the Table A of this paragraph minimum clearance distance below the plane of the power line.

4. The equipment user determines that compliance is infeasible and meets the requirements of subparagraph (iv) of this paragraph; except that where the crane or derrick requires a certificate of on-site inspection, the determination must be made by an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution.

Such determination must be filed with the crane or derrick notice application.

(E) Power lines presumed energized. The equipment user must assume that all power lines are energized unless the utility owner/operator confirms that the power line has been and continues to be deenergized and visibly grounded at the site.

(F) Working near transmitter/communication towers. When working near transmitter/communication towers where the equipment is close enough for an electrical charge to be induced in the equipment or materials being handled, the transmitter must be deenergized or the following precautions must be taken:

1. The equipment must be provided with an electrical ground; and

2. If tag lines are used, they must be non-conductive.

(G) Reserved.

(H) Manufacturer specifications. Devices originally designed by the manufacturer for use as a safety device, operational aid, or a means to prevent power line contact or electrocution, when used to comply with this paragraph, must meet the manufacturer's procedures for use and conditions of use.

Table A – Minimum Clear Distances

Voltage (nominal, kV, alternating current)[1]	**Minimum clearance distance (feet)**
up to 50	10
over 50 to 200	15
over 200 to 350	20
over 350 to 500	25
over 500 to 750	35
over 750 to 1,000	45
over 1,000	(as established by the utility owner/operator or an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution).

[1] Note: The value that follows "to" is up to and includes that value. For example, over 50 to 200 means up to and including 200kV.

(iii) Power line safety (over 350 kV). The requirements of subparagraphs (i) and (ii) of this paragraph apply to power lines over 350 kV.

Exceptions:

1. For power lines at or below 1000 kV, wherever the distance "20 feet (6.1 m)" is specified in subparagraphs (i) or (ii) above, the distance "50 feet" (15.24 m) must be substituted.

2. For power lines over 1000 kV, the minimum clearance distance must be established by the utility owner/operator or an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution.

(iv) Power line safety (all voltages) – equipment operations closer than the Table A zone. Equipment operations in which any part of the equipment, load line, or load (including rigging and lifting accessories) is closer than the minimum approach distance under Table A of this paragraph to an energized power line is prohibited, except where the equipment user demonstrates that all of the following requirements are met:

(A) The equipment user determines that it is infeasible to do the work without breaching the minimum approach distance under Table A of this paragraph.

Exception: Where the crane or derrick requires a certificate of on-site inspection, the determination must be made by an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution. Such determination must be filed with the crane or derrick notice application.

(B) The equipment user determines that, after consultation with the utility owner/operator, it is infeasible to deenergize and ground the power line or relocate the power line.

Exception: Where the crane or derrick requires a certificate of on-site inspection, the determination must be made by an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution. Such determination must be filed with the crane or derrick notice application.

(C) The power line owner/operator or an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution, determines the minimum clearance distance that must be maintained to prevent electrical contact in light of the on-site conditions. The factors that must be considered in making this determination include, but are not limited to: Conditions affecting atmospheric conductivity; time necessary to bring the equipment, load line, and load (including rigging and lifting accessories) to a complete stop; wind conditions; degree of sway in the power line; lighting conditions, and other conditions affecting the ability to prevent electrical contact.

Exception: Electric power transmission and distribution work.

(D) A planning meeting with the equipment user and utility owner/operator (or an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution) is held to determine the procedures that will be followed to prevent electrical contact and electrocution; except that where the crane or derrick requires a certificate of on-site inspection, such procedures must be developed by an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution. Where a crane or derrick requires a certificate of on-site inspection, such procedures must be filed with the crane or derrick notice application. At a minimum these procedures must specify the following:

1. If the power line is equipped with a device that automatically reenergizes the circuit in the event of a power line contact, before the work begins, the automatic reclosing feature of the circuit interrupting device must be made inoperative if the design of the device permits.

2. A dedicated spotter who is in continuous contact with the hoisting machine operator. The dedicated spotter must:

   2.1 Be equipped with a visual aid to assist in identifying the minimum clearance distance. Examples of a visual aid include, but are not limited to: A line painted on the ground; a clearly visible line of stanchions; a set of clearly visible line-of-sight landmarks (such as a fence post behind the

dedicated spotter and a building corner ahead of the dedicated spotter);

2.2 Be positioned to effectively gauge the clearance distance;

2.3 Where necessary, use equipment that enables the dedicated spotter to communicate directly with the hoisting machine operator; and

2.4 Give timely information to the hoisting machine operator so that the required clearance distance can be maintained.

3. An elevated warning line, or barricade (not attached to the crane), in view of the hoisting machine operator (either directly or through video equipment), equipped with flags or similar high-visibility markings, to prevent electrical contact. However, this provision does not apply to electric power transmission and distribution work.

4. An insulating link/device installed at a point between the end of the load line (or below) and the load; except that an insulating link/device is not required for electric power transmission and distribution work.

5. Nonconductive rigging if the rigging may be within the Table A of this paragraph distance during the operation.

6. If the equipment is equipped with a device that automatically limits range of movement, it must be used and set to prevent any part of the equipment, load line, or load (including rigging and lifting accessories) from breaching the minimum approach distance established under clause (C) above.

7. If a tag line is used, it must be of the nonconductive type.

8. Barricades forming a perimeter at least 10 feet (3.05 m) away from the equipment to prevent unauthorized personnel from entering the work area. In areas where obstacles prevent the barricade from being at least 10 feet (3.05 m) away, the barricade must be as far from the equipment as feasible.

9. Workers other than the hoisting machine operator must be prohibited from touching the load line above the insulating link/device and crane. Hoisting machine operators remotely operating the equipment from the ground must use either wireless controls that isolate the hoisting machine operator from

the equipment or insulating mats that insulate the hoisting machine operator from the ground.

10. Only personnel essential to the operation are permitted to be in the area of the crane and load.

11. The equipment must be properly grounded.

12. Insulating line hose or cover-up must be installed by the utility owner/operator except where such devices are unavailable for the line voltages involved.

(E) The procedures developed to comply with clause (D) above are documented and immediately available on-site.

(F) The equipment user and utility owner/operator (or an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution) meet with the hoisting machine operator and the other workers who will be in the area of the equipment or load to review the procedures that will be implemented to prevent breaching the minimum approach distance established in clause (C) above and prevent electrocution.

(G) The procedures developed to comply with clause (D) above are implemented.

(H) The utility owner/operator (or an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution) and all employers of employees involved in the work must identify one person who will direct the implementation of the procedures. The person identified in accordance with this clause must direct the implementation of the procedures and must have the authority to stop work at any time to ensure safety.

(I) Reserved.

(J) If a problem occurs implementing the procedures being used to comply with clause (D) above, or indicating that those procedures are inadequate to prevent electrocution, the equipment user must safely stop operations and either develop new procedures to comply with clause (D) above or have the utility owner/operator deenergize and visibly ground or relocate the power line before resuming work.

(K) Devices originally designed by the manufacturer for use as a safety device, operational aid, or a means to prevent power line contact or electrocution, when used to comply with this paragraph, must comply with the manufacturer's procedures for use and conditions of use.

(L) Reserved.

(M) Reserved.

(v) Power line safety – while traveling under or near power lines.

(A) Traveling with a load. When traveling under or near a powerline with a load, the traveling operation must comply with the applicable requirements of subparagraphs (ii), (iii), or (iv) of this paragraph. In addition the requirements of subparagraph (xii) of paragraph (3) of subdivision (q) of this section also apply.

(B) Traveling without a load. When traveling under or near a powerline without a load, the equipment user must ensure that:

1. The boom/mast and boom/mast support system are lowered sufficiently to meet the requirements of this subparagraph.

2. The clearances specified in Table T of this paragraph are maintained.

3. The effects of speed and terrain on equipment movement (including movement of the boom/mast) are considered so that those effects do not cause the minimum clearance distances specified in Table T of this paragraph to be breached.

4. If any part of the equipment while traveling will get closer than 20 feet (6.1 m) to the power line, the equipment user must ensure that a dedicated spotter who is in continuous contact with the driver/operator is used. The dedicated spotter must:

   4.1 Be positioned to effectively gauge the clearance distance;

   4.2 Where necessary, use equipment that enables the dedicated spotter to communicate directly with the driver/operator; and

   4.3 Give timely information to the driver/operator so that the required clearance distance can be maintained.

5. When traveling at night, or in conditions of poor visibility, in addition to the measures specified in items 1 through 4 above, the equipment user must ensure that:

5.1 The power lines are illuminated or another means of identifying the location of the lines is used; and

5.2 A safe path of travel is identified and used.

TABLE T – MINIMUM CLEARANCE DISTANCES WHILE TRAVELING WITH NO LOAD

Voltage (nominal, kV, alternating current)[1]	**While traveling—minimum clearance distance (feet)**
up to 0.75	4
over .75 to 50	6
over 50 to 345	10
over 345 to 750	16
Over 750 to 1,000	20
Over 1,000	(as established by the utility owner/operator or an engineer, licensed and registered to practice the profession of engineering under the education law of the state of New York, who is also a qualified person with respect to electrical power transmission and distribution).

[1] Note: The value that follows "to" is up to and includes that value. For example, over 50 to 200 means up to and including 200kV.

§21. Subparagraph (iv) of paragraph (4) of subdivision (s) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is repealed.

§22. Paragraph (5) of subdivision (s) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is repealed and replaced with a new paragraph (5), as follows:

(5) Demolition. Where a crane or derrick is utilized to facilitate the mechanical demolition of a building or structure, the requirements of Section 3306 of the New York City Building Code will apply.

§23. Subdivision (s) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended by adding new paragraphs (6) and (7), and is further amended by

renumbering subdivisions (t), (u) and (v) as paragraphs (8), (9) and (10) and adding them to this subdivision (s), as follows:

(6) Footing. Mobile cranes must be provided with adequate footing, including but not limited timber, cribbing, plates, mats, or other structural members, in order to distribute the load so as not to exceed the allowable bearing capacity the ground, subsurface elements, or structure.

(7) Special provisions for cranes operating on a sidewalk or roadway. Where a crane is operated on the sidewalk or roadway, a permit from the New York City Department of Transportation must be obtained. The pressure on such surface must not exceed 3,500 psf (167.85 kPa).

[(t)] **(8) Storage.**

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

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

[(u)] **(9) Refueling.**

[(1)](i) Refueling [shall] must 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] must be read to mean "crane or derrick."

[(2)](ii) Machines [shall] must not be refueled with the engine running.

[(v)] **(10) Fire Extinguishers.**

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

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

§24. Subdivision (t) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is renumbered as paragraph (8) of subdivision (s) of this section, with paragraphs (1) and (2) renumbered as subparagraphs (i) and (ii), and a new subdivision (t) is added, as follows:

(t) Wind and weather. Cranes and derricks are subject to the following wind and weather restrictions.

(1) Wind action plan and manufacturer procedures. The hoisting machine operator must follow the approved wind action plan, where a wind action plan is required, and the applicable manufacturer procedures related securing the crane or derrick against wind and weather.

(2) Hoisting machine operator to review wind action plan and manufacturer procedures. The hoisting machine operator must review the approved wind action plan, where a wind action plan is required, and the applicable manufacturer procedures related to securing the crane or derrick against wind and weather prior to the operator's initial commencement of work with the crane or derrick at the job, each time the crane or derrick enters into a new phase, and each time the wind action plan is amended. It is the responsibility of the equipment user to verify that the hoisting machine operator has reviewed the approved wind action plan and the applicable manufacturer procedures, as required above, and to notify the hoisting machine operator each time the wind action plan is amended.

(3) Start of work. No hoisting machine operator may start a pick when:

(i) The wind speed exceeds the threshold specified in the approved wind action plan, or where such a plan is not required, 30 mph (3-second gust) or the threshold specified by the manufacturer, whichever is lower; or

(ii) As otherwise warranted by weather conditions or weather forecasts.

(4) In-service. The following must be observed at all times the crane or derrick is in service.

(i) During picks, it is the responsibility of the hoisting machine operator to safely bring the pick to a stop and safely land the load:

(A) When the wind speed exceeds the threshold specified in the approved wind action plan, or where such a plan is not required, 30 mph (3-second gust) or the threshold specified by the manufacturer, whichever is lower; or

(B) As otherwise warranted by weather conditions or weather forecasts.

(ii) At the end of the shift, or as weather conditions otherwise warrant, the hoisting machine operator must properly park or secure the crane or derrick for occurring or forecasted winds in accordance with the approved wind action plan, or where such plan is not required, in accordance with the manufacturer's specifications.

(5) Assembly/disassembly operations. Assembly/disassembly operations may not begin if the wind speed exceeds the thresholds specified in the approved assembly/disassembly plan, or if winds are forecast to exceed the thresholds specified in the approved assembly/disassembly plan before the crane or derrick that is to assembled/disassembled, and all assist cranes or derricks involved in such operation, can be parked or secured. The provisions of paragraphs (3) and (4) of this subdivision above also apply to all hoisting machine operators engaged in the assembly/disassembly operation; except that the term "approved wind action plan" means "approved assembly/disassembly plan."

Exception: Where an assembly/disassembly plan is not required, the thresholds established by the manufacturer will govern.

(6) Inspection to verify the crane or derrick has been secured. An inspection must be performed when required by, in accordance with, the requirements of paragraph (2) of subdivision (k) of this section.

(7) Measuring wind. For the purposes of this subdivision, wind speed must be determined in accordance with one of the options listed in subparagraphs (i) through (iii) of this paragraph.

Exceptions:

1. For a crane, other than a pile driver or clamshell, that requires a certificate of on-site inspection and that utilizes a lattice boom, lattice jib, or lattice mast at the site, only the option listed in subparagraph (i) of this paragraph may be utilized; except, however, should the anemometer on the crane malfunction, the option listed in subparagraph (ii) of this paragraph may be utilized.

2. For a derrick that requires a certificate of on-site inspection, only the options listed in subparagraphs (i) or (ii) of this paragraph may be utilized.

(i) Anemometer on the crane or derrick. An anemometer provided by the crane or derrick manufacturer, or an entity acceptable to the manufacturer, and installed at the top of the boom or other location specified by the manufacturer. The anemometer must measure a 3-second gust wind. A real time display of the anemometer must be available to the hoisting machine operator at the operator's station.

(ii) Anemometer at the site. An anemometer located at a high point of the site approximate to the height and location of the crane or derrick boom/jib, freely exposed to the wind, and calibrated in accordance with ASTM D5096-02. The anemometer must measure a 3-second gust wind. A real time display of the anemometer must be available to the hoisting machine operator at the operator's station, or a person designated by the hoisting machine operator must be provided

to monitor the display and alert the hoisting machine operator when measurements near, meet, or exceed the thresholds specified in the approved wind action plan.

(iii) Nearest weather station. The most recent gust wind speed reported at the nearest National Weather Service weather station. The equipment user must establish a system to ensure the hoisting machine operator is notified when reported wind gusts near, meet, or exceed the thresholds specified in the approved wind action plan. An acceptable system may include engaging a metrological service to provide a text or similar alert to a person designated by the equipment user when wind thresholds are neared, met, or exceeded, and have such designated person notify the hoisting machine operator.

(iv) Anemometer as operational aid. The anemometer required by subparagraphs (i) and (ii) of this paragraph is to be considered an operational aid and must be checked prior to each shift as part of the frequent inspection required by paragraph (1) of subdivision (k) of this section.

§25. Subdivision (u) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is renumbered as paragraph (9) of subdivision (s) of this section, with paragraphs (1) and (2) renumbered as subparagraphs (i) and (ii), and a new subdivision (u) is added, as follows.

(u) Documents to be maintained at the site. Where this section requires construction or submittal documents, drawings, plans, calculations, inspection or meeting records, manufacturer specifications, or similar documents, copies of such must be maintained at the site, including in an electronic format acceptable to the commissioner, for the duration of the job and made available to the commissioner upon request.

(1) Plans to be available to hoisting machine operators. The equipment user must ensure that a copy of the approved crane or derrick notice plan, the approved assembly/disassembly plan, and the approved wind action plan are kept in the hoisting machine cab or at the operator's station at all times, easily accessible to the hoisting machine operator.

(2) Plans to be available to the lift director and the assembly/disassembly director. The equipment user must ensure that a copy of the approved crane or derrick notice plan, the approved assembly/disassembly plan, and the approved wind action plan are separately kept at the site at all times, easily accessible to the lift director and the assembly/disassembly director, as appropriate.

§26. Subdivision (v) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is renumbered as paragraph (10) of subdivision (s) of this section, with paragraphs (1) and (2) renumbered as subparagraphs (i) and (ii), and subdivision (v) is reserved.

§27. Subdivision (w) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is deleted and replaced with a new subdivision (w), as follows.

(w) Enforcement. See Chapter 2 of Title 28 of the New York City Administrative Code.

§28. Subdivision (x) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is deleted and replaced with a new subdivision (x), as follows.

(x) Waiver or modifications. Variations to the provisions of this section may be granted by the commissioner in accordance with the requirements of 28-103.3 of the Administrative Code.

§29. Subdivision (y) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York is amended, as follows:

(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, & 2016
ASME B30.5	Mobile Cranes	1968, 1982, 1989, 1994, 2000, 2004, 2007, 2011, & 2014
ASME B30.6	Derricks	2003, [&] 2010, & 2015
ASME B30.22	Articulating Boom Cranes	2005, [&] 2010, & 2016
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
EN 16228	Drilling and foundation equipment	2014
American Society for the Testing of Materials		
ASTM D5096-02	Standard Test Method for Determining the Performance of a Cup Anemometer or	2011

	Propeller Anemometer	
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

§30. Criterion 2 in Table 1 of section 101-08 of chapter 100 of Title 1 of the Rules of the City of New York is amended by adding a new footnote (a) to read as follows:

[a] Does not include a self-erecting tower crane provided the setup of the self-erecting tower crane does not require a boom, mast, or jib section, or other attachment, to be installed at the site.

§31. These amendments shall take effect 30 days after the final version is published, except that (i) the notification requirements in paragraph (5) of subdivision (c) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York (section 6 of this rule) shall not take effect until May 1, 2018, (ii) the requirements of paragraphs (7) and (8) of subdivision (g) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York (section 11 of this rule) shall not take effect until May 1, 2018, and (iii) the requirement in paragraph (7) of subdivision (t) of section 3319-01 of chapter 3300 of Title 1 of the Rules of the City of New York (section 24 of this rule) for certain cranes to be equipped with an anemometer shall not apply to a crane that is not a crawler crane and whose certificate of on-site inspection was issued before such effective date.

NEW YORK CITY MAYOR'S OFFICE OF OPERATIONS
253 BROADWAY, 10th FLOOR
NEW YORK, NY 10007
212-788-1400

CERTIFICATION / ANALYSIS
PURSUANT TO CHARTER SECTION 1043(d)

RULE TITLE: Amendment of the rules relating to cranes and derricks

REFERENCE NUMBER: DOB-89

RULEMAKING AGENCY: Department of Buildings

I certify that this office has analyzed the proposed rule referenced above as required by Section 1043(d) of the New York City Charter, and that the proposed rule referenced above:

(i) Is understandable and written in plain language for the discrete regulated community or communities;

(ii) Minimizes compliance costs for the discrete regulated community or communities consistent with achieving the stated purpose of the rule; and

(iii) Does not provide a cure period because the violations pose significant risks to public health and safety.

/s/ Francisco X. Navarro — *February 7, 2017*
Mayor's Office of Operations — Date

NEW YORK CITY LAW DEPARTMENT
DIVISION OF LEGAL COUNSEL
100 CHURCH STREET
NEW YORK, NY 10007
212-356-4028

CERTIFICATION PURSUANT TO

CHARTER §1043(d)

RULE TITLE: Amendment of the rules relating to cranes and derricks

REFERENCE NUMBER: 2017 RG 009

RULEMAKING AGENCY: Department of Buildings

I certify that this office has reviewed the above-referenced proposed rule as required by section 1043(d) of the New York City Charter, and that the above-referenced proposed rule:

(i) is drafted so as to accomplish the purpose of the authorizing provisions of law;

(ii) is not in conflict with other applicable rules;

(iii) to the extent practicable and appropriate, is narrowly drawn to achieve its stated purpose; and

(iv) to the extent practicable and appropriate, contains a statement of basis and purpose that provides a clear explanation of the rule and the requirements imposed by the rule.

/s/ STEVEN GOULDEN
Acting Corporation Counsel

Date: February 7, 2017