



Instructions for completing Cranes & Derricks Form CD1-OA: Crane/Derrick/Pile Driver Prototype Application

Revised January 2016

Purpose of the Form

The CD1-OA Form is to be used by **the owner** of a crane, derrick, or dedicated pile driver to apply to **amend** an existing Certificate of Approval (“Prototype Approval”).

- For an owner of a crane, derrick, or dedicated pile-driver to request to amend a Certificate of Approval, the manufacturer of the crane, derrick, or dedicated pile-driver must:
 - No longer be in business; or
 - Have been notified, in writing, of the proposed amendment by the owner of the crane, derrick, or dedicated pile driver, and:
 - Declines to review the request;
 - Within 30 days of the request, fails to acknowledge the request or initiate a review of the request; or
 - Acknowledges the request or begins a review of the request, but, within 120 days of the request, fails to submit an amendment to the department.

To apply for a **new** Certificate of Approval or for **the manufacturer** of a crane, derrick, or dedicated pile driver to apply to **amend** an existing Certificate of Approval, please use the **CD1 Form**.

To apply for a new or amended Certificate of Approval for a **mast climber**, please use the **MC1 Form**.

Important Information

These instructions are made available by the NYC Department of Buildings (“DOB”) as a courtesy to the public. It does not represent all the filing requirements for any given application. Though every effort is made to continuously update these instructions, it in no way supersedes, or otherwise substitutes for, the Construction Codes, Zoning Resolution, or any other applicable rules, regulations, or policies.

These instructions provide information for use when filling out the CD1-OA Form. It includes general template information common to all DOB forms as well specific instructions on certain CD1-OA sections. New users are encouraged to read this prior to completing the CD1-OA.

General Instructions

- All applications must be typed.
- If additional space is required, please use 8 ½” x 11” sheets and attach to the application.
- Do NOT write on the back of any form.
- Do NOT write in any area that says “Internal Use Only.”

How to read the CD1-OA Form

CD1-OA is broken up into 9 sections, which are identified by bold boxes and section numbers

Section instructions are always in *italics*.

| | | | | | | | | | |
|--|--|----------|------|--------------------------|----|----------|------|--------------------------|-------|
| 7 | Standards <i>Required for all applications.</i> | | | | | | | | |
| The device is designed and constructed to, and the supplied manuals and load rating charts are in accordance with: | | | | | | | | | |
| <input type="checkbox"/> | ASME | Standard | Year | <input type="checkbox"/> | EN | Standard | Year | <input type="checkbox"/> | Other |
| | | | | | | | | | |

SECTION 1: Application Information

- Select "Amendment".
 - An amended Certificate of Approval is required when:
 - Adding a new configuration.
 - Altering or removing an existing configuration.
 - Altering:
 - Load rating charts
 - Counterweight configurations
 - "Tables of allowable installation and use" (only for a crane, derrick, or dedicated pile driver whose initial Certificate of Approval was issued on or after January 1, 2016)
 - Information concerning components has to be revised, specifically:
 - A new component, of a type required to be listed with the department, is added
 - A component previously listed with the department is no longer authorized for use
 - The weight, dimensions, center of gravity, or lifting points of a component that requires such information to be provided to the department is altered

See SECTION 8, "List of Components" for detailed information on components that are required to be listed with the department, and components that require their weight, dimensions, center of gravity, or lifting points to be provided to the department.

*NOTE: To apply for a **new** Certificate of Approval or for **the manufacturer** of a crane, derrick, or dedicated pile driver to apply to **amend** an existing Certificate of Approval, please use the **CD1 Form**.*

- Leave “Prototype Number,” “Invoice Number,” and “Fee Paid” blank. This information will be entered by DOB staff.

SECTION 2: Equipment Information

- Select the checkbox that most accurately describes the equipment type.
 - “Mobile Crane” includes:
 - Articulating Boom Crane (aka “Knuckleboom” Crane)
 - Commercial Truck Mounted Crane (aka “Boom Truck”)
 - Crawler Crane
 - Wheel Mounted Crane (Both single control station and multiple control stations)
 - “Tower Crane” includes:
 - Internal Climbing Tower Crane
 - External Climbing Tower Crane
 - “Self-Erecting Tower Crane” (aka “Mobile Tower Crane”)
 - A “Self-Erecting Tower Crane” is treated separately from a “Tower Crane.” Where these instructions talk about a “Tower Crane,” it does not include a “Self-Erecting Tower Crane.”
 - “Dedicated Pile Driver”
 - A dedicated pile driver is a machine designed exclusively to drive, hammer, press, or vibrate piles into the earth.
 - If a crane or derrick is to be outfitted with a pile driving attachment, select the appropriate crane or derrick equipment type, and list the pile driving attachment as part of the “List of Components” filed under SECTION 8 of the CD1-OA Form. Do not select “Dedicated Pile Driver.”
 - “Derrick”
 - Enter the type of derrick, (e.g. A-frame, Chicago Boom, Gin Pole, etc)
- Enter the name of the “Manufacturer,” along with the “Model” name and number of the crane, derrick, or dedicated pile driver.
- Enter the **maximum** “Rated Capacity” of the crane, derrick, or dedicated pile driver, and select if the capacity is in “Tons” (short tons), “Kips,” or “Pounds.”
 - Cranes, derricks, and dedicated pile-drivers may not be de-rated to circumvent licensing provisions or to meet code exemptions for which they do not otherwise qualify.
- Enter the **maximum** length of the “Boom,” “Jib,” “Other Attachments,” and “Total” for the longest options for which approval is sought.
 - The “Boom” measurement should be the longest “boom” for which approval is sought.

- The “Jib” measurement should be the longest “jib” for which approval is sought.
 - The measurement for “Other Attachments” should be the maximum length of the longest available attachment for which approval is sought.
 - “Total” should be the total length in the largest configuration for which approval is sought. This number may not necessarily add up to the total of the “Boom,” “Jib,” and “Other Attachments,” particularly where the longest “Other Attachment” indicated cannot be utilized with the longest “Jib” or “Boom” configuration.
- Where applicable, enter the **maximum** “Freestanding Height” in the highest freestanding configuration for which approval is sought.
 - Enter the **maximum** and **minimum** “Counterweight Configuration,” in pounds.
 - Select the applicable checkbox for “Transmission Type,” “Power,” “Climbing Type,” and “Boom Type.”
 - If multiple “Boom Types” apply, select all applicable options.
 - “Climbing Type” applies only to “Tower Crane” and “Self-Erecting Tower Crane” equipment types.
 - If “Self-Erecting Tower Crane” was selected as the equipment type, “Self-Erecting” must be selected.
 - Where applicable, enter the **maximum** “Mast Section Depth,” “Mast Section Width,” and “Mast Section Height,” in feet, for the largest mast section for which approval is sought.
 - Where applicable, select the appropriate checkbox for “Carrier Type.”
 - Where applicable, enter the “Overall Carrier” dimensions, in feet.
 - Enter the “Number of Drums” and the “Cable Size” for each drum.
 - When entering the “Cable Size,” also enter the unit utilized (“in” or “mm”).
 - If the crane or derrick has more than 4 drums, enter the number of “Drums” on the CD1-OA Form. However, leave the “Cable Size” areas blank. Submit all of the “Cable Size” information as a separate attachment.

SECTION 3: Engineer Information

- Select that the engineer is filing the application on behalf of the “Owner” of the crane, derrick, or dedicated pile driver.
 - The engineer must be a licensed New York State professional engineer.

- Enter the name and contact information of the engineer who is filing the application.
 - Please include a notation “NY” to indicate the license number is for New York State.

SECTION 4: Manufacturer Information

- Select if “Manufacturer no longer in business” or if “Manufacturer did not reject the amendment request.”
 - For an owner of a crane, derrick, or dedicated pile-driver to request to amend a Certificate of Approval, the manufacturer of the crane, derrick, or dedicated pile-driver must:
 - No longer be in business; or
 - Have been notified, in writing, of the proposed amendment by the owner of the crane, derrick, or dedicated pile driver, and:
 - Declines to review the request;
 - Within 30 days of the request, fails to acknowledge the request or initiate a review of the request; or
 - Acknowledges the request or begins a review of the request, but, within 120 days of the request, fails to submit an amendment to the department.
- Enter the contact information of the individual from the manufacturer to whom the notification of the proposed amendment, described above, was submitted.
 - Leave blank if the manufacturer is no longer in business.

SECTION 5: Owner Information

- Enter the name and contact information for the owner’s authorized representative.

SECTION 6: Prototype Test Information

- Where applicable, select the prototype test that was conducted.
 - When applying for an amendment for any “Mobile Crane,” or for a “Tower Crane” that was manufactured on or after November 8, 2010, a prototype test is required if:
 - There is a decrease to the structural stability or structural strength of the crane; or
 - There is an increase in the loads or stresses upon the crane, including but not limited to adding configurations, booms, or jibs.

- Where an SAE (physical) prototype test was conducted, enter the name and contact information of the test witness.
 - If the test witness is an engineer licensed within the United States, enter the “License Number” and indicate the state by its postal abbreviation (e.g. NY, NJ, PA, etc).
 - A test witness is not required for a computer based (EN) prototype test.

SECTION 7: Standards

- Indicate the standard utilized to design the crane, derrick, or dedicated pile-driver by selecting “ASME,” “EN,” or “Other,” and entering the “Standard” and “Year” of the standard.
 - For an amendment, acceptable standards are listed in 1 RCNY §3319-01(e)(1)(i) and (ii). The appropriate standard will vary based on when the initial prototype application was submitted.

SECTION 8: Attachments

- Materials submitted with the CD1-OA Form **must be in English**.
- All measurements must be in **United States customary units**; except that rope and bolt sizes may be given in metric units.
- Indicate the materials that are being submitted with the CD1-OA Form.
 - Revised “Manuals” are required if any of the information specified in 1 RCNY §3319-01(d)(1)(i) needs to be revised to account for the amendment.
 - Deviations and modifications from the manufacturer’s original manuals must be clearly indicated.
 - The revised “Manuals” must be signed, sealed, and dated by the engineer listed in SECTION 3 of the CD1-OA Form.
 - Revised “Load Rating Charts” are required if load ratings are altered, or if new configurations are requested.
 - The revised “Load Rating Charts” must be signed, sealed, and dated by the engineer listed in SECTION 3 of the CD1-OA Form.
 - Revised “Maintenance Checklists,” are required if the “Maintenance Checklists” previously filed by the manufacturer of the crane, derrick, or dedicated pile-driver have to be revised to account for the amendment.
 - Deviations and modifications from the manufacturer’s original checklists must be clearly indicated.

- The checklists must account for all components for which approval is sought, and cover all phases of the manufacturer’s recommended schedule of maintenance, for example, daily, monthly, and annual.
 - Checklists are not required for an amendment to a Certificate of Approval where the initial Certificate of Approval was issued prior to January 1, 2016.
- Revised “Inspection Checklists,” are required if the “Inspection Checklists” previously filed by the manufacturer of the crane, derrick, or dedicated pile-driver have to be revised to account for the amendment.
 - Deviations and modifications from the manufacturer’s original checklists must be clearly indicated.
 - The checklists must account for all components for which approval is sought, and cover all phases of the manufacturer’s recommended schedule of inspection, for example, daily, monthly, and annual.
 - Checklists are not required for an amendment to a Certificate of Approval where the initial Certificate of Approval was issued prior to January 1, 2016.
- A “List of Components” is required where (1) a new component, of a type required to be listed with the department, is added, (2) a component previously listed with the department is no longer authorized for use, or (3) the weight, dimensions, center of gravity, or lifting points of a component that requires such information to be provided to the department is altered.
 - “Components” are: a **structural part** or **mechanical system** that is integral to the crane, derrick, or dedicated pile-driver, or an **element that supports** an integral structural part or mechanical system.
 - Examples of **structural parts** include, but are not limited to: a-frame, any attachment to the boom or jib, boom, boom tip, climbing frame or section, collar, counter jibs, counterweight, counterweight support system, heel boom, mast, operator’s cabin, pendant bars (excluding wire rope pendants), tower base/base frame, tower top, and turntable. For a derrick, a structural component also includes base plates, junctions, poles and other uprights, seats, and stiff legs.
 - Examples of **mechanical systems** include, but are not limited to: braking system, climbing mechanism, engine, hoist drum, hoist motor, hydraulic system, and suspension system.
 - Examples of **elements that support** an integral structural part or mechanical system include, but are not limited to: the machine deck or platform.
 - Please note the difference between “structural parts,” “mechanical systems,” and “elements that support an integral structural part or mechanical system.”
 - The list must provide structural parts, as indicated above.

- A specific listing of parts that comprise a mechanical system or an element that supports an integral structural part or mechanical system is not required; only a general listing of such system or element is required – for example, x HP (or y kW) engine, z hydraulic system, etc.
 - The list only has to specify those components which are proposed to be added, removed, or modified by the proposed amendment.
 - The list is generic and does not have to provide specific part or model numbers.
 - However, specific components do require additional information about their weight, dimensions, center of gravity, and lifting points to be provided, as follows:
 - For a “Tower Crane,” where the weight, dimensions, center of gravity, and lifting points for the boom, mast, jib, collar, and all attachments, or individual sections thereof, are proposed to be altered by the amendment, this must be indicated, and revised information for such included, on the “List of Components.”
 - For a “Mobile Crane,” “Self-Erecting Tower Crane,” “Derrick,” and “Dedicated Pile Driver,” where the weight, dimensions, center of gravity, and lifting points for the lattice boom, jib, and all attachments, or individual sections thereof, are proposed to be altered by the amendment, this must be indicated, and revised information for such included, on the “List of Components.”
 - For any crane, derrick, or dedicated pile-driver with a telescoping boom, where the weight, dimensions, and center of gravity for the entire crane or derrick with the boom fully retracted and fully extended are proposed to be altered by the amendment, this must be indicated, and revised information for such included, on the “List of Components.”
- If lifting points are not provided on a specified component, please indicate such on the drawings.
- Revised “Counterweight Tables” are required if counterweight combinations or counterweight attachments are altered by the proposed amendment.
 - The tables must indicate the counterweight combinations and counterweight attachments for each configuration for which approval is sought.
 - The revised “Counterweight Tables” must be signed, sealed, and dated by the engineer listed in SECTION 3 of the CD1-OA Form.
 - An amendment is not required to split counterweights into smaller pieces (for example, splitting a 10 ton slab into 5 ton slabs) for transportation purposes, provided there are no changes to the load rating chart, the counterweight support system, or the counterweight attachments.

- Revised “Tables of allowable installation and use” are required if the proposed amendment alters the information contained in the previously submitted table.
 - Tables are not required to be submitted for an amendment to a Certificate of Approval where the initial Certificate of Approval was issued prior to January 1, 2016.
 - The revised “Tables of allowable installation and use” must be signed, sealed, and dated by the engineer listed in SECTION 3 of the CD1-OA Form.
 - Deviations and modifications from the manufacturer’s original tables must be clearly indicated.
 - For a “Mobile Crane,” “Self-Erecting Tower Crane,” “Derrick,” and “Dedicated Pile Driver,” the tables must show the maximum in-service and out-of-service wind speed for each configuration for which approval is sought.
 - For a “Tower Crane,” the tables must include the following data for the “Tower Crane” at its maximum free standing height in each separate standard configuration indicated in the submitted load rating charts:
 - The maximum in-service moment, based on a 45 mph in-service wind;
 - The maximum out-of-service moment, based on a 98 mph out-of-service wind;
 - The slewing moment, based on a 45 mph in-service wind; and
 - Corresponding vertical loads at the foundation.
 - Such above data for a “Tower Crane” must be calculated in accordance with ASCE 7- 2005, and be provided at Exposures B, C, and D. The maximum free standing height must be clearly indicated, and must be based on a 98 mph out-of-service wind, or a 45 mph in-service wind when such in-service wind produces a lower free standing height.
 - For a “Tower Crane,” the “Tables of allowable installation and use” must also clearly indicate special conditions in which the crane may not be used or installed (e.g. crane configuration, height, exposure, etc.).
- A “Listing of amendment revisions” is required.
 - The list is a summary of the changes proposed to the crane, derrick, or dedicated pile-driver.
- A copy of the “Amendment request to the manufacturer” is required if the manufacturer of the crane, derrick, or dedicated pile-driver is still in business.
 - This box should only be checked “No” if the box “Manufacturer no longer in business” was checked in SECTION 4 of the CD1-OA Form.
 - If the manufacturer is in business, the owner must submit a detail written request to the manufacturer of the proposed amendment and request that the manufacturer submit an amendment request to the department. The owner may only proceed to file the CD1-OA Form if the manufacturer:

- Declines to review the request;
 - Within 30 days of the request, fails to acknowledge the request or initiate a review of the request; or
 - Acknowledges the request or begins a review of the request, but, within 120 days of the request, fails to submit an amendment to the department.
- If the manufacturer provided a written response to the request, this **must also be submitted** with the CD1-OA Form as part of the “Amendment request to the manufacturer” submission.
- Select “Other” if any other attachments are submitted with the CD1-OA Form.
 - For example:
 - If ran out of space on the form, attached additional pages of information.

SECTION 9: Statement and Signatures

- The “Owner’s Statement” must be signed and dated by the individual listed in SECTION 5 of the CD1-OA Form.
- The “Test Witness’ Statement” must be signed and dated by the individual listed in SECTION 6 of the CD1-OA Form.
- The “Engineer’s Statement” must be signed, dated, and sealed by the individual listed in SECTION 3 of the CD1-OA Form.