



**NATIONAL COMMISSION FOR THE
CERTIFICATION OF CRANE OPERATORS (CCO)**

**CANDIDATE
HANDBOOK
(TOWER CRANES)**



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CCO does not discriminate against any individual because of race, gender, age, creed, disability or national origin.



Dear CCO Candidate:

Welcome to the CCO national crane operator certification program.

The National Commission for the Certification of Crane Operators (CCO), a nonprofit corporation, was founded in January 1995 to establish a fair and independent evaluation of crane operator knowledge and skills. Key to this industry-led effort was the development of the CCO Written and Practical Examinations.

This nationally recognized program is the culmination of many years' hard work by experts from the varied industries and groups that use cranes, including construction, steel erection, the operating engineers, utilities, crane rental, petrochemical, pulp and paper, etc. CCO Task Forces were staffed by experts from all aspects of the crane industry—crane operators, training directors, managers, supervisors, manufacturers—representing many thousands of hours of crane operating experience. These volunteers gave freely of their time and expertise with the single goal of improving the safety of all whose work brings them into contact with cranes and lifting equipment.

In order to ensure CCO examinations are, and remain, a valid measurement of a crane operator's proficiency, CCO has teamed this group's knowledge and experience with the exam development expertise of International Assessment Institute. Based in Clearwater, Florida, International Assessment Institute continually analyses the performance of CCO exams and reports to CCO's Exam Management Committee, who it also guides in the development of new examinations. Additionally, International Assessment Institute assists CCO in the administration of its Written and Practical Examinations.

This Candidate Handbook has been developed to provide you with comprehensive information about the CCO Written and Practical Examinations. CCO recognizes the commitment you are about to make, and we want your experience to be a positive and successful one. If, after reading this Handbook, there is anything you do not fully understand or need clarifying, please call CCO at 703/560-2391, or e-mail us at info@nccco.org. CCO staff will be happy to guide you through any aspect of the CCO national crane operator certification program.

Thank you for your interest—and good luck!

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Introduction

PROGRAM DESCRIPTION

The National Commission for the Certification of Crane Operators (CCO) is an independent not-for-profit organization formed to establish and administer a nationwide program of certification for crane operators. The purpose of CCO is to set standards for measuring the knowledge and proficiency required for the safe operation of cranes. Based on extensive discussions with representatives from all segments of business and industry who recognize the impact of construction safety issues, CCO has identified the following potential benefits of operator certification:

- Reduced risk of loss
- Fewer accidents, injuries and fatalities
- Assurance of operator's abilities
- Less property damage
- Improved safety records
- Enhanced public image of crane operators

All candidates are required to pass both the written and practical examination(s) in order to be certified.

Candidates may take the Practical Exam on either of the following Tower Crane types:

- Hammerhead
- Self Erecting

Candidates wishing to take the Practical Examination should contact their Test Site Coordinator.

The initial certification period is for five (5) years, after which an operator is required to recertify. Periodic written examination is necessary to ensure that certificants' knowledge of industry standards, equipment, and safety practices keeps pace with changes in these areas. CCO's subject matter experts, working in conjunction with psychometric consultants, reviewed the speed of such change in the industry and researched other comparable certification / licensing programs before determining that this goal could be achieved by setting the examination interval at five years; little, if any, additional benefit, it is believed, would accrue by more frequent testing. A practical (skills) examination is not required for recertification providing the certificant meets experience and medical (physical) requirements.

DEVELOPMENT OF THE CCO EXAMINATIONS

The first step in the development of an objective test to measure the knowledge of safe crane operations was a job analysis study. The study identified the knowledge necessary for safe crane operations. A survey was given to a representative number of crane operators, who validated that the knowledge recommended by the experts was vital to safe operations. The test blueprints or content specifications were generated from the validation study.

Development of the Tower Crane **written examination** involved a panel of crane operation content experts who worked with the staff of International Assessment Institute to write and review all questions used in the examination. Each examination contains a unique combination of questions from the question bank. These questions are selected for the examination on the basis of the content areas and specialties as defined by the test blueprints.

The CCO Tower Crane **practical examination** was developed as a fair and objective assessment of the essential skills a crane operator needs in order to safely operate tower cranes.

They were developed over a one-year period by a CCO Task Force staffed by experts from all aspects of the crane industry—crane operators, training directors, managers, supervisors, manufacturers—representing many thousands of hours of crane operating experience.

CCO teamed their knowledge and experience with the exam development expertise of International Assessment Institute who guided the CCO Task Force in establishing key elements of the program, including: identifying essential skills, selecting tasks, standardizing test conditions, developing the scoring process, establishing reliability between tests, and creating flexible application and scheduling procedures.

In concert with the CCO Task Force, International Assessment Institute also designed the Practical Examiner Accreditation Program whereby CCO trains and accredits CCO-certified crane operators to administer CCO practical examinations.

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CERTIFICATION POLICIES

ELIGIBILITY

Requirements for certification include the following:

- Be at least 18 years of age
- Meet Medical Requirements
- Comply with CCO's Substance Abuse Policy
- Pass Written Examination
- Pass Practical Examination

Candidates must pass a Written Exam and a Practical Exam in the category they wish to be certified in. Candidates have 12 months after they pass their first exam (Written or Practical) in which to take the corresponding Written or Practical Exam in the same category. Candidates may take their Written and Practical Exams in any order. For example, a candidate passing the Written Tower Crane Exam has 12 months to pass the Tower Crane Practical Exam.

EXPERIENCE

CCO certification examinations are designed for operators who are trained and who currently work in crane operation.

PHYSICAL EVALUATION

Candidates must submit one of the following:

- CCO Physical Examination Form
- A current DOT (Department of Transportation) Medical Examiner's Certificate

Certified crane operators must continue to meet ASME B30.3 physical requirements throughout their certification period. The CCO certification card is valid only with a current medical certificate that meets the requirements of ASME B30.3.

CCO WRITTEN EXAMINATIONS

The written examination program consists of a single examination in tower crane operation. This examination has 50 multiple-choice questions two (2) of which are load calculation problems. Candidates are allowed 60 minutes to complete the Tower Crane Written Examination.

Candidates meeting the eligibility requirements and passing the CCO Tower Crane Written Examination are eligible to take the Practical Examination.

CCO PRACTICAL EXAMINATIONS

The CCO Practical Examination demonstrating crane operation proficiency is available in either one of the following Tower Crane types:

- Self Erecting
- Hammerhead

A candidate must pass both the written and Practical Examination in order to be certified for a 5-year period.

CCO CERTIFICATION TIMEFRAMES

Candidates have 12 months from the time they pass the initial Written or Practical test in which to pass the corresponding (Written or Practical) exam.

Candidates who do not take and pass both the Written and Practical Exams within the 12 month time frame will be required to start the certification process again from the beginning.

RECERTIFICATION

CCO certification is valid for five (5) years.

Candidates must complete all of their recertification requirements during the 12 months prior to their expiration date. This includes:

- Passing the Written Recertification Examination
- Continuing to meet Medical Requirements
- Compliance with CCO's Substance Abuse Policy

Candidates who can document at least 1,000 hours crane-related experience during their period of certification, do not need to take the practical exam to recertify.

Crane related experience is defined as: operating, maintenance, inspection or training. However, candidates who do need to take the Practical Exam for any reason must do so before their certification expires. There is no "grace period" after the date of expiration. Candidates whose certification has lapsed must take the full Written and Practical Examinations over again in order to be recertified.

Recertification candidates are allowed two (2) attempts to pass the Tower Crane Recertification Written Exam before their certification expires. Candidates who are unsuccessful after two (2) attempts must take and pass the regular Tower Crane Written Exam.

Certified candidates may take their Written Recertification Examinations up to one (1) year prior to their date of expiration. Regardless of the date of the recertification examination within that one year period, the new five-year certification period begins from the date of expiration of the candidate's initial certification.

[Note: Candidates who recertify more than 12 months prior to their expiration date will have their new certification period begin immediately, not from the end of their current certification period.]

Recertification exams are available at regularly scheduled test administrations. Candidates wishing to recertify should contact the Test Site Coordinator who set up the initial certification. Candidates whose employment circumstances have changed should ask their new employer to schedule a test administration.

For more information about recertification, please contact CCO's recertification Department at (703) 560-2391 or via e-mail at info@nccco.org.

DISCIPLINARY POLICY

CCO's Review Committee is responsible for establishing and implementing standards of conduct, such as ethical standards, policies and procedures for disciplinary action. Grounds for revocation of certification status shall include, but not be limited to, the following:

1. Period of certification exceeded without renewal.
2. Evidence of falsification of any information on any documents submitted to CCO or its agents.
3. Expiration of a candidate's medical certificate.
4. Evidence of non-compliance with CCO's Substance Abuse Policy.
5. Evidence of culpability in an accident during certification period.

Candidates who wish to appeal a decision regarding revocation of a certificant's status, must do so in writing to the Appeals Committee, stating the grounds for the appeal. This should be addressed to:

National Commission for the Certification
of Crane Operators (CCO)
2750 Prosperity Avenue, Suite 505
Fairfax, VA 22031

SUBSTANCE ABUSE POLICY

It is the policy of CCO that crane operators shall not use a prescribed or over-the-counter substance which would impair the ability to operate cranes safely.

This includes illegal drugs, controlled substances (including trace amounts), look-alike drugs, designer drugs, or any other substance which may have an effect on the human body of being a narcotic, depressant, stimulant or hallucinogen.

An exception to this rule is that an operator may use such a substance or drug if it is prescribed by a licensed medical practitioner who is familiar with the operator's medical history and all assigned duties, and who has advised the operator that the prescribed substance or drug will not adversely affect the operator's ability to safely operate an Overhead crane.

CCO-certified crane operators shall comply with the substance abuse testing provisions of ASME B30.2.

It is a condition of certification that crane operators certified by CCO attest to their compliance with this Substance Abuse Policy. Non-compliance with this policy automatically revokes a candidate's certification status.

CERTIFICATION CARDS

Certified operators receive a plastic photo ID card at no cost when they certify for the first time and when they complete the requirements for recertification.

A certified operator may only hold one certification card at one time. If a candidate has previously certified in Mobile and/or Tower cranes and subsequently becomes certified in Overhead cranes, (s)he may request an updated certification card.

Updated, duplicate or replacement cards may be obtained from International Assessment Institute at a cost of \$25.00.

CHANGE OF ADDRESS

If you change your address you must notify CCO as soon as possible. Failure to do so may cause you to miss important updates on the CCO program that could affect your certification.

Changes of address should be sent to International Assessment Institute (IAI). They must be in writing, but can be sent via letter or fax. A form is provided for this purpose in this Handbook.



TOWER CRANE WRITTEN EXAMINATION PROCESS

APPLICATION PROCESS TO TAKE THE WRITTEN EXAMINATION

Candidates wishing to sit for the CCO Tower Crane Examination may request an application form or obtain further information from either the National Commission for the Certification of Crane Operators (CCO) or International Assessment Institute.

Candidate applications must be submitted with the appropriate documentation to International Assessment Institute. Applications are due two (2) weeks prior to the scheduled examination date.

Information about the specific locations of the test sites will be available approximately four (4) weeks prior to the examination. Candidates eligible to sit for the examination will receive an admission letter approximately one (1) week before the scheduled test administration date.

Candidates Requesting Special Accommodations

Arrangements for persons with disabilities will be provided upon request, in conformance with the American with Disabilities Act (ADA).

Professional documentation in support of a request for accommodation must be submitted to CCO no later than four (4) weeks prior to your scheduled test date. You may contact CCO for further information.

SUBMISSION OF APPLICATION

The Candidate Application and Physical Examination forms are located at the back of this Handbook. These forms can be easily photocopied for your use.

The Candidate Application with the appropriate fees and the Physical Examination form, as well as any correspondence and request for information concerning the administration of the CCO Certification Examinations, should be directed to:

International Assessment Institute
—Attention: CCO Testing
600 Cleveland Street, Suite 900
Clearwater, Florida 33755
Phone: (727) 449-8525 Fax (727) 461-2746

Check your application to ensure that all information is accurate and complete. In addition to your completed application, make sure you have enclosed:

- the appropriate fees
- a completed and signed CCO Physical Examination Form or current DOT Medical Examiner's Certificate

Follow the directions carefully when filling in the information required. Incomplete applications, incorrect payment, and/or inaccurate documentation will delay the processing and incur additional fees. It could result in your NOT being able to sit for the examination.

Therefore, please be sure your application is complete and the payment is correct.

Deadlines

Please note that all deadlines are UPON RECEIPT deadlines and that candidates and Test Site Coordinator are solely responsible for making sure that completed and accurate applications reach International Assessment Institute by the stated deadline.

APPLICATION FEE

The appropriate fee must be enclosed with your application. Checks and money orders payable to International Assessment Institute are preferred. You may also pay by credit card – VISA or MasterCard. Do not send cash. Please do not staple your check or money order to your application form, but do include your payment in the envelope with all the other application materials. *All returned checks that are unable to be processed will be subject to a \$25 fee.*

Application Fees for the Written Examinations are:

Written Exam	\$165
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For candidates who are also registering for Mobile Crane Examinations at the same time:

Written Exam	\$50
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For candidates who are already certified in Mobile Cranes:

Written Exam (<i>new, updated certification card issued</i>)	\$75
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Written Exam (<i>certification card not updated</i>)	\$50
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The same fees apply for retest candidates.

Other Fees:

You will be charged an additional \$50 fee if your application is late.

You will be charged an additional \$25 fee if:
— you wish to reschedule without a valid reason

(see *Emergency Cancellations or Withdrawals*).

— you need a duplicate/replacement certification card.

You will be charged an additional \$30 fee if:
— your application form is incomplete
— your physical exam form is not included
— you do not send in full payment
— your credit card cannot be processed for any reason
— you want to add to, or change, the exams you want to take after scheduling has been completed (in addition to the exam fee).

Your application materials must be at International Assessment Institute Assessment’s office according to the sample test schedule outline in this Candidate Handbook.

Applications received after the main application deadline, but at least four (4) business days prior to the exam administration deadline, can be accepted for an additional \$50 late fee. For example, for a test administration on a Saturday, late applications that arrive at IAI’s testing office by 5pm (ET) on the Monday evening prior can be accepted.

Candidate applications that arrive after that time cannot be accepted. **Walk-in candidates cannot be accepted under any circumstances.**

RESCHEDULING, CANCELLATIONS, AND WITHDRAWALS

Should you be unable to sit for the examination, International Assessment Institute must receive notification in writing no later than seven (7) business days prior to the examination date. Your fees will be held until you reschedule. When you reschedule you will need to pay an additional \$25.00 rescheduling fee. Candidates who wish to reschedule their CCO written examination **MUST** notify International Assessment Institute and submit the necessary documentation and fees to International Assessment Institute by the deadline for the rescheduled test date.

Candidates withdrawing or canceling after the deadline or not sitting for the examination will forfeit all application fees and will NOT receive a refund.

Emergency Cancellations or Withdrawals

ONLY the following situations will be accepted as grounds for emergency cancellations or withdrawals:

- Called to work — supporting documentation required: letter from employer
- Candidate illness — supporting documentation required: doctor’s note
- Family death — supporting documentation required: death certificate or obituary notice

Requests for medical and personal emergency withdrawals are handled by International Assessment Institute. Please write a letter to International Assessment Institute describing your situation. Be sure to include your full name, address and social security number along with the scheduled test date, site number, and supporting documentation indicated above.

International Assessment Institute **MUST** receive your written notification within seven (7) business days after the scheduled examination date or you will forfeit ALL application fees. You will be allowed to reschedule for a future examination administration.

You will NOT receive a refund if you decide you no longer wish to take the test.

TEST ADMINISTRATION SCHEDULE FOR THE CCO EXAMINATIONS

The CCO written certification examinations are available for administration on demand with at least four (4) weeks notice.

APPLICATION DEADLINES

Tests can be administered at any time so long as the application deadlines are adhered to. Sample deadlines shown are for a test date of January 29.

		JANUARY						
		S	M	T	W	T	F	S
Test Site Application Form and Written Test Administration Request Form due four (4) weeks prior to test date.	●	→	1	2	3	4	5	6
		7	8	9	10	11	12	13
Candidate Applications due two (2) weeks prior to test.	●	4	→	15	16	17	18	19
		20	21	22	23	24	25	26
Test Day	●	28	→	29	30	31		

ADMISSION LETTERS

Approximately one week before the scheduled test date, registered and eligible candidates approved to take the CCO Written Certification Examinations will receive an admission letter by mail. The admission letter will contain information regarding the test center address, the reporting time, the examination(s) the candidate registered for and the materials candidates will need to bring with them on the day of the administration. This admission letter must be presented at the test site to gain admittance to the examination(s).

No candidate will be allowed to sit for the examination unless an admission letter, valid for the specific test date, is presented. Candidates who have registered late and paid the candidate late fees will need to present their photo ID at the test site.

TEST SITE INFORMATION

Identification at the Test Site

In addition to an admission letter valid for the specific test date, candidates must bring government issued photo identification to the test site on the day of the administration. Candidates will be required to sign the test site roster upon entry to the testing area. Acceptable forms of photo identification are:

- passport
- government issued driver's license
- work identification

NOTE: Candidates without appropriate identification documents will NOT be admitted to take the written certification examination(s).

Materials to Bring to the Test Site

Each candidate must bring the following items to the test site:

- Government issued photo ID
- The admission letter for the specific test date
- Two (2) sharpened #2 pencils (to complete the examination answer sheet)
- A good eraser

NOTE: No books, scratch paper, calculators, beepers, cellular phones or other materials will be allowed in the examination room.

Test Security

For the purposes of test security, candidates who sit for the CCO examination(s) acknowledge that they understand the following:

- This examination is the exclusive property of CCO.
- This examination and the questions contained therein are protected by federal copyright law. No part of the examination(s) may be copied, reproduced in part or whole by any means whatsoever, including memorization.
- Theft or attempted theft of an examination booklet or any of its pages is punishable as a felony.
- Candidate participation in any irregularity occurring during the examination, such as giving or obtaining unauthorized information or aid, as evidenced by an observation or subsequent statistical analysis, may be sufficient cause to terminate participation, invalidate the results of the examination or other appropriate remedy.
- Candidates verify that they have successfully met the physical/medical requirements and are eligible to take this examination. If at any time it is confirmed a candidate has not met all the requirements, candidates will no longer be eligible for certification.
- A candidate's signature on the answer sheet for the administration of the examination confirms that the candidate has read and understands the above statements.

Candidate Question Comment Forms

Candidates can comment on the examination(s) as a whole or on specific items within an examination by writing the comments on the Candidate Question Comment Form. These comments should be accompanied by the candidate's name (which is optional), the specific examination and question referred to, the site code and test date. Examination comments are reviewed by CCO content experts on a regular basis.

NOTE: Only comments completed on the Candidate Question Comment Form at the test site will be considered for review.

TEST SCORING INFORMATION

Test Scoring

The CCO Written Certification examinations are criterion-referenced examinations; i.e., the passing score is set beforehand, and candidate performance on the examination is not compared to the performance of others taking the examination. In a criterion-referenced examination, a candidate must obtain a score equal to or higher than the “passing score” to pass the test. The passing scores represent absolute standards and are determined by panels of CCO content experts using psychometrically accepted standard-setting methodology.

Score Reporting

The written examinations are electronically scored by International Assessment Institute. For this reason, it is important to complete the answer sheet according to the instructions provided by the Chief Examiner on the day of the exam. Candidates will receive credit only for answers recorded on the scannable answer sheet.

Answers marked in the test booklet(s) will **NOT** be counted toward a candidate’s score.

All candidates will receive a score report of their performance. Examination results are mailed to candidates approximately twelve (12) business days after the examination administration.

In reporting the examination results to candidates, statistical procedures are used to convert raw scores (i.e., the number of test questions answered correctly) to scaled scores which are equivalent or all administrations of the examination(s). The scaled score is not a “number answered correctly” score.

Candidate results will be reported as a scaled score, on a scale ranging from 0 to 100 points, with a score of 70 representing the “minimum passing” score.

Candidate scores cannot be given over the telephone.

Hand Score Requests

Candidates not passing the examination(s) may request from International Assessment Institute a hand scoring of the answer sheet, provided the request is made in writing within three months of the test date, and the request is accompanied by a \$50 check or money order made payable to International Assessment Institute. The \$50 fee covers all examinations taken on the same test date. Requests should be mailed to:

International Assessment Institute

— **Attention: CCO Testing**

600 Cleveland Street, Suite 900, Clearwater,
Florida 33755

Phone: (727) 449-8525 — Fax (727) 461-2746

In the event that the hand scoring of a failing candidate’s answer sheet results in a passing score, the \$50 fee will be refunded in full.

Retaking the Examination(s)

Candidates who fail an examination(s) may retake the examination(s). Candidates will need to reapply and pay all corresponding fees.

Information Release Policy

CCO may release any information regarding a candidate’s examination application and a candidate’s examination administration to any employer, regulatory agency or any other person or entity that may inquire in writing to the Commission.

The name and certification status of individuals who have successfully completed the CCO examinations may be published and released upon request to employers and other interested parties. CCO and International Assessment Institute will discuss score-related matters with the candidate or the candidate’s legal representative only.



Tower Crane Written Exam Outline

The Tower Crane written examination certification program tests the following knowledge areas relating to the operation of tower cranes.

Domain 1: Site

(Approximately 10% of Test)

Domain 2: Erection, Climbing, and Dismantling

(Approximately 25% of Test)

Domain 3: Operations

(Approximately 50% of Test)

Domain 4: Technical Knowledge

(Approximately 15% of Test)

DOMAIN 1: SITE

(Approximately 10% of Test)

1. Know how to assess suitability of the supporting surface. *
2. Know how to determine if there is adequate room for outriggers and tail swing. *
3. Know how to locate and identify site hazards and restrictions such as electric power lines, air-rights, or other hazardous systems and public access areas.
4. Be familiar with basic requirements for power sources, fusing, disconnects, lightning protection, and grounding.
5. Be familiar with the necessity to protect the crane's foundation.

** 1 and 2 only refers to Self-Erecting Cranes*

DOMAIN 2: ERECTION, CLIMBING, AND DISMANTLING

(Approximately 25% of Test)

1. Know proper erection, climbing, and dismantling procedures specified by the manufacturer in the operator's manual.
2. Know general notes and warnings to be applied during climbing procedures.
3. Know the maximum allowable wind speeds during erection, climbing, dismantling, and operation.
4. Understand the proper procedures for bolting and/or pinning connections.
5. Understand the maximum freestanding height allowed.
6. Understand the proper counterweight configurations and/or central ballast requirements.
7. Understand the proper crane configuration.

8. Be familiar with standard minimum and maximum tie-in spacing and maximum tower height above tie-ins.
9. Be familiar with proper installation of internal climbing collars, support beams, wedges and climbing apparatus.
10. Be familiar with proper installation of top climbing units and tie-in collars, struts, and lower braces.
11. Know proper position of top climbing unit after climbing procedures in accordance with manufacturer's specifications.
12. Be familiar with proper travel rail installation and maintenance.

DOMAIN 3: OPERATIONS

(Approximately 50% of Test)

1. Know how to inspect the crane for proper condition and complete required records.
2. Know how and when to communicate with management, crew, and signal person.
3. Know standard hand signals as specified in ASME B30.3.
4. Know how to shut down and secure the crane properly when leaving it unattended.
5. Know the manufacturer's recommendations for operating in various weather conditions.
6. Know how to verify the weight of the load and the rigging.
7. Understand basic load rigging procedures.
8. Know how to perform the basic maintenance.
9. Know the crane operator responsibilities contained in ASME B30.3.
10. Know how to use operator aids and limiting devices.
11. Know the proper procedures for operating safely under special conditions: i.e., traveling with suspended loads; approaching two-blocking; operating near electric power lines; lifting loads from beneath the surface of the water; handling loads out of the operator's vision ("in the blind"), and suspended personnel platforms.
12. Know the proper procedures for load control during the use of hand held tag lines.
13. Know emergency response procedures: i.e., fire control, electric power line contact, and control malfunction.

14. Understand federal, state, and local regulations and ASME B30.3 regulations pertaining to the operation of the crane.
15. Know how to review planned crane operations and requirements with site supervision.
16. Understand tower crane load charts.

DOMAIN 4: TECHNICAL KNOWLEDGE

(Approximately 15% of Test)

1. Understand the function, limitations, and characteristics of the crane.
2. Know the basic maintenance, inspection and replacement criteria for tower crane wire ropes.
3. Know basic tower crane nomenclature.
4. Understand basic machine power flow systems: i.e., mechanical, electrical, hydraulic, combination.
5. Understand boom, jib, counter jib, and counterweight configurations.
6. Know the “out of plumb” tolerance for the tower crane.
7. Basic understanding of metric units/US customary units.
8. Understand basic safety procedures: e.g. lock out, tag out, fall protection.



Sample Questions

The following are sample test questions typical of the style and content of the questions used in the CCO Written Certification Examinations.

1. According to ASME B30.3, an overhead power line is **ALWAYS** considered to be
 - (A) energized until the power company has verified it is not energized.
 - (B) safe as long as the load, hoist rope and structure are kept at least ten (10) feet away.
 - (C) de-energized if there is not power on the jobsite.
 - (D) de-energized if the lines have a safety cover over them.
2. According to ASME B30.3, maintenance personnel are permitted to operate the crane only when
 - (A) it is a light load.
 - (B) the operator is not available.
 - (C) performing their duties.
 - (D) winds are less than 20 mph.
3. According to ASME B30.3, who should be present when climbing or telescoping operations take place?
 - (A) Supervisor
 - (B) Field Tech
 - (C) Operator
 - (D) Manufacturer's Representative
4. According to OSHA 1926.550, when a wire rope bridle is used to connect the personnel platform to the load line, each bridle leg shall be connected to a
 - (A) master link.
 - (B) cable clamp.
 - (C) pelican hook.
 - (D) becket pin.
5. According to OSHA, what shall be provided at both ends of travel of the trolley?
 - (A) buffers
 - (B) warning lights
 - (C) paint marks
 - (D) trolley basket
6. According to ASME B30.3, all controls shall be tested by the operator
 - (A) every 100 hours of running time.
 - (B) at the start of a new shift.
 - (C) after any critical lift.
 - (D) after erection only.

Question #	6
Answer	B
Question #	5
Answer	A
Question #	4
Answer	A
Question #	3
Answer	C
Question #	2
Answer	C
Question #	1
Answer	A



Reference List

The following reference materials are used by CCO's Examination Committee to verify the accuracy of CCO test questions.

Candidates are strongly advised to become familiar with manufacturers' load charts in preparing for the CCO certification examinations. Prices current at time of going to press.

ASME, B30.3, 1996 \$55.00
CONSTRUCTION TOWER CRANES
(Includes 1999 addenda)

Order by Mail:

American Society of Mechanical Engineers
22 Law Drive, Box 2900
Fairfield, NJ 07007
Ph: 800-843-2763 Fax: 201-882-1717
*Check, VISA, MasterCard, American Express,
Discover, Diner's Club*

**OSHA SAFETY AND HEALTH STANDARDS
FOR THE CONSTRUCTION INDUSTRY (29
CFR PART 1926) SUBPART N-CRANES,
DERRICKS, HOISTS, ELEVATORS AND
CONVEYORS, SUBPART R - STEEL
ERECTION, SUBPART H -MATERIALS
HANDLING, STORAGE, USE AND DISPOSAL,
29 CFR PARTS 1910 –SUBPART N-
MATERIALS HANDLING AND STORAGE**

Order by Internet:

www.osha.gov

Order by Mail:

NCCCO
2750 Prosperity Avenue, Suite 505
Fairfax, VA 22031-4312
Ph: 703-560-2391 Fax: 703-560-2392
E-Mail: info@nccco.org

**NCCCO TOWER CRANE REFERENCE
MANUAL**

Order by Mail:

NCCCO
2750 Prosperity Avenue, Suite 505
Fairfax, VA 22031-4312
Ph: 703-560-2391 Fax: 703-560-2392
E-Mail: info@nccco.org

**IPT'S CRANE AND RIGGING
TRAINING MANUAL** \$31.00
+ S&H \$7.00

Order by Mail:

IPT Publishing and Training Ltd.
P.O. Box 9590
Edmonton, Alberta, T6E 5X2 Canada
Ph: 780-962-4548 Fax: 780-962-4819
Website: www.iptbook.com
*VISA, MasterCard, American Express, Check,
Money Order*

BOB'S RIGGING & CRANE HANDBOOK
Desk Size \$23.50
Pocket Size \$12.50

Order by Mail:

Pellow Engineering Services, Inc.
11200 Juniper Drive
Leawood, KS 66211
Ph: 877-473-5569 Fax: 913-438-2532
Website: www.danwheeler.us/Pellow/
VISA, MasterCard, Check, Money Order



PRACTICAL EXAMINATION PROCESS

SKILLS TESTED

The CCO Tower Crane practical exam can be taken on either one of the two following types:

- Hammerhead
- Luffer
- Self Erecting

The practical examination is comprised of three main tasks that increase progressively in the skill level tested. Skills tested are: trolley travel, hoisting, swinging, and combination (multifunction) operations. Crane operation with load and without load is required.

CCO provides a test site layout for each type of Tower Crane for the Practical Examination to ensure the examination remains standardized for all candidates wherever and whenever they may test.

SCHEDULING A TEST

A candidate for the practical examination should contact the Test Site Coordinator to determine the date of the next scheduled practical exam. Alternatively, the candidate may contact CCO for this information.

You must bring your completed Practical Exam Candidate Application Form with you to your scheduled examination, along with any required supporting materials.

TEST DAY

Candidates must report to the test site at the scheduled time. Candidates are required to bring personal protective equipment to wear during the test, including as a minimum: hard hat, work boots and suitable work clothing.

PRACTICAL SCORING

Candidate performance on the Practical Examination is recorded by Practical Examiners accredited by CCO.

Examiner requirements include meeting CCO requirements for certification, passing the Written and Practical Exams and successfully completing an accreditation workshop.

The testing procedure has been developed to provide the highest degree of standardization and reliability. The Examiner's task is primarily to record the performance of the candidate.

A candidate may lose points either through operational errors or exceeding established optimum time limits. The scoring of candidates' performance is done off-site at the facilities of International Assessment Institute.

PRACTICAL SCORE REPORTING

All candidates receive a score report of their performance. Examination results are mailed to candidates approximately twelve (12) business days after the receipt of Practical Examination score sheets by International Assessment Institute.

Please note that while Practical Examiners are encouraged to expedite score sheets after each test administration, they may "batch" score sheets from several test administrations over a number of days.

This may mean candidates receive their score reports from IAI more than three weeks after their test administration.

Both the Practical Examination and the scoring system have been validated by CCO's pilot testing program and verified by International Assessment Institute. The score of 70 represents the "minimum passing" score for the practical examinations.

PRACTICAL CANDIDATE FEES

The appropriate fee must be submitted with your application through your test site coordinator. The same fee applies for retest candidates.

Practical Examination Candidate Fees

- | | |
|---|-------|
| • Practical Examination Candidates Fee | \$ 60 |
| • Candidates who are also registering for Mobile Crane Examinations at the same time, or who are already certified in Mobile Cranes | \$ 50 |

PRACTICAL HAND SCORE REQUESTS

Candidates not passing the Tower Crane Practical Examination may request from IAI a detailed score report of their results. This provides an overview of performance in each task category.

The request must be made within three (3) months of the test date and be accompanied by a check/ money order payable to IAI (or with VISA/ MasterCard number) for \$25 for each test requested.

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PRACTICAL EXAM OUTLINE

The following is an outline of the practical testing procedure, as provided to candidates at the time of testing.

CANDIDATE INFORMATION AND INSTRUCTIONS

The following sections describe the specific tasks you will be performing when taking the practical examination. It is important that you understand these instructions. If there is anything you do not understand, please request clarification from the Examiner.

TASKS

The Three Tasks are:

- Task 1: Place Load Hook and Chain in Stop Circle
- Task 2: Place Test Weight in Load Circle
- Task 3: Negotiate Zigzag Corridor with Load

There is also a Pre-Test Briefing, a Pre-Test Familiarization Period, and a Pre-Task Familiarization Period (prior to the Load Circle task) with a load. You will be required to complete all phases of the test in sequence.

You must report to the test site at the scheduled time. You are required to bring personal protective equipment to wear during the test including as a minimum: hard hat, work boots, and suitable work clothing.

The Test Site Coordinator is responsible for setting the testing schedule. If you are familiar with the operation of the test crane, you may elect to test first to allow other candidates time to review the operator's manuals and load charts. Otherwise, selection shall be by random drawing or by assignment of the Test Site Coordinator.

During the practical examination, you are under the direction of the Examiner and must follow the Examiner's directions at all times.

Once you have completed all of the tests you are taking, you must leave the testing area. Only personnel involved in the administration of the test are allowed in the test area.

TIME LIMITS

For Task 1, Task 2 and Task 3 an "optimum" time limit has been set. If the task is completed within this time period, you receive no time penalty.

Once you exceed this time limit, you will lose points on a gradual basis. If you take twice as long as the optimum time, you will have lost all the points

allotted to that particular task. The "optimum" time for each task is stated as part of the task descriptions.

PRE-TEST BRIEFING

While you are waiting to take your test you will have sufficient time to read this description of the tasks to be performed and review the operator's manual and load chart for the crane you will operate. In addition, you will be informed of the make and model of the crane, the load hook height, jib length, and the weight of the test load. You will also watch a short video showing all the tasks you will be required to perform during the examination.

Note that:

- The crane's LMI system (if the crane is so equipped) has been correctly programmed and will not interfere with the proper operation of the crane.
- The crane has been set up and leveled.
- None of the target points have been placed at a radius that exceeds the crane's rated capacity.

UNSAFE ACT

If at any time during the Pre-Test Familiarization Period or during the test, you commit an "unsafe" act, you will be disqualified from continuing with the test. An "unsafe" act includes the following:

- Dropping the load hook or Test Weight (on ground)
- Uncontrolled or reckless operation;
- Failure to respond to a "Stop" signal;
- Any action that in the judgment of the Examiner could endanger personnel or equipment at the test site.

The Examiner has the authority to stop the test at any time for reasons of safety or if the Examiner determines the candidate is attempting to circumvent any task. Please ask the Examiner if you have questions.

If you are disqualified due to an unsafe act, your case will be reviewed by IAI and CCO, and you will be notified as to your eligibility for rescheduling your practical test.

CANDIDATE ID AND SIGNATURE

Prior to beginning the examination, the Examiner will ask you for a government issued photo identification such as a driver's license.

The Examiner will ask if you have read the Candidate Information and Instructions and will answer any questions you may have. He will review with you the weather conditions and ask you to sign indicating you understand the instructions for the test, and agree with the Examiner's assessment of the weather conditions.

WEATHER CONDITIONS/EQUIPMENT PROBLEMS

The Examiner will use an anemometer to check the wind speed and record weather conditions on your score sheet.

The Examiner has the responsibility to determine if weather conditions/equipment problems are such that a test needs to be suspended. If the test is interrupted due to weather conditions/equipment problems, the procedure for restarting will be as follows:

- You will resume the test at the beginning of the task you were performing at the time of the interruption, except for Task 3, when you will go back to the beginning of either Task 3a or 3b, as appropriate.
- You will also be entitled to a Pre-Test or Pre-Task Familiarization period before resuming the test.
- If you resume the test on a different machine, you will have the option of starting the entire test over from the beginning.
- If the testing is delayed to a different day, the test must be restarted from the beginning.

PRE-TEST FAMILIARIZATION PERIOD

- You will be allowed 15 minutes to familiarize yourself with the crane and to examine anything on the crane which you feel is necessary to operate it comfortably.
- You will be allowed to "get the feel" of the controls and run the crane through its functions. The jib length has been preset. The brakes and other devices have been set according to the crane manufacturer's recommendations.
- You may not interfere with the test course, lift the Test Weight, or "shadow" the zigzag corridor and Load Circle.

- You must finish the Pre-test Familiarization Period with the load hook under control in the Start Circle within the 15 minute period.
- The Examiner will notify you when there are 10, 5 and 1 minute(s) remaining.
- If you are ready in less than 15 minutes, you may indicate this to the Examiner.
- If, at the end of the Pre-Test Familiarization Period, you feel you are not ready to take the examination, you should notify the Examiner. You will have, in effect, disqualified yourself from taking the examination at this time, and you will be required to sign to that effect on the Candidate Score Sheet.

TASK 1: PLACE LOAD HOOK AND CHAIN IN STOP CIRCLE

Optimum Time — One(1) minute and 30 seconds.

- At the Examiner's indication to start (at which point timing will begin) raise the load hook and chain at least 10 ft. off the ground to clear all obstacles and personnel.
- Bring it from its starting position in the Start Circle to the Stop Circle.
- Once the load hook and chain reaches the Stop Circle place it there such that the chain suspended from the hook makes contact with the ground inside the circle and remains there.
- The Examiner will give you a stop signal once the load hook and chain are under control.
- Points will be deducted for the following:
 - Dragging or contact of chain outside of the circle.
 - Load hook touching ground either inside or outside of the circle.
 - Load hook or chain contacting any part of the course or crane.

PRE-TASK FAMILIARIZATION PERIOD (WITH TEST WEIGHT)

This part of the Test is not scored.

- At the Examiner's indication, bring the load hook over the Test Weight located in the Test Weight Circle.
- The load will be attached to the crane's load hook by the Examiner or Proctor.
- You are allowed to bring the Test Weight to the designated area where you can get the feel of the load, test the brake, etc. before beginning the Load Circle task.

- You may not swing the load outside of the designated area or shadow the Zigzag course.
- You will be allowed a maximum of five (5) minutes for this Pre-Task Familiarization, by the end of which period, you must have placed the Test Weight on the ground in the Test Weight Circle with the rigging taut.
- The Examiner will notify you when there is one (1) minute remaining.

TASK 2: PLACE TEST WEIGHT IN LOAD CIRCLE

Optimum — Time Four (4) minutes.

- At the Examiner's indication to start, bring the Test Weight from the Start Circle to the Load Circle.
- Swing, trolley, or hoist as necessary to place the Test Weight on the ground completely within the Load Circle.
- The Examiner will then give the hoist and swing signal and this will indicate that you should then hoist and swing to place the Test Weight on the ground in the Start Circle.
- Do not let any part of the Test Weight make contact with the PVC barriers that surround the Load and Start Circles.
- Timing will end when you have placed the Test Weight on the ground in the Start Circle. Task is not complete until the load is placed completely within the outside perimeter of the circle and the Examiner has given you a stop signal. If the Examiner has not given you a stop signal, this will indicate that the weight is not within the circle and the task continues to be timed.
- Points will be deducted for the following:
 - Knocking ball off pole
 - Knocking pole over
 - Circumventing the task
 - Exceeding the optimum time
 - Hitting any part of the course

TASK 3: NEGOTIATE ZIGZAG CORRIDOR WITH LOAD

Optimum Time — Three (3) minutes each direction.

This task is divided into two tasks 3A and 3B. 3A requires you to go through the corridor in a forward direction. 3B requires you to go through the corridor in a reverse direction.

- At the Examiner's direction to start (at which point timing will begin), lift the Test Weight into the air and swing, trolley, or hoist up or down as you judge necessary to guide the load through the Zigzag Corridor without touching the ground with the Test Weight, or raising the Test Weight so high that the chains leave the ground, or knocking over any part of the PVC barrier. Points will be deducted for the following:
 - Knocking ball off pole
 - Moving pole base off line
 - Knocking pole over
 - Chain leaving ground
 - Load touching ground
 - Circumventing the task
- Timing will stop when you have placed the Test Weight on the ground in the Stop Circle and the Examiner has given you a stop signal. Task is not complete until the load is placed completely within the outside perimeter of the circle and the Examiner has given you a stop signal. If the Examiner does not give you a stop signal, this will indicate the weight is not within the circle and the task continues to be timed.
- At this time the Examiner will reconstruct the corridor as necessary.
- At the direction of the Examiner, at which point timing will begin, lift the Test Weight from the Stop Circle and travel through the corridor in reverse fashion.
- Timing will stop when you have placed the Test Weight on the ground in the Test Weight circle and the Examiner has given you a stop signal. Task is not complete until the load is placed completely within the outside perimeter of the circle and the Examiner has given you a stop signal. If the Examiner does not give you a stop signal, this will indicate the weight is not within the circle and the task continues to be timed.
- The Proctor will then detach the Test Weight from the load hook.
- At the Examiner's direction, swing the load hook to the Start Circle and allow the Examiner to attach the chain in readiness for the next candidate. Remain in the cab or at the operator's station until the Examiner gives you a clear indication that you may leave. Set the swing brake and lock before leaving.

POST TEST PROCEDURES

Once you have completed the Practical Examination:

- The Examiner will record your performance.
- The Examiner is not permitted to review your score sheet or discuss your performance on the test.
- Exam results will be mailed to you within approximately twelve (12) working days of International Assessment Institute's receipt of the score sheet.
- For tests on any other cranes you have made formal application to test on, return to the candidate briefing area.
- If you have completed all of your tests, you must leave the test site.



Candidate Application Forms

Please photocopy all sides of the following forms for your use in applying for the CCO Written and Practical Examinations.

- Candidate Application — Written Examination**
- Physical Examination Form**
- Physician Instructions for Medical Examination**
- Candidate Application — Practical Examination**
- Change of Address Form**



CANDIDATE APPLICATION

WRITTEN EXAMINATION – TOWER CRANE

Please type or print neatly

NAME <i>First</i>			<i>Middle</i>			<i>Last</i>		
CCO CERTIFICATION NUMBER <i>(If previously certified)</i>				SOCIAL SECURITY #				
STREET ADDRESS						DATE OF BIRTH		
CITY				STATE		ZIP		
PHONE		FAX		EMAIL				
COMPANY / ORGANIZATION				PHONE				
COMPANY STREET ADDRESS								
CITY				STATE		ZIP		
ARE YOU A RETEST CANDIDATE? <input type="checkbox"/> NO <input type="checkbox"/> YES Date last tested: ____/____/____								

WRITTEN EXAMINATION FOR WHICH YOU ARE APPLYING

BUBBLE IN the circle next to the written exam category for which you are applying.

EXAM DESCRIPTION	EXAM FEES
<input type="radio"/> Tower Crane Written Exam <i>(Tower Crane candidates only).</i>	654101 <input type="checkbox"/> \$165
<input type="radio"/> Tower Crane Written Exam <i>(For candidates who are also registering for Mobile Crane Examination at the same time).</i>	654101 <input type="checkbox"/> \$50
<input type="radio"/> Tower Crane Written Exam <i>(For candidates who are already certified in Mobile Cranes, new updated certification card issued).</i>	654101 <input type="checkbox"/> \$75
<input type="radio"/> Tower Crane Written Exam <i>(For candidates who are already certified in Mobile Cranes, certification card <u>not</u> updated).</i>	654101 <input type="checkbox"/> \$50
ADDITIONAL FEES	
<input type="radio"/> Candidate Late Fee <i>(If applicable)</i>	<input type="checkbox"/> \$50
<input type="radio"/> Incomplete Application Fee <i>(If applicable)</i>	<input type="checkbox"/> \$30
TOTAL AMOUNT ENCLOSED	\$

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PHYSICAL EXAMINATION FORM

PAGE 1 OF 2

TO BE FILLED IN BY EXAMINING PHYSICIAN (Please print)

DATE OF EXAMINATION

(Month / Day / Year) / /

OPERATOR'S NAME First

Middle

Last

SOCIAL SECURITY #

DATE OF BIRTH (Month / Day / Year)

AGE

HOME ADDRESS

PHONE

CITY

STATE

ZIP

HEALTH HISTORY

- | | | | | | | | | |
|------------------------------|-----------------------------|--|------------------------------|-----------------------------|---|------------------------------|-----------------------------|---|
| <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> Asthma | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> Muscular Disease | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> Head or spinal injuries |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Kidney | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Psychiatric Disorder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Seizures, fits, convulsions or fainting |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Tuberculosis | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Cardiovascular Disease | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Extensive confinement by illness or injury |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Diabetes | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Gastrointestinal Ulcer | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Any other nervous disorder |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Nervous Stomach | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Ethanol use | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Suffering from any other disorder |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Rheumatic Fever | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Rx drug use | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Permanent defect from illness, disease or injury |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Over the counter drug use | | | | | | |

IF ANSWER TO ANY OF THE ABOVE IS YES, EXPLAIN:

GENERAL APPEARANCE AND DEVELOPMENT:

Good

Fair

Poor

VISION:

For Distance: Right/20

Left/20

Both/20

Without Corrective Lenses

With Corrective Lenses

Evidence of disease or injury: Right _____

Left _____

Color Test: _____

Horizontal Field of Vision: Right _____

Left _____

HEARING:

Right Ear _____

Left ear _____

Evidence of disease or injury: Right _____

Left _____

AUDIOMETRIC TEST:

Decibel loss at

500 HZ

1,000 Hz

2,000 Hz

3,000 Hz

4,000 Hz

5,000 Hz

6,000 Hz

7,000 Hz

8,000 Hz

THROAT:

THORAX:

Heart: _____

If organic disease is present, is it fully compensated? _____

Blood Pressure: Systolic _____

Diastolic _____

Pulse: _____

Before Exercise _____

Immediately after _____

Lungs: _____

ABDOMEN:

Scars _____

Abdominal Masses _____

Tenderness _____

PHYSICAL EXAMINATION FORM (CONT'D)

HERNIA: Yes No If so, where? _____ Is truss worn? _____

GASTROINTESTINAL: Ulceration or other disease? Yes _____ No _____

GENITO-URINARY: Scars: _____ Urinal Discharge: _____

REFLEXES: Rhomberg _____
 Pupillary: _____ Light R _____ L _____
 Accommodation: _____ R _____ L _____

KNEE JERKS: Right Normal _____ Increased _____ Absent _____
 Left Normal _____ Increased _____ Absent _____

REMARKS: _____

EXTREMITIES: Upper _____ Lower _____ Spine _____
LABORATORY & OTHER SPECIAL FINDINGS: Urine Spec. Gr. _____ Alb. _____ Sugar _____
 Other Laboratory Data (Serology, etc.) _____
 Radiological Data _____ Electrocardiograph _____

GENERAL COMMENTS: _____

NAME OF EXAMINING DOCTOR (PLEASE PRINT) _____ SIGNATURE _____
 ADDRESS OF EXAMINING DOCTOR _____
 CITY _____ STATE _____ ZIP _____

MEDICAL EXAMINER'S CERTIFICATE TO BE COMPLETED ONLY IF OPERATOR IS FOUND QUALIFIED

MEDICAL EXAMINER'S CERTIFICATE
 I certify that I have examined _____
CRANE OPERATOR'S NAME (PRINT)
with the knowledge of his/her duties,
I find him/her qualified under the regulations.

Qualified only when wearing corrective lenses.
 Qualified only when wearing a hearing aid.
 Qualified — see Accommodation Statement attached.

A complete examination form for this person is on file in my office:

ADDRESS _____
 DATE OF EXAMINATION _____ NAME OF EXAMINING DOCTOR _____
 SIGNATURE OF EXAMINING DOCTOR _____
 SIGNATURE OF OPERATOR _____
 ADDRESS OF OPERATOR _____

MEDICAL EXAMINER'S CERTIFICATE
 I certify that I have examined _____
CRANE OPERATOR'S NAME (PRINT)
with the knowledge of his/her duties,
I find him/her qualified under the regulations.

Qualified only when wearing corrective lenses.
 Qualified only when wearing a hearing aid.
 Qualified — see Accommodation Statement attached.

A complete examination form for this person is on file in my office:

ADDRESS _____
 DATE OF EXAMINATION _____ NAME OF EXAMINING DOCTOR _____
 SIGNATURE OF EXAMINING DOCTOR _____
 SIGNATURE OF OPERATOR _____
 ADDRESS OF OPERATOR _____



PHYSICIAN INSTRUCTIONS

FOR MEDICAL EXAMINATION

Please give these instructions to the Examining Physician.

PHYSICAL QUALIFICATIONS AND EXAMINATIONS OF CRANE OPERATORS

A person is physically qualified to operate a crane if that person:

1. Has no loss of a foot, a leg, a hand, or an arm, or has been granted a waiver;
2. Has no impairment of the use of a foot, a leg, a hand, fingers, or an arm, and no other structural defect or limitation, which is likely to interfere with his/her ability to control and safely operate a crane or has been granted a waiver upon a determination that the impairment will not interfere with his/her ability to control and safely operate a crane;
3. Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control;
4. Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis, or any other cardiovascular disease of a variety to be known accompanied by syncope, dyspnea, collapse or congestive cardiac failure;
5. Has no established medical history or clinical diagnosis of respiratory dysfunction likely to interfere with his/her ability to control and operate a crane safely;
6. Has no current clinical diagnosis of high blood pressure likely to interfere with his/her ability to operate a crane;
7. Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease which interferes with his/her ability to control and operate a crane safely;
8. Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a crane;
9. Has no mental, nervous, organic or functional disease or psychiatric disorder likely to interfere with his/her ability to operate a crane;
10. Has distant visual acuity of at least 20/40 (Snellen) in each eye without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green, and amber;
11. When tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz, 2,000 Hz, 3,000 Hz and 4,000 Hz with or without a hearing aid when the audiometric device is calibrated to American National Standard (formerly ASA Standard) Z24.5-1951;
12. Does not use a prescribed or over the counter substance, including ethanol, which would impair the operator to perform safe operation of a crane. These include illegal drugs, controlled substances (including trace amounts), look-alike drugs, designer drugs, or any other substance which may have the effect on the human body of being a narcotic, depressant, stimulant or hallucinogen. An exception to this ruling is that an operator may use such a substance or drug if the substance or drug is prescribed by a licensed medical practitioner who is familiar with the operator's medical

history and all assigned duties and who has advised the operator that the prescribed substance or drug will not adversely affect the operator's ability to safely operate a crane. The treating physician will also provide a waiver to the Medical Examiner. (See waiver statement.)

INSTRUCTIONS FOR PERFORMING AND RECORDING PHYSICAL EXAMINATIONS

The examining physician should review these instructions before performing the physical examination. Answer each question yes or no where appropriate.

The examining physician should be aware of the rigorous physical demands and mental and emotional responsibilities placed on the operator of cranes. In the interest of public safety the examining physician is required to certify that the operator does not have any physical, mental, or organic defect of such a nature as to affect the operator's ability to operate safely a crane.

General Information. The purpose of this history and physical examination is to detect the presence of physical, mental or organic defects of such a character and extent as to affect the applicant's ability to operate a crane safely. The examination should be made carefully and at least as complete as indicated by the attached form. History of certain defects may be cause for rejection or indicate the need for making certain laboratory tests or a further, and more stringent, examination. Defects may be recorded which do not, because of their character or degree, indicate that certification of physical fitness should be denied. However, these defects should be discussed with the applicant and he/she should be advised to take the necessary steps to ensure correction, particularly of those which, if neglected, might lead to a condition likely to affect his/her ability to operate safely.

General Appearance and development. Not marked overweight. Not any posture defect, perceptible limp, tremor, or other defects that might be caused by alcoholism, thyroid intoxication, or other illnesses including sedating or habit forming drugs.

Head-eyes. When other than the Snellen chart is used, the results of such test must be expressed in values comparable to the standard Snellen test. If the applicant wears corrective lenses, these should be worn while applicant's visual acuity is being tested. If appropriate, indicate on the Medical Examiner's Certificate by checking the box "Qualified only when wearing corrective lenses." In recording distance vision use 20 feet as normal. Report all vision as a fraction with 20 as a numerator and the smallest type read at 20 feet as denominator. Note ptosis, discharge, visual fields, ocular muscle imbalance, color blindness, corneal scar, exophthalmos, or strabismus, uncorrected by corrective lenses.

Contact lens wear may not be allowed in many work areas where mandatory eye protection disallows contact lens wear. The applicant must be made aware that safety glass eye wear may routinely be required at job sites and must also pass vision testing protocols with safety eye glasses specified and approved ANSI Z89.

Ears. Note evidence of mastoid of middle ear disease, discharge, symptoms of aura vertigo, or Meniere's Syndrome. When recording hearing an audiometer is used to test hearing. Record decibel loss at 500 Hz, 1,000 Hz, 2,000 Hz, 3,000 Hz, and 4,000 Hz.

Throat. Note evidence of disease, irremediable deformities of the throat likely to interfere with eating or breathing, or any laryngeal condition which could interfere with the safe operation of a crane.

Thorax-heart. Stethoscopic examination is required. Note murmurs and arrhythmias, and any past or present history of cardio-

PHYSICIAN INSTRUCTIONS (CONT'D)

FOR MEDICAL EXAMINATION

vascular disease, of a variety known to be accompanied by syncope, dyspnea, collapse, enlarged heart or congestive heart failures. Electrocardiogram is required when findings so indicate.

Blood Pressure. Record with either spring or mercury column type of sphygmomanometer. If the blood pressure is consistently above 160/90mm. Hg., further tests may be necessary to determine whether the operator is qualified to operate a crane.

Lungs. If any lung disease is detected, state whether active or arrested; if arrested, your opinion as to how long it has been quiescent.

Gastrointestinal system. Note any diseases of the gastrointestinal system.

Abdomen. Note wounds, injuries, scars, or weakness of muscles of abdominal walls sufficient to interfere with normal function. Any hernia should be noted if present. State how long and if adequately contained by truss.

Abnormal masses. If present, note location, if tender, and whether or not applicant knows how long they have been present. If the diagnosis suggests that the condition might interfere with the control and safe operation of a crane, more stringent tests must be made before the applicant can be certified.

Genito-urinary. Urinalysis is required. Acute infections of the genito-urinary tract, as defined by local and State public health laws, indications from urinalysis of uncontrolled diabetes, symptomatic albuminuria in the urine, or other findings indicative of health conditions likely to interfere with the control and safe operation of a crane will disqualify an applicant from operating a crane.

Neurological. If positive Romberg is reported, indicate degrees of impairment. Pupillary reflexes should be reported for both light and accommodation.

Knee jerks are to be reported absent only when not obtainable upon reinforcement and as increased when foot is actually lifted from the floor following a light blow on the patella, sensory vibratory and positional abnormalities should be noted.

Extremities. Carefully examine upper and lower extremities. Record the loss or impairment of a leg, foot, toe, arm, hand, or fingers. Note any and all deformities, the presence of atrophy, semiparalysis or paralysis, or varicose veins. If a hand or finger deformity exists, determine whether sufficient grasp is present to enable the operator to secure and maintain a grip on the controls. If a leg deformity exists, determine whether sufficient mobility and strength exists to enable the operator to operate pedals properly. Particular attention should be given to, and a record should be made of, any impairment or structural defect which may interfere with the operator's ability to operate a crane safely.

Spine. Note deformities, limitation of motion, or any history of pain, injuries, or disease, past or presently experienced in the cervical or lumbar spine region. If findings so dictate, radiologic and other examinations should be used to diagnose congenital or acquired defects; or spondylolisthesis and scoliosis.

Recto-genital studies. Diseases or conditions causing discomfort should be evaluated carefully to determine the extent to which the condition might be handicapping while lifting, pulling, or during periods of prolonged operation that might be necessary as part of the operator's duties.

Laboratory and other special findings. Urinalysis is required, as

well as such other tests as the medical history or findings upon physical examination may indicate are necessary. A serological test is required if the applicant has a history of luetic infection or present physical findings indicate the possibility of latent syphilis. Other studies deemed advisable may be ordered by the examining physician.

Diabetes. If insulin is necessary to control a diabetic condition, the operator is not qualified to operate a crane. If mild diabetes is noted at the time of examination and it is stabilized by use of a hypoglycemic drug and a diet that can be obtained while the operator is on duty, it should not be considered disqualifying. However, the operator must remain under adequate medical supervision.

General. The physician must date and sign his findings upon completion of the examination.

The medical examination shall be performed by a licensed doctor of medicine or osteopathy. A licensed ophthalmologist or optometrist may perform examinations pertaining to visual acuity, field of vision and ability to recognize colors.

If the medical examiner finds that the person he/she examined is physically qualified to operate a crane, the medical examiner shall complete the Medical Examiner's Certificate and furnish one copy to the person examined and one copy to the employer.

The medical examiner must attach all treating physician, ophthalmologist, or optometrist medical information pertaining to the applicant. Waiver acceptance is up to the medical examiner when waiver is attached to applicant application. The medical examiner is expected to verify the waiver provided by treating physician and qualify or disqualify applicant because of his examination of the applicant.

The medical examiner is expected to perform testing as needed of all applicants and may submit an accommodation statement if applicable about applicants' physical limitations to aid an employer with ADA guidelines. Any accommodation statements must be attached to medical artifaction.

Waiver by physician. Treating physicians must provide signed statements disclosing disease state and/or medication and that the applicant is qualified for the practical examination, and state, "I have examined the aforementioned crane operator applicant and within medical certainty I find the applicant at no greater risk than the general population as a result of any physical, mental, or organic defects, and can safely operate a crane with the aforementioned diagnosis and treatment regimen subject to passing the CCO practical examination."



CANDIDATE APPLICATION

PRACTICAL EXAMINATION

Please type or print neatly.

PAGE 1 OF 2

NAME *First* _____ *Middle* _____ *Last* _____

CCO CERTIFICATION NUMBER (If previously certified) _____ SOCIAL SECURITY # _____

STREET ADDRESS _____ DATE OF BIRTH _____

CITY _____ STATE _____ ZIP _____

PHONE _____ FAX _____ E-MAIL _____

COMPANY / ORGANIZATION _____ PHONE _____

COMPANY STREET ADDRESS _____

CITY _____ STATE _____ ZIP _____

ARE YOU A RECERTIFICATION CANDIDATE? NO YES

A candidate may take the Practical Examination only in those categories that he/she has passed on the Written Examination. Indicate with a checkmark the crane type(s) you wish to be tested on and the date you passed the corresponding Written Examination. You must also provide a copy of either a score report, certificate, or certification card.

PRACTICAL EXAM	WRITTEN EXAM	Date on which you passed the Written Exam
<input type="checkbox"/> Lattice Boom	Lattice Boom Crawler and/or Lattice Boom Truck	____/____/____
<input type="checkbox"/> Large Telescopic	Large Telescopic (above 17.5 tons)	____/____/____
<input type="checkbox"/> Small Telescopic	Small Telescopic (below 17.5 tons)	____/____/____
<input type="checkbox"/> Tower	Tower Crane	____/____/____
<input type="checkbox"/> Overhead	Overhead Crane	____/____/____

TEST SITE AT WHICH YOU INTEND TO TAKE THE PRACTICAL EXAMINATION

TEST SITE COORDINATOR NAME _____

PHONE _____ FAX _____ E-MAIL _____

TEST SITE STREET ADDRESS _____

CITY _____ STATE _____ ZIP _____

SCHEDULED DATE OF PRACTICAL EXAMINATION _____

Under penalties of perjury, I declare that the foregoing statements and those in any required accompanying documentation are true. I have passed a substance abuse test conducted by a recognized laboratory service and I further attest that: I am at least 18 years old; I have received and read the Candidate Handbook; I have read and do comply with CCO's Substance Abuse Policy as described elsewhere in the Candidate Handbook; I will indemnify and hold harmless from all liability, loss, or damage CCO, International Assessment Institute, and the site owner/sponsor and/or any affiliate thereof, and/or any owners, directors, officers, employeer or agents of these organizations. I hereby consent to CCO's release of any information regarding this application and my examination administration to third parties as more fully described in the "Information Release Policy" in the CCO Candidate Handbook.

CANDIDATE SIGNATURE _____ DATE _____

CANDIDATE APPLICATION (CONT'D)
PRACTICAL EXAMINATION

CCO CERTIFICATION CARDS

PAGE 2 OF 2

Candidates who meet all the requirements for certification in any one category are issued a certification card at no charge. Replacement and updated cards are available for an additional fee; see panel below.

Attach Color
 Passport Photo
 Here

1 3/8" W x 1 3/4" H

Please attach a passport color photo, without hat or sunglasses, and enclose any required payment based upon the information listed below with your application form.

PRACTICAL EXAMINATION FEES

Checks and money orders must be made payable to **International Assessment Institute**. Credit cards (Visa or Master Card) may be used by filling out the Credit Card Box below.



Check the box next to the Practical Exam category for which you are registering.

Examination Fees:

- One Mobile Crane Type — \$60 Two Mobile Crane Types — \$70 Three Mobile Crane Types — \$80
- Tower Crane Category Only — \$60
- Tower Crane (Added to existing Mobile Crane Certification, no new card) — \$50
- Overhead Crane Category Only — \$60
- Overhead Crane (Added to existing Mobile and/or Tower Crane Certification, no new card) — \$50
- Charge an additional \$25 for a replacement card.

METHOD OF PAYMENT FOR CANDIDATE EXAMINATION FEES

Do not send cash.


 
 Personal Check
 Employer Check
 Money Order
 Do not staple your check.

If paying by credit card — complete the following information:

CREDIT CARD NUMBER EXPIRATION DATE

NAME (Print as it appears on card) SIGNATURE (on card)

Checks and money orders should be made payable to: International Assessment Institute — Attention: CCO Testing
Do not send this application to IAI or CCO. Give this application, along with payment and all necessary documentation, to your Test Site Coordinator on test day.



CHANGE OF ADDRESS FORM

Please use this form to advise of any changes of address. Please mail or fax this to:
International Assessment Institute (IAI)
600 Cleveland Street, Suite 900
Clearwater, Florida 33755

Phone: 727-449-8525

Fax: 727-461-2746

Please type or print neatly.

NAME <i>First</i>			<i>Middle</i>			<i>Last</i>		
CCO CERTIFICATION NUMBER				SOCIAL SECURITY #				

OLD ADDRESS

STREET ADDRESS								
CITY						STATE		ZIP
PHONE			FAX			E-MAIL		
COMPANY / ORGANIZATION						PHONE		
COMPANY STREET ADDRESS								
CITY						STATE		ZIP

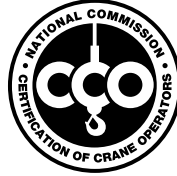
NEW ADDRESS

STREET ADDRESS								
CITY						STATE		ZIP
PHONE			FAX			E-MAIL		
COMPANY / ORGANIZATION						PHONE		
COMPANY STREET ADDRESS								
CITY						STATE		ZIP

EFFECTIVE DATE OF CHANGE

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IMPORTANT CONTACT INFORMATION



NATIONAL COMMISSION FOR THE CERTIFICATION OF CRANE OPERATORS

2750 Prosperity Avenue, Suite 505
Fairfax, VA 22031-4312

Phone: 703-560-2391

Fax: 703-560-2392

E-Mail: info@nccco.org



INTERNATIONAL ASSESSMENT INSTITUTE

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Clearwater, Florida 33755

Phone: 727-449-8525

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