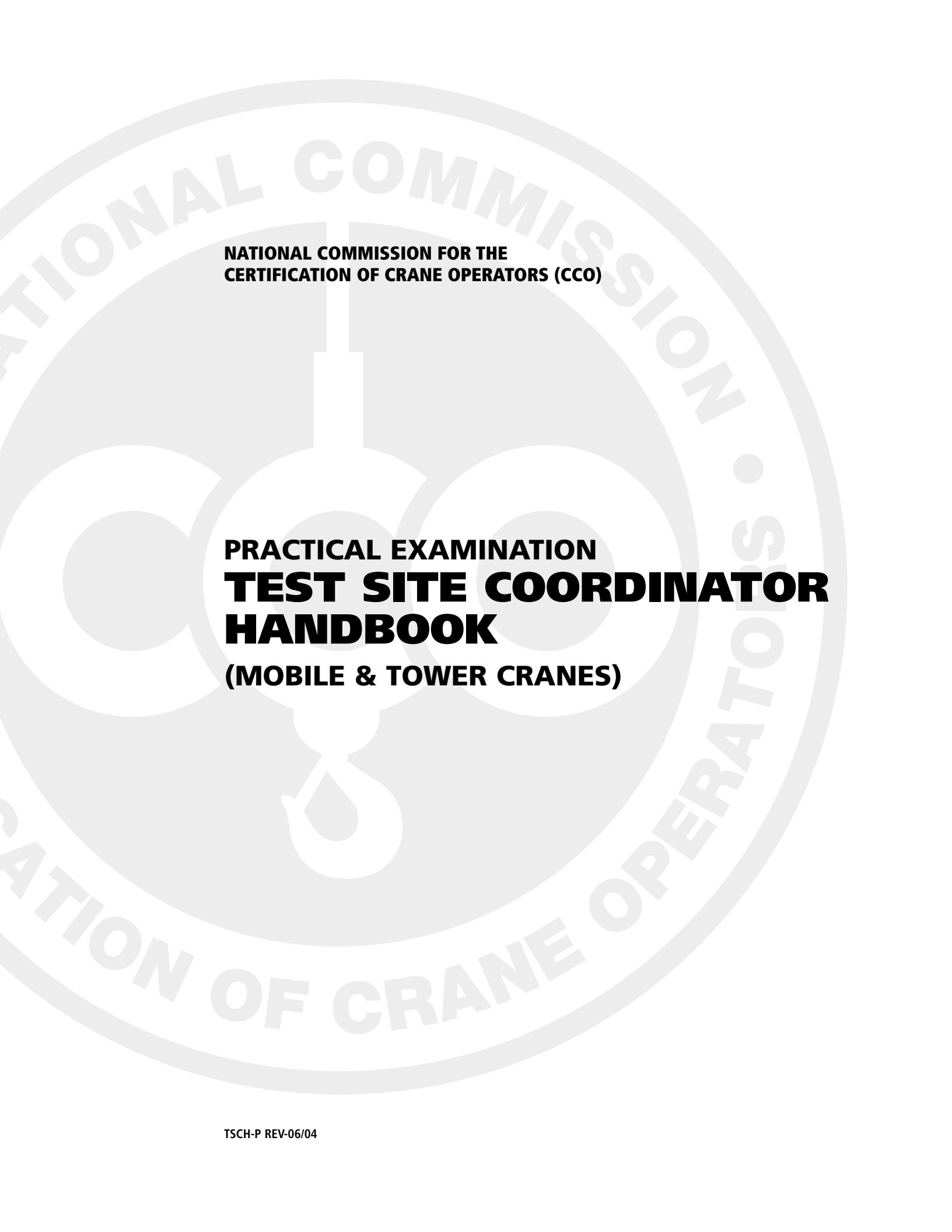




**NATIONAL COMMISSION FOR THE
CERTIFICATION OF CRANE OPERATORS (CCO)**

**PRACTICAL EXAMINATION
TEST SITE COORDINATOR
HANDBOOK
(MOBILE & TOWER CRANES)**



BOARD OF DIRECTORS

PRESIDENT

Ronald Schad

Essex Crane Rental Corp.

VICE PRESIDENT

Garry M. Higdem

Ashland Paving & Construction

SECRETARY/TREASURER

John M. Kennedy

Manitowoc Crane Group

IMMEDIATE PAST PRESIDENT

Davis J. Lauve

Nichols Construction Co.

CHAIRMAN, COMMISSIONERS

Kerry Hulse

Deep South Crane & Rigging

Stephen Brown

International Union of
Operating Engineers

Dale Daul

The St. Paul Companies

J. Chris Ryan

Boh Bros. Construction Co.

Robert Steiner

Kelley Equipment Co.
of Florida

EXECUTIVE DIRECTOR

Graham J. Brent

National Commission for the
Certification of Crane Operators

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



Dear Practical Test Site Coordinator:

Welcome to the Practical Examination segment of the CCO national crane operator certification program.

The CCO Practical Examination has been developed by the National Commission for the Certification of Crane Operators as a fair, valid and reliable assessment of the essential skills a crane operator needs to demonstrate in order to be certified by CCO to operate cranes. The Practical Examination was developed 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 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.

CCO teamed their knowledge and experience with the exam development expertise of International Assessment Institute (IAI). Based in Clearwater, Florida, IAI 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, IAI also designed the Practical Examiner Accreditation Program whereby CCO trains and accredits CCO-certified crane operators to administer CCO practical examinations.

This Handbook has been developed to provide you, the Practical Test Site Coordinator, with all the information you need to successfully prepare for a CCO Practical Examination. As the Practical Test Site Coordinator, you play a critical role in the smooth administration of the CCO exams on test day. It is vitally important you study this entire Handbook very carefully before making any preparations for a practical test administration. The overview of the Practical Examination Process and the summary of your responsibilities are particularly important.

**The CCO
Certification
Program is
accredited by
the National
Commission
for Certifying
Agencies.**

As you read carefully through its several sections, you will note the Handbook provides a large amount of detail on such aspects as crane selection and configuration, layout of the test site, and construction of the test weight and other site equipment. The validity and reliability of the test you are planning to administer depends on your following each requirement to the letter. Failure to do so could result in your practical test being declared invalid and the need to start over.

CCO recognizes the commitment you have made, and the resources you will allocate, to hosting the CCO practical examination. We want your experience to be a positive and successful one, and we stand ready to assist you in reaching that goal. 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 and all aspects of the Practical Examination administration process.



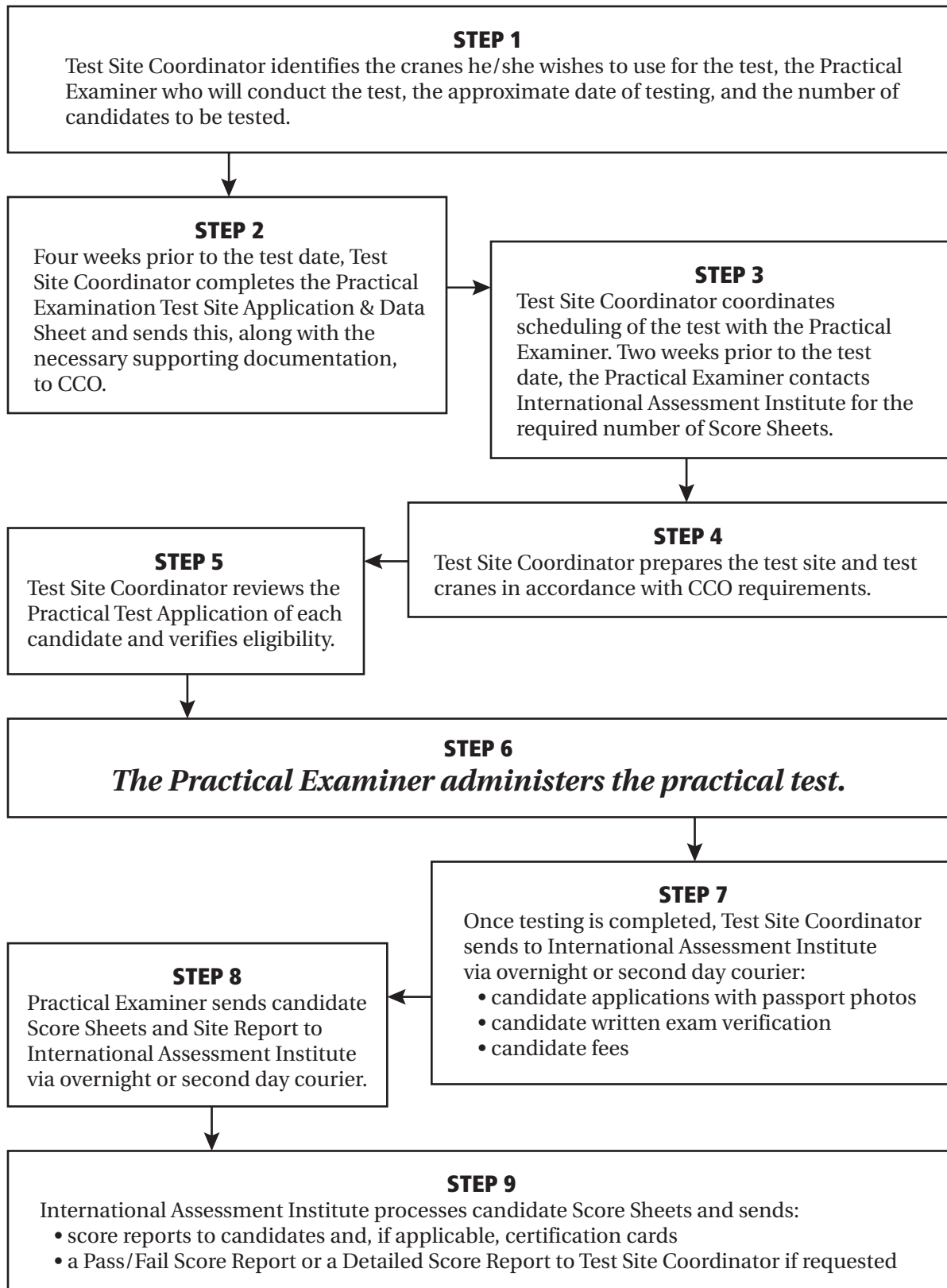


Table of Contents

PRACTICAL EXAMINATION PROCESS FLOWCHART	3
HOSTING AND ADMINISTERING A CCO PRACTICAL EXAMINATION	4
An overview of the criteria for test sites, and the roles of those individuals necessary for the successful administration of practical examinations. Includes an outline of necessary information and time lines anticipated when establishing a test site.	
Criteria for Test Sites	4
Test Site Coordinator	4
Practical Examiner	4
Proctors	4
Applying to Host a Practical Examination	4
Site Layout	5
Verifying Candidate Eligibility	5
Candidate Photographs	5
Examination Fees	5
Submitting Applications	5
Score Reporting	6
Mentoring Program	6
TEST SITE SET-UP	8
Details of the equipment specifications used for the various tasks on the practical test.	
Pole Barrier Construction Diagram	9
TEST SITE LAYOUT INSTRUCTIONS	10
Instructions for using the information supplied by CCO on the Data Sheet and the Test Site Plan developed by CCO for each test crane.	
Sample Test Site Plan — Mobile	11
Sample Test Site Plan — Tower	12
CRANE SELECTION AND SET-UP	14
Details of the crane configuration and rigging requirements, along with specifications of the test weight used on the final task of the test.	
PHOTOGRAPHS	16
Photographs are provided in this Handbook for clarification of certain aspects of equipment and site preparation.	
CCO PRACTICAL EXAMINATION FORMS	19
Ready Reference Checklist — Mobile	20
Test Site Application and Data Sheet — Practical Examination — Mobile	21
Test Site Application and Data Sheet — Practical Examination — Tower	23
Site Report — Practical Examination — Mobile	25
Site Report — Practical Examination — Tower	29
Candidate Application — Practical Examination	33
Pass/Fail Report Request for the Practical Exam	35
Detailed Score Report Request for the Practical Exam	37



Practical Examination Process





Hosting and Administering a CCO Practical Examination

Facilities wishing to volunteer as Practical Exam Sites must meet all CCO criteria for hosting a Practical Exam. If the facility meets the stated criteria, CCO will provide all necessary information to allow tests to be scheduled.

CRITERIA FOR TEST SITES

Each practical test site facility must arrange to have on site:

- A designated Test Site Coordinator.
- A CCO Accredited Practical Examiner.
- A designated Proctor(s) to assist the Practical Examiner during the test.
- Cranes that meet CCO requirements for the Practical Exam (see *Crane Selection and Set-Up*).
- An outside area suitable for testing on the cranes selected and ancillary equipment necessary for conducting the exam (see *Test Site Set-Up*).
- An indoor facility suitable for the Pre-Test Briefing of exam candidates and a waiting area.

In addition, Practical Test Sites must pay a \$50 registration at the time of application. On or before the first practical test of each calendar year thereafter, Practical Test Sites must pay a \$50 fee to remain registered. Employers or organizations with more than one test site must pay a fee for **each** site. Candidate Score Sheets from exams conducted at Practical Test Sites who have not paid the \$50 annual fee will not be processed.

TEST SITE COORDINATOR

The person designated by their company or organization to liaise with CCO and its testing company International Assessment Institute (IAI) on test administration matters is known as the Test Site Coordinator.

The Test Site Coordinator is responsible for:

- submitting all required information to CCO in a timely fashion on the *Practical Examination Test Site Application Form & Data Sheet*.
- preparing a test area in accordance with the directions in the *Test Site Set-Up* and *Test Site Layout Instructions* provided by CCO.
- preparing test equipment in accordance with the directions in *Crane Selection and Set-Up*.

- scheduling candidates to take the Practical Exam, and informing them of their test date, location, and time.
- liaison with the Practical Examiner and CCO in all aspects of test preparation and administration.

Test Site Coordinators are required to have an email address which must be provided to CCO with the first paperwork submission.

PRACTICAL EXAMINER

The practical examination is conducted by a CCO Accredited Practical Examiner. An Examiner may test only one candidate on one crane at one time.

Thus, testing a candidate, or several candidates in turn, on one crane, would require one Practical Examiner.

Testing two candidates simultaneously on separate cranes would require two Practical Examiners, and so on. If you need assistance on selecting a Practical Examiner, contact CCO.

Only Practical Examiners are permitted to request Score Sheets from International Assessment Institute. These must be requested at least two weeks prior to the intended test date.

Practical Examiners must have an email address as a condition of accreditation.

PROCTORS

Proctors are volunteers who assist the Practical Examiner in the administration of the exam. The Test Site Coordinator is responsible for assigning one proctor per Practical Examiner to assist during the test. Proctors are under the direction of the Practical Examiner during the test administration. Proctors may not be candidates waiting to take the practical exam.

APPLYING TO HOST A PRACTICAL EXAMINATION

When the Test Site Coordinator is ready to schedule a test, (s)he must submit to CCO a completed *Test Site Application and Data Sheet* for each crane to be tested on. The Data Sheet may be copied as often as necessary to accommodate all test cranes.

This must be sent, along with all requested additional materials, to CCO **no later than four (4) weeks prior to the desired test date**. Note that **all** the information requested must be included; incomplete applications **cannot** be processed.

Using the application form, the Test Site Coordinator will need to provide the following information:

- Make, model, serial no. of the crane(s).
- A detailed description of the configuration for testing, i.e. counterweight(s), boom type, rope size and type, and ancillary equipment which will be in place.
- Maximum permissible single line pull on the top layer for the crane(s) as configured (Mobile only).
- Dimensions (diameter) of the test weight(s) to be used.
- Rating/capacity charts and associated notes for the proposed configuration(s).

Once the application has been approved, CCO will develop details of the layout of the test site and crane set-up including a CAD Test Site Plan. CCO will email these direct to the Test Site Coordinator.

SITE LAYOUT

Using the information CCO provides, and the instructions contained in this Handbook, the Test Site Coordinator should prepare the cranes and lay out the test site.

Before the Examiner can begin testing, he/she will need to verify the test site has been laid out correctly. A copy of the *Practical Examination Site Report* used by the Examiner is provided in this Handbook. CCO encourages Test Site Coordinators to use this Report to check that all items are in order before the Examiner arrives. This will expedite the Examiner's verification of the test site.

For permanent practical test sites, the requirement for a Site Inspection prior to each test may be waived. This option is available only to test sites where there has been no change in test crane, test site/location and Test Site Coordinator in the last six months. If it has been more than six months since the last full Site Inspection was conducted, another full Site Inspection must be conducted. If the Test Site Coordinator requests a Test Site Report Waiver, the Examiner must have the Test Site Coordinator sign a statement on the last page of the Site Report attesting that all the requirements for such a waiver have been met.

VERIFYING CANDIDATE ELIGIBILITY

Before a candidate can be permitted to test on the practical examination, the Test Site Coordinator must verify the candidate is eligible.

A candidate may take the practical examination only in those categories (s)he has passed on the written examination. Candidates have 12 months from taking the written examination to take the practical examination. Candidates who do not take the practical examination within 12 months of passing the written examination must retake and pass the written examination before again being eligible to take the practical examination.

To establish eligibility, candidates must provide the Test Site Coordinator with a copy of a score report, certificate, or certification card.

CANDIDATE PHOTOGRAPHS

All candidate applications must be accompanied by a color, passport-type, head-and-shoulders photograph of the candidate without hat or sunglasses.

Digital photos are acceptable. Test sites equipped with digital photographic equipment are encouraged to submit candidate photographs to International Assessment Institute in digital format.

EXAMINATION FEES

Examination fees for the practical examination are as follows:

One Mobile Crane Type	\$60
Two Mobile Crane Types	\$70
Three Mobile Crane Types	\$80
Tower Crane	\$60
Tower Crane Candidates who are also registering for mobile crane examinations at the same time, or who are already certified in mobile cranes	
	\$50

SUBMITTING APPLICATIONS

Once testing is completed, the Test Site Coordinator must send to International Assessment Institute via overnight or second day courier:

- candidate applications with passport photos
- candidate written examination verification
- candidate fees

SCORE REPORTING

All candidates are mailed a report of their performance from International Assessment Institute approximately twelve (12) business days after receipt of the Score Sheets from the Practical Examiner.

Test Site Coordinators may request a summary of candidates Pass/Fail Score Reports and Detailed Score Reports testing at their site. Forms for this purpose are provided in this Handbook. Note that all requests for Detailed Score Reports must include the release signature of each candidate.

MENTORING PROGRAM

Practical test sites testing for the first time are encouraged to request a Mentor from CCO. Mentors are CCO Accredited Practical Examiners who have experience in laying out test sites and who have been approved as Mentors by CCO's Practical Exam Management Committee.

Mentors are volunteers who receive no compensation from CCO for their services. However, test sites may negotiate fees with Mentors for test site set-up and/or practical exam guidance services.

Practical test sites interested in having a Mentor attend their site should contact CCO.



Test Site Set-Up

PRE-TEST CANDIDATE BRIEFING AREA must be located so that waiting candidates are unable to observe testing procedures. It must be provided with:

- CCO candidate instruction materials, including a written description of the examination and copies of the CAD Test Site Layout.
- Operators Manuals and Load Charts for all cranes to be tested on: at least four (4) copies of those pages of the Operator's Manual dealing with operating instructions and one (1) copy of the complete Operator's Manual.
- A VCR and television for candidates to watch the CCO Practical Exam video.
- An indoor facility suitable for the Pre-Test Briefing of exam candidates, to include:
 - Sufficient tables and chairs to seat candidates for the Pre-Test Briefing.
 - Head table or podium at the front of the room.
 - Registration table.
 - Quiet, well-lit, surroundings with a comfortable temperature.
 - Easy access to unlocked rest rooms stocked with sufficient supplies.
 - Easy access to water fountain.
 - Large signs prominently posted making candidates aware of the location of the test.

BARRELS (Mobile Test Site Layout only) must be two (2) empty steel drums, 22 in. diameter and 34 in. high (e.g. 55 gallon diesel drum), open at one end, and identified as No. 1 and No. 2 by numerals large enough to be clearly seen from the operator's cab.

They must be weighted with twenty (20) lbs. ($\pm 10\%$) of ballast evenly distributed in the base of each barrel, so that the barrel is level.

The ballast must not prevent the overhaul ball from entering the barrel such that the horizontal line cannot drop below the rim.

If sand is used for ballast, ensure it is protected from moisture. Wet sand weighs more than dry sand so care must be taken not to exceed the 20 lbs. ballast weight required for each barrel.

They must be placed within a 22 in. inside diameter painted circle, 2 in. wide ($\pm \frac{1}{16}$ in.), on a 4 ft $\times$ 4 ft sheet of CDX (or better) plywood, secured or weighted as necessary to prevent movement.

A spare barrel must be available in case of damage to any of the barrels during the test.

ZIGZAG CORRIDOR is composed of a PVC pole barrier with one tennis ball placed on top of each pole.

POLE is made of 1½ in. white PVC pipe, SHD.40, 36 in. long, painted fluorescent orange or red on top 12 in. (see illustration). The poles must be mounted to a pole base made of two ¾ in. CDX grade (or better) plywood glued together, cut 12 in. long with ends cut square.

As an alternative to plywood, High Density Polyethylene (HDPE), or equivalent, may be used to construct the pole bases. This material must meet the following requirements:

- weight: 5 lbs. ($\pm 10\%$)
- dimensions: 12" $\times$ 12" $\times$ 1½" ($\pm \frac{1}{2}$ " thick).

The weight must be spread evenly across the base.

Pole bases may be coated with a protective finish if desired, so long as they continue to meet the stated design and construction parameters.

Pole bases must be placed at 2 ft centers. A taut, brightly colored, longitudinal string line must be placed on the ground through the centerline of each pole base.

To assist the Examiner and Proctor in restoring the zigzag corridor between tasks, the tennis balls may be attached to the pole by means of a 12 in. long, #18 nylon string. The string must be attached between 2 – 8 in. from the top of the pole, and to the tennis ball, using two #2 $\times$ 1¼ in. sheet metal screws, or equivalent (see pole construction diagram).

During the test, the string loops must face towards the outside of the corridor to avoid the string being snagged on the test weight. Also, if this string option is used, the tops of test weights must be covered (i.e. not open) for the same reason.

If the string does become snagged during a test, the examiner must stop the test, restore the corridor to its original condition, and direct the candidate to restart the task.

CIRCLES. The Start, Stop and Test Weight Circles for the Mobile Test Site Layout are 6 ft inside diameter and 7 ft for the Tower Crane Test Site Layout, painted 2 in. wide and located per the Test Site Plan. Start Circle shall be placed in line with the centerline of the crane, and due left of the Test Weight Circle.

LEVEL. All parts of the test site must be level within 5% of true level and free of debris, stored materials, surface irregularities, or hazards such as overhead power lines, which could interfere with test maneuvers.



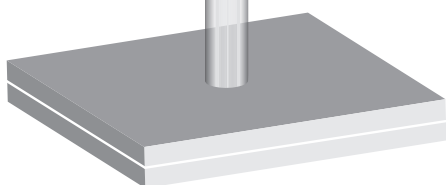
POLE BARRIER CONSTRUCTION

Assembled Pole Barrier

12", #18 nylon string attached to the pole (between 2" – 8" from the top) and tennis ball with two #2 × 1¼" zinc plated screws, or equivalent galvanized #2 × 1¼" screws.

Pole base must be made either of two layers of ¾" plywood (CDX grade or better) glued together, or High Density Polyethylene (HDP).

Finished dimensions must be 1½" (±½") × 12" × 12".



1½" PVC
SMD 40 Pipe

36" Pipe
Length



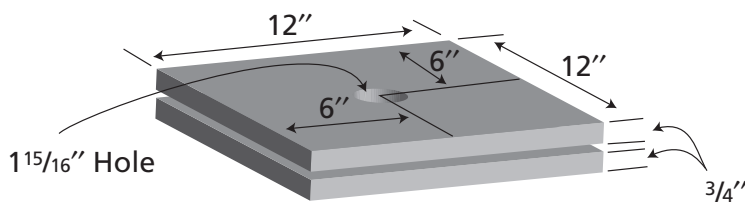
Tennis Ball

12" Painted
Fluorescent Red

12" #18
Nylon String

Two #2 × 1¼"
zinc plated
screws

Pipe must be fully inserted into hole so that distance between top of pole to ground is 36".



Two sheets of ¾" × 12" × 12" plywood
(CDX grade or better)



Test Site Layout Instructions

Using the CAD drawing and other information provided by CCO, it is the Test Site Coordinator's responsibility to lay out the test site. It is extremely important that all test equipment (corridor poles, barrels, test weight and stop circles, etc.) be placed exactly as indicated on the CAD drawings. Failure to do so could result in the test administration being declared invalid and the need to start over.

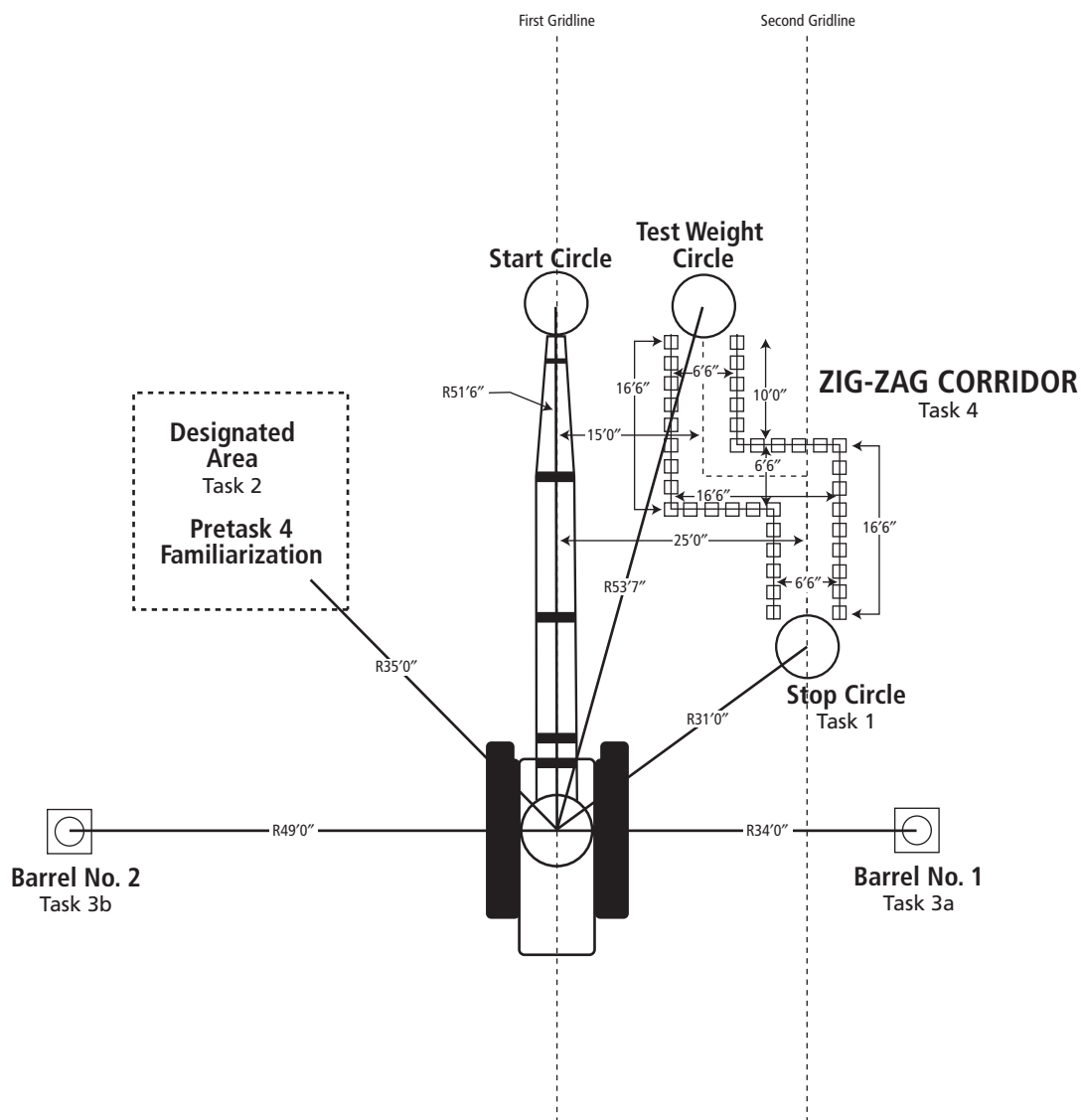
Before the Practical Examiner can begin testing, (s)he will verify the site is laid out correctly using the Practical Examination Site Report. We have provided a copy of this form in this Handbook. We strongly encourage all Test Site Coordinators to use this form to verify they have followed the site layout directions correctly.

There are various ways to begin the process of laying out the test site, but we recommend the following procedure:

- | | |
|---|---|
| LAY DOWN GRID LINES | 1. The layout of the test site is based around two parallel grid lines; one running through the centerline of the crane; and the second through the middle of the last leg of the zigzag corridor (see Test Site Plan, opposite). Lay out these grid lines on the ground with string as noted on the Test Site Plan. On the first grid line, make a mark that will indicate the center of the rotation of the crane. |
| LOCATE STOP CIRCLE | 2. Next, using the information from the Data Sheet, determine the location of the center of the Stop Circle, at the intersection of the second grid line and the radius from the crane's center of rotation. |
| PAINT STOP CIRCLE | 3. Using this center point, paint a 6 ft inside diameter Stop Circle on the ground. The Stop Circle is situated at the entrance to the zigzag corridor closest to the crane. |
| LAY OUT ZIGZAG CORRIDOR | 4. Working back from the Stop Circle, and using the second grid line as a guide, lay out the zigzag corridor using the pole barriers, tennis balls, and string line. Width of the corridor and length of the inside and outside legs are as stated on the Data Sheet. |
| LOCATE TEST WEIGHT CIRCLE | 5. Locate the center of the Test Weight Circle at the farthest entrance of the zigzag corridor as noted on the CAD layout. Using this center point, paint a 6 ft (Mobile Crane) or 7 ft (Tower Crane) inside diameter Test Weight Circle on the ground. |
| LOCATE STOP CIRCLE | 6. Paint a 6 ft (Mobile Crane) or 7 ft (Tower Crane) inside diameter Start Circle on the ground on the crane centerline to the left of the Test Weight Circle. |
| POSITION BARRELS (MOBILE CRANES ONLY) | 7. Place Barrel No. 1 to the right of the crane in the position and at the radius stated on the Data Sheet. Place Barrel No. 2 180 degrees from Barrel No.1 at the radius indicated on the Data Sheet. Place them on 4 ft x 4 ft of CDX grade (or better) plywood sheets secured or weighted as described in Test Site Set-Up. |
| LOCATE LOAD CIRCLE (TOWER CRANES ONLY) | 8. Locate the Load Circle that is 38 ft from the axis of rotation. |
| LOCATE DESIGNATED AREA | 9. Ensure there is an appropriate area to serve as the Designated Area for Tasks 2 and 4 (Mobile Crane) or Tasks 2 and 3 (Tower Crane) as illustrated on the Test Site Plan. |
| POSITION CRANE | 10. Set up the crane on outriggers (if applicable) with the center of rotation of the crane directly above the mark you made on the ground in Step 1. Ensure the boom is over the centerline of the crane and the boom or jib length is as stated on the CAD. The exam tasks will be performed in a roughly 180 degree (Mobile Crane) or 90 degree (Tower Crane) area. |
| CHECK FOR OBSTRUCTIONS | 11. Ensure there are no obstructions (on the ground or overhead) that could interfere with the safe operation of the crane during the test. |



SAMPLE TEST SITE PLAN — MOBILE



Sample Mobile Crane CAD Layout

AMERICAN 5299

Boom Length = 80 ft

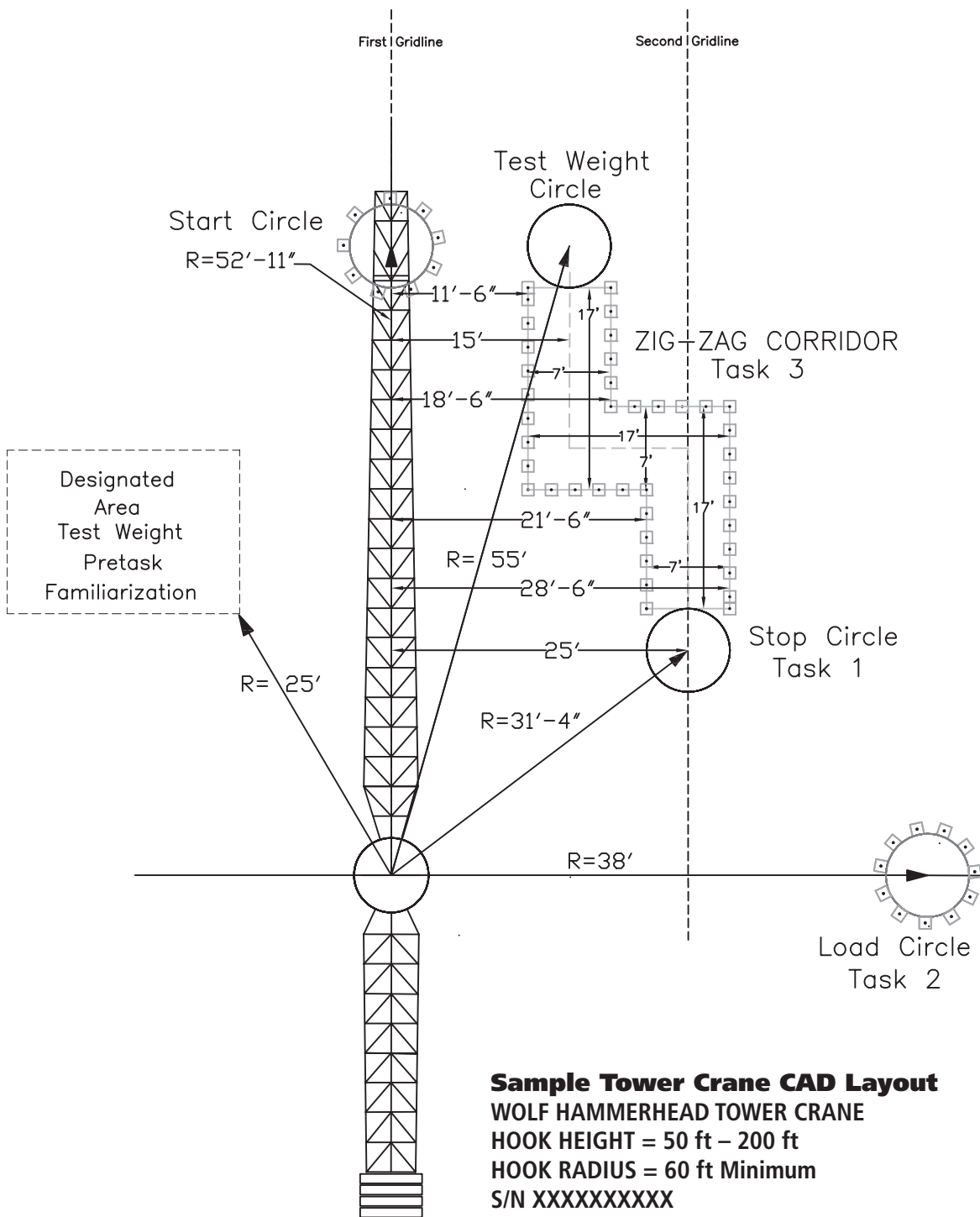
S/N GS114870

Test Weight = 4,000 lbs, Diameter = 2'6"

This is a sample of a typical CCO Practical Test layout. It is not to be used in an actual test situation.



SAMPLE TEST SITE PLAN — TOWER



This is a sample of a Tower Crane Practical Test layout.
 It is not to be used in an actual test situation.



Crane Selection and Set-Up

CCO PRACTICAL EXAM CATEGORIES

- Lattice Boom Crane
- Telescopic Crane up to 17.5 tons capacity (fixed cab)
- Telescopic Crane above 17.5 tons capacity (swing cab)
- Tower Crane

CRANE SELECTION. Mobile cranes for the Lattice Boom category can be either truck or crawler mounted. For the Telescopic Boom category up to and including 17.5 tons capacity, the mobile test crane must have a fixed (non-rotating) operator's station. For the Telescopic Boom category greater than 17.5 tons capacity, the mobile test crane must have an operator's station which rotates with the crane's upperworks.

The Tower Crane Exam can be taken on either Self-Erecting or Hammerhead types.

COMPLIANCE. All cranes used on CCO practical examinations must be in compliance with federal and state OSHA requirements and the current ASME B30.5 Standard (Mobile) or ASME B30.3 Standard (Tower).

RIGGING. Slings used to connect the mobile crane overhaul ball hook and the test weight must not exceed 3 ft in length. Slings used to connect the tower crane hook and the test weight must not exceed 4 ft in length. It must be of a type that can be quickly and easily attached and detached from the crane hook.

OVERHAUL BALL (Mobile only) must be 30-48 in. in circumference (10-15 in. in diameter) and have painted or taped around its center a horizontal white line, 2 in. wide. A length of $\frac{3}{8}$ in. chain, measured from the bottom of the hook, that can be quickly and easily attached and detached, painted fluorescent orange, must be attached to the bottom center of the overhaul ball. The distance of the chain measured from the bottom of the hook must be 36 in. If necessary, a second overhaul ball may be attached to the first, which shall be freely suspended. The distance between the bottom of the upper ball and the top of the lower ball must be no more than 2 ft.

TEST WEIGHT. The weight of the Mobile Crane test weight (which must also include the weight of the overhaul ball and any ancillary equipment in place on the mobile crane) must be equal to between 20% and 30% of the maximum permissible single line pull of the crane, **working on the top layer of rope**, operating in low speed range.

The Tower Crane test weight must be between 1,500 lbs and 2,000 lbs.

These weights must be verified by a weight ticket or other type of certification documenting the actual load weight. This document must be available to the Examiner.

The weight must:

- be a cylinder, with the same diameter from top to bottom
- have a continuously smooth surface from top to bottom
- have a diameter between 2 ft and 4 ft (mobile only) (76 – 152 in. in circumference) or 3 ft (tower crane only)
- have a height no more than $2 \times$ its diameter
- be no more than 5 ft high

See photograph for example of a suitable test weight.

Attached to the **bottom center** of the test weight must be a 36 in. length of $\frac{3}{8}$ in. chain, painted fluorescent orange or red. For the tower crane test weight the 36 in chain must be removable.

TEST WEIGHT CONSTRUCTION. So long as the requirements for test weight design are adhered to, Test Site Coordinators are free to select the most convenient materials and methods available to them. Pipe has a major advantage over other materials in that it has a smooth surface and is perfectly cylindrical, two of the main requirements for CCO test weights.

If you expect to change the weight of your test weight from time to time to accommodate different types and sizes of cranes, you might consider selecting steel pipe and filling it with loose material (e.g. steel slugs) that can be varied according to specific test requirements. Otherwise, concrete is a popular choice.

The following charts and diagram are provided for test sites selecting either of these two options.

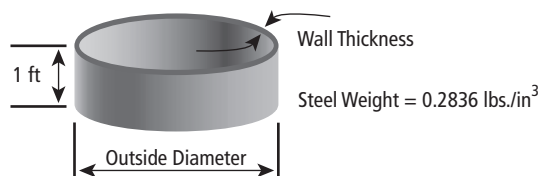
The *Pipe Weight Thickness Chart* provides weights for given pipe wall thicknesses and outside diameters.

The *Concrete Weight Chart* contains calculated concrete weights for given diameters of pipe. These values can be used as close approximations depending on overall test weight size, and the inside diameter and wall thickness of the pipe or other cylindrical material that is used as a form.

Note that the weight of the bottom and top plates, along with any bracing (if used), must be added to the weight of the pipe and concrete when calculating the overall weight of the test weight (20-30% of line pull on the top layer) (mobile only). Also, the weight of any attachment devices (rings, hooks, etc.) and wire rope must be included.

All load supporting components must be assembled in accordance with proper rigging practice and working load limits for the hardware utilized.

PIPE DIAGRAM



PIPE WEIGHT THICKNESS CHART (WEIGHT FOR 1 LINEAR FOOT OF PIPE)

OUTSIDE DIAMETER	PIPE WALL THICKNESS			
	1/4"	3/8"	1/2"	3/4"
2'0"	63 lbs.	95 lbs.	126 lbs.	186 lbs.
2'6"	80 lbs.	119 lbs.	158 lbs.	235 lbs.
3'0"	96 lbs.	143 lbs.	190 lbs.	283 lbs.
3'6"	112 lbs.	167 lbs.	222 lbs.	331 lbs.
4'0"	128 lbs.	191 lbs.	254 lbs.	379 lbs.

For lengths longer than 1', multiply the weight given in the table times the pipe length in feet.

Example:

4' diameter × 3/4" wall thickness pipe, 4'6" high
 Pipe weight = 379 lbs. × 4½' high = 1,706 lbs.

CONCRETE WEIGHT CHART

DIAMETER	CONCRETE HEIGHT IN TEST WEIGHT						
	2'0"	2'6"	3'0"	3'6"	4'0"	4'6"	5'0"
2'0"	942 lbs.	1,178 lbs.	1,413 lbs.	1,615 lbs.	1,885 lbs.	2,119 lbs.	2,355 lbs.
2'6"	1,472 lbs.	1,840 lbs.	2,209 lbs.	2,577 lbs.	2,945 lbs.	3,313 lbs.	3,681 lbs.
3'0"	2,120 lbs.	2,650 lbs.	3,180 lbs.	3,711 lbs.	4,233 lbs.	4,771 lbs.	5,301 lbs.
3'6"	2,886 lbs.	3,607 lbs.	4,329 lbs.	5,051 lbs.	5,773 lbs.	6,495 lbs.	7,217 lbs.
4'0"	4,800 lbs.	6,000 lbs.	7,200 lbs.	8,400 lbs.	9,600 lbs.	10,800 lbs.	12,000 lbs.

Concrete weights were calculated by using 4050 lbs./yd³ or 150 lbs./ft³ of concrete

Any specially fabricated structural components which are part of the load supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 standard, *Below the Hook Lifting Devices*.

REEVING. The test crane must be reeved with a single part line over the main boom point.

JIBS (Mobile only). Booms must have no erected jibs/extensions, auxiliary load lines/blocks, etc. unless specifically authorized by CCO. However, stowed jibs/extensions are permitted, but must be noted by the Test Site Coordinator on the Practical Examination Application Form.

SET-UP. The test crane must be set up and leveled, ready for operation, with engine running, in accordance with the manufacturer's recommendations, and in the location specified on the CCO CAD drawing.

BLOCKING. Matting or cribbing must be installed if necessary to provide a sound foundation for the crane. A spirit level (minimum length 2 ft) must be available for the candidates to verify the crane level condition prior to beginning their testing.

LOAD INDICATORS. If the crane is equipped with a load indicator or load moment indicating (LMI) system, the system must be programmed for the proper load ratings, parts of line, etc. prior to the beginning of any testing. A representative of the test host who is familiar with the operation of the crane, and specifically with any LMI system on the crane must be available while testing is being conducted.

TELESCOPIC BOOM (Mobile only). After verifying that the telescopic boom has been extended to the designated length, the Practical Examiner will mark the boom in a manner that is clearly visible from the ground to ensure the boom is not telescoped during the test.



Photographs

MARKING EQUIPMENT

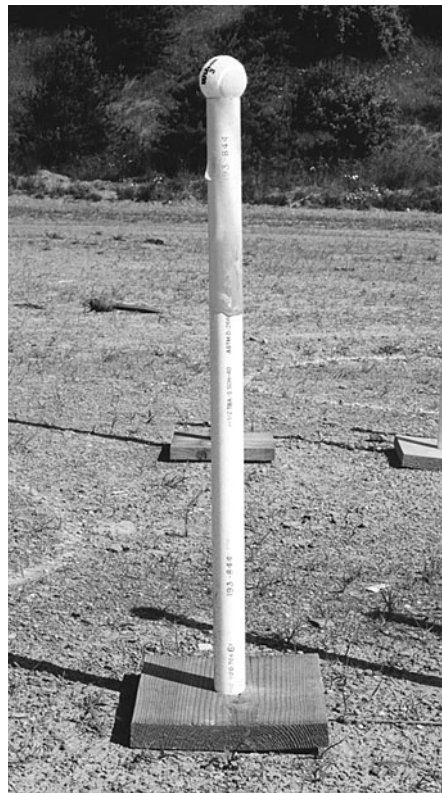
All test site and crane equipment must be clearly marked in accordance with CCO requirements (see documents *Test Site Set-Up* and *Crane Selection and Set-Up*)



Overhaul ball (Mobile only)



Barrel (Mobile only)



Corridor pole

TEST WEIGHT

One example of a suitable test weight is this 36 in. diameter pipe, cut to a length so that, when filled with concrete, it falls within acceptable weight limits for the type and size of crane selected for the test.

An inverted piece of 3 in. channel set into the base helps protect the chain attachment point from damage each time the weight is set down.

Any specially fabricated structural components that are part of the load-supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 standard, *Below the Hook Lifting Devices*.



SAND (Mobile only)

Repackaging sand in resealable plastic bags facilitates handling. It also protects the sand from moisture which might otherwise lead to the weight requirement of 20 lbs. per barrel being exceeded.

Photographs (Cont'd)

MEASURING THE CORRIDOR AND CIRCLES

All elements of the test site must be laid out in accordance with the *Test Site Layout Instructions*, *Data Sheet* and *Test Site Plan*. The Test Site Coordinator is responsible for carefully checking all dimensions prior to the arrival of the Practical Examiner.



Examiners verifying corridor width.



Examiners verifying diameter of circles surrounding Barrels for Task 3 (Mobile only).



CCO Practical Examination Forms

Please photocopy all sides of the following forms for use as a CCO Practical Examination Test Site.

Ready Reference Checklist — Mobile

**Test Site Application and Data Sheet —
Practical Examination — Mobile**

**Test Site Application and Data Sheet —
Practical Examination — Tower**

Site Report — Practical Examination — Mobile

Site Report — Practical Examination — Tower

Candidate Application — Practical Examination

Pass/Fail Report Request for the Practical Exam

Detailed Score Report Request for the Practical Exam



READY REFERENCE CHECKLIST

MOBILE CRANES

YOU WILL NEED A CRANE IN EACH OF CCO'S PRACTICAL EXAMINATION CATEGORIES YOU PLAN TO TEST IN:

- ☐ Lattice Boom Crane (truck or crawler)
- ☐ Telescopic Boom Crane up to 17.5 tons capacity (fixed cab)
- ☐ Telescopic Boom Crane more than 17.5 tons capacity (swing cab)

YOU WILL NEED THE FOLLOWING FOR EACH CRANE TO BE TESTED ON:

- ☐ A cylindrical test weight, diameter 2 – 4 ft (76 – 152 in. in circumference), weight (including rigging) to be calculated at 20-30% of rated single line pull on top layer of rope including overhaul ball and any auxiliary components.
- ☐ Two (2) lengths of $\frac{3}{8}$ in. chain, painted fluorescent orange or red, that measure 3 ft long when attached to the bottom center of the test weight and crane hook.
- ☐ Overhaul ball, 30 – 48 in. in circumference, with a 2 in. wide horizontal white line painted or taped around the center.
- ☐ Suitable rigging to attach the test weight to the hook, no more than 3 ft long.
- ☐ Two (2) empty steel drums, 22 in. outside diameter and 34 in. high (e.g. 55 gallon diesel drum), open at one end.
- ☐ Forty (40) lbs. of non-permeable ballast for ballasting the barrels (20 lbs. each).
- ☐ Two 4 ft $\times$ 4 ft sheets of $\frac{3}{4}$ in. CDX-grade (or better) plywood, secured or weighted as necessary to prevent movement, to place under the barrels.
- ☐ PVC pipe, white, $1\frac{1}{2}$ in. SHD 40, sufficient to make forty-two (42), 36 in. long poles.
- ☐ $\frac{3}{4}$ in. CDX grade (or better) plywood or high density polyethylene, sufficient to create forty-two (42) pole bases, $1\frac{1}{2}$ "($\pm\frac{1}{2}$ ") $\times$ 12" $\times$ 12".
- ☐ Forty-two (42) tennis balls
- ☐ 42 ft of #18 nylon string, to attach tennis balls to poles (optional).
- ☐ Eighty-four (84) $1\frac{1}{4}$ in. zinc plated (galvanized) screws, or equivalent, to secure nylon string to tennis balls and poles (optional).
- ☐ 500 ft brightly colored, string line (for zigzag corridor and test site layout use).
- ☐ Spirit level to verify level (minimum 2 ft length).
- ☐ Paint (fluorescent orange or red) for painting the tops of the poles and chain.
- ☐ Paint (white) for identifying the barrels, marking the overhaul ball, marking circles.
- ☐ Hard hats for all candidates and site personnel.
- ☐ Hand-held wind speed indicator (anemometer).
- ☐ Two (2) 100 ft tape measures and one 30 ft steel tape.
- ☐ Stop watches and clipboards for Examiner(s) and Proctor(s).

EQUIPMENT SOURCES.

Anemometers: West Marine, PO Box 50070, Watsonville, CA 95077. 1-800-262-8464. www.westmarine.com.

HDPE bases: House of Plastics, 2580 S. Orange Blossom Trail, Orlando, FL 32805. 1-888-707-5278. plastics@hopu.com.

CCO does not endorse or recommend particular vendors of any equipment.



TEST SITE APPLICATION & DATA SHEET

PRACTICAL EXAMINATION — MOBILE CRANES

Please type or print neatly.

PAGE 1 OF 2

NAME		TEST SITE #	
COMPANY			
COMPANY STREET ADDRESS			
CITY		STATE	ZIP
PHONE	FAX	E-MAIL	
TEST SITE STREET ADDRESS (If different from Company address)			
CITY		STATE	ZIP
CHECK BOXES AS APPROPRIATE			
☐ New Test Site ☐ Existing Test Site ☐ \$50 Site Fee for 2004 already paid ☐ \$50 Site Fee for 2004 enclosed			
TEST SITE COORDINATOR NAME			
PRACTICAL EXAMINER NAME		ACCREDITATION #	
DATE(S) OF TEST			

The Practical Examination Test Site Coordinator assumes total responsibility for the following items:

1. Selection of cranes and verification that at all times during the testing process the cranes are in compliance with federal and state OSHA requirements and the applicable current ASME B30 standard.
2. Verification that candidate has passed the written exam(s) corresponding to the practical exam(s) to be taken.
3. Verification that candidates' application for the practical test is complete.
4. Verification that candidate is physically and mentally capable of safe operation the day of the test.
5. Personal injury and/or property damage resulting from or caused in any way by the act of participation in the CCO practical examination.

COMPANY NAME	
COMPANY REPRESENTATIVE	
TEST SITE COORDINATOR SIGNATURE	DATE

METHOD OF PAYMENT FOR TEST SITE APPLICATION FEES

Do not send cash.

☐	☐	☐ Personal Check Enclosed	☐ Employer Check Enclosed	☐ Money Order Enclosed	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: NCCCO

Please send all payments to: National Commission for the Certification of Crane Operators
2750 Prosperity Avenue, Suite 505, Fairfax, Virginia 22031-4312

TEST SITE APPLICATION & DATA SHEET (CONT'D)

PRACTICAL EXAMINATION — MOBILE CRANES

INSTRUCTIONS FOR COMPLETING THIS DATA SHEET

Photocopy this form for use with every crane you plan to test on.

Please ensure you include the load charts, working area diagrams, and range diagrams for each test crane in its proposed configuration. CCO CANNOT PROCESS THIS APPLICATION WITHOUT ALL THIS INFORMATION.

SECTION A: Complete as fully as possible, including your desired test date if known.

PAGE 2 OF 2

COMPANY NAME		TEST SITE #	
TEST SITE ADDRESS		APPLICATION DATE	DATE OF TEST
CITY	STATE	ZIP	

SECTION B — CRANE TYPE: Check the box next to the type of the crane you plan to test on.

☐ Lattice Boom ☐ Large Telescopic (above 17.5 tons) ☐ Small Telescopic (below 17.5 tons) ☐ Fixed Cab ☐ Swing Cab

SECTION C: Provide data for items 1 thru 13 using the crane's load chart. Answer items 5 thru 7 ONLY if you plan to test on a telescopic boom crane. Answer item 8 ONLY if you plan to test on a lattice boom crane with a capacity of 50 tons or less. Answer item 9 ONLY if you plan to test on a lattice boom crane with a capacity of more than 50 tons.

1. Make/ Model:	2. Serial Number:	3. Max. rated capacity (tons):
4. Configuration of crane (counterweight, boom type, rope size and type, ancillary equipment, etc.)		

Answer items 5 thru 7 for TELESCOPIC BOOM CRANES only.

5. Max. full power boom: _____ ft
6. Boom Length range between: _____ ft (70% full power boom) and _____ ft (75% full power boom)
7. Closest listed on load chart = _____ ft

Answer item 8 for LATTICE BOOM CRANES UP TO 50 TONS CAPACITY only.

8. 80 ft of boom ± shortest section at value listed on the load chart = _____ ft

Answer item 9 for LATTICE BOOM CRANES ABOVE 50 TONS CAPACITY only.

9. 120 ft of boom ± shortest section at value listed on the load chart = _____ ft

10. Maximum permissible single line pull on the top layer of rope for the crane as configured: _____ lbs.
(including overhaul ball and any auxiliary components)

11. Test Weight range between: _____ lbs. (20% of line pull) and _____ lbs. (30% of line pull)

12. Height of Test Weight: _____ ft

13. Diameter of Test Weight: _____ ft + 4 ft = Width of zigzag corridor: _____ ft

SECTION D — TO BE COMPLETED BY CCO: Leave this section blank. CCO will supply the data for these items and return this form to you with a Test Site Plan for each crane for which you have submitted an application.

14. Length of inside legs of corridor: _____ ft	15. Length of outside legs of corridor: _____ ft	
16. Radius from centerline of crane to:		
Center Barrel 1: _____ ft	Center Barrel 2: _____ ft	Center Stop Circle: _____ ft
17. [Radius with _____ ft boom at 50 degree angle = _____ ft		
Capacity in this configuration (may be limited by single line pull): _____ lbs.]		
Crane must be able to reach Test Weight Circle with boom no less than 50 degrees.		



TEST SITE APPLICATION & DATA SHEET

PRACTICAL EXAMINATION — TOWER CRANES

Please type or print neatly.

PAGE 1 OF 2

NAME		TEST SITE #	
COMPANY			
COMPANY STREET ADDRESS			
CITY		STATE	ZIP
PHONE	FAX	E-MAIL	
TEST SITE STREET ADDRESS (If different from Company address)			
CITY		STATE	ZIP
CHECK BOXES AS APPROPRIATE			
☐ New Test Site ☐ Existing Test Site ☐ \$50 Site Fee for 2004 already paid ☐ \$50 Site Fee for 2004 enclosed			
TEST SITE COORDINATOR NAME			
PRACTICAL EXAMINER NAME		ACCREDITATION #	
DATE(S) OF TEST			

The Practical Examination Test Site Coordinator assumes total responsibility for the following items:

1. Selection of cranes and verification that at all times during the testing process the cranes are in compliance with federal and state OSHA requirements and the applicable current ASME B30 standard.
2. Verification that candidate has passed the written exam(s) corresponding to the practical exam(s) to be taken.
3. Verification that candidates' application for the practical test is complete.
4. Verification that candidate is physically and mentally capable of safe operation the day of the test.
5. Personal injury and/or property damage resulting from or caused in any way by the act of participation in the CCO practical examination.

COMPANY NAME	
COMPANY REPRESENTATIVE	
TEST SITE COORDINATOR SIGNATURE	DATE

METHOD OF PAYMENT FOR TEST SITE APPLICATION FEES

Do not send cash.

☐	☐	☐ Personal Check Enclosed	☐ Employer Check Enclosed	☐ Money Order Enclosed	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: NCCCO

Please send all payments to: National Commission for the Certification of Crane Operators
2750 Prosperity Avenue, Suite 505, Fairfax, Virginia 22031-4312

TEST APPLICATION & DATA SHEET (CONT'D)

PRACTICAL EXAMINATION – TOWER CRANE

INSTRUCTIONS FOR COMPLETING THIS DATA SHEET

Photocopy this form for use with every crane you plan to test on.

Please ensure to include the Tower Crane capacity charts for each test crane in its proposed configuration. CCO CANNOT PROCESS THIS APPLICATION WITHOUT ALL THIS INFORMATION.

SECTION A *Complete as fully as possible, including your desired test date if known.*

Page 2 OF 2

COMPANY NAME	TEST SITE #		
TEST SITE ADDRESS	APPLICATION DATE	DATE OF TEST	
CITY	STATE	ZIP	

SECTION B – CRANE TYPE: *Check the box next to the type of the crane you plan to test on.*

☐ Hammerhead	☐ Self Erecting	☐ CAB Operated	☐ Remote Control
-------------------------------------	--	---------------------------------------	---

SECTION C

1. Make / Model:	2. Serial Number:	3. Max. rated capacity (tons):
4. Configuration of crane <i>(counterweight, rope size and type, ancillary equipment, etc.)</i>		

Answer items 5 thru 7.

5. Minimum Jib Length (60 ft min. is required) _____

6. Load Hook Height (50 ft min. required) _____

7. Maximum Capacity at 60 ft Radius _____ *(Must be at least 3,000 lbs.)*

The following are the Tower Crane Test Weight Specifications.

8. Test Weight Range between: 1,500 lbs. & 2,000 lbs.

9. Test Weight Height: _____ ft. *(No taller than 5 ft.)*

10. Test Weight Diameter: 3 ft + 4 ft = Width of Zigzag Corridor _____ ft



SITE REPORT

PRACTICAL EXAMINATION — MOBILE CRANES

CCO has established specific conditions and guidelines that each Practical Examination Test Site must adhere to. This Site Report is designed to ensure these conditions are met. The Examiner is required to perform a site inspection prior to the start of the first examination and complete the Site Report form. The Examiner must arrive at the test site in sufficient time to verify, by measuring with a tape, the accuracy of the course layout with respect to the CCO Test Site Plan. The Examiner must also conduct a visual inspection of the crane for proper set-up prior to testing any applicant.

Please type or print neatly.

PAGE 1 OF 4

TEST SITE	DATE
NAME OF TEST SITE COORDINATOR	

Check the following items for compliance.

PRE-TEST CANDIDATE BRIEFING AREA

An indoor facility suitable for the Pre-Test Briefing of exam candidates, to include:

- ☐ Sufficient tables and chairs to seat candidates for the Pre-Test Briefing.
- ☐ Equipped with a VCR and television for candidates to watch the CCO Practical Exam video.
- ☐ Located so that waiting candidates are unable to observe other candidates being tested.

Candidate Materials Available:

- ☐ A written description of the examination (candidate handbook);
- ☐ A plan view of the Test Site Layout;
- ☐ Operators Manuals and Load Charts for all cranes to be tested on, at least one extra copy of those pages of the Operator's Manual dealing with operating instructions;
- ☐ One (1) copy of the complete Operator's Manual;
- ☐ Instructions for the LMI system, if the crane is so equipped.

This section is to be completed for each crane used during the testing session.

Make/Model of Crane:	Serial Number of Crane:
----------------------	-------------------------

TEST SITE SET-UP

- ☐ Level within 5% of true level.
- ☐ Free of debris, stored materials, surface irregularities, or hazards such as overhead power lines, which could interfere with test maneuvers.

Using the Test Site Plan, verify the following measurements:

- ☐ Distance from the center of rotation of the crane to the center of Barrel #1.
- ☐ Distance from the center of rotation of the crane to the center of the Stop Circle.
- ☐ Distance from the center of rotation of the crane to the center of the Test Weight Circle.
- ☐ Distance from the center of rotation of the crane to the center of Barrel #2.
- ☐ Distance from the centerline of the crane to the second leg of the zigzag corridor.
- ☐ Distance from the centerline of the crane to the first leg of the zigzag corridor.

SITE REPORT (CONT'D)
PRACTICAL EXAMINATION — MOBILE CRANES

Test Site #: _____

PAGE 2 OF 4

- ☐ Length of the two long sides of the zigzag corridor.
- ☐ Length of the four short sides of the zigzag corridor (10 ft).
- ☐ Poles placed at 2 ft centers.
- ☐ Width of the zigzag corridor.

Barrels

- ☐ Two (2) empty steel drums, 22 in. diameter and 34 in. high (e.g. 55 gallon diesel drums), open at one end.
- ☐ Identified as No. 1 and No. 2 in letters large enough to be clearly seen from the operator's cab.
- ☐ Weighted with twenty (20) lbs. of ballast, evenly distributed in the base of each barrel, so that the barrel is level.
- ☐ The ballast does not prevent the overhaul ball from entering the barrel such that the horizontal line cannot drop below the rim.
- ☐ Each placed within a 22 in. inside diameter painted circle, 2 in. wide ($\pm \frac{1}{16}$ in.).
- ☐ Each placed on a 4 ft $\times$ 4 ft sheet of CDX grade (or better) plywood.
 - ☐ Secured and weighted as necessary to prevent movement.
- ☐ A spare barrel available.

Poles

- ☐ Made of 1½ in. white PVC pipe, SHD. 40, 36 in. long.
- ☐ Top 12 in. painted fluorescent orange or red.
- ☐ Mounted to a platform made of two layers of ¾ in. CDX grade (or better) plywood, or high density polyethylene, 12 in. long with ends cut square.
- ☐ A taut, longitudinal string line placed on the ground through the centerline of each pole base.
- ☐ Spare poles and bases available.

Circles

- ☐ Start Circle is 6 ft inside diameter, painted 2" wide and located per the Test Site Plan.
- ☐ Start Circle is in line with the centerline of the crane and due left of the Test Weight Circle.
- ☐ Stop Circle is 6 ft inside diameter, painted 2" wide and located per the Test Site Plan.
- ☐ Test Weight Circle is 6 ft inside diameter, painted 2" wide and located per the Test Site Plan.

CRANE SELECTION AND SET-UP

- ☐ Crane as identified in the Test Site Plan

Test Crane

- ☐ Set up and leveled, in the location specified, ready for operation, with engine running, in accordance with the manufacturer's recommendations.
- ☐ Boom length is as stated on Test Site Plan.
- ☐ The telescopic boom is extended to the designated length, and marked in a manner that is clearly visible from the ground to ensure the boom is not telescoped during the test.
- ☐ Rigging between the overhaul ball hook and the test weight does not exceed 3 ft in length.
- ☐ If a second overhaul ball is used, it is attached with a sling at a distance between the bottom of the upper ball and the top of the lower ball of not more than 2 ft.

Overhaul Ball

- ☐ 30 – 48 in. in circumference (10 – 15 in. in diameter) with a horizontal white line, 2 in. wide, painted or taped around its center.
- ☐ A length of $\frac{3}{8}$ in. chain that can be quickly and easily attached and detached:
 - ☐ painted fluorescent orange or red
 - ☐ attached to bottom center of overhaul ball
 - ☐ measures 36 in. from bottom of hook

Test Weight

- ☐ Weight as indicated in Test Site Plan.
- ☐ Verified by a weight ticket or other type of certification documenting the actual load weight available to the Examiner.
- ☐ Cylindrical in shape.
- ☐ The diameter of the test weight is between 2 – 4 ft (76 – 152 in. circumference)
- ☐ Height is no more than 2 × its diameter and in any case does not exceed 5 ft in height.
- ☐ Method of attachment is by a sling not exceeding 3 ft in length.
- ☐ A 36 in. length of $\frac{3}{8}$ in. chain.

NOTE: In order to measure the chain length, attach the test weight to the crane hook. Have the test weight carefully laid on its side and ensure it is stable before measuring.

- ☐ Painted fluorescent orange or red.
- ☐ Attached to the bottom center of the Test Weight.

Reeving

- ☐ The test crane is reeved with a single part line over the main boom point, or jib if used.

Jibs

- ☐ Boom has no erected jib or extensions, auxiliary load lines/blocks, etc. (stowed jibs/extensions are permitted), unless otherwise indicated in CCO Test Site Plan.

Blocking

- ☐ Matting or cribbing installed, as necessary, to provide a sound foundation for the crane.
- ☐ A spirit level is available (for the candidates to verify the crane level condition prior to beginning their testing).

Load Indicators

- ☐ If the crane is equipped with a load indicator or load moment indicating (LMI) system, the system must be programmed for the proper load ratings, parts of line, etc. prior to the beginning of any testing. A representative of the test host organization who is familiar with the operation of the crane, and specifically with any LMI system on the crane, must be available near the test area during the times testing is being conducted.

Test Weight Rigging

- ☐ All load supporting components must be assembled in accordance with proper rigging practice and working load limits for the hardware utilized. Any specially fabricated structural components which are part of the load supporting system must be designed and fabricated in accordance with the requirements of the current ASME B30.20 standard, *Below the Hook Lifting Devices*.

SITE REPORT (CONT'D)
PRACTICAL EXAMINATION — MOBILE CRANES

Test Site #: _____

PAGE 4 OF 4

DEVIATIONS FROM STANDARD TEST CONDITIONS OR TEST SITE PARAMETERS.

Describe fully any deviations from the approved *Test Site Set-Up* and *Crane Selection and Set-Up*.

TEST SITE REPORT WAIVER

Under the modified reporting provisions for permanent practical test sites, the requirement for a Site Report prior to each test is waived. This option is available only to test sites where there has been no change in test crane, test site/location and Test Site Coordinator in the last six months. If it has been more than six months since the last full Site Report was submitted, another full Site Report must be conducted. If the Test Site Coordinator requests a Test Site Report Waiver, the Examiner must have the Test Site Coordinator read the following attestation, and sign below:

TEST SITE COORDINATOR ATTESTATION

I attest that there have been no changes to the test crane or test site/location since the last site report was conducted (if this was more than six months ago, a full Site Report must be conducted). I further attest that I was the Test Site Coordinator at this site when the last site report was conducted, and have continued to act in this capacity since that time.

SIGNATURE OF TEST SITE COORDINATOR	DATE
PRINTED NAME OF TEST SITE COORDINATOR	DATE LAST SITE REPORT CONDUCTED

I attest that this is a true and accurate report of the above named Test Site.

SIGNATURE OF EXAMINER	DATE
PRINTED NAME OF EXAMINER	EXAMINER ACCREDITATION NUMBER

This SITE REPORT is to be completed by the Examiner prior to each testing session and sent with candidate score sheets to:

International Assessment Institute — Attention: CCO Testing
600 Cleveland Street, Suite 900
Clearwater, Florida 33755

Phone: 727-449-8525
Fax: 727-461-2746



SITE REPORT

PRACTICAL EXAMINATION — TOWER CRANE

CCO has established specific conditions and guidelines that each Practical Examination Test Site must adhere to. This Site Report is designed to ensure these conditions are met. The Examiner is required to perform a site inspection prior to the start of the first examination and complete the Site Report form. The Examiner must arrive at the test site in sufficient time to verify, by measuring with a tape, the accuracy of the course layout with respect to the CCO Test Site Plan. The Examiner must also conduct a visual inspection of the crane for proper set-up prior to testing any applicant.

Please type or print neatly.

TEST SITE	DATE
NAME OF TEST SITE COORDINATOR	

Check the following items for compliance.

PRE-TEST CANDIDATE BRIEFING AREA

An indoor facility suitable for the Pre-Test Briefing of exam candidates, to include:

- ☐ Sufficient tables and chairs to seat candidates for the Pre-Test Briefing.
- ☐ Equipped with a VCR and television or computer for candidates to watch the CCO Practical Exam video.
- ☐ Located so that waiting candidates are unable to observe other candidates being tested.

Candidate Materials Available:

- ☐ A written description of the examination (Candidate Handbook);
- ☐ A plan view of the Test Site Layout;
- ☐ Operators Manuals and Load Charts for all cranes to be tested on, at least one extra
- ☐ Copy of those pages of the Operator's Manual dealing with operating instructions;
- ☐ One (1) copy of the complete Operator's Manual;
- ☐ Instructions for the LMI system, if the crane is so equipped.

This section is to be completed for each crane used during the testing session.

Make/Model of Crane:	Serial Number of Crane:
----------------------	-------------------------

TEST SITE SET-UP

- ☐ Entire course is level within 5' of true level.
- ☐ Zigzag Corridor has no more than a 6" maximum change in elevation
- ☐ Free of debris, stored materials, surface irregularities, or hazards such as overhead power lines, which could interfere with test maneuvers.

Using the Test Site Plan, verify the following measurements:

- ☐ Distance from the center of rotation of the crane to the center of the Stop Circle.
- ☐ Distance from the center of rotation of the crane to the center of the Test Weight Circle.
- ☐ Distance from the center of rotation of the crane to the center of the Start Circle.
- ☐ Distance from the center of rotation of the crane to the center of the Load Circle.
- ☐ Distance from the centerline of the crane to the second leg of the zigzag corridor.
- ☐ Distance from the centerline of the crane to the first leg of the zigzag corridor.

- ☐ Length of the two long sides of the zigzag corridor.
- ☐ Length of the four short sides of the zigzag corridor.
- ☐ Width of the zigzag corridor.
- ☐ Poles placed at 2 ft centers.

Poles

- ☐ Made of 1½ in. white PVC pipe, SHD. 40, 36 in. long.
- ☐ Top 12 in. painted fluorescent orange or red.
- ☐ Mounted to a platform made of two layers of ¾ in. CDX grade (or better) plywood, or high density
- ☐ Polyethylene, 12 in. long with ends cut square.
- ☐ A taut, longitudinal string line placed on the ground through the centerline of each pole base.
- ☐ Spare poles and bases available.

Circles

- ☐ Start Circle is 7 ft. inside diameter, painted 2" wide and located per the Test Site Plan.
- ☐ Start Circle is in line with the centerline of the crane and due left of the Test Weight Circle.
- ☐ Stop Circle is 7 ft inside diameter, painted 2" wide and located per the Test Site Plan.
- ☐ Test Weight Circle is 7 ft inside diameter, painted 2" wide and located per the Test Site Plan.

TOWER CRANE SET-UP

- ☐ Crane as identified in the Test Site Plan

Test Crane

- ☐ Set up and leveled, in the location specified, ready for operation, with engine running, in accordance with the manufacturer's recommendations.
- ☐ Jib length is as stated on Test Site Plan.
- ☐ Rigging between the load hook and the Test Weight does not exceed 4 ft in length

Load Hook

- ☐ Minimum height as indicated on Test Site Plan
- ☐ A length of 3/8 in. chain that can be quickly and easily attached and detached from hook:
 - ☐ Painted fluorescent orange or red
 - ☐ Attached to bottom center of Load Hook
 - ☐ Measures 36 in. from bottom of hook

Test Weight

- ☐ Weight as indicated in Test Site Plan.
- ☐ Verified by a weight ticket or other type of certification documenting the actual load weight available to the Examiner.
- ☐ Cylindrical in shape.
- ☐ The diameter of the test weight is 3 ft in diameter(114 in. circumference)
- ☐ Height is no more than 1-1/2 times its diameter and in any case does not exceed 5 ft in height.

TEST SITE REPORT WAIVER

Under the modified reporting provisions for permanent practical test sites, the requirement for a Site Report prior to each test is waived. This option is available only to test sites where there has been no change in test crane, test site/location and Test Site Coordinator in the last six months. If it has been more than six months since the last full Site Report was submitted, another full Site Report must be conducted. If the Test Site Coordinator requests a Test Site Report Waiver, the Examiner must have the Test Site Coordinator read the following attestation, and sign below:

TEST SITE COORDINATOR ATTESTATION

I attest that there have been no changes to the test crane or test site/location since the last site report was conducted (if this was more than six months ago, a full Site Report must be conducted). I further attest that I was the Test Site Coordinator at this site when the last site report was conducted, and have continued to act in this capacity since that time.

SIGNATURE OF TEST SITE COORDINATOR	DATE
PRINTED NAME OF TEST SITE COORDINATOR	DATE LAST SITE REPORT CONDUCTED

SIGNATURE OF EXAMINER	DATE
PRINTED NAME OF EXAMINER	EXAMINER ACCREDITATION NUMBER

This SITE REPORT is to be completed by the Examiner prior to each testing session and sent with candidate score sheets to:

International Assessment Institute — Attention: CCO Testing
600 Cleveland Street, Suite 900
Clearwater, Florida 33755

Phone: 727-449-8525
Fax: 727-461-2746



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

- ☐ Lattice Boom
- ☐ Large Telescopic (above 17.5 tons)
- ☐ Small Telescopic (below 17.5 tons)
- ☐ Tower Crane

WRITTEN EXAM

Lattice Boom Crawler
and/or
Lattice Boom Truck

Large Telescopic (above 17.5 tons)

Small Telescopic (below 17.5 tons)

Tower Crane

Date on which you passed the written exam

/ /

/ /

/ /

/ /

/ /

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 (If known)		

Under penalties of perjury, I declare that the foregoing statements and those in any required accompanying documentation are true. 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. I further acknowledge, I am physically and mentally fit to participate in this CCO Practical Examination program. In the event of any accident or injury, 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, employees or agents of these organizations.

CANDIDATE SIGNATURE	DATE
---------------------	------

CANDIDATE APPLICATION (CONT'D)

PRACTICAL EXAMINATION

CCO CERTIFICATION CARDS

Applicable Charges

PAGE 2 OF 2

1. Candidates have 12 months from the time they pass the first written test (core or specialty) in which to pass the other written examination (core or specialty). Candidates have 12 more months from the time they pass both the core and specialty in which to pass the practical exam.
2. Candidates who subsequently pass any additional specialty written exams have 12 months in which to pass the corresponding practical exam.
3. Candidates who passed both the core and a specialty written exam(s) in 1999 had a three-year certification. If they passed the Practical Exam in one or more Specialties before December 31, 2000, the 3-year certification was extended to a 5-year certification in all Specialties.
4. Candidates who passed either the core or a specialty written exam(s) during 1999 had until December 31, 2000 to complete the certification process.
5. A replacement or duplicate card.

- ▶ There is no charge for card when candidate meets all certification requirements.
- ▶ A \$25 card fee applies if candidate wants to add additional specialty(s).
- ▶ There is no charge for card since this is an extension of the candidate's certification term.
- ▶ There is no charge for card since this is the candidate's initial certification.
- ▶ Issued upon the payment of a \$25.00 fee.

**Attach Color
Passport Photo
Here**

1⅜" W × 1¾" H

Please attach a passport color photo, without hat or sunglasses, and enclose any required payment based upon the information listed above 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. The same fees apply for retest candidates.

If you have already received a certification card and wish to update it to reflect additional specialties in which you are now certified, you may do so upon payment of an additional \$25 fee.

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
☐ Please charge an additional \$25 to update my 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.



PASS/FAIL REPORT REQUEST FOR THE PRACTICAL EXAM

If you wish to receive a Pass/Fail Report on candidates taking the CCO examination(s), please fill out this form and submit it to International Assessment Institute when you return your Test Administration Materials for each administration:

International Assessment Institute
600 Cleveland Street, Suite 900
Clearwater, Florida 33755

You must submit this form for each test administration.

Please type or print neatly.

NAME OF REQUESTOR		PHONE	
COMPANY NAME			
STREET ADDRESS			
CITY		STATE	ZIP
TEST SITE NUMBER	TEST DATE	SIGNATURE	

CANDIDATE NAME (printed)	*SOCIAL SECURITY #	CANDIDATE NAME (printed)	*SOCIAL SECURITY #
1.		16.	
2.		17.	
3.		18.	
4.		19.	
5.		20.	
6.		21.	
7.		22.	
8.		23.	
9.		24.	
10.		25.	
11.		26.	
12.		27.	
13.		28.	
14.		29.	
15.		30.	

*Social Security Number is required in order to assure correct candidate identification.



DETAILED SCORE REPORT REQUEST FOR THE PRACTICAL EXAM

If you wish to receive a Score Report on candidates taking the CCO examination(s), please fill out this form and submit it, along with a **\$50 processing fee**, to International Assessment Institute when you return your Test Administration Materials for each administration:

International Assessment Institute
600 Cleveland Street, Suite 900
Clearwater, Florida 33755

You must submit this form for each test administration. Scores are the property of the candidate, and his/her consent must be obtained before International Assessment Institute can release the scores to a third party. Please have the candidate sign under the release statement below.

Please type or print neatly.

PAGE 1 OF 2

NAME OF REQUESTOR		PHONE	
COMPANY NAME			
STREET ADDRESS			
CITY		STATE	ZIP
TEST SITE NUMBER	TEST DATE	SIGNATURE	

CANDIDATE RELEASE STATEMENT

Notice to Candidate: By signing this form, you are giving your permission to the National Commission for the Certification of Crane Operators (CCO) and International Assessment Institute to release the details of your test scores directly to the person listed above as the "Requestor."

CANDIDATE NAME (printed)	SOCIAL SECURITY #	CANDIDATE RELEASE SIGNATURE
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		

DETAILED SCORE REPORT REQUEST (CONT'D) FOR THE PRACTICAL EXAM

Please type or print neatly.

PAGE 2 OF 2

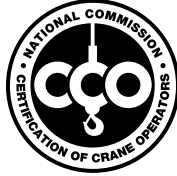
TEST SITE NUMBER	TEST DATE	NAME OF REQUESTOR
------------------	-----------	-------------------

CANDIDATE RELEASE STATEMENT

Notice to Candidate: By signing this form, you are giving your permission to the National Commission for the Certification of Crane Operators (CCO) and International Assessment Institute to release the details of your test scores directly to the person listed above as the "Requestor."

CANDIDATE NAME (printed)	SOCIAL SECURITY #	CANDIDATE RELEASE SIGNATURE
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		
23.		
24.		
25.		
26.		
27.		
28.		
29.		
30.		
31.		
32.		

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

Attention: CCO Testing

600 Cleveland Street, Suite 900
Clearwater, Florida 33755

Phone: 727-449-8525

Fax: 727-461-2746



**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
info@nccco.org