NATIONAL COMMISSION FOR THE
CERTIFICATION OF CRANE OPERATORS (NCCCO)

PRACTICAL EXAMINATION
TEST SITE COORDINATOR HANDBOOK

- MOBILE CRANE OPERATOR
- SERVICE TRUCK CRANE OPERATOR
- TOWER CRANE OPERATOR
- OVERHEAD CRANE OPERATOR

TSCH-P REV 04/19

BOARD OF DIRECTORS

This handbook reflects NCCCO's current policies at the time of publication. To be sure that you have the latest version of this book, see the Handbooks and Forms page on the NCCCO website.

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

Dear Practical Examination Test Site Coordinator:

Welcome to the Practical Examination segment of the National Commission for the Certification of Crane Operators (NCCCO) national crane operator certification program.

CCO Practical Examinations have been developed as fair, valid, and reliable assessments of the essential skills that crane operators need to demonstrate to be certified by NCCCO to operate cranes. These Practical Examinations were developed by NCCCO task forces made up of experts from all aspects of the crane industry—crane operators, training directors, managers, supervisors, manufacturers—who together represent many thousands of hours of crane experience. These volunteers gave freely of their time and expertise with the goal of improving the safety of all whose work brings them into contact with cranes and lifting equipment. NCCCO used its exam development expertise to guide its task forces in establishing key elements of the program, including identifying essential skills, selecting tasks, standardizing test conditions, developing the scoring process, establishing reliability among tests, and creating flexible application and scheduling procedures. In concert with its task forces, NCCCO also designed the Practical Examiner Accreditation Programs whereby NCCCO trains and accredits CCO–certified crane operators to administer CCO Practical Examinations.

These NCCCO certification programs are accredited by the American National Standards Institute (ANSI) to ISO 17024 (General Requirements for Bodies Operating Certification Systems of Persons).

ANSI ACCREDITED

ISO/IEC 17024
Personnel Certification Body
#0756

Mobile, Tower, Overhead, Articulating, and Service Truck Crane Operator, Digger Derrick Operator, Signalperson, Rigger Level I and Level II, Crane Inspector, and Lift Director Programs Accredited

Until recently crane operator certification has been voluntary unless required by local jurisdictions or specific employers. However, in August 2010, the federal Occupational Safety and Health Administration (OSHA) enacted new national standards for cranes and derricks used in construction under 29 CFR 1926 Subpart CC. These new rules require that operators of most cranes above 2,000 lb. capacity when used in construction need to be either certified by an accredited crane operator testing organization such as NCCCO or qualified through an audited employer program. Section 1926.1427 of the new rule describes crane operator certification/qualification requirements. Option 1, which is anticipated to be the most commonly used, requires operators to be certified by a nationally accredited crane operator testing organization that tests operators through written and practical testing. Obtaining CCO certification from NCCCO meets all the requirements set forth by the new OSHA rule.

This handbook has been developed to provide you, the Practical Examination Test Site Coordinator, with all the information you need to prepare for successful CCO Practical Examinations. As the Practical Exam Test Site Coordinator, you play a critical role in the smooth administration of CCO exams on test day. It is vitally important that you study this entire handbook carefully before making any preparations for a practical test administration. The overview of the Practical Examination Process on page 1 and the summary of your responsibilities in the subsequent chapter are particularly important to understand the requirements for hosting and administering CCO Practical Examinations.

As you read through this handbook, you will find that it 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 required equipment. ***The validity and reliability of the test you are planning to administer depends on your following each of these requirements precisely.*** Failure to do so could result in your practical test being declared invalid and the need to start over.

NCCCO recognizes the commitment that you have made and the resources that you will allocate to hosting CCO Practical Examinations. 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 NCCCO at 703-560-2391 or email info@nccco.org. NCCCO staff will guide you through any aspects of the Practical Examination administration process that you would like explained in detail.

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Practical Examination Process

FOUR OR MORE WEEKS BEFORE THE PRACTICAL EXAM…

STEP 1

The Test Site Coordinator identifies:

- Crane(s) to be used for Practical Exams
- The Practical Examiner who will conduct test
- The approximate date of test
- Number of candidates to be tested

STEP 2

The Test Site Coordinator completes the Practical Examination Test Site Application (and Data Sheet for mobile crane sites only) and sends it, along with the necessary supporting documentation, to NCCCO's Western Regional Office.

TWO OR MORE WEEKS BEFORE THE PRACTICAL EXAM…

STEP 3

- The Test Site Coordinator sets scheduling of the test with the Practical Examiner.
- The Practical Examiner orders the required number of Candidate Score Sheets online.

TWO OR MORE DAYS BEFORE THE PRACTICAL EXAM…

STEP 4

The Test Site Coordinator:

- Prepares the Test Site and test crane(s) in accordance with NCCCO requirements
- Notifies NCCCO's Western Regional Office of the intent to test via the NCCCO website no less than two business days prior to testing (new Test Sites only)
- Reviews the Practical Examination Candidate Application of each candidate

ON THE DAY OF THE PRACTICAL EXAM…

STEP 5

The Practical Examiner administers the Practical Examination(s).

AFTER THE PRACTICAL EXAM…

STEP 6

The Test Site Coordinator sends the following documents to NCCCO:

- Candidate Applications with passport/digital photos
- Candidate Written Exam verification (if applicable)
- Candidate fees

The Practical Examiner sends the following documents to NCCCO via overnight or second-day courier:

- Candidate Score Sheet(s)
- Site Reports(s)
- Crane Report(s) for service truck, tower, and overhead cranes

WITHIN 12 BUSINESS DAYS AFTER RECEIVING THE NECESSARY DOCUMENTS…

STEP 7

NCCCO processes Candidate Score Sheets and sends:

- Score reports to candidates and, if applicable, certification cards
- A Pass/Fail Score Report or Detailed Score Report to Test Site Coordinator (if requested)

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Hosting and Administering CCO Practical Examinations

Facilities seeking to serve as NCCCO Practical Exam Test Sites must meet all the following criteria for hosting a Practical Exam. If the facility meets the stated criteria, NCCCO will provide all of the information necessary to schedule Practical Examinations.

CRITERIA FOR TEST SITES

Each Practical Exam Test Site facility must arrange to have on site the following:

- A designated Test Site Coordinator
- An NCCCO–accredited Practical Examiner
- A designated Proctor(s) to assist the Practical Examiner during the test
- Crane(s) that meet NCCCO requirements for the Practical Exam(s) to be given (All cranes used for NCCCO testing shall comply with minimum OSHA requirements; where OSHA does not apply ASME B30 will be used.)
- An area suitable for testing on the cranes selected; pole corridors may be set up on asphalt, concrete surface, or firm and compacted sand, dirt, or gravel (free of vegetation), with a sufficiently uniform surface to permit the poles to stand vertical and slide freely; *grass surfaces are not acceptable*
- Any ancillary equipment necessary for conducting the exam(s)
- An indoor facility with a waiting area suitable for the Pre-Test Briefing of exam candidates

In addition, Practical Exam Test Sites must submit a Test Site Application and pay an annual $50 registration fee at the time of application and before the first practical test of each calendar year thereafter. If running a variety of CCO exams at that location, only one Test Site fee is charged on an annual basis. Employers or organizations with more than one Test Site must pay a fee for each location. Candidate Score Sheets from Practical Exam Test Sites that have not paid their annual $50 fee will not be processed.

Test Sites are established by the physical address where the equipment is located. Multiple companies and/or sites are not permitted to be established under the same address, although additional equipment can be added by submitting the appropriate Test Site Application(s) to NCCCO's Western Regional Office. Should a Test Site need to become inactive or remove equipment, it must provide the following information to NCCCO in writing:

- PE Site Number
- Company Representative
- Company
- Contact information (phone and email)
- Company Representative signature

No site will be discontinued without this documentation. Any Practical Exam Test Sites that become inactive (i.e., do not pay their annual test site fee) will be placed in probationary status (see below) and must follow the requirements for new test sites should they want to become approved again in the future.

NEW AND PROBATIONARY TEST SITES

For all new test sites and for 12 months after their first test administration, all new NCCCO Practical Exam Test Sites are conferred "probationary" status. The purpose of this probation is to monitor new test sites and ensure that they are following NCCCO's policies and procedures. These procedures include proper notification of testing, proper cancellation, and cooperation in the audit process.

Probationary test sites are required to provide notification via the NCCCO website at http://nccco.org/login no less than two business days prior to any test administration. Changes or cancellations to testing plans are subject to the same notification requirement. Once a site has provided test notification to NCCCO, that will be considered intent to test on that day and the site may be audited even if no testing occurs.

After a 12-month time frame, a probationary test site's history is reviewed to ensure that it has followed NCCCO's policies and procedures, including notification procedures. If a test site has not been providing proper notification, the probationary period will be extended at six-month intervals until such time that the policies and procedures have been properly followed.

TEST SITE COORDINATOR

The person designated by the host company or organization to liaise with NCCCO on test administration matters is known as the *Test Site Coordinator.* The Test Site Coordinator is responsible for the following:

- Submitting all required information in a timely fashion on the Test Site Application (and Data Sheet for mobile crane sites only)
- Preparing a test area in accordance with the directions in the Test Site Setup, Test Site Layout Instructions, and Test Site Layout (CAD) provided by NCCCO for each crane type

- Preparing test equipment in accordance with the directions provided under Crane Selection & Setup for the appropriate crane type
- Scheduling candidates to take the Practical Exam and informing them of their test date, location, and time
- Liaising with the Practical Examiner and NCCCO in all aspects of test preparation and administration
- Remaining at the Test Site throughout each test administration (or a designated representative)
- Have a direct email address to receive email notifications from NCCCO (this may not be a shared address)

Test Site Coordinators are also responsible for ensuring that all candidates and Proctors meet NCCCO's personal protective equipment (PPE) policies, ***which at a minimum meet OSHA requirements.***

All Test Site Coordinators and their designated representatives are required to submit a completed and signed Test Site Coordinator Agreement form, including email address, to the NCCCO Western Regional Office.

NCCCO periodically emails Information Bulletins to all Test Site Coordinators containing clarifications and updated policies. To remain in good standing, Test Site Coordinators are required to abide by the information contained therein.

PRACTICAL EXAMINER

Practical Examinations are conducted by NCCCO–accredited Practical Examiners. NCCCO does not assign a Practical Examiner for each site; Test Site Coordinators can search a directory of accredited Practical Examiners available for hire on NCCCO's website at www.nccco.org. For assistance with selecting a Practical Examiner, contact NCCCO. Practical Examiners must have an email address as a condition of accreditation.

Examiners may test only one candidate on one crane at a time. Thus, testing a candidate (or several candidates, in turn) on one crane, requires only one Practical Examiner. Testing two candidates simultaneously on separate cranes would, however, require two Practical Examiners, and so on.

Only Practical Examiners are permitted to request official Candidate Score Sheets from NCCCO. These must be requested or ordered online at least two weeks prior to the intended test date.

PROCTORS

Proctors are volunteers who assist the Practical Examiner in administering exams. 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. Candidates waiting to take the Practical Exam are permitted to serve as Proctors during Practical Exams.

APPLYING TO HOST A PRACTICAL EXAMINATION

When the Test Site Coordinator is ready to schedule a test, he/she must submit to NCCCO a completed Test Site Application for each crane; mobile crane sites also require a completed Data Sheet for NCCCO to produce a tailored Test Site Layout (CAD). Each type of crane (mobile, tower, and overhead) has a different form, which can be found in the appropriate sections of this handbook.

NCCCO Practical Test Sites are registered by the host company for which the services are being provided, *not* the training company or the Practical Examiner. The site-specific CAD drawings therefore become the property of the host company.

The Test Site Application shall be filled out with the company's information for which the services are being provided (*not* the training company). All contact information (including an email address for the company contact person) *must* be provided. A training representative is *not* an acceptable contact person.

The Test Site Application may be copied as often as necessary to accommodate all test cranes; similarly, complete one Data Sheet per mobile crane.

As illustrated on page 1, ***a Test Site Application (& Data Sheet for mobile crane sites) must be sent along with all additional requested materials to NCCCO no later than four weeks prior to the requested test date.*** Note that all the information requested must be included; incomplete applications cannot be processed.

Expedited processing of CAD drawings—for an additional cost—is available for mobile crane sites that require faster processing time:

- Standard processing (4-week turnaround): no charge
- Expedited processing (7 business days): $100 per crane
- Rush (3 business days, as available): $200 per crane

Please see the Expedited and Rush Expedited CAD Request forms on pages 27 and 28 and/or contact NCCCO's Western Regional Office for more information.

Applications received after noon (MST) will be considered received on the next business day.

Also for the mobile crane operator program only, the Test Site Coordinator must provide the following information on a Data Sheet for each crane to be used for testing:

- Make, model, and serial number of the crane(s)
- A detailed description of the configuration for testing—counterweight(s), boom type, rope size and type, and any ancillary equipment that will be in place
- Dimensions (diameter and height) of the Test Weight(s) to be used
- Line pull chart and range diagram
- Rating/capacity charts and associated notes for the proposed configuration(s); charts ***may not*** be reference or sales brochures; digital copies of the in-cab manual or durable chart ***are*** acceptable.
- ***For boom trucks only:*** Bed length, front and rear outrigger spread (center pin to center pin, fully extended), working area (180 or 360 degrees), and center of rotation mount (rear or behind the cab)

Once the mobile crane data sheet has been approved, NCCCO will develop details for the layout of the Test Site and crane setup, including a Test Site Layout (CAD). NCCCO will email the CAD directly to the host company representative and the Test Site Coordinator. Standardized Test Site Layouts (CADs) are used for the tower and overhead crane operator programs.

SITE LAYOUT

Using the information NCCCO provides, including the Test Site Layout (CAD) and the instructions contained in this handbook, the Test Site Coordinator should prepare the cranes and lay out the Test Site.

Before the Practical Examiner can begin testing, he/she will verify that the Test Site has been laid out correctly.

Copies of the Site Reports used for each crane type are provided in appropriate sections of this handbook. NCCCO encourages Test Site Coordinators to use these reports to check that all items are in order before the Examiner arrives. This will expedite the Examiner's verification of the Test Site.

PRACTICING THE TEST COURSE

NCCCO discourages the use of authorized test courses for practice purposes. No CAD will be issued for a "practice" purpose only. Those wishing to establish a test course for practice purposes may use the Sample CAD provided in this handbook. Practicing the Practical Exam on or before the day of the test is permitted, however, with the approval of the site's Test Site Coordinator.

PERMANENT TEST SITES

Practical Test Sites that test on a regular basis may become permanent Practical Test Sites. For such 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 12 months.

An annual full site report is required for permanent test sites.

Use the enclosed Permanent Test Site Application to apply for Permanent Test Site status. Probationary test sites may not apply.

SECURE TEST SITES

Test sites with limited access and/or enhanced security protocols that might interfere with the ability of testing personnel and/or NCCCO staff and Auditor to enter are required to indicate on their Test Site Applications that they are secure sites. They must also complete the enclosed Security Requirements Report and provide any associated documentation (such as the site's formal security policy), all of which should be submitted along with the Test Site Application. All Secure Test Sites—including permanent Test Sites—must submit completed Security Requirement Reports annually.

VERIFYING CANDIDATE ELIGIBILITY

Candidates must pass both a Written Exam and a Practical Exam in the category(s) 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. Candidates may take their Written and Practical Exams in any order. For example, a candidate passing the Written Exams (Core + Specialty) in the Telescopic Boom Cranes-Swing Cab (TLL) category in January 2011 has until the end of January 2012 to pass the Telescopic Boom Cranes-Swing Cab (TLL) Practical Exam.

Any tests passed within a 12-month period count towards certification. For example, a candidate who passes the Written Core Exam in January 2011 and the Practical Exam in June 2011 but does not pass the corresponding Written Specialty Exam until February 2012 will then be required to retake (and pass) the Written Core Exam. The Practical Exam would count toward certification until the end of June 2012.

CANDIDATE PHOTOGRAPHS

All candidate applications must be accompanied by a color, head-and-shoulders photograph of the candidate without hat or sunglasses. Test Sites equipped with digital photographic equipment are encouraged to submit candidate photographs to NCCCO in digital format via email or CD.

EXAMINATION FEES

Examination fees for the Practical Examinations are as follows:

- One Mobile Crane type $60
- Two Mobile Crane types..... $70
- Three Mobile Crane types $80

- Tower Crane only..... $60
- Tower Crane *(current CCO–certified Mobile Crane operators, or new candidates who are registering for Mobile Crane exams at same time)*..... $50

- Overhead Crane only..... $60
- Overhead Crane *(current CCO–certified Mobile Crane operators, or new candidates who are registering for Mobile Crane exams at same time)*..... $50

SUBMITTING APPLICATIONS

Once testing is completed, the Test Site Coordinator must send to NCCCO via overnight or second-day courier:

- Candidate applications with photos
- Candidate fees

SCORE REPORTING

All candidates are mailed a report of their performance from NCCCO approximately 12 business days after receipt of the Candidate Score Sheets from the Practical Examiner.

Test Site Coordinators are automatically sent at no charge a Pass/Fail Score Report for all candidates testing at their sites.

Test Site Coordinators may also request a Detailed Score Report for all candidates by completing the appropriate form in this handbook and submitting it, along with a $50 processing fee, to NCCCO when returning test administration materials for each administration. ***Note that all requests for Detailed Score Reports must include the release signature of each candidate.***

MENTOR PROGRAM

Practical Test Sites testing for the first time are encouraged to request a Mentor from NCCCO. Mentors are NCCCO–accredited Practical Examiners who have experience in laying out Test Sites and who have been approved as Mentors by NCCCO's Practical Exam Management Committee.

Mentors are volunteers who receive no compensation from NCCCO for their services. However, Test Sites may negotiate fees with Mentors for Test Site setup and/or Practical Exam guidance services. Practical Exam Test Sites interested in having a Mentor provide guidance should contact NCCCO.

AUDIT PROGRAM

NCCCO conducts audits of Test Sites and/or Practical Examiners in accordance with the accreditation requirements of the American National Standards Institute (ANSI).

Test Sites and/or Practical Examiners are selected for audits on the basis of a variety of criteria, including random selection, in response to issues reported by candidates, unusually high or low pass rates, new Test Sites, or probationary Examiners.

Once a site has been selected for an audit, the Test Site Coordinator or company representative from the site may be notified by letter from NCCCO prior to the scheduled test day. In addition, the Auditor will contact the Test Site Coordinator or company representative to verify the testing date and the site address. Unannounced audits may also be conducted.

It is a condition of Practical Examiner accreditation and Test Site status that all Test Site personnel, including the Test Site Coordinator, Practical Examiner, and Proctor, cooperate fully with the NCCCO Auditor during the audit process.

Practical Examiners who have been audited and notified that an additional audit is required will be responsible for the expenses incurred by NCCCO for the additional audit. Any Practical Exams conducted by the Examiner will not be scored until NCCCO has been reimbursed for the incurred expenses.

CCO Practical Examination Forms

MOBILE, TOWER, & OVERHEAD CRANE OPERATOR

Please photocopy all sides of the following forms for use in applying for CCO Practical Examinations:

- **Test Site Coordinator Agreement**
- **Pole Barrier Construction**
- **Practical Test Administration Summary Form**
- **Candidate Application—Practical Examination: Mobile, Tower, & Overhead Crane Operator**
- **Candidate Application—Practical Examination: Service Truck Crane Operator**
- **Detailed Score Report Request for CCO Practical Examinations**
- **Permanent Test Site Application**
- **Security Requirements Report**

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Test Site Coordinator Agreement
FOR CCO PRACTICAL EXAMINATIONS

Thank you for your application to be a Test Site Coordinator for CCO Practical Examinations. Test Site Coordinators play a critical role in the CCO examination process, from the initial site application, through the collection and submission of candidate applications to NCCCO to serving as liaison with the Examiner on test day. To ensure a smooth administration of CCO certification exams, it is critical that Test Site Coordinators fulfill their duties in a competent and professional manner. Please review the following Agreement and sign below where indicated, acknowledging that you have read and understood this Agreement and that, should your application be successful, you agree to abide by all of its provisions. NOTE: If your employment or affiliation changes from the company/organization listed below, you must complete and execute this form anew.

As a Test Site Coordinator for CCO Practical Examinations, I certify and acknowledge that:

1. I will not disclose (nor cause to be disclosed) to anyone outside of NCCCO any confidential information I obtain as a result of my participation as a Test Site Coordinator in the CCO certification program, including, without limitation, the content of any examination.
2. I have read all applicable NCCCO policies and procedures, particularly those detailed in the Practical Examination Test Site Coordinator Handbook, and I agree to be bound by the same.
3. I have read NCCCO's Criteria for Practical Test Sites and agree to prepare all Test Sites in accordance with the general directions set forth therein.
4. I agree to provide authorized personnel with access to the Test Site on test day and to remain (or arrange for my designated representative(s) to remain) at the Test Site throughout the test administration.
5. If I arrange for one or more representatives to remain at the Test Site, I agree to explain the responsibilities and obligations of a Test Site Coordinator to such persons and to ensure their compliance therewith.
6. I understand that the site for which I am a Test Site Coordinator may be audited by NCCCO and that I am required to cooperate fully with the NCCCO Auditor.
7. I agree to meet all applicable deadlines for submitting the Practical Test Site Application and Data Sheet with all necessary supporting crane documentation.
8. I agree to ensure that all Candidate Applications I submit are complete and in compliance with stated NCCCO policies and procedures, including any required payments.
9. I agree to pay any and all fees that are due in a timely fashion, including any additional fees I may incur by submitting incomplete or late applications.
10. I agree not to make, and not to knowingly allow any other person to make, any material misrepresentation or omission of fact in any document I submit to NCCCO.
11. I am acting on my own behalf and/or on behalf of the company or organization set forth below, and I am not acting to circumvent a prior NCCCO suspension or revocation.
12. I agree to conduct my affairs with NCCCO, any Examiner, clients, and candidates in a professional manner, according to accepted codes of business conduct.

I understand that non-compliance with any of these provisions may result in the revocation or suspension of my status as a Test Site Coordinator for CCO Practical Examinations. I agree that any questions or other matter arising under this agreement will be governed by and construed in accordance with the laws of the State of Virginia, without regard to choice of law rules. All actions and proceedings arising out of or relating directly or indirectly to this agreement will be filed and litigated exclusively in any state court or federal court located in the State of Virginia. I expressly consent to the jurisdiction of these courts.

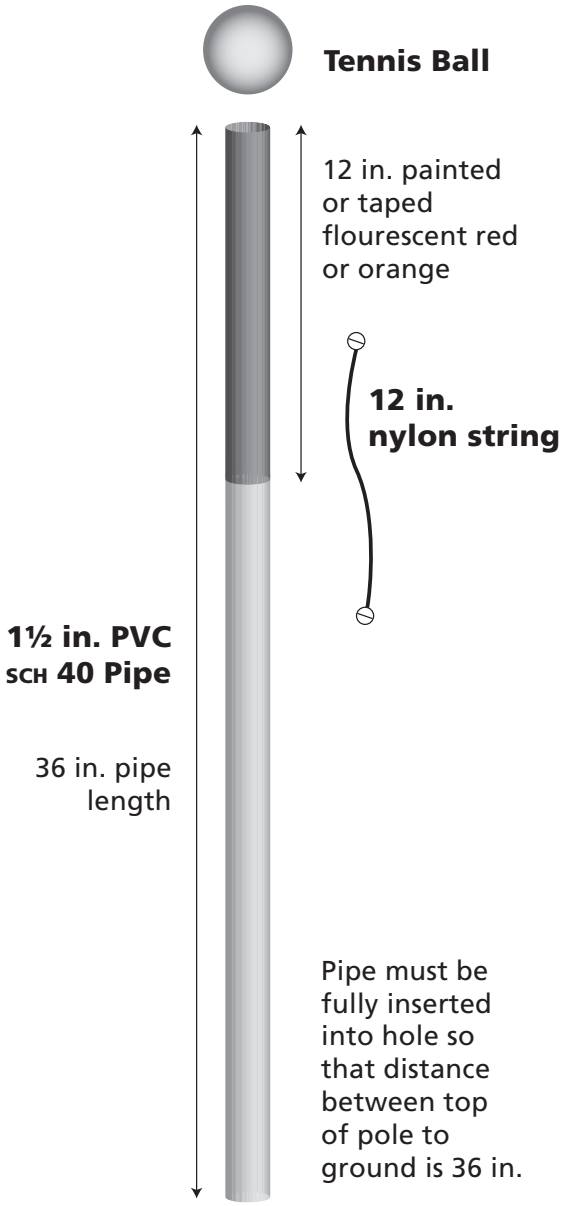
SIGNED	DATE
NAME	EMAIL
COMPANY/ORGANIZATION	
ADDRESS	
CITY	STATE / ZIP / COUNTRY
TELEPHONE	CELL

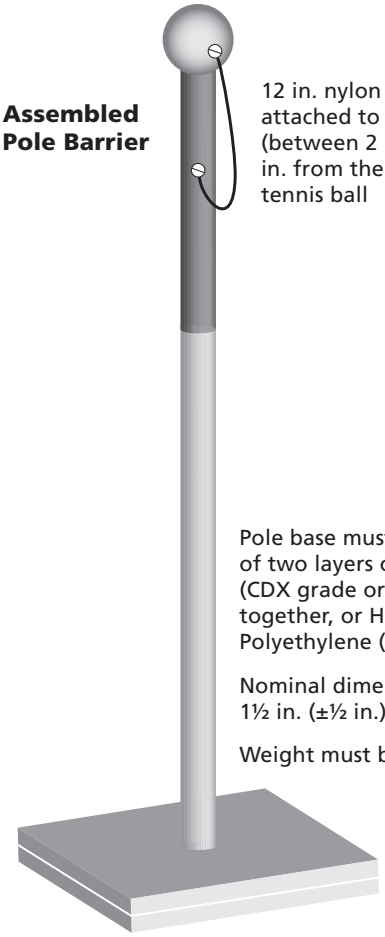
Please complete and submit to:

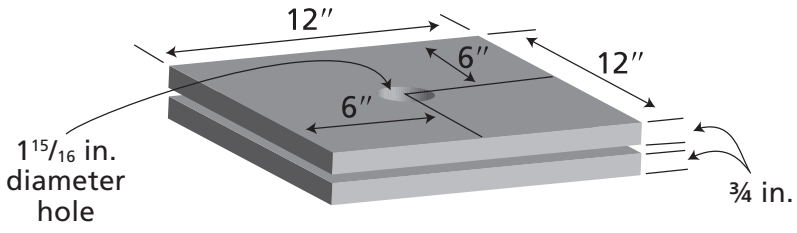
National Commission for the Certification of Crane Operators, Western Regional Office
5250 S. Commerce Drive, Suite 100, Murray, Utah 84107
Phone: 801-363-2693 / Fax: 801-363-3806 / Email: ejones@nccco.org

Pole Barrier Construction

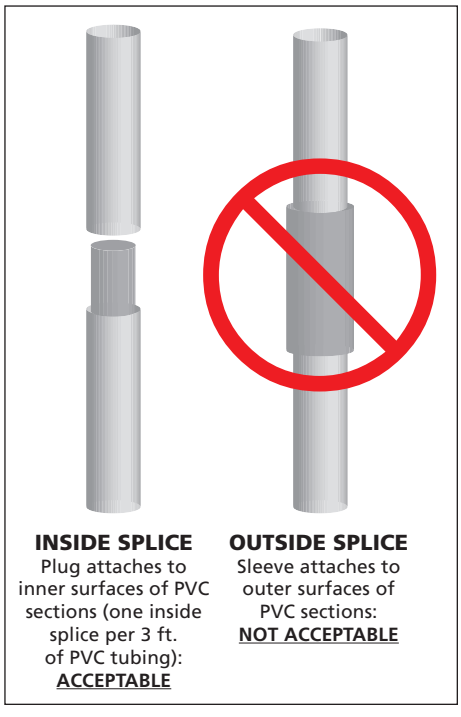
ALL CRANE OPERATOR PROGRAMS







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



Practical Test Administration
SUMMARY FORM—ALL PROGRAMS

Please type or print neatly.

SUBMITTER'S NAME		
SUBMITTER'S CELL PHONE	SUBMITTER'S EMAIL	PRACTICAL EXAM SITE NUMBER
PRACTICAL EXAM SITE LOCATION (STREET ADDRESS)		
CITY	STATE / ZIP / COUNTRY	
TEST SITE COORDINATOR NAME		
TEST SITE COORDINATOR CELL PHONE	TEST SITE COORDINATOR EMAIL	

Dates Testing Occurred (range) First date: _____ Last date: _____

Practical Examiner Name	Practical Examiner Accreditation Number

Number of candidates tested: _____

Number of Practical Exams administered: _____

Did you submit the Site Report? (Not required for Signalperson test administrations or permanent test sites)

❑ Yes ❑ No

Did you submit the Crane/Digger Derrick Report? (Not required for Mobile Crane, Rigger, or Signalperson test administrations)

❑ Yes ❑ No

Did you submit all candidate applications and fees?

❑ Yes ❑ No

How are you submitting candidate photos? _____

_____

Tests administered in which programs? (Check all that apply):

- ❑ Mobile Crane Operator
- ❑ Tower Crane Operator
- ❑ Overhead Crane Operator
- ❑ Articulating Crane Operator
- ❑ Digger Derrick Operator
- ❑ Service Truck Crane Operator
- ❑ Dedicated Pile Driver Operator
- ❑ Drill Rig Operator
- ❑ Rigger
- ❑ Signalperson

PRACTICAL TEST ADMINISTRATION SUMMARY FORM (CONT'D)

List all cranes/digger derricks/dedicated pile drivers used during this administration period:

Crane Type (e.g., "TLL")	Make	Model	Serial Number

PAYMENT SUMMARY

Total Examination Fees Enclosed: $_____

Updated CCO Card Fees Enclosed: $_____

Detailed Score Report Requested*: $_____ ($50.00 if requested)

Total Fees Enclosed: $_____

**Separate Detailed Score Report Request Form must be submitted for processing. Payment may be provided either here or on separate form.*

METHOD OF PAYMENT *(Do not send cash.)*

❒ VISA ❒ MasterCard ❒ AMERICAN EXPRESS ❒ Personal check enclosed ❒ Employer check enclosed ❒ Money order enclosed

Please do not staple your check or money order.

If paying by credit card, please complete the following information:

CREDIT CARD NUMBER | | | | | | | | | | | | | | | | |

EXPIRATION DATE | | | | |

NAME (Print as it appears on card)

SIGNATURE (on card)

SECURITY CODE* | | | | |

* Three- or four-digit code located on the card.

Email credit card receipt to: _____

Checks and money orders should be payable to: NCCCO

Please return this Practical Test Administration Summary Form along with all candidate applications, fees, photos, and score sheets to:

NCCCO—Testing Services Department
1960 Bayshore Blvd.
Dunedin, FL 34698

Phone: 727-449-8525
Fax: 727-461-2746
Email: jwarner@nccco.org

Candidate Application

PRACTICAL EXAMINATION—MOBILE, TOWER, & OVERHEAD CRANE OPERATOR

Please type or print neatly.

FULL LEGAL NAME (as shown on driver's license) | First | Middle | Last | Suffix (Jr., Sr., III)

CCO CERTIFICATION NUMBER (if previously certified) | DATE OF BIRTH | CANDIDATE ID: (if previously tested)

MAILING ADDRESS

CITY | STATE | ZIP | COUNTRY

PHONE | CELL | EMAIL

COMPANY/ORGANIZATION | PHONE

COMPANY MAILING ADDRESS

CITY | STATE | ZIP | COUNTRY

INDICATE WITH A CHECK THE CRANE TYPE(S) YOU WISH TO BE TESTED ON:

- ❒ **Lattice Boom Crane**
- ❒ **Telescopic Boom Crane—Swing Cab (TLL)**: Testing on a boom truck? ❑ Yes ❑ No
- ❒ **Telescopic Boom Crane—Fixed Cab (TSS)**: Testing on a boom truck? ❑ Yes ❑ No
- ❒ **Tower Crane**
- ❒ **Overhead Crane**

TEST SITE AT WHICH YOU INTEND TO TAKE THE PRACTICAL EXAMINATION

TEST SITE COORDINATOR NAME | PE SITE #:

PHONE | EMAIL

TEST SITE ADDRESS

CITY | STATE | ZIP | COUNTRY

I declare that the foregoing statements and those in any required accompanying documentation are true. I understand and agree that my failure to provide accurate and complete information or abide by NCCCO's policies and procedures, including the Code of Ethics, shall constitute grounds for the rejection of my application, or denial or revocation of my certification. I understand that NCCCO reserves the right to verify any information in this application or in connection with my certification. I expressly consent to NCCCO's release of any information consistent with NCCCO's Information Release policy. I have received a copy of the NCCCO Candidate Handbook, have read it, and agree to be bound by it. I agree to be bound by all NCCCO policies and procedures, as they may be amended from time to time, including without limitation those posted at nccco.org. I attest that I have passed a substance abuse test conducted by a recognized laboratory service and agree to comply with NCCCO's substance abuse policy. I have passed a physical exam that complies with the ASME B30 standard for my certification designation and I will continue to comply with those requirements. I further attest that I am physically and mentally capable of safely operating equipment on the day of the Practical Examination. I understand and agree that any personal injury and/or property damage resulting from or caused in any way by my participation in the CCO Practical Examination is not and shall not be the responsibility of NCCCO. I understand that if at any point during my certification period I fail to meet any of the requirements outlined above, or if matters arise that can affect my capability to continue to fulfill certification requirements, I must report it to NCCCO immediately and agree to cooperate with any subsequent investigation regarding such matters.

CANDIDATE SIGNATURE | DATE

CANDIDATE APPLICATION (CONT'D)

PRACTICAL EXAMINATION—MOBILE, TOWER, & OVERHEAD CRANE OPERATOR

CCO CERTIFICATION CARD

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

Please email a digital color photo (without hat or sunglasses) to ***photos@nccco.org*** *and label it with your full name and birth date. Enclose with your application form any required payment based upon the information listed below.*

A 1⅜"× 1¾" passport color photo may be substituted for a digital photo; if submitting a passport photo, please give it to your Test Site Coordinator.

PRACTICAL EXAMINATION FEES

Check the box next to the Practical Exam type(s) for which you are registering.

Practical Examination Fees:

❒ One Mobile Crane type: $60 ❒ Two Mobile Crane types: $70 ❒ Three Mobile Crane types: $80

❒ Tower Crane only: $60

❒ Tower Crane *(current CCO–certified Mobile Crane Operator, or new candidate registering for the Mobile Crane Operator exams at the same time)*: $50

❒ Overhead Crane only: $60

❒ Overhead Crane *(current CCO–certified Mobile Crane Operator, or new candidate registering for the Mobile Crane Operator exams at the same time)*: $50

❒ Updated/replacement card: $25

METHOD OF PAYMENT *(Do not send cash.)*

❒ VISA ❒ MasterCard ❒ AMERICAN EXPRESS ❒ Personal check enclosed ❒ Employer check enclosed ❒ Money order enclosed

Please do not staple your check or money order.

If paying by credit card, please complete the following information:

CREDIT CARD NUMBER _____ EXPIRATION DATE _____

NAME (Print as it appears on card) _____ SIGNATURE (on card) _____ SECURITY CODE* _____

* Three- or four-digit code located on the card.

Email credit card receipt to: _____

Checks and money orders should be payable to: NCCCO

Do not send this application to NCCCO. Give this application, along with payment and all necessary documentation, to your Test Site Coordinator on test day.

Candidate Application

PRACTICAL EXAMINATION—SERVICE TRUCK CRANE OPERATOR

Please type or print neatly.

FULL LEGAL NAME (as shown on driver's license) | First | Middle | Last | Suffix (Jr., Sr., III)

CCO CERTIFICATION NUMBER (if previously certified) | DATE OF BIRTH | CANDIDATE ID: (if previously tested)

MAILING ADDRESS

CITY | STATE | ZIP | COUNTRY

PHONE | CELL | EMAIL

COMPANY/ORGANIZATION | PHONE

COMPANY MAILING ADDRESS

CITY | STATE | ZIP | COUNTRY

INDICATE WITH A CHECK THE EQUIPMENT YOU WISH TO BE TESTED ON:

❒ Service Truck Crane

TEST SITE AT WHICH YOU INTEND TO TAKE THE PRACTICAL EXAMINATION

TEST SITE COORDINATOR NAME | PE SITE #:

PHONE | EMAIL

TEST SITE ADDRESS

CITY | STATE | ZIP | COUNTRY

I declare that the foregoing statements and those in any required accompanying documentation are true. I understand and agree that my failure to provide accurate and complete information or abide by NCCCO's policies and procedures, including the Code of Ethics, shall constitute grounds for the rejection of my application, or denial or revocation of my certification. I understand that NCCCO reserves the right to verify any information in this application or in connection with my certification. I expressly consent to NCCCO's release of any information consistent with NCCCO's Information Release policy. I have received a copy of the NCCCO Candidate Handbook, have read it, and agree to be bound by it. I agree to be bound by all NCCCO policies and procedures, as they may be amended from time to time, including without limitation those posted at nccco.org. I attest that I have passed a substance abuse test conducted by a recognized laboratory service and agree to comply with NCCCO's substance abuse policy. I have passed a physical exam that complies with the ASME B30 standard for my certification designation and I will continue to comply with those requirements. I further attest that I am physically and mentally capable of safely operating equipment on the day of the Practical Examination. I understand and agree that any personal injury and/or property damage resulting from or caused in any way by my participation in the CCO Practical Examination is not and shall not be the responsibility of NCCCO. I understand that if at any point during my certification period I fail to meet any of the requirements outlined above, or if matters arise that can affect my capability to continue to fulfill certification requirements, I must report it to NCCCO immediately and agree to cooperate with any subsequent investigation regarding such matters.

CANDIDATE SIGNATURE | DATE

CANDIDATE APPLICATION (CONT'D)
PRACTICAL EXAMINATION—SERVICE TRUCK CRANE OPERATOR

CCO CERTIFICATION CARD

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

Please email a digital color photo (without hat or sunglasses) to ***photos@nccco.org*** *and label it with your full name and birth date. Enclose with your application form any required payment based upon the information listed below.*

A 1⅜"× 1¾" passport color photo may be substituted for a digital photo; if submitting a passport photo, please give it to your Test Site Coordinator.

PRACTICAL EXAMINATION FEE

Check the box(es) next to the Practical Exam designation(s) for which you are registering:

❒ Service Truck Crane Operator: $60

❒ Updated/replacement card: $25

METHOD OF PAYMENT *(Do not send cash.)*

❒ VISA ❒ MasterCard ❒ AMERICAN EXPRESS ❒ Personal check enclosed ❒ Employer check enclosed ❒ Money order enclosed *Please do not staple your check or money order.*

If paying by credit card, please complete the following information:

CREDIT CARD NUMBER _____ EXPIRATION DATE _____

NAME (Print as it appears on card) _____ SIGNATURE (on card) _____ SECURITY CODE* _____

* Three- or four-digit code located on the card.

Email credit card receipt to: _____

Checks and money orders should be payable to: NCCCO

Do not send this application to NCCCO. Give this application, along with payment and all necessary documentation, to your Test Site Coordinator on test day.

Detailed Score Report Request Form
FOR CCO PRACTICAL EXAMINATIONS

If you wish to receive a Detailed Score Report on candidates taking the CCO examination(s), please fill out this form and submit it, along with a $50 processing fee (payable to NCCCO), to NCCCO when you return your test administration materials for each administration:

NCCCO—Testing Services Department
1960 Bayshore Blvd.
Dunedin, FL 34698

Phone: 727-449-8525
Fax: 727-461-2746
Email: jwarner@nccco.org

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

Please type or print neatly.

NAME OF REQUESTOR		PHONE	
COMPANY NAME		EMAIL	
MAILING ADDRESS			
CITY	STATE	ZIP	COUNTRY
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 (NCCCO) to release the details of your test scores directly to the person listed above as the "Requestor."*

CANDIDATE NAME (printed)	DATE OF BIRTH*	CANDIDATE RELEASE SIGNATURE
1.		
2.		
3.		
4.		
5.		
6.		
7.		

**Date of birth required to assure correct candidate identification.*

METHOD OF PAYMENT FOR DETAILED SCORE REPORT REQUEST

Do not send cash.

❑ VISA ❑ MasterCard ❑ AMERICAN EXPRESS ❑ Personal check enclosed ❑ Employer check enclosed ❑ Money order enclosed

Please do not staple your check or money order.

If paying by credit card, please complete the following information:

CREDIT CARD NUMBER

EXPIRATION DATE

SECURITY CODE*

NAME (Print as it appears on card)

SIGNATURE (on card)

* Three- or four-digit code located on the card.

Email credit card receipt to: _____

Checks and money orders should be payable to: **NCCCO**

DETAILED SCORE REPORT REQUEST FORM (CONT'D)

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 (NCCCO) to release the details of your test scores directly to the person listed above as the "Requestor."*

CANDIDATE NAME (printed)	DATE OF BIRTH*	CANDIDATE RELEASE SIGNATURE
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		
23.		
24.		
25.		
26.		
27.		
28.		
29.		
30.		
31.		
32.		

**Date of birth required to assure correct candidate identification.*

Permanent Test Site Application
PRACTICAL EXAMINATIONS

Please type or print neatly.

HOST COMPANY REPRESENTATIVE	PE TEST SITE NUMBER

HOST COMPANY NAME

HOST COMPANY MAILING ADDRESS

CITY	STATE	ZIP	COUNTRY

HOST PHONE	HOST EMAIL

TEST SITE ADDRESS (Physical address of where the crane(s) will be set up; P.O. Boxes not acceptable)

CITY	STATE	ZIP	COUNTRY

Programs this site is registered for:

❒ Mobile ❒ Tower ❒ Overhead ❒ Articulating ❒ Service Truck
❒ Digger Derrick ❒ Rigger ❒ Signalperson ❒ Dedicated Pile Driver ❒ Drill Rig

Cranes/digger derricks/dedicated pile drivers/drill rigs registered to this test site (operator programs only):

MAKE/MODEL	SERIAL NUMBER	MAX RATED CAPACITY (TONS)

If additional space is needed, please continue on the back side of this application.

The Test Site Coordinator or Company Representative assumes total responsibility for selecting equipment and verifying that at all times during the testing process the equipment is in compliance with federal and state OSHA requirements and current applicable industry standards.

By signing this application, I understand as Test Site Coordinator or Company Representative that this site is a permanent site in which the course, cranes/digger derricks/pile drivers/drill rigs, and Test Site Coordinator have not changed within the last 12 months. I also agree to abide by all NCCCO Practical Test Site policies and procedures. I understand that by signing this application, NCCCO will conduct an audit of the test site prior to the site being granted permanent status and that if at any time within 12 months the course, cranes/digger derricks/pile drivers/drill rigs,, or Test Site Coordinator change, this site will no longer be considered permanent and a new application for permanent status will be required.

SIGNATURE	DATE

NAME	EMAIL

Please complete and submit to:

National Commission for the Certification of Crane Operators, Western Regional Office
5250 S. Commerce Drive, Suite 100, Murray, Utah 84107
Phone: 801-363-2693 / Fax: 801-363-3806 / Email: ejones@nccco.org

PERMANENT TEST SITE APPLICATION (CONT'D)
PRACTICAL EXAMINATIONS

Test Site #: _____

Additional cranes/digger derricks registered to this test site (operator programs only):

MAKE/MODEL	SERIAL NUMBER	MAX RATED CAPACITY (TONS)

Security Requirements Report
PRACTICAL EXAMINATIONS

A secured test site is a site that requires additional security clearance or security procedures for off-site personnel. If the Test Site Application indicates that the test site is a secure facility, please complete this form and submit it with the Test Site Application.

Please type or print neatly.

SECURITY CONTACT REPRESENTATIVE	PE TEST SITE NUMBER (OBTAIN FROM TEST SITE COORDINATOR)

HOST COMPANY NAME

HOST COMPANY MAILING ADDRESS

CITY	STATE	ZIP	COUNTRY

SECURITY CONTACT PHONE	SECURITY CONTACT EMAIL

TEST SITE ADDRESS (Physical address of where the crane(s) will be set up; P.O. Boxes not acceptable)

CITY	STATE	ZIP	COUNTRY

1. Does the site have a secured entrance? ❒ Yes ❒ No
2. If the site has multiple entrances, which entrance should testing personnel and/or NCCCO staff and Auditor use to access testing location? _____

_____

3. What type(s) of credentials or proof of training are required to gain access to the site? _____

_____

4. How much time is required for a security review? _____
5. Can security reviews be performed in advance of testing personnel and/or NCCCO staff and Auditor arriving at secure site? ❒ Yes ❒ No
6. Does the site have other site-specific requirements or protocols? (Describe below or attach written security policy.)

_____

_____

_____

_____

_____

_____

_____

_____

SECURITY CONTACT SIGNATURE	DATE

Please complete and submit to:

National Commission for the Certification of Crane Operators, Western Regional Office
5250 S. Commerce Drive, Suite 100, Murray, Utah 84107
Phone: 801-363-2693 / Fax: 801-363-3806 / Email: ejones@nccco.org

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Mobile Crane Operator Program
PRACTICAL EXAMINATION

- Test Site Application & Data Sheet
- Expedited CAD Request Form
- Rush Expedited CAD Request Form
- Photographs
- Test Site Setup
- Test Site Layout Instructions
- Sample Test Site Layout (CAD)
- Crane Selection and Setup
- Ready Reference Checklist
- Site Report

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Test Site Application & Data Sheet

PRACTICAL EXAMINATION—MOBILE CRANES

Please type or print neatly.

HOST COMPANY REPRESENTATIVE | TEST SITE NUMBER

HOST COMPANY NAME | COMPANY REP EMAIL

HOST COMPANY MAILING ADDRESS

CITY | STATE | ZIP | COUNTRY

COMPANY REP OFFICE PHONE | COMPANY REP MOBILE PHONE

❒ This is a Secure Test Site. (Submit completed Security Requirements Report.)

TEST SITE ADDRESS (Physical address of where the crane(s) will be set up; P.O. Boxes not acceptable)

CITY | STATE | ZIP | COUNTRY

CHECK BOXES AS APPROPRIATE

❒ $50 Site Fee for _____ (year) enclosed ❒ $50 Site Fee for _____ (year) already paid ❒ This is my first test administration

TEST SITE COORDINATOR NAME | TEST SITE COORDINATOR PHONE

TEST SITE COORDINATOR EMAIL

PRACTICAL EXAMINER NAME | PRACTICAL EXAMINER EMAIL

The Test Site Coordinator or Company Representative 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 current ASME B30 standard
2. Verification that candidate's application for the Practical Exam is complete
3. Abiding by NCCCO Practical Test Site Audit requirements

SIGNATURE | DATE

METHOD OF PAYMENT FOR TEST SITE FEE

Do not send cash.

❒ VISA ❒ MasterCard ❒ American Express ❒ Personal check enclosed ❒ Employer check enclosed ❒ Money order enclosed *Please do not staple your check or money order.*

If paying by credit card, please complete the following information:

CREDIT CARD NUMBER

EXPIRATION DATE

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

SECURITY CODE*

* Three- or four-digit code located on the card.

Email credit card receipt to: _____

Checks and money orders should be payable to: NCCCO

Please send application and payments to:

National Commission for the Certification of Crane Operators
Western Regional Office
5250 S. Commerce Drive, Suite 100, Murray, Utah 84107
Phone: 801-363-2693 / Fax: 801-363-3806 / Email: ejones@nccco.org

TEST SITE APPLICATION & DATA SHEET (CONT'D)
PRACTICAL EXAMINATION—MOBILE CRANES

TEST SITE NUMBER

INSTRUCTIONS FOR COMPLETING THIS DATA SHEET

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

Please ensure to include the load charts, line pull chart, and range diagrams for each test crane in its proposed configuration. ***NCCCO cannot process this application without all this information.***

SECTION A: CRANE TYPE *(Check the box next to the type of the crane you plan to test on.)*

❒ LATTICE BOOM TRUCK*

❒ LATTICE BOOM CRAWLER*

***For Lattice Boom Only:** IS THIS A FRICTION MACHINE? ❒ YES ❒ NO
(SEE DEFINITION ON PAGE 36)

❒ TELESCOPIC BOOM—SWING CAB (TLL)** *Must have a rotating operator station that rotates with the crane's upper works; may or may not be a "Boom Truck"*

❒ TELESCOPIC BOOM—FIXED CAB (TSS)** *Must have a fixed (non-rotating) operator station; may or may not be a "Boom Truck"*

****For Telescopic Boom Only:** IS THIS A BOOM TRUCK? ❒ YES ❒ NO
(SEE DEFINITION ON PAGE 36)

SECTION B: CRANE SETUP *(Provide data for items 1 thru 11 using the crane's load chart. Answer items 5–7 for the appropriate crane type and/or capacity.)*

1. MAKE/MODEL

2. SERIAL NUMBER

3. MAX RATED CAPACITY (TONS)

4. CONFIGURATION OF CRANE

FOR ALL CRANES

OUTRIGGER/STABILIZER SPREAD:
- ❒ Front _____ ft.
- ❒ Back: _____ ft.

ROPE SIZE & TYPE: _____

_____

JIB STOWED? ❒ Yes ❒ No

FOR LATTICE BOOM CRANES ONLY

COUNTERWEIGHT:
- ❒ Standard
- ❒ Adjustable: _____ lb.

Type: _____

FOR BOOM TRUCKS ONLY

WORKING AREA:
- ❒ 360°
- ❒ 180°
- ❒ Other:_____

CRANE POSITION:
- ❒ Behind cab
- ❒ Center mount
- ❒ Rear mount
- ❒ Fifth wheel

CONTROL POSITION:
- ❒ Fixed Controls
- ❒ Remote Controls (may only be used if noted on supplied CAD)

TRUCK BED LENGTH: _____ ft.

5. ANSWER FOR **TELESCOPIC BOOM CRANES ONLY**—MAXIMUM FULL POWERED BOOM: _____FT.

6. ANSWER FOR **LATTICE BOOM CRANES UP TO 50 TONS CAPACITY ONLY**: 80 FT. OF BOOM (± 10 FT.) = _____FT.

7. ANSWER FOR **LATTICE BOOM CRANES ABOVE 50 TONS CAPACITY ONLY**: 120 FT. OF BOOM (± 10 FT.) = _____FT.

8. ALLOWABLE LINE PULL AS STATED IN THE LOAD CHART: _____ LB.

9. TEST WEIGHT RANGE BETWEEN: _____ (20% OF LINE PULL) AND _____ LB. (30% OF LINE PULL)

Note: Carry-decks and boom trucks may have a different Test Weight range that is based on the machine capacity at the longest test radius. In any case, a 55-gallon drum MAY NOT be used as a Test Weight.

10. HEIGHT OF TEST WEIGHT: _____FT.

11. DIAMETER OF TEST WEIGHT: _____FT. + 4 FT. = WIDTH OF ZIGZAG CORRIDOR: _____FT.

SECTION C: TO BE COMPLETED BY NCCCO *(Leave this section blank.)*

12. LENGTH OF INSIDE LEGS OF CORRIDOR: _____ FT. 13. LENGTH OF OUTSIDE LEGS OF CORRIDOR: _____FT.

14. RADIUS FROM CENTER OF ROTATION OF CRANE TO:

CENTER OF BARREL 1: _____FT. CENTER OF BARREL 2: _____ FT. CENTER OF STOP CIRCLE: _____FT.

15. RADIUS WITH _____ FT. BOOM AT 50 DEGREE ANGLE =_____ FT.

CAPACITY IN THIS CONFIGURATION (MAY BE LIMITED BY SINGLE LINE PULL):_____ LB.

Expedited CAD Request Form

RECEIVE CAD DRAWINGS IN 7 BUSINESS DAYS

Please expedite CAD drawings for the following cranes:

Make & Model	Serial Number

I am requesting these expedited CAD drawings for a ❑ New Test Site or ❑ Existing Test Site.

I understand that the fee associated with expediting CAD drawings is ***$100 per crane*** and that I will receive CAD drawings via email/fax within seven (7) business days from authorization of payment. Applications received after noon (MST) will be considered received on the next business day.

I authorize NCCCO to charge my credit card in the total amount of $_____ to expedite CAD drawings for the cranes listed above.

SIGNATURE | DATE

NAME (PRINT)

COMPANY/ORGANIZATION

METHOD OF PAYMENT FOR EXPEDITED CAD REQUEST FEE

❑ VISA ❑ MasterCard ❑ American Express

Credit card payments only. CAD drawings will not be released until payment has been successfully processed. If payment cannot be processed for any reason, there will be an additional fee of $50 per each subsequent attempt to process.

CREDIT CARD NUMBER | EXPIRATION DATE

NAME (Print as it appears on card) | SIGNATURE (on card) | SECURITY CODE*

* Three- or four-digit code located on the card.

Email credit card receipt to: _____

Please send or fax this form to:

National Commission for the Certification of Crane Operators
Western Regional Office
5250 S. Commerce Drive, Suite 100, Murray, Utah 84107
Fax: 801-363-3806

NCCCO USE

Authorization Number _____ Date _____ PE-Site#_____

Rush Expedited CAD Request Form

RECEIVE CAD DRAWINGS IN 3 BUSINESS DAYS (SUBJECT TO AVAILABILITY)

Please RUSH expedite CAD drawings for the following cranes:

Make & Model	Serial Number

I am requesting these expedited CAD drawings for a ❑ New Test Site or ❑ Existing Test Site.

I understand that the fee associated with rush expediting CAD drawings is ***$200 per crane*** and that I will receive CAD drawings via email/fax within three (3) business days from authorization of payment, ***subject to availability***. Applications received after noon (MST) will be considered received on the next business day.

I authorize NCCCO to charge my credit card in the total amount of $_____ to rush expedite CAD drawings for the cranes listed above.

SIGNATURE | DATE

NAME (PRINT)

COMPANY/ORGANIZATION

METHOD OF PAYMENT FOR EXPEDITED CAD REQUEST FEE

❑ VISA ❑ MasterCard ❑ American Express

Credit card payments only. CAD drawings will not be released until payment has been successfully processed. If payment cannot be processed for any reason, there will be an additional fee of $50 per each subsequent attempt to process.

CREDIT CARD NUMBER _____ EXPIRATION DATE _____

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

SECURITY CODE* _____

* Three- or four-digit code located on the card.

Email credit card receipt to: _____

Please send or fax this form to:

National Commission for the Certification of Crane Operators
Western Regional Office
5250 S. Commerce Drive, Suite 100, Murray, Utah 84107
Fax: 801-363-3806

NCCCO USE

Authorization Number _____ Date _____ PE-Site#_____

Photographs
MOBILE CRANE OPERATOR PROGRAM

MARKING EQUIPMENT

All Test Site and crane equipment must be clearly marked in accordance with NCCCO requirements.

Overhaul Ball

Rigging for Second Overhaul Ball (Task 3 Only)

Barrel

Corridor Pole

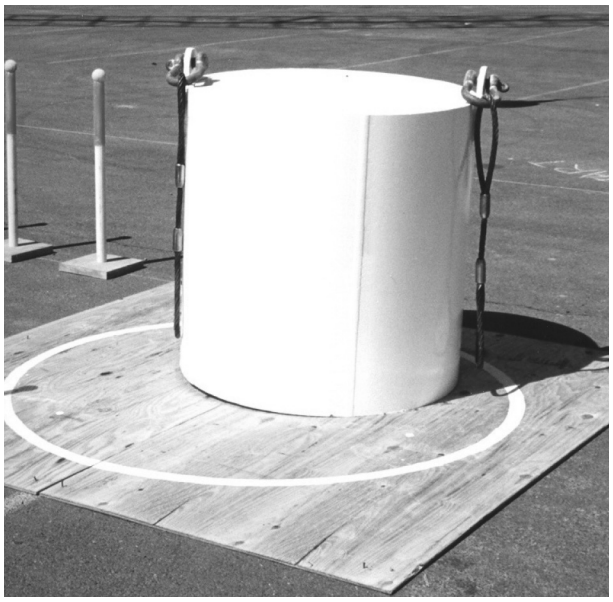
Photographs (Cont'd)
MOBILE CRANE OPERATOR PROGRAM

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 current applicable industry standards.



SAND

For lattice boom cranes only: Repackaging sand in sealed plastic bags facilitates handling. It also protects the sand from moisture which might otherwise lead to exceeding the weight requirement of 20 lb. per barrel.

Photographs (Cont'd)
MOBILE CRANE OPERATOR PROGRAM

MEASURING THE CORRIDOR AND CIRCLES

All elements of the Test Site must be laid out in accordance with the Test Site Setup instructions, Data Sheet, and Test Site Layout (CAD). 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

Test Site Setup

MOBILE CRANE OPERATOR PROGRAM

PRE-TEST CANDIDATE BRIEFING AREA

This area must be located so that waiting candidates are unable to observe testing procedures and at least 50 ft. from any crane's farthest testing radius. It must be provided with:

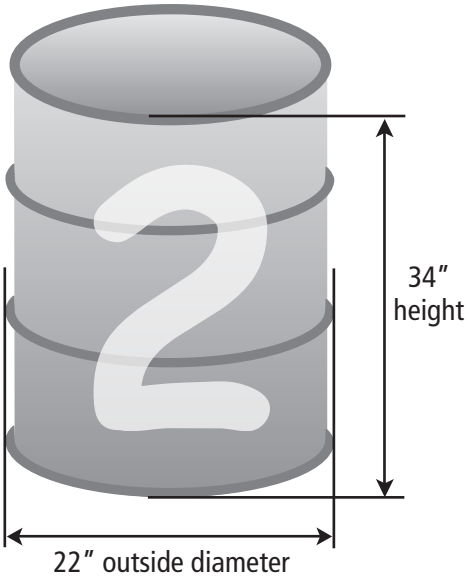
- NCCCO candidate instruction materials, including a written description of the examination *(Candidate Handbook)* and copies of the Test Site Layouts (CADs)
- Operator's manuals and load charts for all cranes to be tested on
- A DVD player and television or computer for candidates to watch the CCO Practical Exam video (up to 24 hours before the Practical Exam)
- A suitable setting for the Pre-Test Briefing of exam candidates, to include:
  - — Sufficient space for the candidates for the Pre-Test Briefing
  - — Quiet, well-lit surroundings with a comfortable temperature
  - — Access to water (bottled or potable water)
  - — Easy access to rest rooms (porta-potties are acceptable)
  - — Large signs posted prominently to make candidates aware of the location of the test

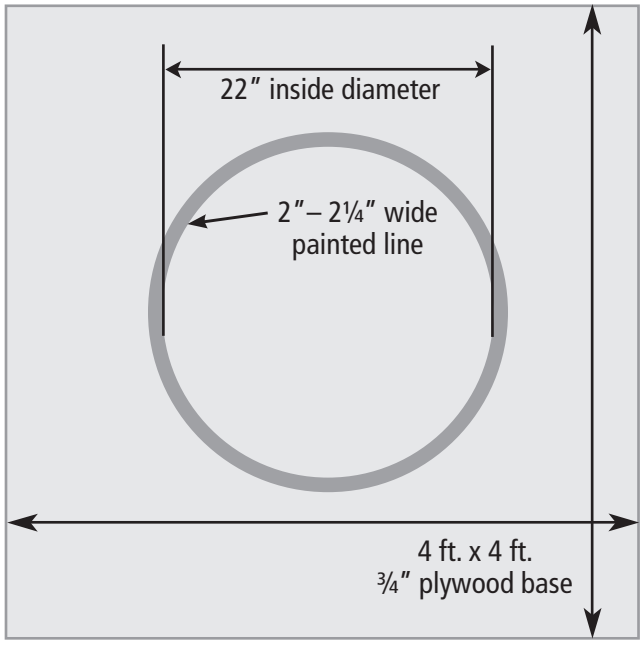
BARRELS

Barrels must be two empty steel drums approximately 22 in. diameter and 34 in. high (e.g., 55-gallon drums), open at one end, and identified as ***No. 1*** and ***No. 2*** by numerals large enough to be seen clearly from the operator's cab. The only modifications to barrels allowed are removing the lid top and/or punching/drilling holes for the purpose of draining water.

For Lattice Boom Cranes only—Barrels must be weighted with 20 lb. (±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 that it is protected from moisture. Wet sand weighs more than dry sand, so care must be taken not to exceed the 20 lb. ballast weight required for each barrel.

Each barrel should be placed within a 2 in. wide circle line (with a maximum width of 2¼ in.); this circle must be painted and specific to each barrel because barrel diameters area approximate only. Paint circles on a 4 ft. × 4 ft. sheet of ¾-inch 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

The Zigzag Corridor is composed of a PVC-pole barrier with a tennis ball placed on top of each pole. A taught, longitudinal string must be placed on the ground through the centerline of each pole base; a cut concrete line may be used in lieu of a string line.

POLES

Forty-two poles must be constructed of 1½-inch white PVC pipe (SCH 40), each 36 in. long, painted orange or red on the top 12 in. (one inside splice per 3 ft. pole permitted; outside splices of PVC pipes NOT permitted; see page 10 for illustration).

The poles must be mounted to a pole base made of two layers of ¾-inch, CDX-grade (or better) plywood glued together, cut 12 in. (nominal) 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 lb. (±10%)
- Nominal dimensions: 12 in. × 12 in. × 1½ in. (±½ in. thick)

The weight must be spread evenly across the base. Pole bases may be coated with a protective finish, if desired, as long as they continue to meet the stated design and construction parameters.

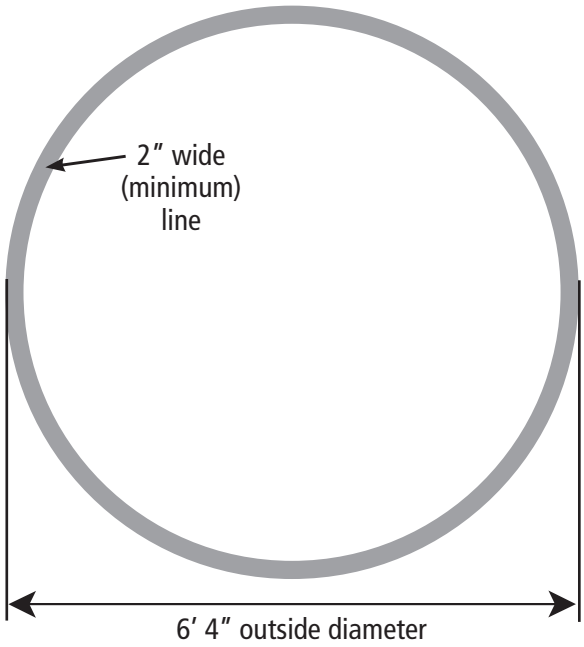
Pole bases must be placed as indicated on the Test Site Layout (CAD). A taut, brightly colored string line must be placed on the ground under the centerline of each pole base.

To assist the Examiner and Proctor in restoring the Zigzag Corridor between tasks, the tennis balls may be attached to the poles by means of 12 in. long nylon string. The string must be attached between 2 in. and 8 in. from the top of the pole and to the tennis ball.

During the test, the string loops must face towards the outside of the corridor to avoid the string being snagged on the Test Weight. 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 must have a 6 ft. 4 in. outside diameter (with a permitted tolerance of ±½ in.), with a clearly marked inside line at least 2 in. wide, and they must be located per the Test Site Layout (CAD).



If marking circles or other parts of a course on plywood or mats, the borders must be marked with materials with a flat, uniform surface and a lip variance not to exceed 3/4 in. Any materials used may not interfere with the free movement of the pole bases.

LEVEL

All parts of the Test Site must be within five percent of true level and free of debris, stored materials, surface irregularities, or hazards such as overhead power lines that could interfere with test maneuvers. No obstructions may be within 5 ft. of a practical test course in any direction.

Test Site Layout Instructions

MOBILE CRANE OPERATOR PROGRAM

Using the CAD drawing and other information provided by NCCCO, 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, circles) be placed exactly as indicated on the CAD drawings provided by NCCCO. Failure to do so could result in the test administration being declared invalid and the need to start over.

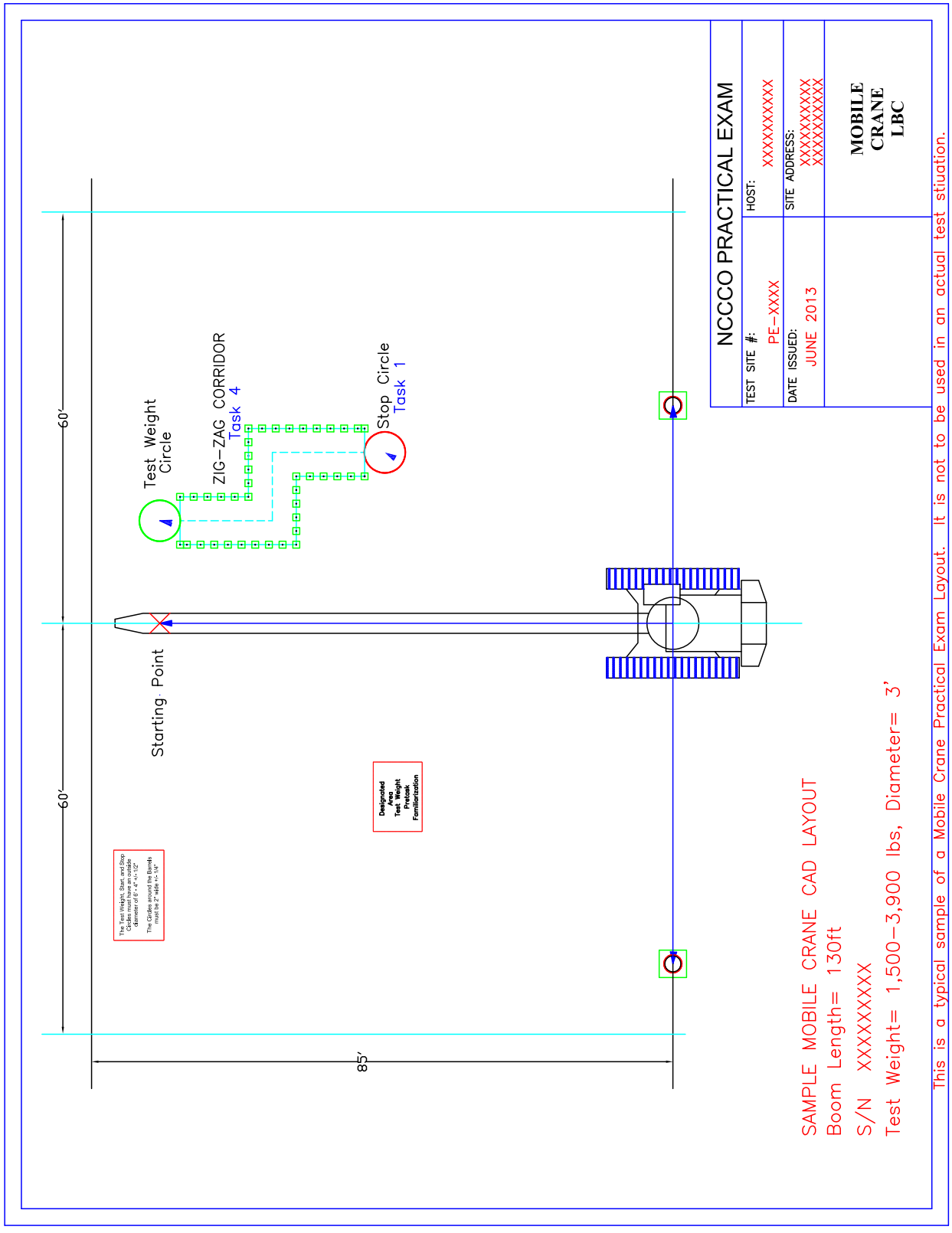
Before the Practical Examiner can begin testing, he/she will verify the site is laid out correctly using the *Site Report* for the appropriate crane type. Different versions of the *Site Report* form can be found in the appropriate sections of this handbook. Test Site Coordinators are strongly encouraged to use this form to verify that 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:

1.	**CHECK FOR OBSTRUCTIONS**	Ensure there are no obstructions (on the ground or overhead) that could interfere with the safe operation of the crane during the test. No obstructions may be within 5 ft. of a practical test course in any direction.
2.	**LAY DOWN GRID LINES**	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 Sample Test Site Layout, page 22). Lay out these grid lines on the ground with string as noted on the Test Site Layout (CAD). On the first grid line, make a mark that will indicate the crane's center of rotation.
3.	**LOCATE STOP CIRCLE**	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.
4.	**PAINT STOP CIRCLE**	Using this center point, paint a 6 ft. 4 in. outside diameter Stop Circle (with a permitted tolerance of ±½ in.) with a clearly marked inside line at least 2 in. wide. The Stop Circle is situated at the end of the Zigzag Corridor closest to the crane.
5.	**LAY OUT ZIGZAG CORRIDOR**	Working back from the Stop Circle, and using the second grid line as a guide, lay out the Zigzag Corridor using the poles and bases, tennis balls, and string line. The width of the corridor and length of the inside and outside legs are stated on the CAD layout.
6.	**LOCATE TEST WEIGHT CIRCLE**	Locate center of the Test Weight Circle at the top end of the Zigzag Corridor, as noted on the CAD layout. Using this center point, paint a 6 ft. 4 in. outside diameter circle (with a permitted tolerance of ±½ in.) with a clearly marked inside line at least 2 in. wide.
7.	**LOCATE STARTING POINT**	Establish the center of the starting point position as noted on the CAD layout. Paint with an "X" large enough so the candidate can see the marked position.
8.	**POSITION BARRELS**	Place Barrel No. 1 to the right of the crane in the position and at the radius stated on the CAD layout. Place Barrel No. 2 180 degrees from Barrel No.1, at the radius indicated on the CAD layout. Place them on 4 ft. × 4 ft. ¾-inch CDX-grade (or better) plywood sheets secured or weighted as described in the Test Site Layout (CAD).
9.	**LOCATE DESIGNATED AREA**	Ensure there is an appropriate area to serve as the Designated Area for the Test Weight Pre-Task Familiarization Period, as illustrated on the Test Site Layout (CAD).
10.	**POSITION CRANE**	Set up the crane on outriggers (if applicable) with the center of rotation of the crane directly above the mark 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 layout. The exam tasks will be performed in a roughly 180-degree area.

Sample Test Site Layout (CAD)

MOBILE CRANE OPERATOR PROGRAM



Crane Selection and Setup

MOBILE CRANE OPERATOR PROGRAM

CCO PRACTICAL EXAM CATEGORIES

The Mobile Crane Operator Practical Exam can be taken in one or more of the following mobile crane categories:

- **Lattice Boom Crane (Hydraulic or Friction*)**

  **For NCCCO testing purposes, a "Friction Machine" is defined as a lattice boom crane in which the sole means of hoist and lower functions is through friction clutches and brakes.*

- **Telescopic Boom Crane—Fixed Cab (TSS)**
  *Must have a fixed (non-rotating) operator station; may or may not be a "Boom Truck"***
- **Telescopic Boom Crane—Swing Cab (TLL)**
  *Must have a rotating operator station that rotates with the crane's upper works or turret of the boom; may or may not be a "Boom Truck"**. (These include any cranes for which an operator stands at a control station and "walks" with the controls as they rotate with the boom structure; this definition also applies to any cranes with a rotating operator station, including walk-around, platform, and cab-operated boom trucks.)*

  ***For NCCCO testing purposes, a "Boom Truck" (commercial truck-mounted crane) is defined as a crane consisting of a rotating superstructure (center post or turntable), a fixed or telescopic boom, operating machinery, and one or more operator's stations, mounted on a frame attached to a commercial truck chassis with a payload hauling capability whose power source powers the crane. Its function is to lift, lower, and swing loads at various radii, requiring the use of outriggers/stabilizers.*

CRANE SELECTION

All cranes used for CCO testing shall be set up on fully extended outriggers/stabilizers unless otherwise noted on the CAD drawing. Mid extensions are not permitted without written permission from the Western Regional Office and will be noted as such on the CAD drawing.

The maximum boom length for cranes used in CCO testing is 130 ft.

Mobile cranes for the Lattice Boom category can be either truck- or crawler-mounted. Practical Exams may be conducted on land–based mobile cranes mounted on a barge, if desired, including pedestal-mounted upperworks of mobile cranes, but not on marine cranes. For the Telescopic Boom Crane—Fixed Cab category, the test crane must have a fixed (non-rotating) operator's station. For the Telescopic Boom Crane—Swing Cab category, the test crane must have an operator's station that rotates with the crane's upperworks.

If a video monitoring system is installed on the crane, it must be deactivated during CCO Practical Exam testing.

REMOTE CONTROLS

Remote controls on swing cab and fixed cab telescopic boom cranes may only be used if the crane is not equipped with any other type of control station.

SHORT BOOM RESTRICTION

Candidates passing CCO practical exams on cranes not meeting minimum standardized boom configurations will have "short boom restriction" added to their certification card for the applicable crane type(s). Examples of where this policy applies include:

- A *Lattice Boom Crane* that has less than 70 ft. of boom (+/- shortest section) for a 50-ton and less lattice boom crane
- A *Telescopic Boom—Fixed Cab* crane that has a 180-degree working area and less than 38 ft. of boom
- A *Telescopic Boom—Swing Cab* crane that has a 360-degree working area and less than 30 ft. of boom

Test Site Coordinators are notified after submitting their Test Site Application and Data Sheet to NCCCO regarding the assignment of the short boom restriction. Test site plans (CADs) list the crane type as well the applicability of the short boom restriction.

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.

OVERHAUL BALL

The overhaul ball must satisfy OSHA and/or ASME requirements, be:

- Spherical in shape
- Smooth
- Constructed out of steel or iron
- 30–48 inches in circumference (9½–15 in. diameter)

and have:

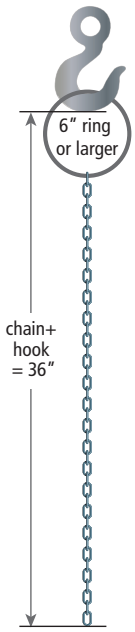
- A hook attached to the bottom of the ball
- A 2 in. wide horizontal line of contrasting color painted or taped around the center

If necessary, a second overhaul ball may be attached to the first, which shall be freely suspended. If a second overhaul ball is used for NCCCO testing, the second ball may only be used during Task 3: Ball in Barrels and it must be removed for all other tasks. The method of attachment must be a 3 ft. ***synthetic sling*** in a straight-line hitch or a 6 ft. ***synthetic sling*** in a basket hitch with a shackle attached to the top of the lower overhaul ball (Diagram, right; also see photo, page 29).

Rigging options for second overhaul ball

TASK CHAIN

A piece of 3/8- or 5/16-inch chain that can be quickly and easily attached and detached, painted orange or red, must be hung from the bottom center of the overhaul ball (recommend using a minimum 6-inch diameter ring). The length of the chain measured from the bottom of the hook must be 3 ft. (See diagram, right.)



Task Chain

REEVING

The test crane must be reeved with a single part line over the main boom point, auxiliary boom head, or jib point, if indicated on CAD. If a hook block is present on the crane, the crane must be equipped with an auxiliary boom head and the line used for testing must be reeved over the auxiliary boom head; otherwise the hook block must be removed.

JIBS AND OTHER ATTACHMENTS

Booms must have no erected jibs/extensions or auxiliary load lines/blocks, unless specifically authorized by NCCCO. However, stowed attachments (jibs, extensions, augers, personnel platforms) are permitted as long as an appropriate load chart with deductions is submitted and attachments are noted by the Test Site Coordinator on the Test Site Application & Data Sheet.

SETUP

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 NCCCO Test Site Layout (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's levelness 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, and other settings prior to the beginning of any testing. A representative of the 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.

TELESCOPING BOOM

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. If the crane is so equipped, the telescope function of the boom may be disabled during testing in lieu of the boom length being marked.

TEST WEIGHT RIGGING

The Test Weight rigging used to connect the Test Weight to the crane must meet the following criteria:

- Total rigging length 2–4 ft. (recommend length equals Test Weight diameter)
- Recommend two or three sling legs and use of bridle
- If using multiple leg slings, recommend 60 degree sling angles (minimum 30 degrees required)
- Can be easily attached and detached from the crane
- Meets current applicable industry standards

TEST WEIGHT

The weight of the crane's Test Weight (which must also include the weight of the overhaul ball and any ancillary equipment below the hook on the Mobile Crane) must be between 20 and 30 percent of the allowable line pull of the crane, when operating in low speed range. In cases where 20 percent of the crane's line pull exceeds 2,000 lb., the minimum permitted test weight will be lowered to 2,000 lb.

Note: Boom trucks and carry decks may have a different Test Weight range that is based on the machine capacity at the longest test radius.

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 Test Weight must:

- Be cylindrical in shape, with the same diameter top to bottom
- Have a continuously smooth surface from top to bottom
- Have a diameter between 2 ft. and 4 ft.
- Have a height no more than two times its diameter
- Be no more than 5 ft. high

If the Test Weight has feet attached, they may extend no more than 4 in. below the bottom of the Test Weight.

NOTE: 55-gallon drums do not meet NCCCO Test Weight requirements and MAY NOT be used.

See diagrams for example of a suitable Test Weight.

Attached to the bottom center of the Test Weight must be a 3 ft. length of 3/8- or 5/16-inch chain, painted orange or red, measured from the lowest point of the Test Weight (including feet).

TEST WEIGHT CONSTRUCTION

As 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 NCCCO Test Weights.

Test Site Coordinators can determine how many pick points are used on the Test Weight.

NOTE: The picking/attachment points must be welded or attached to the inside of the Test Weight; however, picking ears may be mounted on the outside of the Test Weight as long as the bottoms of the ears are more than 3 ft. 6 in. from the bottom of the Test Weight.

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

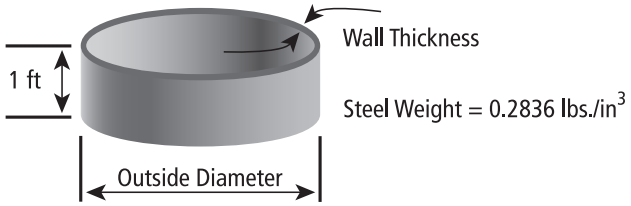
The charts and diagram below are provided for Test Sites selecting either of these two options.

The *Pipe Weight Thickness Chart* provides weights for given pipe wall thickness 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: Boom trucks and carry-decks may not have the capacity at the longest radius used for testing conditions to use the Test Weight range of 20 percent to 30 percent of the line pull. Verify with NCCCO the new Test Weight range before constructing a Test Weight for these machines. Also the weight of any attachment devices (e.g., rings, hooks) 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 used. 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 applicable industry standards.

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 lb.	95 lb.	126 lb.	186 lb.
2′6″	80 lb.	119 lb.	158 lb.	235 lb.
3′0″	96 lb.	143 lb.	190 lb.	283 lb.
3′6″	112 lb.	167 lb.	222 lb.	331 lb.
4′0″	128 lb.	191 lb.	254 lb.	379 lb.

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

Example: Pipe weight for a 4 ft. diameter × ¾ in. wall thickness pipe × 4½ ft. high *= 379 lb. × 4½ ft. = 1,706 lb.*

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 lb.	1,178 lb.	1,413 lb.	1,649 lb.	1,885 lb.	2,120 lb.	2,356 lb.
2′6″	1,472 lb.	1,840 lb.	2,209 lb.	2,577 lb.	2,945 lb.	3,313 lb.	3,681 lb.
3′0″	2,120 lb.	2,650 lb.	3,180 lb.	3,711 lb.	4,241 lb.	4,771 lb.	5,301 lb.
3′6″	2,886 lb.	3,607 lb.	4,329 lb.	5,051 lb.	5,772 lb.	6,494 lb.	7,218 lb.
4′0″	3,768 lb.	4,710 lb.	5,652 lb.	6,594 lb.	7,536 lb.	8,478 lb.	9,420 lb.

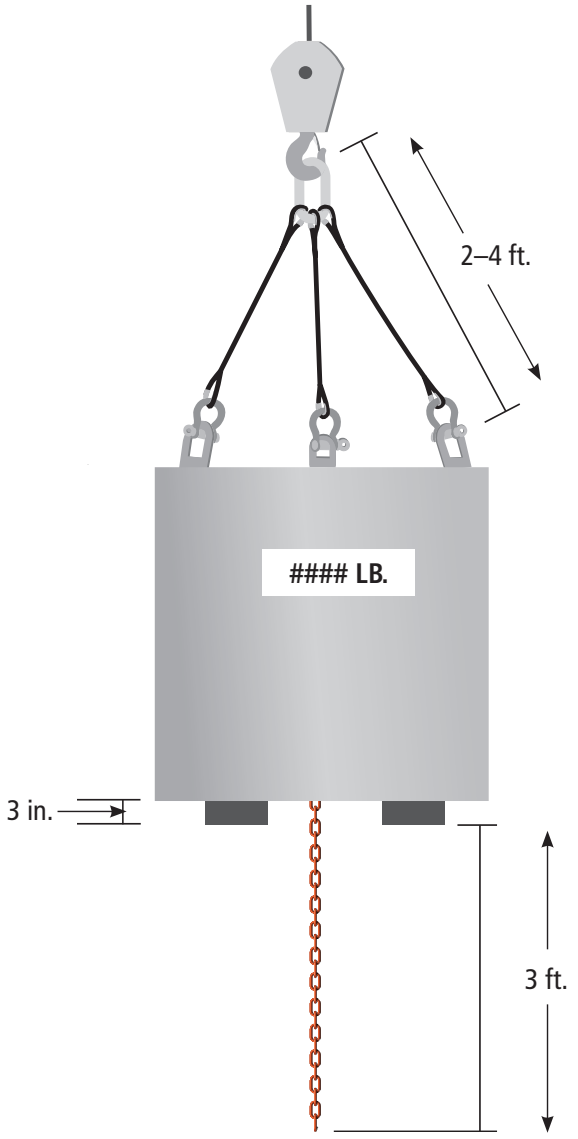
Concrete weights were calculated by using 4050 lb./yd.^{3} or 150 lb./ft.^{3} of concrete.

RECOMMENDED TEST WEIGHT DESIGN

NCCCO has some recommendations for construction of Test Weights suitable for use in CCO mobile crane Practical Exams. The Test Weight should have three attachment points, and the rigging should measure 2–4 ft. from load-bearing point to load-bearing point. The weight of the Test Weight should be adjustable, so additional weight can be added, as necessary. The chain should attach from the top and run through a tube to come out through the bottom. Finally, there should be four 3 in. tall rubber feet on the bottom of the Test Weight.

NOTE: Mobile Crane Test Weight parameters (e.g., diameter, height, weight) vary based on crane type, boom length, and capacities; for more information on the exact Test Weight requirements for the selected test crane, contact NCCCO's Western Regional office at (801) 363-2693.

TYPICAL TEST WEIGHT CONSTRUCTION



RECOMMENDED TEST WEIGHT CONSTRUCTION

Ready Reference Checklist

PRACTICAL EXAMINATION—MOBILE CRANES

YOU WILL NEED A MOBILE CRANE IN AT LEAST ONE OF THE FOLLOWING CATEGORIES:

- ❒ Lattice Boom Crane (truck or crawler)
- ❒ Telescopic Boom Crane—Fixed Cab
- ❒ Telescopic Boom Crane—Swing Cab

THE FOLLOWING IS REQUIRED FOR *EACH* CRANE:

- ❒ A cylindrical Test Weight, diameter 2 ft. to 4 ft., weight (including rigging, overhaul ball, and any ancillary equipment hanging below the hook) to be calculated at 20 to 30 percent of maximum permissible single line pull for the crane as configured (in cases where 20 percent of the crane's line pull exceeds 2,000 lb., the minimum permitted test weight will be lowered to 2,000 lb.); weight verified by a weight ticket, crane's load indicating device (LMI, RCI, RCL), or other type of certification documenting the actual load weight available to the Examiner
  NOTE: 55-gallon drums do not meet NCCCO Test Weight requirements and MAY NOT be used.
- ❒ If a hook block is present on the crane, the crane must be equipped with an auxiliary boom head and the line used for testing must be reeved over the auxiliary boom head; otherwise the hook block must be removed
- ❒ Two lengths of 3/8-inch or 5/16-inch chain, painted orange or red, each 3 ft. long (± one chain link); one attaches to the crane hook (recommend using a 6-inch minimum diameter ring) and is measured from the bottom of the crane hook; the other is measured from the lowest point of the Test Weight (including feet)
- ❒ Overhaul ball, spherical in shape, smooth, constructed out of steel or iron, 30–48 in. circumference (9½–15 in. diameter), with a hook attached to the bottom of the ball and a 2 in. wide horizontal line of contrasting color painted or taped around the center. The overhaul ball must satisfy OSHA and/or ASME requirements.
- ❒ Test Weight rigging is 2–4 ft. in length (load-bearing point to load-bearing point); if using multiple sling legs, recommend 60 degree sling angles (minimum 30 degrees required)
- ❒ Picking ears are mounted inside the Test Weight, or if mounted on the outside of the Test Weight the bottom of ears are at least 3 ft. 6" above the bottom of the weight
- ❒ Two empty steel drums approximately 22 in. outside diameter and 34 in. high (e.g., 55-gallon drum), open at one end
- ❒ ***For lattice boom crane only:*** 40 lb. of non-permeable ballast for ballasting the barrels (20 lb. each)
- ❒ PVC pipe, white, 1½ in. (SCH 40), sufficient to make 42 three-foot-long poles
- ❒ Two 4 ft. × 4 ft. sheets of ¾-inch CDX-grade (or better) plywood, placed under barrels and secured or weighted as necessary to prevent movement
- ❒ ¾-inch, CDX-grade (or better) plywood or high density polyethylene (HDPE)*, sufficient to create 42 pole bases, 1½ in. (±½ in.) × 12 in. × 12 in. (nominal)
- ❒ 42 tennis balls
- ❒ 42 ft. of nylon string, to attach tennis balls to poles (optional)
- ❒ 84 1¼-inch 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) ***NOTE: Chalk line may NOT be used***
- ❒ Spirit level to verify levelness (minimum 2 ft. length)
- ❒ Paint (orange or red) for painting the tops of the poles and chain ***NOTE: Red tape may be used for the poles***
- ❒ Paint of contrasting color for identifying the barrels, marking the overhaul ball, and circles
- ❒ Handheld wind speed indicator (anemometer)
- ❒ Two 100 ft. tape measures and one 30 ft. steel tape
- ❒ Stopwatches and clipboards for Examiner(s) and Proctor(s)

*EQUIPMENT SOURCES

NCCCO does not endorse or recommend specific vendors of any equipment, but the following sources may be helpful in finding required materials and equipment:

- ***HDPE bases:*** House of Plastics (part number HOP01-055), 2580 S. Orange Blossom Trail, Orlando, FL 32805, 407-843-3290, plastics@hopu.com

Site Report
PRACTICAL EXAMINATION—MOBILE CRANES

NCCCO has established specific conditions and guidelines that each Practical Examination Test Site must adhere to. This *Site Report* is designed to ensure that 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 NCCCO Test Site Layout (CAD). The Examiner must also conduct a visual inspection of the crane for proper setup prior to testing any applicant. This *Site Report* must be presented on demand to any Practical Test Auditor.

Please type or print neatly.

TEST SITE	DATE

NAME OF TEST SITE COORDINATOR

CRANE TYPE: ❒ LATTICE BOOM TRUCK ❒ LATTICE BOOM CRAWLER ❒ TELESCOPIC BOOM—SWING CAB ❒ TELESCOPIC BOOM—FIXED CAB

Check the following items for compliance:

PRE-TEST CANDIDATE BRIEFING AREA

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

- ❒ Sufficient tables and chairs to seat all candidates for the Pre-Test Briefing
- ❒ A DVD player and television or computer for candidates to watch the CCO Practical Exam video
- ❒ A location so that waiting candidates are unable to observe other candidates being tested, at least 50 ft. from any crane's farthest testing radius

Candidate materials available:

- ❒ A written description of the examination *(NCCCO Mobile Crane Operator Candidate Handbook)*
- ❒ A plan view of the Test Site Layout (CAD)
- ❒ Operator's manual(s) and load chart(s) for all cranes that will be used for testing
- ❒ 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 SETUP

- ❒ Entire course is level within five percent of true level
- ❒ Zigzag Corridor has no more than a 6 in. maximum change in elevation
- ❒ Zigzag Corridor set up on asphalt, concrete surface, or firm and compacted sand, dirt, or gravel (free of vegetation), with a sufficiently uniform surface to permit the poles to stand vertical and slide freely; *grass surfaces are not acceptable*
- ❒ Free of debris, stored materials, surface irregularities, or hazards that could interfere with test maneuvers
- ❒ No obstructions are within 5 ft. of the test course in any direction

Using the Test Site Layout (CAD), verify the following measurements:

- ❒ Distance from the center of rotation of the crane to the Starting Point
- ❒ Distance from the center of rotation of the crane to the center of Barrel #1 (± 1 in.)
- ❒ Distance from the center of rotation of the crane to the center of the Stop Circle (± 1 in.)
- ❒ Distance from the center of rotation of the crane to the center of the Test Weight Circle (± 2 in.)
- ❒ Distance from the center of rotation of the crane to the center of Barrel #2 (± 1 in.)
- ❒ Distance from the centerline of the crane to the second leg of the Zigzag Corridor (± 1 in.)
- ❒ Distance from the centerline of the crane to the first leg of the Zigzag Corridor (± 1 in.)
- ❒ Length of all six sides of the Zigzag Corridor (± ½ in.)
- ❒ Width of the Zigzag Corridor (± ½ in.)
- ❒ Distance between consecutive poles (2 ft. ± ½ in.)

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

Test Site #: _____

BARRELS

- ❒ Two empty steel drums, approximately 22 in. diameter and 34 in. tall (e.g., 55-gallon drums), open at one end
- ❒ Identified as ***No. 1*** and ***No. 2*** in numerals large enough to be clearly seen from the operator's cab
- ❒ ***For Lattice Boom Cranes only***, barrels are weighted with 20 lb. of ballast, evenly distributed in the base, 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 2 in. wide circle line (with a maximum width of 2¼ in.) painted around the outline of the barrel
- ❒ Each placed on a 4 ft. × 4 ft. sheet of ¾-inch CDX-grade (or better) plywood.
- ❒ Secured and weighted as necessary to prevent movement
- ❒ A spare barrel is available

POLES

- ❒ 42 poles made of 1½-inch, white PVC pipe (SCH 40), each 3 ft. long; ball on each pole (one inside splice per 3 ft. pole permitted; outside splices of PVC pipes NOT permitted; see page 18 for illustration)
- ❒ Top 12 in. painted or taped orange or red
- ❒ Mounted to a platform made of two layers of ¾-inch, CDX-grade (or better) plywood or high density polyethylene (HDPE), cut 12 in. square
- ❒ A taut, longitudinal string line placed on the ground under the centerline of each pole base. A cut concrete line may be used in lieu of a string line; no other materials are acceptable.
- ❒ Spare poles and bases available

DESIGNATED AREAS

- ❒ Starting Point is in line with the centerline of the crane and due left of the Test Weight Circle
- ❒ Stop Circle has a 6 ft. 4 in. outside diameter (within a permitted tolerance of ± ½ in.), with a clearly marked inside line at least 2 in. wide and located per the Test Site Layout (CAD)
- ❒ Test Weight Circle has a 6 ft. 4 in. outside diameter (within a permitted tolerance of ±½ in.), with a clearly marked inside line at least 2 in. wide and located per the Test Site Layout (CAD)
- ❒ If marking circles, designated areas, or other parts of a course on plywood or mats, the borders must be marked with materials with a flat, uniform surface and a lip variance not to exceed 3/4 in. Any materials used may not interfere with the free movement of the pole bases.

CRANE SELECTION AND SETUP

- ❒ Crane as identified in the Test Site Layout (CAD)

TEST CRANE

- ❒ This crane has a current annual inspection with supporting documentation.
- ❒ Crane is set up on fully extended outriggers/stabilizers unless otherwise noted on the CAD drawing.
- ❒ 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 Layout (CAD)
- ❒ If applicable, the telescopic boom is extended to the designated length and marked in a manner that is clearly visible by the Examiner from the ground to see if the boom is telescoped during the test; if the crane is so equipped, the telescope function of the boom may be disabled during testing in lieu of the boom length being marked.

OVERHAUL BALL

- ❒ Spherical in shape, smooth, constructed out of steel or iron, 30–48 in. circumference (9½–15 in. diameter), with a hook attached to the bottom of the ball and a 2 in. wide horizontal line of contrasting color, painted or taped around its center. The overhaul ball must satisfy OSHA and/or ASME requirements.
- ❒ If a second overhaul ball is used (only permitted for Task 3), a 3 ft. *synthetic sling* with an straight-line hitch or a 6 ft. *synthetic sling* in a basket hitch with a shackle attached to the top of the lower overhaul ball must be used.
- ❒ A length of 3/8-inch or 5/16-inch chain that can be quickly and easily attached and detached and is:
  - ❒ Painted orange or red to enable candidate to see the chain
  - ❒ Attached to bottom center of overhaul ball (recommend using a minimum 6-inch diameter ring)
  - ❒ 36 in. long, measured from bottom of hook (± one chain link)

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

Test Site #: _____

TEST WEIGHT

- ❒ Weight as indicated in Test Site Layout (CAD)
- ❒ Verified by a weight ticket, crane's load indicating device (LMI, RCI, RCL), or other type of certification documenting the actual load weight available to the Examiner
- ❒ Cylindrical in shape with no protruding edges
- ❒ The diameter of the Test Weight is between 2 ft. and 4 ft. (same diameter from top to bottom)
  NOTE: 55-gallon drums DO NOT meet NCCCO Test Weight requirements and MAY NOT be used.
- ❒ Height is no more than two times its diameter and in any case does not exceed 5 ft. in height
- ❒ Picking ears are mounted inside the Test Weight, or if mounted on the outside of the Test Weight the bottom of ears are at least 3 ft. 6" above the bottom of the weight
- ❒ Method of attachment: Test Weight rigging is 2–4 ft. in length (load-bearing point to load-bearing point); if using multiple sling legs, recommend 60 degree sling angles (minimum 30 degrees required)
- ❒ A 36 in. length of 3/8-inch or 5/16-inch chain (± one chain link)
  NOTE: To measure the chain length, attach the Test Weight to the crane hook. Raise the Test Weight until the chain barely touches the ground and measure from the lowest point of Test Weight (including feet) to ground.
  - ❒ Chain is painted orange or red to enable the candidate to see the chain
  - ❒ Chain extends from bottom center of the Test Weight
- ❒ If the Test Weight has feet attached, they do not extend more than 4 in. below the bottom of the Test Weight

REEVING

- ❒ The test crane is reeved with a single part line over the main boom point (or jib, if used)
- ❒ If a hook block is present on the crane, the crane must be equipped with an auxiliary boom head and the line used for testing must be reeved over the auxiliary boom head; otherwise the hook block must be removed

JIBS

- ❒ Boom has no erected jib or extensions or auxiliary load line/blocks (stowed jibs/extensions are permitted), unless otherwise indicated in the Test Site Layout (CAD)

BLOCKING

- ❒ Matting or cribbing installed, as necessary, to provide a sound foundation for the crane

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, and other settings 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 used. Any specially fabricated structural components that are part of the load-supporting system must be designed and fabricated in accordance with the requirements of current applicable industry standards.

TEST COURSE SETUP

- ❒ The Practical Examiner whose signature appears at the end of this Site Report attests that he/she has set up the course *(Check only if the Practical Examiner has set up the test course.)*
- ❒ The Examiner must have the following items for conducting the Practical Exam:
  - ❒ *Two stopwatches*
  - ❒ *Clip board*
  - ❒ *Anemometer (wind meter)*
  - ❒ *Pen or pencil*
  - ❒ *Spirit level (2 ft. minimum)*
  - ❒ *Two 100 ft. measuring tapes*
  - ❒ *Test Site Layout (CAD)*
  - ❒ *Proctor*
  - ❒ *Verbatim instructions*
  - ❒ *Notification of test email (new Test Sites, if applicable)*
  - ❒ *Personal protective equipment (hard hats, work boots)*
  - ❒ *30 ft. measuring tape*

Deviations from the above-noted requirements are not allowed without written consent from the NCCCO Western Regional Office.

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

Test Site #: _____

PRACTICAL EXAMINER ATTESTATION *(Examiner signature required.)*

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:

NCCCO—Testing Services Department
1960 Bayshore Blvd.
Dunedin, Florida 34698

Phone: 727-449-8525
Fax: 727-461-2746
Email: info@nccco.org

Service Truck Crane Operator Program
PRACTICAL EXAMINATION

- Test Site Application
- Photographs
- Test Site Setup
- Sample Test Site Layout (CAD)
- Test Site Layout Instructions
- Crane Selection and Setup
- Ready Reference Checklist
- Site Report
- Crane Report
- Sample Completed Crane Report

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Test Site Application

PRACTICAL EXAMINATION—SERVICE TRUCK CRANE OPERATOR

Please type or print neatly.

HOST COMPANY REPRESENTATIVE | TEST SITE NUMBER

HOST COMPANY NAME | COMPANY REP EMAIL

HOST COMPANY MAILING ADDRESS

CITY | STATE | ZIP | COUNTRY

COMPANY REP OFFICE PHONE | COMPANY REP MOBILE PHONE

❒ This is a Secure Test Site. (Submit completed Security Requirements Report.)

TEST SITE ADDRESS (Physical address of where the crane(s) will be set up; P.O. Boxes not acceptable)

CITY | STATE | ZIP | COUNTRY

CHECK BOXES AS APPROPRIATE

❒ $50 Site Fee for _____ (year) enclosed ❒ $50 Site Fee for _____ (year) already paid ❒ This is my first test administration

TEST SITE COORDINATOR NAME | TEST SITE COORDINATOR PHONE

TEST SITE COORDINATOR EMAIL

PRACTICAL EXAMINER NAME | PRACTICAL EXAMINER EMAIL

The Test Site Coordinator or Company Representative 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 current ASME B30 standard
2. Verification that candidate's application for the Practical Exam is complete
3. Abiding by NCCCO Practical Test Site Audit requirements

SIGNATURE | DATE

METHOD OF PAYMENT FOR TEST SITE FEE

Do not send cash.

❒ VISA ❒ MasterCard ❒ AMERICAN EXPRESS ❒ Personal check enclosed ❒ Employer check enclosed ❒ Money order enclosed *Please do not staple your check or money order.*

If paying by credit card, please complete the following information:

CREDIT CARD NUMBER | EXPIRATION DATE

NAME (Print as it appears on card) | SIGNATURE (on card) | SECURITY CODE*

* Three- or four-digit code located on the card.

Email credit card receipt to: _____

Checks and money orders should be payable to: NCCCO

Please send application and payments to:

National Commission for the Certification of Crane Operators
Western Regional Office
5250 S. Commerce Drive, Suite 100, Murray, Utah 84107
Phone: 801-363-2693 / Fax: 801-363-3806 / Email: ejones@nccco.org

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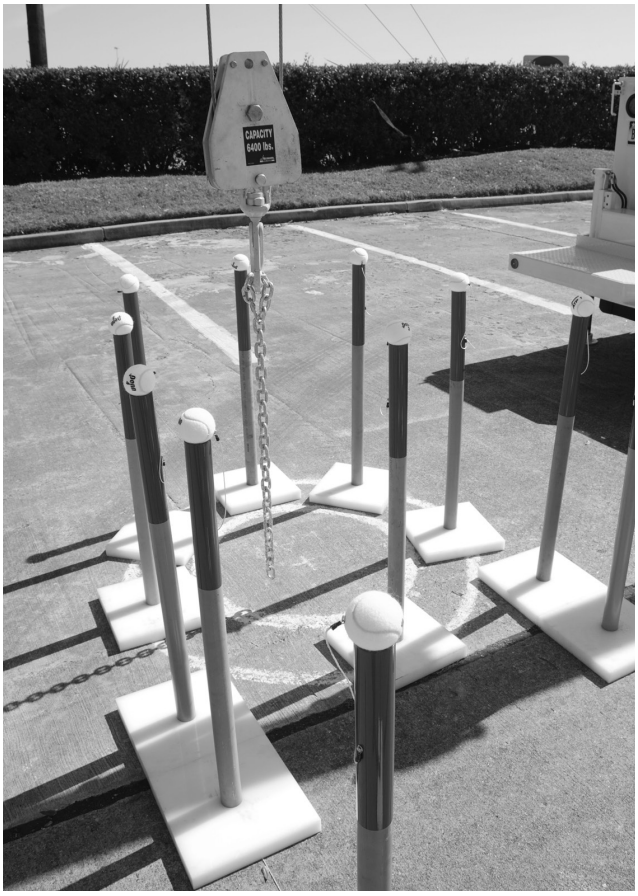
Photographs

SERVICE TRUCK CRANE OPERATOR PROGRAM

COURSE EQUIPMENT

All Test Site and crane equipment must be clearly marked in accordance with NCCCO requirements.



Block, Chain, and Corridor Poles

TEST WEIGHT

One example of a suitable Test Weight is this 24 in. piece of 24 in. diameter pipe.

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 current applicable industry standards.

Test Weight and Rigging

Photographs (Cont'd)

SERVICE TRUCK CRANE OPERATOR PROGRAM

MEASURING THE CORRIDOR AND CIRCLES

All elements of the Test Site must be laid out in accordance with the Test Site Setup instructions and Test Site Layout (CAD). The Test Site Coordinator is responsible for carefully checking all dimensions prior to the arrival of the Practical Examiner.

Measuring Corridor Length

Measuring Corridor Width

Measuring Circle Diameter

Test Site Setup

SERVICE TRUCK CRANE OPERATOR PROGRAM

PRE-TEST CANDIDATE BRIEFING AREA

This area must be located so that waiting candidates are unable to observe testing procedures and at least 50 ft. from any crane's farthest testing radius. It must be provided with:

- NCCCO candidate instruction materials, including a written description of the examination *(Candidate Handbook)* and copies of the Test Site Layouts (CADs)
- Operator's manual and load chart for the crane to be tested on
- A DVD player and television or computer for candidates to watch the CCO Practical Exam video (up to 24 hours before the Practical Exam)
- A suitable setting for the Pre-Test Briefing of exam candidates, to include:
  - — Sufficient space for the candidates for the Pre-Test Briefing
  - — Quiet, well-lit surroundings with a comfortable temperature
  - — Access to water (bottled or potable water)
  - — Easy access to rest rooms (porta-potties are acceptable)
  - — Large signs posted prominently to make candidates aware of the location of the test

ZIGZAG CORRIDOR

The Zigzag Corridor is composed of a PVC-pole barrier with a tennis ball placed on top of each pole. A taught, longitudinal string must placed on the ground through the centerline of each pole base; a cut concrete line may be used in lieu of a string line.

POLES

The PVC-pole barrier poles must be constructed of 1½-inch white PVC pipe (SCH 40), each 36 in. long, painted orange or red on the top 12 in. (see illustration, page 10). The number of poles required depends upon which Test Site Layout (CAD) will be used for testing. For STC #1, 32 poles are required; for STC #2, 42 poles are required.

The poles must be mounted to a pole base made of two layers of ¾-inch, 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 lb. (±10%)
- Nominal dimensions: 12 in. × 12 in. × 1½ in. (±½ in. thick)

The weight must be spread evenly across the base. Pole bases may be coated with a protective finish, if desired, as long as they continue to meet the stated design and construction parameters.

Pole bases must be placed as indicated on the Test Site Layout (CAD). A taut, brightly colored string line must be placed on the ground under 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 poles by means of 12 in. long nylon string. The string must be attached between 2 in. and 8 in. from the top of the pole and to the tennis ball.

During the test, the string loops must face towards the outside of the corridor to avoid the string being snagged on the Test Weight. 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.

DESIGNATED AREAS

All designated areas must have outside dimensions as stated on the Test Site Layout (CAD) with a clearly marked inside line at least 2 in. wide and they must be located per the CAD. The suggested method of marking the designated areas is with thin, durable rubber mats that secure to the ground and are of a color that contrasts distinctly with the ground surface.

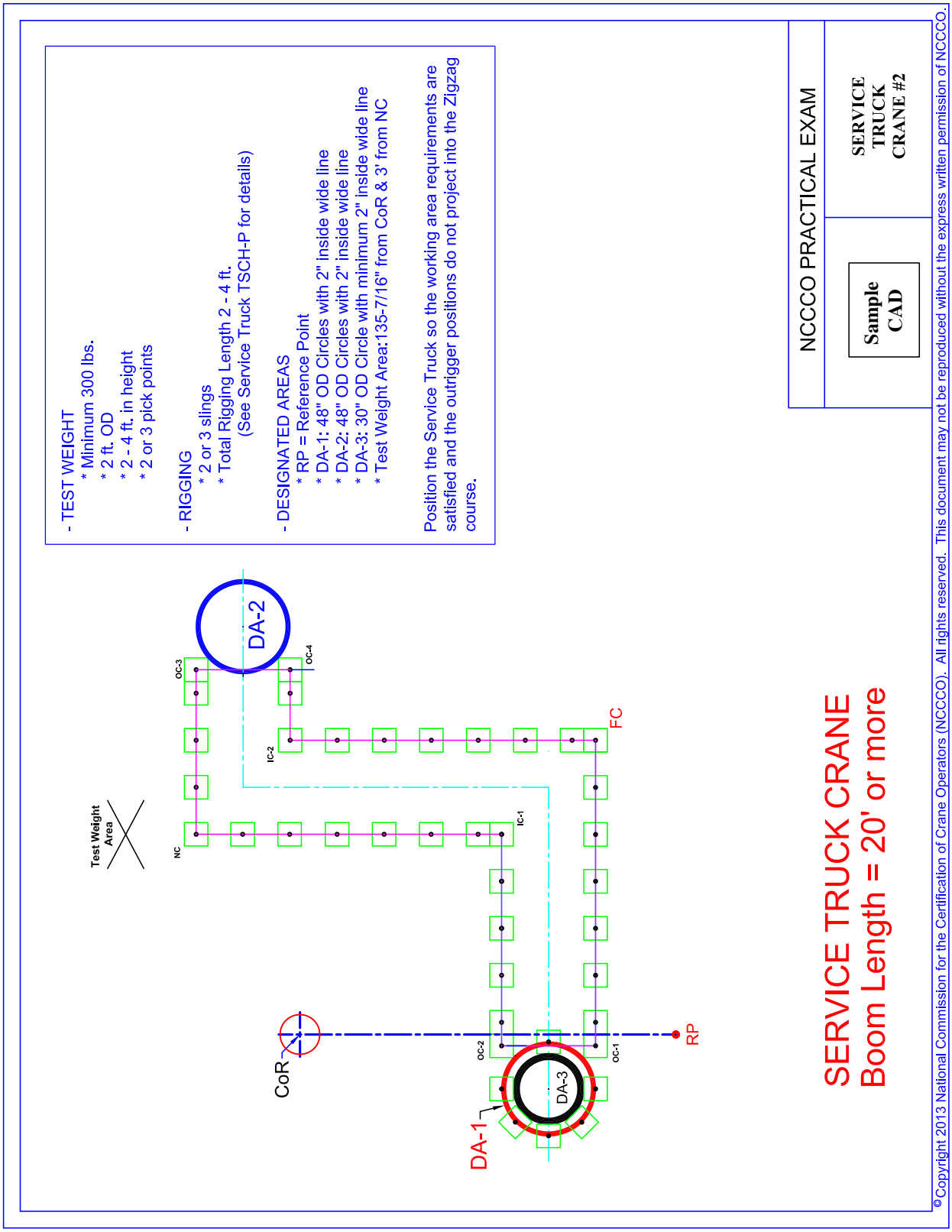
If marking circles, designated areas, or other parts of a course on plywood or mats, the borders must be marked with materials with a flat, uniform surface and a lip variance not to exceed 3/4 in. Any materials used may not interfere with the free movement of the pole bases.

LEVEL

All parts of the Test Site must be within five percent of true level and free of debris, stored materials, surface irregularities, or hazards such as overhead power lines that could interfere with test maneuvers. No obstructions may be within 5 ft. of a practical test course in any direction.

Sample Test Site Layout (CAD)

SERVICE TRUCK CRANE OPERATOR PROGRAM



Crane Selection and Setup

SERVICE TRUCK CRANE OPERATOR PROGRAM

SERVICE TRUCK CRANE SELECTION

Service truck cranes used for testing must meet the following criteria:

- Must have a minimum boom radius of 14 ft.
- Recommended minimum test area: 30 ft. × 30 ft.

Because of duty cycle limitations on service truck cranes, high volumes of testing during short time period may tax the performance of certain service truck cranes. Test Site Coordinators should consider the limitations for certain models of service truck cranes when selecting cranes to be used for testing.

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. This includes all applicable inspection requirements.

REEVING

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

JIBS

Booms must have no erected jibs/extensions (manual extensions permitted) or auxiliary load lines, unless specifically authorized by NCCCO.

SETUP

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 NCCCO Test Site Layout (CAD) drawing.

All outriggers/stabilizers must be fully extended and set. This includes all front and rear outriggers/stabilizers if so equipped.

BLOCKING

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

REMOTE CONTROLS

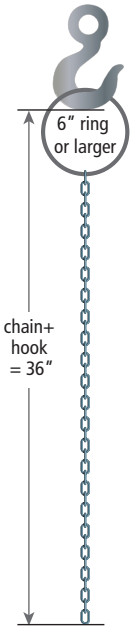
Service Truck Cranes typically use either remote or pendant controls. For remote controls, ensure batteries are fully charged and enough extra batteries are available to complete all scheduled tests.

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, and other settings prior to the beginning of any testing. A representative of the 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.

TASK CHAIN

For Task 2, a piece of 3/8- or 5/16-inch chain, painted orange or red, is required; recommend using a minimum 6-inch diameter ring on one end so that it can be quickly and easily attached to and detached from the load hook. The length of the chain measured from the bottom of the hook must be 3 ft. (See diagram, right.)

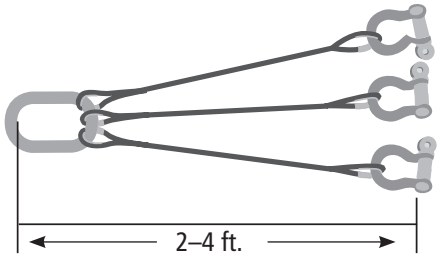


Task Chain

TEST WEIGHT RIGGING

The Test Weight rigging used to connect the Test Weight to the crane must meet the following criteria:

- Total rigging length 2–4 ft. (2 ft. recommended); total rigging length is measured from load-bearing point to load-bearing point
- Two or three sling legs
- Recommend use of bridle
- Recommend sling angles of 60 degrees (minimum 30 degrees required)
- Can be easily attached and detached from the crane
- Meets current applicable industry standards



TEST WEIGHT

The gross load (which includes the weight of the Test Weight and any rigging and ancillary equipment on the crane) must not exceed 75 percent of the rated capacity at the farthest radius indicated on the Test Site Layout (CAD).

Crane Selection and Setup (Cont'd)

SERVICE TRUCK CRANE OPERATOR PROGRAM

These weights must be verified by a weight ticket, crane's load indicating device (LMI, RCI, RCL), or other type of certification documenting the actual load weight. This document must be available to the Examiner. The Test Weight must:

- Weigh a minimum 300 lb.
- Be cylindrical in shape, with the same diameter top to bottom
- Have a continuously smooth surface from top to bottom
- Have a diameter of 2 ft.
- Have a height between 2 ft. and 4 ft., including feet (2 ft. recommended)
- Have two or three attachment points on inside top of the Test Weight

If the Test Weight has feet attached, they may extend no more than 4 in. below the bottom of the Test Weight.

NOTE: 55-gallon drums do not meet NCCCO Test Weight requirements and MAY NOT be used.

See diagrams for example of a suitable Test Weight.

Extending from the bottom center of the Test Weight must be a 3 ft. length of 3/8-inch or 5/16-inch chain, painted orange or red, measured from the lowest point of the Test Weight (including feet).

TEST WEIGHT CONSTRUCTION

As 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 NCCCO Test Weights. Test Site Coordinators may determine how many pick points are used on the Test Weight.

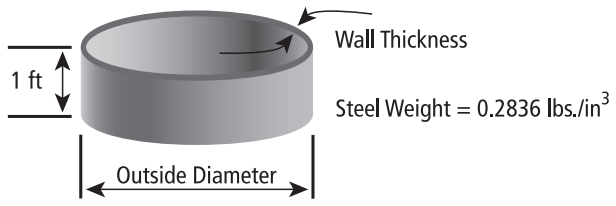
NOTE: The picking/attachment points should be welded or attached to the inside of the Test Weight; however, picking ears may be mounted on the outside of the Test Weight as long as the bottoms of the ears are more than 3 ft. 6 in. from the bottom of the Test Weight.

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

The charts and diagram below are provided for Test Sites selecting either of these two options. The *Pipe Weight Thickness Chart* provides weights for given pipe wall thickness 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.

All load-supporting components must be assembled in accordance with proper rigging practice and working load limits for the hardware used. 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 applicable industry standards.

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 lb.	95 lb.	126 lb.	186 lb.

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

Example: Pipe weight for a 4 ft. diameter × ¾ in. wall thickness pipe × 4½ ft. high *= 379 lb. × 4½ ft. = 1,706 lb.*

CONCRETE WEIGHT CHART

DIAMETER	CONCRETE HEIGHT IN TEST WEIGHT 2′0″	2′6″	3′0″	3′6″	4′0″
2′0″	942 lb.	1,178 lb.	1,413 lb.	1,649 lb.	1,885 lb.

Concrete weights were calculated by using 4050 lb./yd.^{3} or 150 lb./ft.^{3} of concrete.

Crane Selection and Setup (Cont'd)

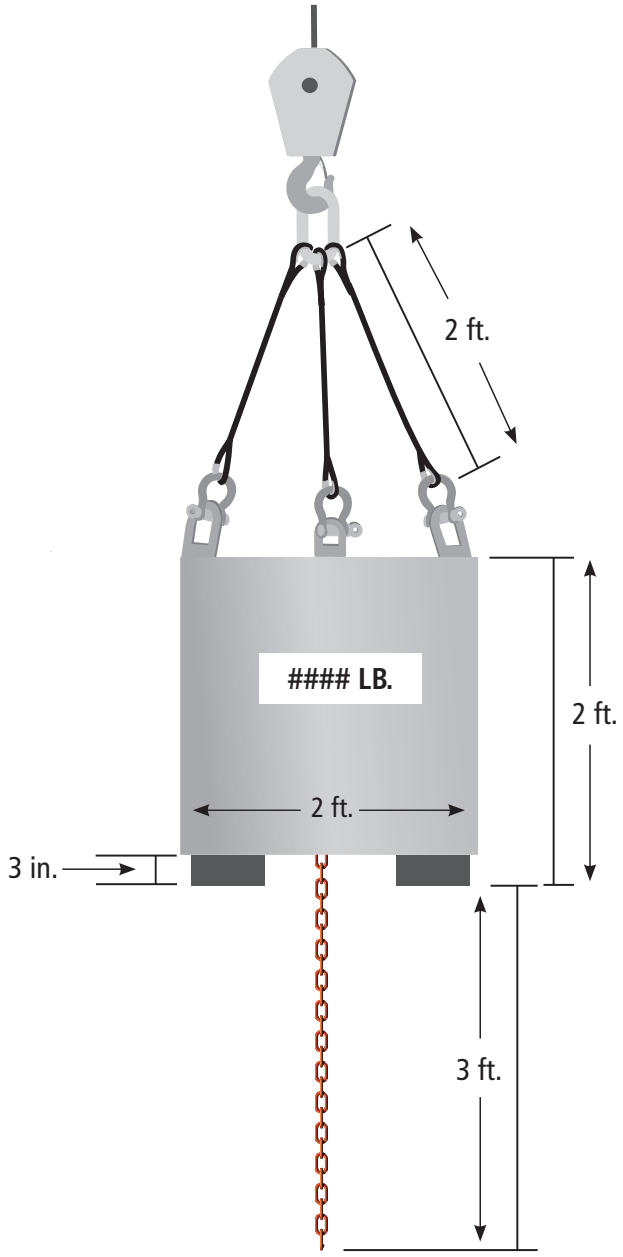
SERVICE TRUCK CRANE OPERATOR PROGRAM

RECOMMENDED TEST WEIGHT DESIGN

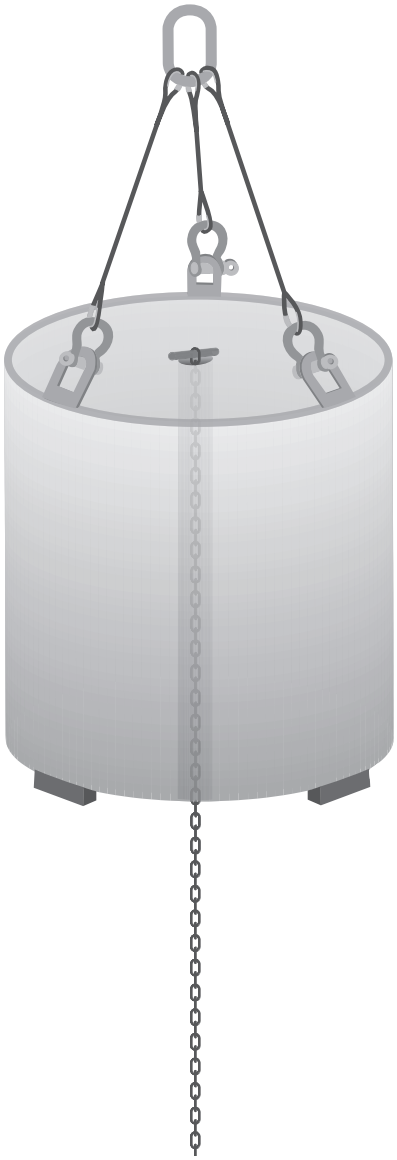
NCCCO has some recommendations for construction of Test Weights suitable for use in CCO service truck crane Practical Exams. The Test Weight should be 2 ft. in diameter and have two or three attachment points. The total length of the rigging should measure 2–4 ft. from load-bearing point to load-bearing point (2 ft. recommended).

The chain should attach from the top and run through a tube to come out through the bottom. The weight of the Test Weight should be adjustable, so additional weight can be added, as necessary. There should be four 3 in. tall rubber feet on the bottom of the Test Weight. When possible, the Test Weight should be 2 ft. high to increase working clearance between the anti–two block device and the ground.

TYPICAL TEST WEIGHT CONSTRUCTION



RECOMMENDED TEST WEIGHT CONSTRUCTION



Ready Reference Checklist

PRACTICAL EXAMINATION—SERVICE TRUCK CRANES

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

- ❒ A Test Weight of minimum 300 lb. (including rigging), cylindrical in shape, 2 ft. in diameter, and when possible limited to 2 ft. in height to prevent two-blocking; weight verified by a weight ticket, crane's load indicating device (LMI, RCI, RCL), or other type of certification documenting the actual load weight available to the Examiner
- ❒ Length of 3/8- or 5/16-inch chain, orange or red, measuring 3 ft. long from the bottom center of the Test Weight
- ❒ Picking ears are mounted inside the Test Weight, or if mounted on the outside of the Test Weight the bottom of ears are at least 3 ft. 6 in. above the bottom of the weight
- ❒ Test Weight rigging is 2–4 ft. in length (load-bearing point to load-bearing point); if using multiple sling legs, recommend 60 degree sling angles (minimum 30 degrees required)
- ❒ 36 in. length of 3/8- or 5/16-inch chain, painted orange or red (recommend using a minimum 6-inch diameter ring on one end so that it can easily be attached to the load hook for Task 2); chain length measured from bottom of load hook
- ❒ PVC pipe, white, 1½ in. (SCH 40), sufficient to make 30 (+2) three-foot-long poles for STC #1 or 40 (+2) three-foot-long poles for STC#2
- ❒ ¾-inch, CDX-grade (or better) plywood or high density polyethylene (HDPE)*, sufficient to create 30 pole bases for STC #1 or 40 pole bases for STC #2, each 1½ in. (± ½ in.) × 12 in. × 12 in. (nominal)
- ❒ 30 (+3) tennis balls for STC #1 or 40 (+3) tennis balls for STC #2
- ❒ 30 (+3) feet of nylon string for STC #1 or 40 (+3) feet of nylon string for STC #2, to attach tennis balls to poles (optional)
- ❒ 60 (+6) 1¼-inch, zinc-plated (galvanized) screws or equivalent to secure nylon string to tennis balls and poles for STC #1 or 80 (+6) 1¼-inch screws for STC #2 (optional)
- ❒ 300 ft. string line, brightly colored (for Corridor and Test Site Layout use) ***NOTE: chalk line may NOT be used***
- ❒ Spirit level to verify levelness (minimum 1 ft. length)
- ❒ Paint (orange or red) for painting the tops of the poles and chain ***NOTE: colored tape may be used for the poles***
- ❒ Thin rubber mats or paint of contrasting color to mark the circular Designated Areas
- ❒ Handheld wind speed indicator (anemometer)
- ❒ Two 30 ft. tape measures (minimum)
- ❒ Stopwatches and clipboards for Examiner(s) and Proctor(s)
- ❒ If using remote controls, sufficient batteries to conduct all Practical Exams

*EQUIPMENT SOURCES

NCCCO does not endorse or recommend specific vendors of any equipment, but the following source may help you find required materials and equipment:

- ***HDPE bases:*** House of Plastics (part number HOP01-055), 2580 S. Orange Blossom Trail, Orlando, FL 32805, 407-843-3290, plastics@hopu.com

Site Report

PRACTICAL EXAMINATION—SERVICE TRUCK CRANES

NCCCO 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 NCCCO Test Site Layout (CAD). The Examiner must also conduct a visual inspection of the service truck crane for proper setup prior to testing any applicant. This *Site Report* must be presented on demand to any Practical Test Auditor.

If using more than one course at this test site, please fill out a Site Report for each course.

Please type or print neatly.

TEST SITE	DATE

NAME OF TEST SITE COORDINATOR

Check the following items for compliance:

PRE-TEST CANDIDATE BRIEFING AREA

A suitable location for the Pre-Test Briefing of exam candidates, including:

- ❒ Sufficient tables and chairs to seat all candidates for the Pre-Test Briefing
- ❒ A DVD player and television or computer for candidates to watch the CCO Practical Exam presentation
- ❒ A location 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 (CAD)
- ❒ Operator's manual and load chart(s) for all service truck cranes that will be used for testing

TEST SITE SETUP

- ❒ Corridor has no more than a 6 in. maximum change in elevation
- ❒ Test Site is free of debris, stored materials, surface irregularities, or hazards such as overhead power lines that could interfere with test maneuvers
- ❒ Zigzag Corridor set up on asphalt, concrete surface, or firm and compacted sand, dirt, or gravel (free from vegetation) with a sufficiently uniform surface to permit the poles to stand vertical and slide freely; *grass surfaces are not acceptable*
- ❒ No obstructions are within 5 ft. of the test course in any direction

Using the Test Site Layout (CAD), verify the following measurements:

- ❒ Distance from the center of rotation (CoR) to the center of Designated Area 1 (DA-1) (± 1 in.)
- ❒ Distance from the CoR to the center of DA-2 (± 1 in.)
- ❒ Distance from DA-1 to DA-2 (± 1 in.)
- ❒ Distance from the CoR to the Far Corner (FC) (± 1 in.)
- ❒ Width of Corridor is 4 ft. (± ½ in.)
- ❒ Length of each outside leg of Corridor (± ½ in.)
- ❒ Length of each inside leg of Corridor (± ½ in.)
- ❒ Distance between consecutive poles (2 ft. ± ½ in. center-to-center)

SITE REPORT (CONT'D)
PRACTICAL EXAMINATION—SERVICE TRUCK CRANES

Test Site #: _____

PVC POLES

- ❒ ***STC #1***: 30 (+ 2 replacement) poles, made of 1½ in., white PVC pipe (SCH 40), each 36 in. long with top 12 in. painted or taped orange or red (one inside splice per 3 ft. pole permitted; outside splices of PVC pipes NOT permitted; see page 10 for illustration)
- ❒ ***STC #2***: 40 (+ 2 replacement) poles, made of 1½ in., white PVC pipe (SCH 40), each 36 in. long with top 12 in. painted or taped orange or red (one inside splice per 3 ft. pole permitted; outside splices of PVC pipes NOT permitted; see page 10 for illustration)
- ❒ Mounted to a platform made of two layers of ¾-inch, CDX-grade (or better) plywood or high density polyethylene (HDPE), cut into nominal 12 in. squares
- ❒ A taut, longitudinal string placed on the ground through the centerline of each pole base. A cut concrete line may be used in lieu of a string line; no other materials are acceptable.
- ❒ ***STC #1***: 30 (+ 3 replacement) tennis balls
- ❒ ***STC #2***: 40 (+ 3 replacement) tennis balls

DESIGNATED AREAS

- ❒ Clearly marked Center of Rotation
- ❒ DA-1 has an outside diameter of 4 ft. marked with a 2 in. wide line
- ❒ DA-2 has an outside diameter of 4 ft. marked with a minimum 2 in. wide line
- ❒ DA-3 has an outside diameter of 30 in. marked with a minimum 2 in. wide line
- ❒ If marking circles, designated areas, or other parts of a course on plywood or mats, the borders must be marked with materials with a flat, uniform surface and a lip variance not to exceed 3/4 in. Any materials used may not interfere with the free movement of the pole bases.

CHAIN FOR TASK 2

- ❒ 36 in. length of 3/8- or 5/16-inch chain, painted red or orange (recommend using a minimum 6-inch diameter ring on one end so that it can be easily attached to load hook); measure from bottom of load hook (36 in. +/- one chain link)

TEST WEIGHT

- ❒ Gross weight of minimum 300 lb., verified by a weight ticket, crane's load indicating device (LMI, RCI, RCL), or other type of certification documenting the actual load weight available to the Examiner
- ❒ Cylindrical in shape with no protruding edges
- ❒ The outside diameter of the Test Weight is 2 ft.
- ❒ Between 2 ft. and 4 ft. in overall height, including feet and attachment points (2 ft. recommended)
- ❒ Picking ears are mounted inside the Test Weight, or if mounted on the outside of the Test Weight the bottom of ears are at least 3 ft. 6 in. above the bottom of the weight
- ❒ Method of attachment: Test Weight rigging has two or three sling legs, 2–4 ft. in length (load-bearing point to load-bearing point); recommend 60 degree sling angles (minimum 30 degrees required)
- ❒ A length of 3/8- or 5/16-inch chain extending from the bottom center of the Test Weight
  To measure the chain length, attach the Test Weight to hook. Raise the Test Weight until the chain barely touches the ground and measure from the lowest edge of the Test Weight to the ground. ***This length must be 36 in.***
- ❒ Chain is painted orange or red

SITE REPORT (CONT'D)
PRACTICAL EXAMINATION—SERVICE TRUCK CRANES

Test Site #: _____

RIGGING (TEST WEIGHT)

❒ All load-supporting components must be assembled in accordance with proper rigging practice and working load limits for the hardware used. Any specially fabricated structural components that are part of the load-supporting system must be designed and fabricated in accordance with the requirements of current applicable industry standards.

TEST COURSE SETUP

❒ The Practical Examiner whose signature appears at the end of this Site Report attests that he/she has set up the course. (Check only if the Practical Examiner has set up the test course.)

❒ The Examiner must have the following items for conducting the Practical Exam:

- ❒ *Two stopwatches*
- ❒ *Clipboard*
- ❒ *Anemometer (wind meter)*
- ❒ *Pen*
- ❒ *Spirit or digital level*
- ❒ *Test Site Layout (CAD)*
- ❒ *Proctor*
- ❒ *Verbatim instructions*
- ❒ *Notification of test email (new test sites if applicable)*
- ❒ *Personal protective equipment*
- ❒ *2 measuring tapes (30 ft. minimum)*

Deviations from the above-noted requirements are not allowed without written consent from the NCCCO Western Regional Office.

PRACTICAL EXAMINER ATTESTATION *(Examiner signature required.)*

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:

NCCCO—Testing Services Department
1960 Bayshore Blvd.
Dunedin, Florida 34698

Phone: 727-449-8525
Fax: 727-461-2746
Email: info@nccco.org

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Crane Report

PRACTICAL EXAMINATION—SERVICE TRUCK CRANES

NCCCO has established specific safety conditions and guidelines that each practical exam must follow. This Crane Report is a verification tool used to ensure that all testing parameters are within strict, safe working conditions. Before testing is conducted, the crane being used for testing must have its own unique report filled out. This report should be completed in ink, signed by the Examiner, and sent with the Site Report to: NCCCO—Testing Services Department, 1960 Bayshore Blvd., Dunedin, FL 34698.

REMINDER: ***Each crane used must have a separate report filled out.***

TEST SITE NUMBER	DATE
NAME OF TEST SITE COORDINATOR	NAME OF PRACTICAL EXAMINER
CRANE OWNER/COMPANY NAME	
CRANE OWNER/COMPANY POINT OF CONTACT	PHONE NUMBER
MAKE OF CRANE	MODEL OF CRANE
SERIAL NUMBER OF CRANE	MAX. BOOM LENGTH (FT.) (JIBS MAY NOT BE USED) / MAX. RATED CAPACITY (LB.)
FRONT OUTRIGGER WIDTH (FT.)* (IF APPLICABLE) *MEASURE FROM OUTSIDE EDGE TO OUTSIDE EDGE	REAR OUTRIGGER WIDTH (FT.)*
BOOM MOUNT LOCATION ❒ Curbside Corner ❒ Street-side Corner ❒ Rear Center** ❒ Front Center** **Please contact NCCCO's Western Regional Office at 801-363-2693 for more information	

EXAMINER CHECKLIST:

- ❒ Verify crane has a current annual/comprehensive inspection or initial inspection if the unit has not been in service for more than 12 months; all supporting documentation must be in accordance with OSHA standards
- ❒ Complete a pre-operational shift inspection to verify no deficiencies are present that would affect safety or performance
- ❒ Block reeved with two parts of line
- ❒ Set up and leveled in the location specified on the CAD, ready for operation in accordance with the manufacturer's recommendations
- ❒ All outriggers/stabilizers properly set per manufacturer's recommendations (intermediate, mid, or short-span outriggers not permitted)
- ❒ Blocking or cribbing, as necessary, to provide sound foundation
- ❒ No jib installed
- ❒ If using remote control, sufficient batteries on hand to conduct all practical exams
- ❒ If necessary, fully deploy manual boom extensions

See reverse side to complete Crane Report.

CRANE REPORT (CONT'D)
SERVICE TRUCK CRANES

TEST SITE LAYOUT USED:

❒ STC #1: Boom Length 14' to 19' 11"

If using STC #1:

CAPACITY AT MAX. RADIUS		STABILITY-GOVERNED DE-RATING PERCENTAGE*		MAXIMUM ALLOWABLE LOAD WEIGHT
LB.	x		x .75 =	LB.

*SELECT LOWEST PERCENTAGE WITHIN COURSE LAYOUT

❒ STC #2: Boom Length 20' or greater

If using STC #2:

CAPACITY AT MAX. RADIUS		STABILITY-GOVERNED DE-RATING PERCENTAGE*		MAXIMUM ALLOWABLE LOAD WEIGHT
LB.	x		x .75 =	LB.

*SELECT LOWEST PERCENTAGE WITHIN COURSE LAYOUT

NOTE: ***Gross Load (Test Weight+Rigging) used must be less than Maximum Allowable Load Weight calculated above.***

GROSS LOAD USED IN TESTING _____ LB.

I attest that this is a true and accurate report of the crane and Test Weight being used for testing.

EXAMINER SIGNATURE	PRINTED NAME OF EXAMINER	EXAMINER'S ACCREDITATION #	DATE

Sample Completed Crane Report

PRACTICAL EXAMINATION—SERVICE TRUCK CRANES

NCCCO has established specific safety conditions and guidelines that each practical exam must follow. This Crane Report is a verification tool used to ensure that all testing parameters are within strict, safe working conditions. Before testing is conducted, the crane being used for testing must have its own unique report filled out. This report should be completed in ink, signed by the Examiner, and sent with the Site Report to: NCCCO—Testing Services Department, 1960 Bayshore Blvd., Dunedin, FL 34698.

REMINDER: ***Each crane used must have a separate report filled out.***

TEST SITE NUMBER: **PE-2015**	DATE: **8/11/12**
NAME OF TEST SITE COORDINATOR: **Amanda Pettigrew**	NAME OF PRACTICAL EXAMINER: **Mortimer Dufason**
CRANE OWNER/COMPANY NAME: **ACME Cranes**	
CRANE OWNER/COMPANY POINT OF CONTACT: **Roger Tinsky**	PHONE NUMBER: **800-555-1212**
MAKE OF CRANE: **IMT**	MODEL OF CRANE: **7500**
SERIAL NUMBER OF CRANE: **0102XY21234**	MAX. BOOM LENGTH (FT.) (JIBS MAY NOT BE USED): **30 ft.**
MAX. RATED CAPACITY (LB.): **7500 lb.**	
FRONT OUTRIGGER WIDTH (FT.)* (IF APPLICABLE): **N/A** *MEASURE FROM OUTSIDE EDGE TO OUTSIDE EDGE	REAR OUTRIGGER WIDTH (FT.)*: **13 ft.**

BOOM MOUNT LOCATION

☑ Curbside Corner ❒ Street-side Corner ❒ Rear Center** ❒ Front Center**

**Please contact NCCCO's Western Regional Office at 801-363-2693 for more information

EXAMINER CHECKLIST:

- ☑ Verify crane has a current annual/comprehensive inspection or initial inspection if the unit has not been in service for more than 12 months; all supporting documentation must be in accordance with OSHA standards
- ☑ Complete a pre-operational shift inspection to verify no deficiencies are present that would affect safety or performance
- ☑ Block reeved with two parts of line
- ☑ Set up and leveled in the location specified on the CAD, ready for operation in accordance with the manufacturer's recommendations
- ☑ All outriggers/stabilizers properly set per manufacturer's recommendations (intermediate, mid, or short-span outriggers not permitted)
- ☑ Blocking or cribbing, as necessary, to provide sound foundation
- ☑ No jib installed
- ☑ If using remote control, sufficient batteries on hand to conduct all practical exams
- ☑ If necessary, fully deploy manual boom extensions

See reverse side to complete Crane Report.

SAMPLE COMPLETED CRANE REPORT (CONT'D)
SERVICE TRUCK CRANES

TEST SITE LAYOUT USED:

❒ STC #1: Boom Length 14' to 19' 11"

If using STC #1: CAPACITY AT MAX. RADIUS		STABILITY-GOVERNED DE-RATING PERCENTAGE*		MAXIMUM ALLOWABLE LOAD WEIGHT
LB.	x		x .75 =	LB.

*SELECT LOWEST PERCENTAGE WITHIN COURSE LAYOUT

☑ STC #2: Boom Length 20' or greater

If using STC #2: CAPACITY AT MAX. RADIUS		STABILITY-GOVERNED DE-RATING PERCENTAGE*		MAXIMUM ALLOWABLE LOAD WEIGHT
1350 LB.	x	100%	x .75 =	1012.5 LB.

*SELECT LOWEST PERCENTAGE WITHIN COURSE LAYOUT

NOTE: ***Gross Load (Test Weight+Rigging) used must be less than Maximum Allowable Load Weight calculated above.***

GROSS LOAD USED IN TESTING: 350 LB.

I attest that this is a true and accurate report of the crane and Test Weight being used for testing.

EXAMINER SIGNATURE	PRINTED NAME OF EXAMINER	EXAMINER'S ACCREDITATION #	DATE
Mortimer Dufason	**Mortimer Dufason**	**938**	**8/11/2012**

Tower Crane Operator Program

- Test Site Application
- Photographs
- Test Site Setup
- Sample Test Site Layout (CAD)
- Test Site Layout Instructions
- Crane Selection and Setup
- Ready Reference Checklist
- Site Report
- Crane Report
- Sample Completed Crane Report

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Test Site Application

PRACTICAL EXAMINATION—TOWER CRANES

Please type or print neatly.

HOST COMPANY REPRESENTATIVE | TEST SITE NUMBER

HOST COMPANY NAME | COMPANY REP EMAIL

HOST COMPANY MAILING ADDRESS

CITY | STATE | ZIP | COUNTRY

COMPANY REP OFFICE PHONE | COMPANY REP MOBILE PHONE

❒ This is a Secure Test Site. (Submit completed Security Requirements Report.)

TEST SITE ADDRESS (Physical address of where the crane(s) will be set up; P.O. Boxes not acceptable)

CITY | STATE | ZIP | COUNTRY

CHECK BOXES AS APPROPRIATE

❒ $50 Site Fee for _____ (year) enclosed ❒ $50 Site Fee for _____ (year) already paid ❒ This is my first test administration

TEST SITE COORDINATOR NAME | TEST SITE COORDINATOR PHONE

TEST SITE COORDINATOR EMAIL

PRACTICAL EXAMINER NAME | PRACTICAL EXAMINER EMAIL

The Test Site Coordinator or Company Representative 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 current ASME B30 standard
2. Verification that candidate's application for the Practical Exam is complete
3. Abiding by NCCCO Practical Test Site Audit requirements

SIGNATURE | DATE

METHOD OF PAYMENT FOR TEST SITE FEE

Do not send cash.

❒ VISA ❒ MasterCard ❒ American Express ❒ Personal check enclosed ❒ Employer check enclosed ❒ Money order enclosed *Please do not staple your check or money order.*

If paying by credit card, please complete the following information:

CREDIT CARD NUMBER | EXPIRATION DATE

NAME (Print as it appears on card) | SIGNATURE (on card) | SECURITY CODE*

* Three- or four-digit code located on the card.

Email credit card receipt to: _____

Checks and money orders should be payable to: NCCCO

Please send application and payments to:

National Commission for the Certification of Crane Operators
Western Regional Office
5250 S. Commerce Drive, Suite 100, Murray, Utah 84107
Phone: 801-363-2693 / Fax: 801-363-3806 / Email: ejones@nccco.org

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Photographs
TOWER CRANE OPERATOR PROGRAM

MARKING EQUIPMENT

All Test Site and crane equipment must be clearly marked in accordance with NCCCO requirements.

Test Weight

Load Hook

Corridor Pole

TEST WEIGHT

One example of a suitable Test Weight is this 36 in. diameter pipe that has a bottom plate welded inside so that weight can be added to put it within acceptable weight limits for various crane types.

Any specially fabricated structural components that are part of the load-supporting system must be designed and fabricated in accordance with the requirements of current applicable industry standards.

Photographs (Cont'd)
TOWER CRANE OPERATOR PROGRAM

MEASURING THE CORRIDOR AND CIRCLES

All elements of the Test Site must be laid out in accordance with the Test Site Setup and Layout Instructions, Data Sheet, and Test Site Layout (CAD). 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 the Stop Circle

Test Site Setup

TOWER CRANE OPERATOR PROGRAM

PRE-TEST CANDIDATE BRIEFING AREA

The Pre-Test Candidate Briefing Area must be located so that waiting candidates are unable to observe testing procedures. It must be provided with:

- NCCCO candidate instruction materials, including a written description of the examination *(Candidate Handbook)* and copies of the Test Site Layout (CAD)
- Operator's manuals and load charts for all cranes to be tested on
- A DVD player and television or computer for candidates to watch the CCO Practical Exam video (up to 24 hours before the Practical Exam)
- A suitable setting for the Pre-Test Briefing of exam candidates, to include:
  - — Sufficient space for the candidates for the Pre-Test Briefing
  - — Quiet, well-lit surroundings with a comfortable temperature
  - — Access to water (bottled or potable water)
  - — Easy access to rest rooms (porta-potties are acceptable)
  - — Large signs posted prominently to make candidates aware of the location of the test

ZIGZAG CORRIDOR

The Zigzag Corridor is composed of a PVC-pole barrier with a tennis ball placed on top of each pole. A taught, longitudinal string must placed on the ground through the centerline of each pole base; a cut concrete line may be used in lieu of a string line.

POLES

Sixty-four poles must be constructed of 1½-inch white PVC pipe (SCH 40), each 36 in. long, painted orange or red on top 12 in. (see illustration on page 10). The poles must be mounted to a pole base made of two layers of ¾-inch 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, maybe used to construct the pole bases. This material must meet the following requirements:

- Weight: 5 lb. (±10%)
- Nominal dimensions: 12 in. × 12 in. × 1½ in. (±½ in. thick)

The weight must be spread evenly across the base. Pole bases may be coated with a protective finish if desired, as long as they continue to meet the stated design and construction parameters.

Pole bases must be placed as indicated on the Test Site Layout (CAD). A taut, brightly colored string line must be placed on the ground under the centerline of each pole base in the Zigzag Corridor.

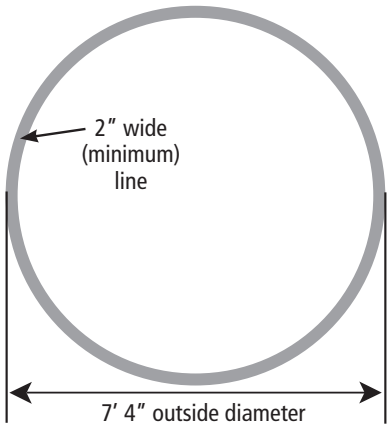
To assist the Examiner and Proctor in restoring the Zigzag Corridor between tasks, the tennis balls may be attached to the pole by means of 12 in. long nylon string. The string must be attached between 2 in. and 8 in. from the top of the pole and to the tennis ball.

During the test, the string loops must face towards the outside of the corridor to avoid the string being snagged on the Test Weight. 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, Load, and Test Weight Circles must have a 7 ft. 4 in. outside diameter (with a permitted tolerance of ±½ in.), with a clearly marked inside line at least 2 in. wide, and they must be located per the Test Site Layout (CAD). The Start Circle shall be placed in line with the centerline of the mast and due left of the Test Weight Circle.

If marking circles, designated areas, or other parts of a course on plywood or mats, the borders must be marked with materials with a flat, uniform surface and a lip variance not to exceed 3/4 in. Any materials used may not interfere with the free movement of the pole bases.

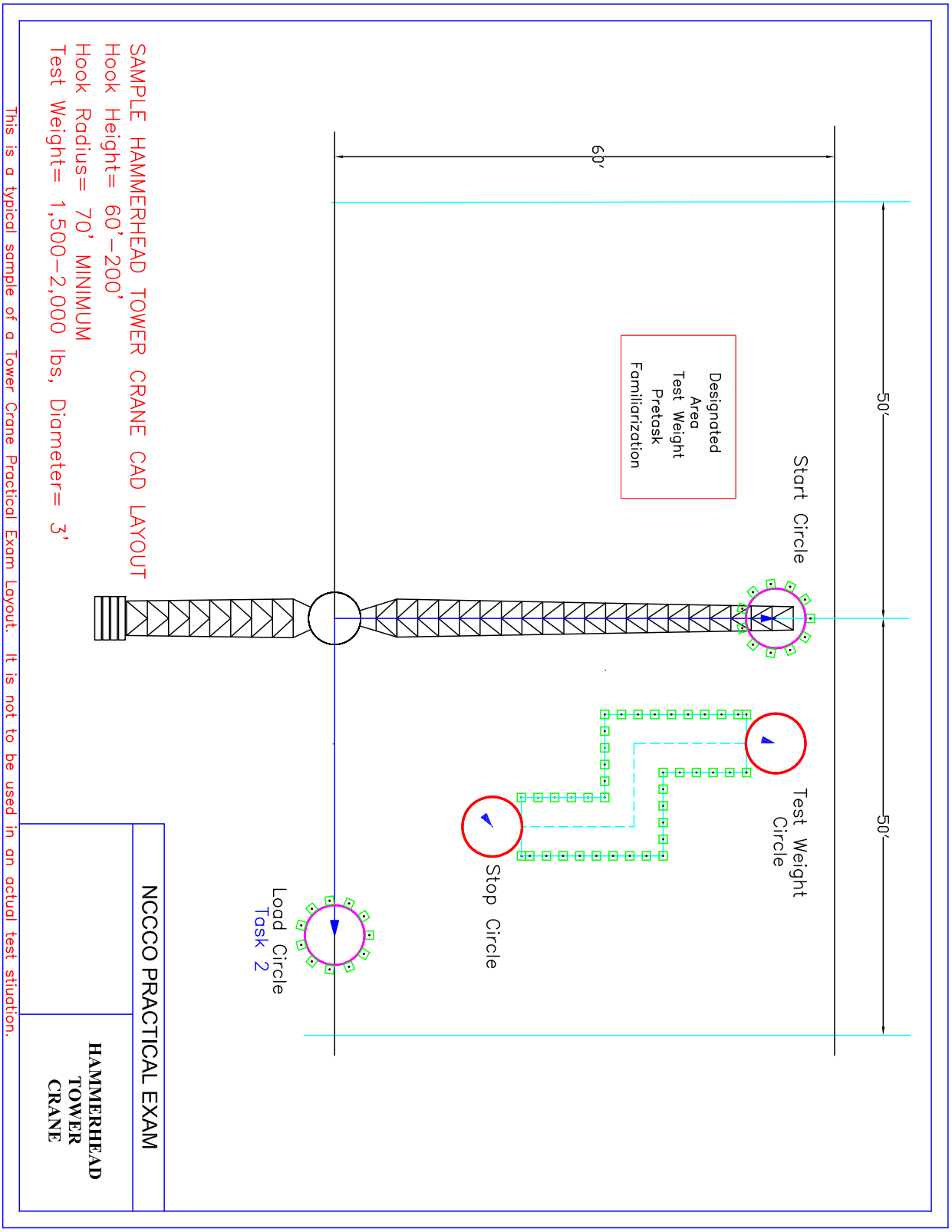


LEVEL

All parts of the Test Site must be level within five percent of true level and free of debris, stored materials, surface irregularities, or hazards such as overhead power lines that could interfere with test maneuvers. No obstructions may be within 5 ft. of the test course in any direction.

Sample Test Site Layout (CAD)

TOWER CRANE OPERATOR PROGRAM



Test Site Layout Instructions
TOWER CRANE OPERATOR PROGRAM

Using the CAD drawing and other information provided by NCCCO, 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 Circles) 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, he/she will verify the site is laid out correctly using the *Site Report* for the appropriate crane type. Different versions of the *Site Report* form can be found in the appropriate sections of this handbook. Test Site Coordinators are strongly encouraged to use this form to verify that 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:

1.	**CHECK FOR OBSTRUCTIONS**	Ensure there are no obstructions (on the ground or overhead) that could interfere with the safe operation of the crane during the test. No obstructions may be within 5 ft. of a practical test course in any direction.
2.	**LAY DOWN GRID LINES**	The layout of the Test Site is based around two parallel grid lines; one running through the centerline of the mast; and the second through the middle of the last leg of the Zigzag Corridor (see Sample Test Site Layout). Lay out these grid lines on the ground with string as noted on the Test Site Layout (CAD). On the first grid line, make a mark that will indicate the center of the mast.
3.	**LOCATE STOP CIRCLE**	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 center of the mast.
4.	**PAINT STOP CIRCLE**	Using this center point, paint a 7 ft. 4 in. outside diameter Stop Circle (with a permitted tolerance of ± ½ inch) with a clearly marked inside line at least 2 in. wide. The Stop Circle is situated at the entrance to the Zigzag Corridor closest to the crane.
5.	**LAY OUT ZIGZAG CORRIDOR**	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. The width of the corridor and length of the inside and outside legs are as stated on the CAD layout.
6.	**LOCATE TEST WEIGHT CIRCLE**	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 7 ft. 4 in outside diameter Test Weight Circle (with a permitted tolerance of ±½ inch) with a clearly marked inside line at least 2 in. wide.
7.	**LOCATE START CIRCLE**	Paint on the ground a 7 ft. 4 in. outside diameter Start Circle (with a permitted tolerance of ±½ inch) with a clearly marked inside line at least 2 in. wide and to the left of the Test Weight Circle.
8.	**LOCATE LOAD CIRCLE**	Locate the Load Circle that is 38 ft. from the mast centerline. Paint on the ground a 7 ft. 4 in. outside diameter circle with a clearly marked inside line at least 2 in. wide. Set up the 11 pole bases tangent to the outside of the circle at 2 ft. on center spacing.
9.	**LOCATE DESIGNATED AREA**	Ensure there is an appropriate area to serve as the Designated Area for Task 2, as illustrated on the Test Site Layout (CAD).
10.	**POSITION CRANE**	Set up the crane on outriggers (if applicable) with the center of the crane's mast directly above the mark made on the ground in Step 1. Ensure the boom is over the centerline of the mast and the boom or jib length is as stated on the CAD Layout. The exam tasks will be performed in a roughly 90-degree area.

Crane Selection and Setup
TOWER CRANES

CCO PRACTICAL EXAM CATEGORIES

The Tower Crane Operator Practical Exam can be taken on any of the following tower crane types:

- Hammerhead
- Luffing Jib
- Self-Erecting

CRANE SELECTION

Tower cranes for CCO Practical Examinations must have:

- Minimum manufacturer's capacity rating of 40 metric tons, or the Test Weight does not exceed 80 percent of the maximum capacity at the longest testing radius
- Minimum hook height of 60 ft. with a maximum hook height of 200 ft. (The height is based off of the jib pivot point above the test course, i.e., the height is set from the test course, not the base of the crane.)
- Minimum hook reach of 70 ft.
- Lever or joystick controls either console or remote control mounted
- ***For luffing jib tower cranes only:*** a 200 ft. maximum height of jib pivot point above the test course

If a video monitoring system is installed on the crane, it must be deactivated during CCO Practical Exam testing.

COMPLIANCE

All cranes used on CCO Practical Examinations must be in compliance with federal and state OSHA requirements and the current ASME B30.3 and B30.29 standards.

SETUP

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 Test Site Layout (CAD) drawing.

BLOCKING

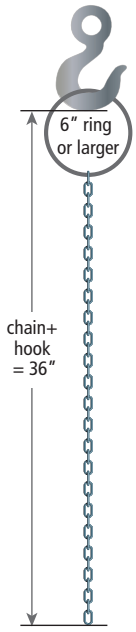
Matting or cribbing must be installed if necessary to provide a sound foundation for the crane. A spirit level (minimum length 2 ft.) must be available for the candidates to verify that the crane is level prior to beginning their testing.

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, and other settings prior to the beginning of any testing. A representative of the 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.

TASK CHAIN

For Task 1, a piece of 3/8- or 5/16-inch chain, painted orange or red, is required; recommend using a minimum 6-inch ring on one end so that it can be quickly and easily attached to and detached from the load hook. The length of the chain measured from the bottom of the hook must be 3 ft. (See diagram, right.)



Task Chain

TEST WEIGHT RIGGING

The Test Weight rigging used to connect the Test Weight to the crane must meet the following criteria:

- Total rigging length 2–4 ft. (3 ft. recommended); total rigging length is measured from load-bearing point to load-bearing point
- Two or three sling legs
- Recommend use of bridle
- Recommend sling angles of 60 degrees (minimum 30 degrees required)
- Can be easily attached and detached from the crane
- Meets current applicable industry standards

TEST WEIGHT

The crane's Test Weight includes the weight of any ancillary equipment in place on the Tower Crane. 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 Test Weight must:

- Weigh between 1,500 and 2,000 lb.
- Be cylindrical in shape, with the same diameter from top to bottom
- Have a continuously smooth surface from top to bottom
- Have a diameter of 3 ft.
- Have a height of 2–5 ft.

If the Test Weight has feet attached, they may extend no more than 4 in. below the bottom of the Test Weight.

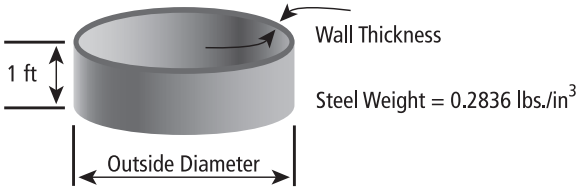
The Test Weight must have four 3 ft. lengths of 3/8- or 5/16-inch chain, painted orange or red, measured from the lowest point of the Test Weight (including feet); they must be inside the rim at 0, 90, 180, and 270 degrees (see drawing).

As 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. Steel 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 NCCCO Test Weights. Test Site Coordinators can determine how many pick points are used on the Test Weight.

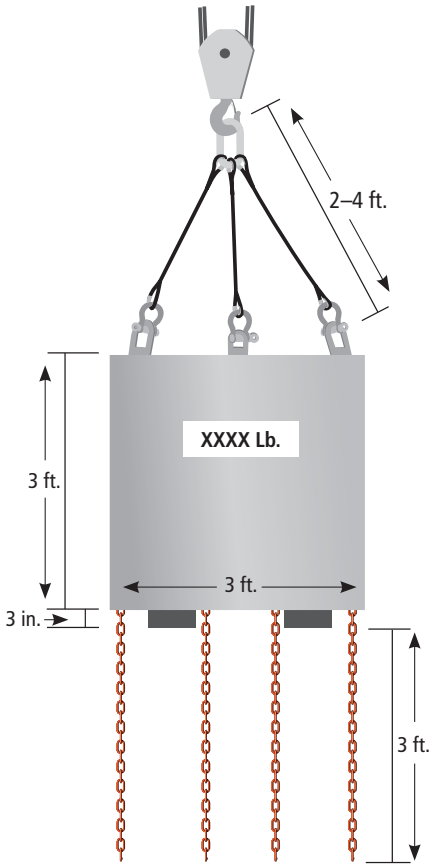
NOTE: The picking/attachment points should be welded or attached to the inside of the Test Weight; however, picking ears may be mounted on the outside of the Test Weight as long as the bottoms of the ears are more than 3 ft. 6 in. from the bottom of the Test Weight.

Use the *Pipe Diagram* and *Steel Pipe Weight Thickness Chart* to calculate weights for given pipe wall thickness. 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 when calculating the overall weight of the Test Weight.

PIPE DIAGRAM



TYPICAL TEST WEIGHT CONSTRUCTION



STEEL PIPE WEIGHT THICKNESS CHART

Pipe wall thickness	Weight per 1 linear ft. of pipe @ 36″ outside diameter
1/4″	96 lb.
3/8″	143 lb.
1/2″	190 lb.
3/4″	283 lb.
1″	374 lb.
1 1/4″	464 lb.
1 1/2″	553 lb.

Multiply the weight given in the table times the pipe length in feet. ***Example:*** Weight for a ¾ in. wall thickness pipe × 3 ft. high = *374 lb. × 3 ft. = 849 lb.*

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

RECOMMENDED TEST WEIGHT DESIGN

NCCCO has some recommendations for construction of a Test Weight suitable for use in CCO tower crane Practical Exams. The Test Weight should have three attachment points, and the total rigging should measure 2–4 ft. from load-bearing point to load-bearing point. There should be four tubes inside the Test Weight for the chains to drop through so they hang freely around the perimeter of the bottom of the Test Weight at 0, 90, 180, and 270 degrees (see drawing). Finally, there should be four 3 in. tall rubber feet on the bottom of the Test Weight.

RECOMMENDED TEST WEIGHT CONSTRUCTION

Ready Reference Checklist
TOWER CRANES

YOU WILL NEED A TOWER CRANE IN AT LEAST ONE OF THE FOLLOWING CATEGORIES:

- ❒ Hammerhead
- ❒ Luffing Jib
- ❒ Self-Erect

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

- ❒ A 3 ft. diameter cylindrical Test Weight, 2–5 ft. tall, weighing between 1,500 and 2,000 lb. (including rigging), verified by a weight ticket, crane's load indicating device (LMI, RCI, RCL), or other type of certification documenting the actual load weight available to the Examiner
- ❒ One 36 in. length of 3/8- or 5/16-inch chain, painted orange or red (recommend using a minimum 6-inch diameter ring on one end so that it can easily be attached to the load hook for Task 1); length should be measured from bottom of load hook
- ❒ Four lengths of 3/8- or 5/16-inch chain, painted orange or red, each 3 ft. long when measured from the lowest point of the Test Weight (including feet); located around the inner rim of the Test Weight at 0, 90, 180, and 270 degrees
- ❒ Picking ears are mounted inside the Test Weight, or if mounted on the outside of the Test Weight the bottom of ears are at least 3 ft. 6 in. above the bottom of the weight
- ❒ Test Weight rigging is 2–4 ft. in length (load-bearing point to load-bearing point); if using multiple sling legs, recommend 60 degree sling angles (minimum 30 degrees required)
- ❒ PVC pipe, white, 1½ in. (SCH 40), sufficient to make 64 three-foot-long poles
- ❒ 3/4-inch, CDX-grade (or better) plywood or high density polyethylene (HDPE)*, sufficient to create 64 pole bases, 1½ in. (± ½ in.) × 12 in. × 12 in.
- ❒ 64 tennis balls
- ❒ 64 ft. of nylon string, to attach tennis balls to poles (optional)
- ❒ 128 1¼-inch, 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) ***NOTE: Chalk line may NOT be used***
- ❒ Paint (orange or red) for painting the tops of the poles and chain ***NOTE: Red tape may be used for the poles***
- ❒ Paint of contrasting color for marking circles
- ❒ Handheld wind speed indicator (anemometer)
- ❒ Two 100 ft. tape measures and one 30 ft. steel tape
- ❒ Stopwatches and clipboards for Examiner(s) and Proctor(s)

*EQUIPMENT SOURCES

NCCCO does not endorse or recommend specific vendors of any equipment, but the following sources may be helpful in finding the required materials and equipment:

- ***HDPE bases:*** House of Plastics (part number HOP01-055), 2580 S. Orange Blossom Trail, Orlando, FL 32805, 407-843-3290, plastics@hopu.com

Site Report
PRACTICAL EXAMINATION—TOWER CRANES

NCCCO 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 this *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 NCCCO Test Site Layout (CAD). The Examiner must also conduct a visual inspection of the crane for proper setup prior to testing any applicant. This *Site Report* must be presented on demand to any Practical Exam Auditor.

Please type or print neatly.

TEST SITE	DATE

NAME OF TEST SITE COORDINATOR

CRANE TYPE: ❒ HAMMERHEAD ❒ LUFFING JIB ❒ SELF-ERECTING

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
- ❒ A DVD player and television or computer for candidates to watch the CCO Practical Exam video
- ❒ A location so that waiting candidates are unable to observe other candidates being tested

Candidate materials available:

- ❒ A written description of the examination *(NCCCO Tower Crane Operator Candidate Handbook)*
- ❒ A plan view of the Test Site Layout (CAD)
- ❒ Operator's manual(s) and load chart(s) for all cranes to be tested on
- ❒ 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 SETUP

- ❒ Entire course is level within five percent of true level
- ❒ Zigzag Corridor has no more than a 6 in. maximum change in elevation
- ❒ Zigzag Corridor set up on asphalt, concrete surface, or firm and compacted sand, dirt, or gravel (free of vegetation) with a sufficiently uniform surface to permit the poles to stand vertical and slide freely; *grass surfaces are not acceptable*
- ❒ Site is free of debris, stored materials, surface irregularities, or hazards such that could interfere with test maneuvers
- ❒ No obstructions are within 5 ft. of the test course in any direction

Using the Test Site Layout (CAD), verify the following measurements:

- ❒ Distance from the center of rotation of the crane to the center of the Stop Circle (± 1 in.)
- ❒ Distance from the center of rotation of the crane to the center of the Test Weight Circle (± 1 in.)
- ❒ Distance from the center of rotation of the crane to the center of the Start Circle (± 1 in.)
- ❒ Distance from the center of rotation of the crane to the center of the Load Circle (± 1 in.)
- ❒ Distance from the centerline of the crane to the second leg of the Zigzag Corridor (± 1 in.)
- ❒ Distance from the centerline of the crane to the first leg of the Zigzag Corridor (± 1 in.)
- ❒ Length of all six sides of the Zigzag Corridor (± ½ in.)
- ❒ Width of the Zigzag Corridor is 7 ft. (± ½ in.)
- ❒ Distance between consecutive poles (2 ft. ± ½ in.)

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

Test Site #: _____

POLES

- ❒ 64 poles, made of 1½-inch, white PVC pipe (SCH 40), each 3 ft. long, ball on each pole (one inside splice per 3 ft. pole permitted; outside splices of PVC pipes NOT permitted; see page 10 for illustration)
- ❒ Top 12 in., painted or taped orange or red
- ❒ Mounted to a platform made of two layers of ¾-inch, CDX-grade (or better) plywood, or high density polyethylene (HDPE), cut 12 in. square
- ❒ A taut, longitudinal string line placed on the ground through the centerline of each pole base. A cut concrete line may be used in lieu of a string line; no other materials are acceptable.
- ❒ Spare poles and bases available

CIRCLES

- ❒ Start Circle has a 7 ft. 4 in. outside diameter (±½ in.) with a clearly marked inside line at least 2 in. wide and is located per the Test Site Layout (CAD)
- ❒ Start Circle is in line with the centerline of the mast and due left of the Test Weight Circle
- ❒ Stop Circle has a 7 ft. 4 in. outside diameter (±½ in.) with a clearly marked inside line at least 2 in. wide and is located per the Test Site Layout (CAD)
- ❒ Test Weight Circle has a 7 ft. 4 in. outside diameter (±½ in.) with a clearly marked inside line at least 2 in. wide and is located per the Test Site Layout (CAD)
- ❒ If marking circles on plywood or mats, the borders must be marked with materials with a flat, uniform surface and a lip variance not to exceed 3/4 in. Any materials used may not interfere with the free movement of the pole bases.

CRANE SELECTION AND SETUP

- ❒ Crane as identified in the Test Site Layout (CAD)

TEST CRANE

- ❒ This crane has a current annual inspection with supporting documentation
- ❒ Set up and leveled, in the location specified, ready for operation, with engine running, in accordance with the manufacturer's recommendations
- ❒ Jib or boom length minimum 70 ft.

LOAD HOOK

- ❒ Height 60–200 ft.
- ❒ A length of 3/8- or 5/16-inch chain that can be quickly and easily attached and detached from hook:
  - ❒ Chain is painted orange or red
  - ❒ Chain attaches to bottom center of load hook (recommend using a minimum 6-inch diameter ring on end of chain)
  - ❒ Chain measures 36 in. from bottom of hook

TEST WEIGHT

- ❒ Gross weight of 1,500 to 2,000 lb., verified by a weight ticket, crane's load indicating device (LMI, RCI, RCL), or other type of certification documenting the actual load weight available to the Examiner
- ❒ Cylindrical in shape and no protruding edges
- ❒ The diameter of the Test Weight is 3 ft.
- ❒ Height is 2–5 ft.
- ❒ Picking ears are mounted inside the Test Weight, or if mounted on the outside of the Test Weight the bottom of ears are at least 3 ft. 6 in. above the bottom of the weight
- ❒ Method of attachment: Test Weight rigging is 2–4 ft. in length (load-bearing point to load-bearing point); if using multiple sling legs, recommend 60-degree sling angles (minimum 30 degrees required)
- ❒ Four 36 in. lengths of 3/8- or 5/16-inch chain located inside rim at 0, 90, 180, and 270 degrees

  NOTE: To measure the chain length, attach the Test Weight to the crane hook. Raise the Test Weight until the chain barely touches the ground and measure from the lowest point of Test Weight (including feet) to ground.
  - ❒ Chains are painted orange or red
- ❒ If the Test Weight has feet attached, they do not extend more than 4 in. below the bottom of the Test Weight

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

Test Site #: _____

BLOCKING

❒ Matting or cribbing installed, as necessary, to provide a sound foundation for the crane

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, and other settings prior to the beginning of any testing. A representative of the 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 used. Any specially fabricated structural components that are part of the load-supporting system must be designed and fabricated in accordance with the requirements of current applicable industry standards.

TEST COURSE SETUP

❒ The Practical Examiner whose signature appears at the end of this Site Report attests that he/she has set up the course. *(Check only if the Practical Examiner has set up the test course.)*

❒ The Examiner must have the following items for conducting the Practical Exam:

- ❒ *Two stopwatches*
- ❒ *Clip board*
- ❒ *Anemometer (wind meter)*
- ❒ *Pen or pencil*
- ❒ *Spirit level (2 ft. minimum)*
- ❒ *Two 100 ft. measuring tapes*
- ❒ *Test Site Layout (CAD)*
- ❒ *Proctor*
- ❒ *Verbatim instructions*
- ❒ *Notification of test email (new Test Sites, if applicable)*
- ❒ *Personal protective equipment (hard hat, work boots)*
- ❒ *30 ft. measuring tape*

Deviations from the above-noted requirements are not allowed without written consent from the NCCCO Western Regional Office.

PRACTICAL EXAMINER ATTESTATION *(Examiner signature required)*

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:

NCCCO—Testing Services Department
1960 Bayshore Blvd.
Dunedin, Florida 34698

Phone: 727-449-8525
Fax: 727-461-2746
Email: info@nccco.org

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Crane Report

PRACTICAL EXAMINATION—TOWER CRANES

NCCCO has established specific safety conditions and guidelines that each practical exam must follow. This Crane Report is a verification tool used to ensure that all testing parameters are within strict, safe working conditions. Before testing is conducted, the crane being used for testing must have its own unique report filled out. This report should be completed in ink, signed by the Examiner, and sent with the Site Report to: NCCCO—Testing Services Department, 1960 Bayshore Blvd., Dunedin, FL 34698.

Reminder: ***Each crane used must have a separate report filled out.***

TEST SITE NUMBER	DATE
NAME OF TEST SITE COORDINATOR	
NAME OF PRACTICAL EXAMINER	
CRANE OWNER/COMPANY NAME	
CRANE OWNER/COMPANY POINT OF CONTACT	PHONE NUMBER

CRANE TYPE *(Check all boxes that apply to the characteristics of the crane you plan to test on.)*

❒ HAMMERHEAD ❒ SELF-ERECTING* ❒ LUFFING JIB

❒ CAB-OPERATED ❒ RADIO/REMOTE CONTROL

**When used for CCO Practical Exams, self-erecting tower cranes must have lever or joystick controls, whether console or remote-control mounted.*

CRANE DESCRIPTION *(Provide data for items 1 thru 8 using the manufacturer's operating manual.)*

1. MAKE/MODEL	2. SERIAL NUMBER	3. MAX RATED CAPACITY (TONS)

4. CONFIGURATION OF CRANE (COUNTERWEIGHT, ROPE SIZE AND TYPE, ANCILLARY EQUIPMENT, ETC.)

5. LOAD HOOK HEIGHT (60–200 FT. REQUIRED): _____ FT.

6. JIB TYPE: ❒ FIXED ❒ FOLDING ❒ TELESCOPING

7. JIB LENGTH (MINIMUM 70 FT. REQUIRED):_____ FT.

8. RATED CAPACITY AT 70 FT. RADIUS:_____ LB. x 80% = MAXIMUM ALLOWABLE GROSS LOAD: _____LB.

9. GROSS LOAD (1,500–2,000 LB. REQUIRED): _____ LB.

NOTE: GROSS LOAD (TEST WEIGHT + RIGGING) USED MUST BE **LESS** THAN THE MAXIMUM ALLOWABLE GROSS LOAD CALCULATED ABOVE.

I attest that this is a true and accurate report of the crane and load being used for testing.

EXAMINER SIGNATURE	PRINTED NAME OF EXAMINER	EXAMINER'S ACCREDITATION #	DATE

Sample Completed Crane Report

PRACTICAL EXAMINATION—TOWER CRANES

NCCCO has established specific safety conditions and guidelines that each practical exam must follow. This Crane Report is a verification tool used to ensure that all testing parameters are within strict, safe working conditions. Before testing is conducted, the crane being used for testing must have its own unique report filled out. This report should be completed in ink, signed by the Examiner, and sent with the Site Report to: NCCCO—Testing Services Department, 1960 Bayshore Blvd., Dunedin, FL 34698.

Reminder: ***Each crane used must have a separate report filled out.***

TEST SITE NUMBER	DATE
PE-2015	12/20/11

NAME OF TEST SITE COORDINATOR: Amanda Pettigrew

NAME OF PRACTICAL EXAMINER: Mortimer Dufason

CRANE OWNER/COMPANY NAME: ACME Cranes

CRANE OWNER/COMPANY POINT OF CONTACT	PHONE NUMBER
Roger Tinsky	800-555-1212

CRANE TYPE *(Check all boxes that apply to the characteristics of the crane you plan to test on.)*

❒ HAMMERHEAD ☑ SELF-ERECTING* ❒ LUFFING JIB

❒ CAB-OPERATED ☑ RADIO/REMOTE CONTROL

**When used for CCO Practical Exams, self-erecting tower cranes must have lever or joystick controls, whether console or remote-control mounted. Manufacturer's documentation for capacity rating, hook height, and hook reach must be submitted for all cranes.*

CRANE DESCRIPTION *(Provide data for items 1 thru 8 using the manufacturer's operating manual.)*

1. MAKE/MODEL	2. SERIAL NUMBER	3. MAX RATED CAPACITY (TONS)
Liebherr 32TT	0102XY21234	4.4 tons

4. CONFIGURATION OF CRANE (COUNTERWEIGHT, ROPE SIZE AND TYPE, ANCILLARY EQUIPMENT, ETC.)

5. LOAD HOOK HEIGHT (60–200 FT. REQUIRED): 79 FT.

6. JIB TYPE: ☑ FIXED ❒ FOLDING ❒ TELESCOPING

7. JIB LENGTH (MINIMUM 70 FT. REQUIRED): 98 FT.

8. RATED CAPACITY AT 70 FT. RADIUS: 4,630 LB. x 80% = MAXIMUM ALLOWABLE GROSS LOAD: 3,704 LB.

9. GROSS LOAD (1,500–2,000 LB. REQUIRED): 1,600 LB.

NOTE: GROSS LOAD (TEST WEIGHT + RIGGING) USED MUST BE **LESS** THAN THE MAXIMUM ALLOWABLE GROSS LOAD CALCULATED ABOVE.

I attest that this is a true and accurate report of the crane and load being used for testing.

EXAMINER SIGNATURE	PRINTED NAME OF EXAMINER	EXAMINER'S ACCREDITATION #	DATE
Mortimer Dufason	Mortimer Dufason	938	12/20/11

Overhead Crane Operator Program

- Test Site Application
- Photographs
- Test Site Setup
- Sample Test Site Layout (CAD)
- Test Site Layout Instructions
- Crane Selection and Setup
- Task 4 Course Layout, Chain-and-Ring Assembly, & Pin Assembly
- Ready Reference Checklist
- Site Report
- Crane Report
- Sample Completed Crane Report

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Test Site Application

PRACTICAL EXAMINATION—OVERHEAD CRANES

Please type or print neatly.

HOST COMPANY REPRESENTATIVE | TEST SITE NUMBER

HOST COMPANY NAME | COMPANY REP EMAIL

HOST COMPANY MAILING ADDRESS

CITY | STATE | ZIP | COUNTRY

COMPANY REP OFFICE PHONE | COMPANY REP MOBILE PHONE

❒ This is a Secure Test Site. (Submit completed Security Requirements Report.)

TEST SITE ADDRESS (Physical address of where the crane(s) will be set up; P.O. Boxes not acceptable)

CITY | STATE | ZIP | COUNTRY

CHECK BOXES AS APPROPRIATE

❒ $50 Site Fee for _____ (year) enclosed ❒ $50 Site Fee for _____ (year) already paid ❒ This is my first test administration

TEST SITE COORDINATOR NAME | TEST SITE COORDINATOR PHONE

TEST SITE COORDINATOR EMAIL

PRACTICAL EXAMINER NAME | PRACTICAL EXAMINER EMAIL

The Test Site Coordinator or Company Representative 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 current ASME B30 standard
2. Verification that candidate's application for the Practical Exam is complete
3. Abiding by NCCCO Practical Test Site Audit requirements

SIGNATURE | DATE

METHOD OF PAYMENT FOR TEST SITE FEE

Do not send cash.

❒ VISA ❒ MasterCard ❒ American Express ❒ Personal check enclosed ❒ Employer check enclosed ❒ Money order enclosed *Please do not staple your check or money order.*

If paying by credit card, please complete the following information:

CREDIT CARD NUMBER | EXPIRATION DATE

NAME (Print as it appears on card) | SIGNATURE (on card) | SECURITY CODE*

* Three- or four-digit code located on the card.

Email credit card receipt to: _____

Checks and money orders should be payable to: NCCCO

Please send application and payments to:

National Commission for the Certification of Crane Operators
Western Regional Office
5250 S. Commerce Drive, Suite 100, Murray, Utah 84107
Phone: 801-363-2693 / Fax: 801-363-3806 / Email: ejones@nccco.org

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Photographs
OVERHEAD CRANE OPERATOR PROGRAM

MARKING EQUIPMENT

All Test Site and crane equipment must be clearly marked in accordance with NCCCO requirements.

Test Weight with four additional perimeter chains (for cab-operated cranes with cab floor more than 25 ft. above ground only)

TEST WEIGHT

One example of a suitable Test Weight is this 36 in. diameter pipe that has a bottom plate welded inside so that weight can be added to put it within acceptable weight limits for various crane types.

All Test Weights need an attachment point in the center for a detachable 3 ft. chain. For tests on cab-operated overhead cranes with a cab floor more than 25 ft. above the ground, the Test Weight should have more four chains placed around the inside perimeter edge, at 0, 90, 180, and 270 degrees, as shown above.

Any specially fabricated structural components that are part of the load-supporting system must be designed and fabricated in accordance with the requirements of current applicable industry standards.

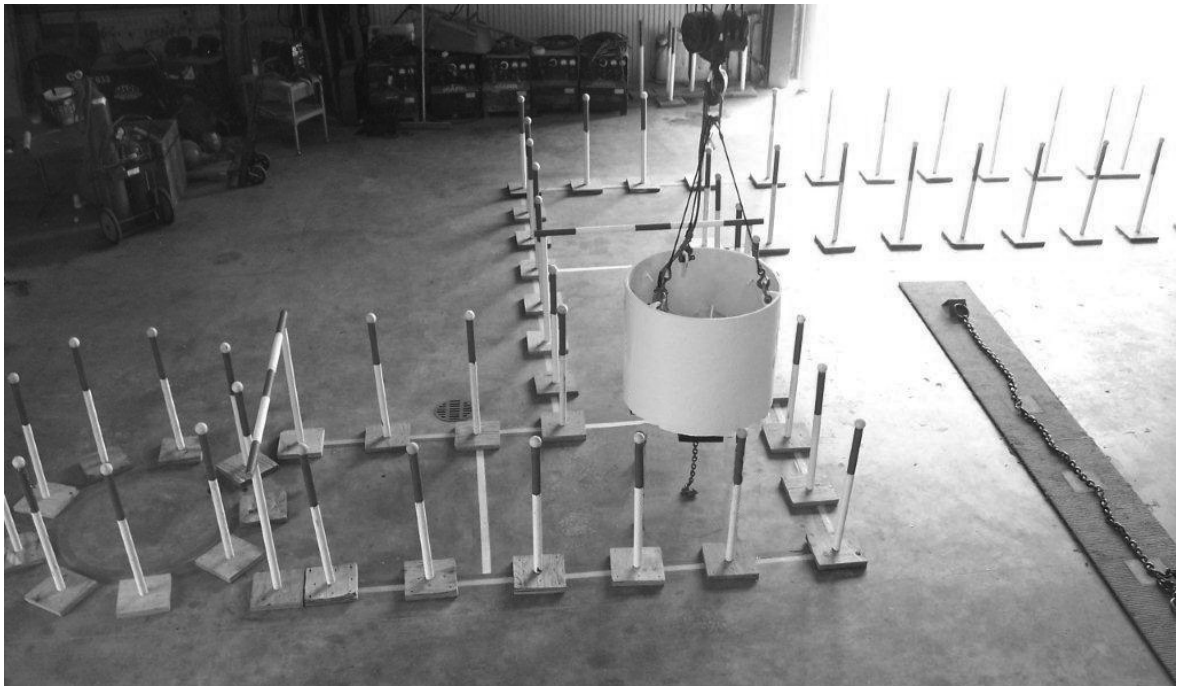
Load Hook

Corridor Pole

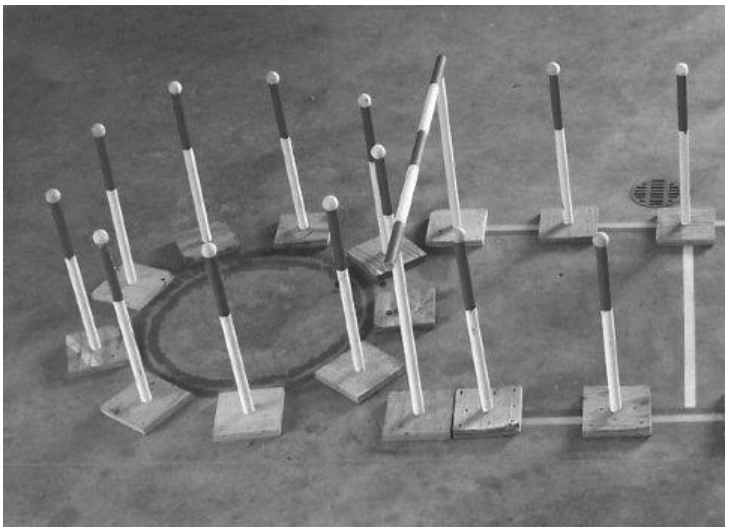
Pin Assembly

MEASURING THE CORRIDOR AND CIRCLES

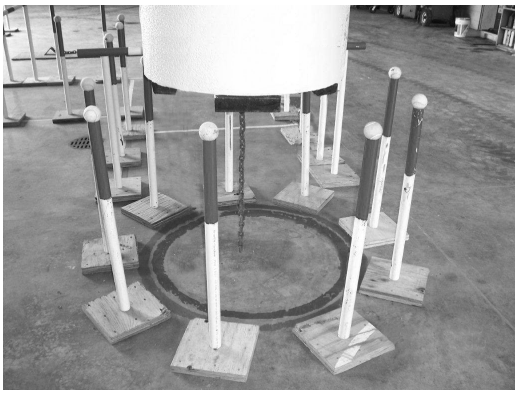
All elements of the Test Site must be laid out in accordance with the Test Site Layout Instructions, Test Site Layout (CAD), Site Report, and Crane Report. The Test Site Coordinator is responsible for carefully checking the dimensions prior to the arrival of the Practical Examiner.



Zigzag Corridor



Test Weight Circle and Hurdle



Test Weight Circle

Test Site Setup

OVERHEAD CRANE OPERATOR PROGRAM

PRE-TEST CANDIDATE BRIEFING AREA

This area must be located so that waiting candidates are unable to observe testing procedures. It must be provided with:

- NCCCO candidate instruction materials, including a written description of the examination *(Candidate Handbook)* and copies of the Test Site Layout (CAD)
- Operator's manuals for all cranes to be tested on
- A DVD player and television or computer for candidates to watch the CCO Practical Exam presentation (up to 24 hours before the Practical Exam)
- A suitable setting for the Pre-Test Briefing of exam candidates, to include:
  - — Sufficient space for the candidates for the Pre-Test Briefing
  - — Quiet, well-lit surroundings with a comfortable temperature
  - — Access to water (bottled or potable water)
  - — Easy access to rest rooms (porta-potties are acceptable)
  - — Large signs posted prominently to make candidates aware of the location of the test

RIGHT ANGLE CORRIDOR

The Right Angle Corridor is composed of a PVC pole barrier with one tennis ball placed on top of each pole and two horizontal PVC pole obstructions.

POLES

Fifty-four poles constructed of 1½-inch white PVC pipe (SCH 40) are required, each 36 in. long, painted orange or red on top 12 in. The poles must be mounted to a pole base made of two layers of ¾-inch, 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 lb. (±10%)
- Nominal dimensions: 12 in. × 12 in. × 1½ in. (± ½ in. thick)

The weight must be spread evenly across the base. Pole bases may be coated with a protective finish, if desired, as long as they continue to meet the stated design and construction parameters.

Pole bases must be placed as indicated on the Test Site Layout (CAD). A taut, brightly colored string line must be placed on the ground under the center line of each pole base; a cut concrete line may be used in lieu of a string line. Indoors, chalk lines are permissible.

To assist the Examiner and Proctor in restoring the Right Angle Corridor between tasks, the tennis balls may be attached to the pole by means of 12 in. long nylon string. The string must be attached between 2 in. and 8 in. from the top of the pole and to the tennis ball.

During the test, the string loops must face towards the outside of the corridor to avoid the string being snagged on the Test Weight.

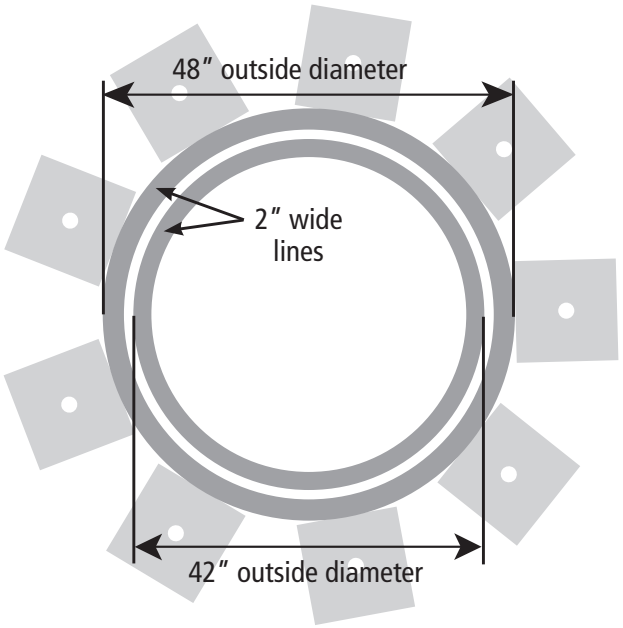
If the string does become snagged during a test, the Examiner must stop the test, restore the corridor to its original condition, and direct the candidate to restart the task.

OBSTRUCTIONS

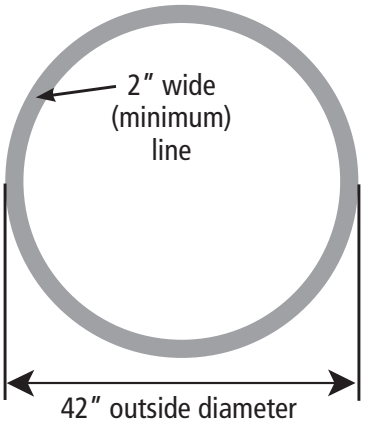
The two horizontal obstructions are each constructed of two vertical poles and a horizontal pole, all made from 1½ in. inner diameter PVC pipe (SCH 40). The vertical poles have notches cut in one end to hold a PVC pipe in a horizontal position; they are mounted on 12 in. square bases similar to those used for the corridor poles. The notches on the vertical poles must be centered and must not exceed 1 in. wide and ½ in. deep. The vertical poles must be 36 in. tall; the horizontal pole must have a minimum length of 6 ft.

CIRCLES

The **Test Weight Circle** has a 48 in. outside diameter circle and a 42 in. outside diameter circle (see diagram below). All circles have a clearly marked 2 in. wide inside line:

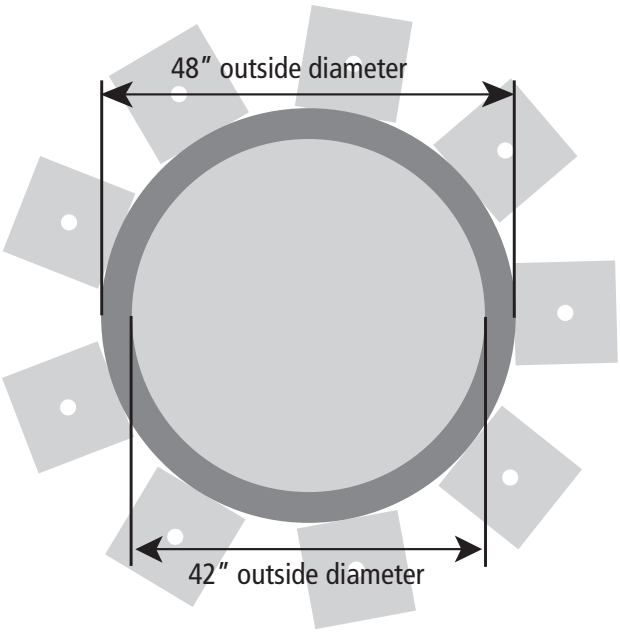


Circle #1 has a 42 in. outside diameter circle (see diagram below):



RECOMMENDED CIRCLE DESIGN

As long as the dimensional requirements for the circles are met, the Test Site Coordinator is free to select the most convenient materials and methods available. However, NCCCO recommends using circular rubber mats for the Test Weight Circle and Circle #1 because rubber mats store easily and are weather-resistant. The mat should be 48 inches in diameter, and the 42-inch circle should be marked with a solid color that contrasts with the color of the mat (see diagram below).



If marking circles, designated areas, or other parts of a course on plywood or mats, the borders must be marked with materials with a flat, uniform surface and a lip variance not to exceed 3/4 in. Any materials used may not interfere with the free movement of the pole bases.

CHAIN-AND-RING ASSEMBLY AND PIN ASSEMBLY

The Chain-and-Ring Assembly consists of ½-inch chain segments coupled together with ⅜-inch master links, painted red or orange, with a 4-inch ring at one end and an oblong ring on the other end to fit over the load hook.

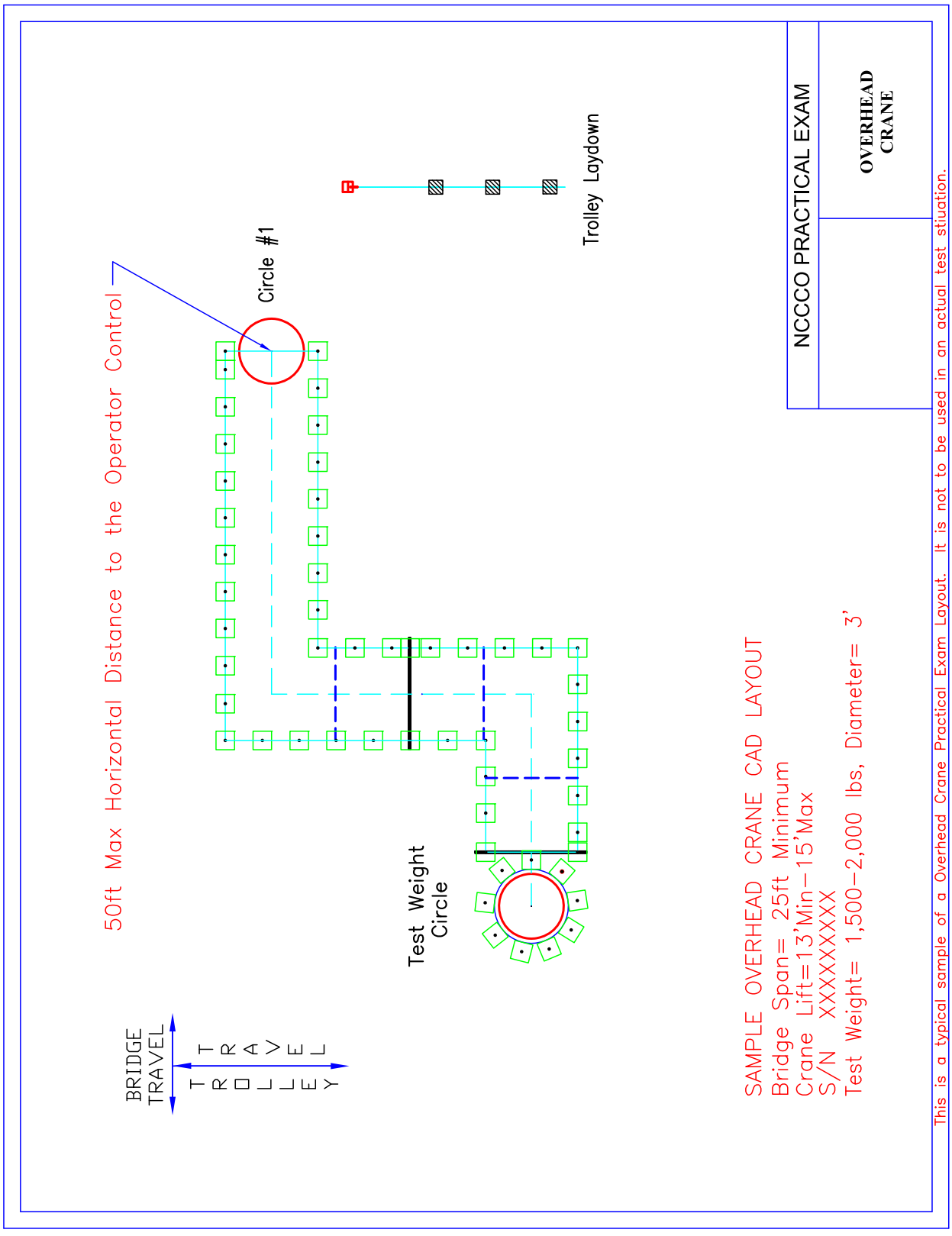
The Pin Assembly consists of a 6 in. × 6 in. angle iron or equivalent with a 6 in. long piece of ½-inch diameter round stock, welded at a 45-degree angle (see *Chain-and-Ring Assembly* and *Pin Assembly* drawings).

LEVEL

All parts of the Test Site must be level within five percent of true level and free of debris, stored materials, surface irregularities, or hazards such as overhead power lines that could interfere with test maneuvers. No obstructions may be within 5 ft. of a practical test course in any direction.

Sample Test Site Layout (CAD)

OVERHEAD CRANE OPERATOR PROGRAM



Test Site Layout Instructions

OVERHEAD CRANE OPERATOR PROGRAM

Using the CAD drawing and other information provided by NCCCO, it is the Test Site Coordinator's responsibility to lay out the Test Site. It is extremely important that all test equipment (corridor poles, Test Weight, circles) 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, he/she will verify that the site is laid out correctly using the *Site Report*. A copy of this form is provided in this handbook, and all Test Site Coordinators are strongly encouraged 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 the following procedure is recommended:

1.	**CHECK FOR OBSTRUCTIONS**	Ensure there are no obstructions (on the ground or overhead) that could interfere with the safe operation of the crane during the test. No obstructions may be within 5 ft. of a practical test course in any direction.
2.	**LAY DOWN GRID LINES**	The layout of the Test Site is based around two parallel gridlines; one running through the center of Circle #1, and the second running through the center of the Test Weight Circle (see Sample Test Site Layout). Lay out these grid lines on the ground with string as noted on the Test Site Layout (CAD) provided by NCCCO.
3.	**LOCATE TEST WEIGHT CIRCLE**	On the left end of the first gridline, make a mark that will indicate the center of the Test Weight Circle.
4.	**LAY DOWN MATS**	Using the point identified above as the center, place a 48 in. round mat that has 42 in. outside diameter concentric circle painted inside (see diagram, page 58). The Test Weight Circle is situated at the lower entrance to the Right Angle Corridor. Lay out PVC poles and bases equally spaced around and tangent to the outer 48 in. circle.
5.	**LAY OUT RIGHT ANGLE CORRIDOR**	Working back from the Test Weight Circle, and using the first gridline as a guide, lay out the Right Angle Corridor using the pole barriers, tennis balls, and string lines. The width of the corridor and length of the corridor legs are as stated on the Test Site Layout (CAD).
6.	**LOCATE TEST CIRCLE #1**	Locate the center of Circle #1 at the farthest entrance of the Right Angle Corridor, as noted on the Test Site Layout (CAD). Using this center point, paint a 2 in. wide, 42 in. outside diameter circle on the ground.
7.	**LAY OUT OBSTRUCTION LINES**	Paint or tape a line 4 ft. before and after the first obstruction and a line 4 ft. before the second obstruction.
8.	**PLACE OBSTRUCTIONS**	Notch (centered, 1 in. wide × ½ in. deep) the PVC poles that will hold the pole obstructions and place the pole bases per the Test Site Layout (CAD). Place a 1½-inch PVC pole (min. 6 ft. long) horizontally across the notched poles.
9.	**LAY OUT TROLLEY LAYDOWN**	Locate a 9 ft. × 1 in. painted/taped line running perpendicular to the grid lines (per the CAD layout). Lay down the 15 ft. × 27 in. (approximately) carpet runner so that it is centered the long way on the 1 in. line.
10.	**PLACE SQUARE TARGETS**	Place center of targets according to the Task #4 Course Layout.
11.	**PLACE PIN ASSEMBLY**	Place and align front of Pin Assembly at the beginning of the 1 in. line, designated as line ***A*** on the Task #4 Course Layout.

Crane Selection and Setup

OVERHEAD CRANES

CRANE SELECTION

The Overhead Crane Operator Practical Exam can be taken on either a cab-operated or pendant/remote control crane with a minimum **three-ton** lifting capacity and powered functions for *hoist*, *bridge*, and *trolley*. The bridge span must be a minimum of 25 ft. and it must have a minimum hook height of 13 ft.

COMPLIANCE

All cranes used on CCO Practical Examinations must be in compliance with federal and state OSHA requirements and current applicable industry standards.

SETUP

The test crane must be set up and ready for operation in accordance with the manufacturer's recommendations, and in the location specified on the Test Site Layout (CAD).

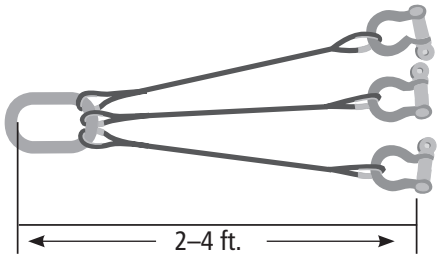
REEVING

The test crane must be reeved with a minimum two part line.

TEST WEIGHT RIGGING

The Test Weight rigging used to connect the Test Weight to the crane must meet the following criteria:

- Total rigging length 2–4 ft. (3 ft. recommended); total rigging length is measured from load-bearing point to load-bearing point
- It must be of a type that can be quickly and easily attached and detached from the crane's load hook and must meet the current applicable rigging standard(s)
- Recommend two or three sling legs and the use of bridle
- If using multiple sling legs, recommend 60 degree sling angles (minimum 30 degrees required)



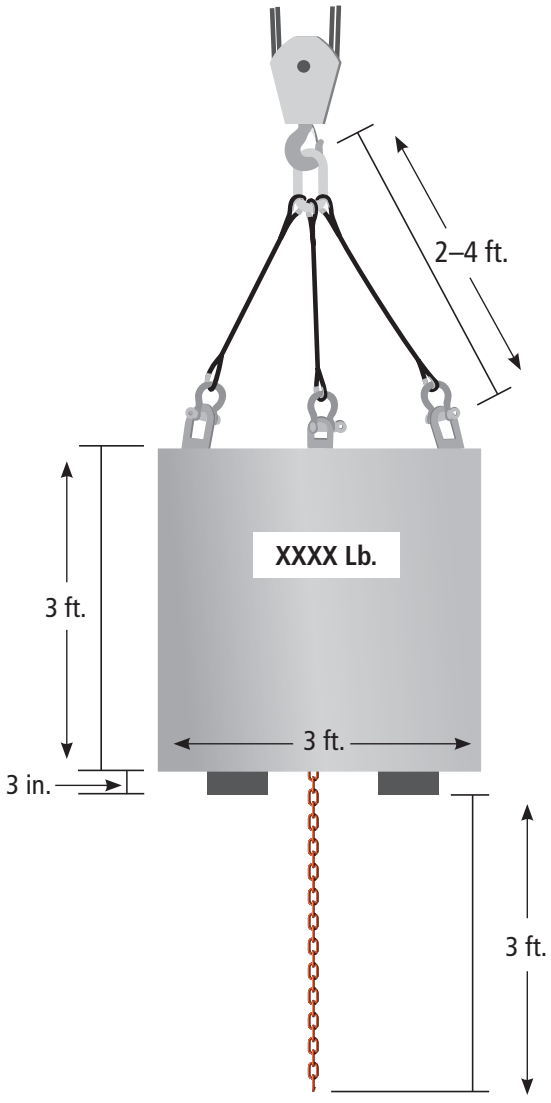
TEST WEIGHT

The weight of the crane's Test Weight includes any rigging and ancillary equipment. The weight 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 Test Weight must:

- Weigh between 1,500 and 2,000 lb., verified by a weight ticket, crane's load indicating device (LMI, RCI, RCL), or other type of certification documenting the actual load weight available to the Examiner
- Be cylindrical in shape, with the same diameter from top to bottom
- Have a continuously smooth surface from top to bottom
- Have a diameter of 3 ft. with no protruding edges
- Be 2–5 ft. in height

If the Test Weight has feet attached, they may extend no more than 4 in. below the bottom of the Test Weight.

TYPICAL TEST WEIGHT CONSTRUCTION



The center of the Test Weight must have a 36 in. length of 3/8- or 5/16-inch chain, painted orange or red, measured from the lowest point of the Test Weight (including feet). For cranes with a cab floor more than 25 ft. above ground, add four ⅜-inch chains (also 36 in. long) around the perimeter at 0, 90, 180, and 270 degrees.

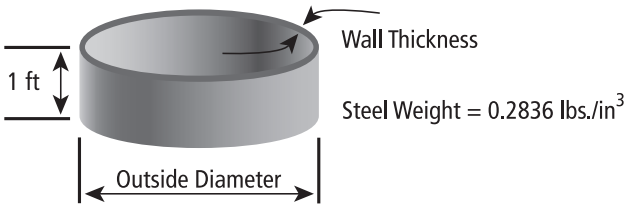
TEST WEIGHT CONSTRUCTION

As 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. Steel 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 NCCCO Test Weights. Test Site Coordinators can determine how many pick points are used on the Test Weight.

NOTE: The picking/attachment points should be welded or attached to the inside of the Test Weight; however, picking ears may be mounted on the outside of the Test Weight as long as the bottoms of the ears are more than 3 ft. 6 in. from the bottom of the Test Weight.

Use the *Pipe Diagram* and *Steel Pipe Weight Thickness Chart* below to calculate weights for given pipe wall thickness. 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 when calculating the overall weight of the Test Weight.

PIPE DIAGRAM



STEEL PIPE WEIGHT THICKNESS CHART

Pipe wall thickness	Weight per 1 linear ft. of pipe @ 36″ outside diameter
1/4″	96 lb.
3/8″	143 lb.
1/2″	190 lb.
3/4″	283 lb.
1″	374 lb.
1 1/4″	464 lb.
1 1/2″	553 lb.

Multiply the weight given in the table times the pipe length in feet.

Example: Weight for a ¾ in. wall thickness pipe × 3 ft. high = *374 lb. × 3 ft. = 849 lb.*

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

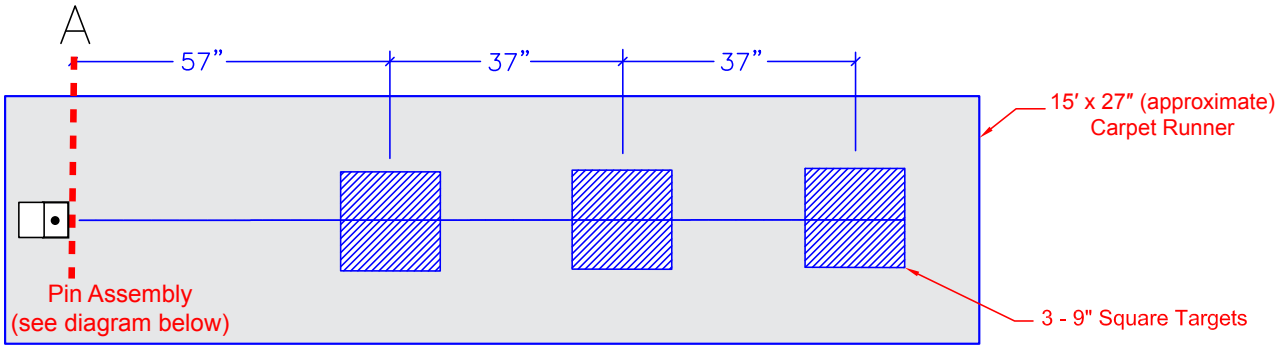
RECOMMENDED TEST WEIGHT DESIGN

NCCCO has some recommendations for construction of a Test Weight suitable for use in CCO overhead crane Practical Exams. The Test Weight should be made primarily of a 3 ft. diameter, 3 ft. tall steel pipe. It should have three attachment points, and the rigging should measure 2–4 ft. from load-bearing point to load-bearing point. There should be five tubes inside the Test Weight for the chains to drop through so they hang freely in the center and around the perimeter of the Test Weight at 0, 90, 180, and 270 degrees (see drawing). The total weight of the Test Weight and rigging should be no more than 1,500 lb., with the option to add at least 500 lb. as necessary. Finally, there should be four 3 in. tall rubber feet on the bottom of the Test Weight.

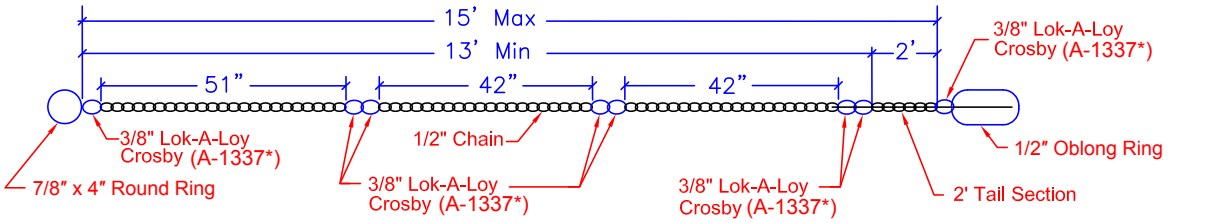
RECOMMENDED TEST WEIGHT CONSTRUCTION

Task 4 Course Layout, Chain-and-Ring Assembly, & Pin Assembly

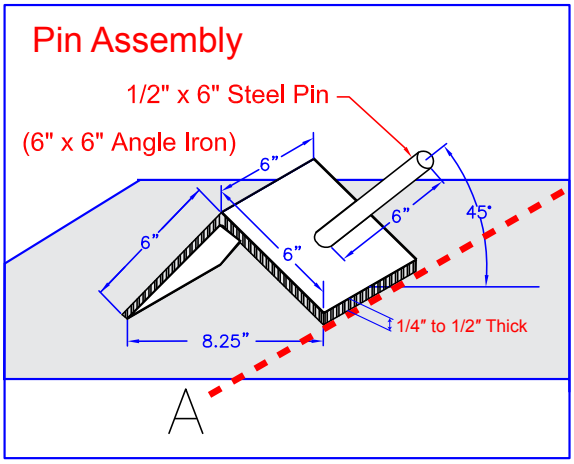
OVERHEAD CRANE OPERATOR PROGRAM



Task #4 Course Layout



Chain-and-Ring Assembly (13′–15′)



Chain-and-Ring Assembly Components

Quantity	Description
1	7/8″ x 4″ Round Ring
8	3/8″ Crosby Lok-A-Loy Master Links (A-1337, stock # 1015122)
1	1/2″ Oblong Ring
~13 ft.	1/2″ Chain

Ready Reference Checklist
OVERHEAD CRANES

YOU WILL NEED AN OVERHEAD CRANE THAT MEETS THE FOLLOWING CRITERIA:

- ❒ Three ton minimum lifting capacity, with powered functions for *hoist, bridge,* and *trolley*
- ❒ Minimum bridge span of 25 ft.
- ❒ Minimum hook height of 13 ft.

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

- ❒ A 3 ft. diameter cylindrical Test Weight, 2–5 ft. tall, weighing between 1,500 and 2,000 lb. (including rigging), verified by a weight ticket, crane's load indicating device (LMI, RCI, RCL), or other type of certification documenting the actual load weight available to the Examiner
- ❒ One 3 ft. length of 3/8-inch or 5/16-inch chain, painted orange or red, measured from the lowest point of the Test Weight (including feet), and attached to the center of the Test Weight
- ❒ Picking ears are mounted inside the Test Weight, or if mounted on the outside of the Test Weight the bottom of ears are at least 3 ft. 6 in. above the bottom of the weight
- ❒ Test Weight rigging is 2–4 ft. in length (load-bearing point to load-bearing point); if using multiple sling legs, recommend 60 degree sling angles (minimum 30 degrees required)
- ❒ PVC pipe, white, 1½ in. (SCH 40), sufficient to make 54 three-foot-long poles
- ❒ 3/4-inch, CDX-grade (or better) plywood or high density polyethylene (HDPE)*, sufficient to create 54 pole bases, 1½ in. (±½ in.) × 12 in. × 12 in. (nominal)
- ❒ 54 tennis balls
- ❒ 54 ft. of #18 nylon string, to attach tennis balls to poles (optional)
- ❒ 108 1¼-inch zinc-plated (galvanized) screws, or equivalent, to secure nylon string to tennis balls and poles (optional)
- ❒ Two horizontal poles, made of 1½-inch PVC pipe, painted red or orange 12 in. on both ends and 12 in. in the middle
- ❒ 500 ft. brightly colored string line (for Right Angle Corridor and CAD layout use) ***NOTE: Chalk line may be used on concrete floors***
- ❒ Paint (orange or red) for painting the poles and chain ***NOTE: Red tape may be used for the poles***
- ❒ Rubber mats or paint to mark circular designated areas
- ❒ 15 ft. × 27 in. carpet runner, with three 9 in. painted square targets per diagram
- ❒ 13 ft.–15 ft. Chain-and-Ring Assembly per diagram
- ❒ Pin Assembly per diagram
- ❒ Handheld wind speed indicator (anemometer) for outside testing only
- ❒ 100 ft. tape measure
- ❒ 30 ft. steel tape (e.g., carpenter's)
- ❒ Stopwatches and clipboards for Examiner(s) and Proctor(s)
- ❒ Two-way communications devices (for cab-operated exams)
- ❒ ***Cab-operated cranes with cab floor/platform more than 25 ft. above ground only:*** Four lengths of 3/8- or 5/16-inch chain, painted red or orange, each 3 ft. long when measured from the lowest point of the Test Weight (including feet); attached around the perimeter of the Test Weight at 0, 90, 180, and 270 degrees

*EQUIPMENT SOURCES

NCCCO does not endorse or recommend specific vendors of any equipment, but the following sources may be helpful in finding the required materials and equipment:

- ***HDPE bases:*** House of Plastics (part number HOP01-055), 2580 S. Orange Blossom Trail, Orlando, FL 32805, 407-843-3290, plastics@hopu.com

Site Report

PRACTICAL EXAMINATION—OVERHEAD CRANES

NCCCO 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 NCCCO Test Site Layout (CAD). The Examiner must also conduct a visual inspection of the crane for proper setup prior to testing any applicant. This *Site Report* must be presented on demand to any Practical Test Auditor.

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
- ❒ A DVD player and television or computer for candidates to watch the CCO Practical Exam video
- ❒ A location so that waiting candidates are unable to observe other candidates being tested

Candidate materials available:

- ❒ A written description of the examination *(NCCCO Overhead Crane Operator Candidate Handbook)*
- ❒ A plan view of the Test Site Layout (CAD)
- ❒ Operator's manual(s) for all cranes to be tested on, if available
- ❒ Instructions for the LMI system, if the crane is so equipped

TEST SITE SETUP

- ❒ Entire course is level within five percent of true level
- ❒ Right Angle Corridor has no more than a 6 in. maximum change in elevation
- ❒ The maximum distance for the course setup on a cab-operated crane is 50 ft. horizontally from the operator controls to the center of Circle #1
- ❒ Site is free of debris, stored materials, surface irregularities, or hazards that could interfere with test maneuvers
- ❒ Right Angle Corridor set up on asphalt, concrete surface, or firm and compacted sand, dirt, or gravel (free of vegetation), with a sufficiently uniform surface to permit the poles to stand vertical and slide freely; *grass surfaces are not acceptable*
- ❒ No obstructions are within 5 ft. of the test course in any direction

Using the Test Site Layout (CAD), verify the following measurements:

- ❒ Distance from the Gridline #1 to Gridline #2 (± 1 in.)
- ❒ Distance from the center of Circle #1 to center of Test Weight Circle along Gridline #1 (± 1 in.)
- ❒ Distance from the center of Circle #1 to the end of the long leg of Circle #1 Corridor (± 1 in.)
- ❒ Distance from the center of Circle #1 to the end of the short leg of Circle #1 Corridor (± 1 in.)
- ❒ Length of all six sides of the Right Angle Corridor (± ½ in.)
- ❒ Width of the Right Angle Corridor is 5 ft. (± ½ in.)
- ❒ Distance between consecutive poles (2 ft. ± ½ in.)
- ❒ Horizontal PVC poles placed according to Test Site Layout (CAD) (± ½ in.)
- ❒ Clearly marked denotation lines located correctly before and after horizontal pole obstructions, as per the Test Site Layout (CAD) (± ½ in.)

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

Test Site #: _____

POLES

- ❒ 54 poles made of 1½-inch, white PVC pipe (SCH 40), each 3 ft. long, ball on each pole (one inside splice per 3 ft. pole permitted; outside splices of PVC pipes NOT permitted; see page 10 for illustration)
- ❒ Top 12 in. painted or taped orange or red
- ❒ Mounted to a platform made of two layers of ¾-inch, CDX-grade (or better) plywood, or high density polyethylene (HDPE), cut 12 in. square (nominal)
- ❒ A taut, longitudinal string line placed on the ground through the centerline of each pole base. If on concrete floor, cut concrete or (indoors only) chalk lines are permissible; no other materials are acceptable.
- ❒ Spare poles and bases available

CIRCLES (OR MATS)

- ❒ Test Weight Circle (outer) has 48 in. outside diameter, with a clearly marked inside 2 in. wide line, located per the Test Site Layout (CAD)
- ❒ Test Weight Circle (inner) has 42 in. outside diameter, with a clearly marked inside line at least 2 in. wide, located per the Test Site Layout (CAD)
- ❒ Circle #1 has 42 in. outside diameter, with a clearly marked inside line at least 2 in. wide, located per the Test Site Layout (CAD)
- ❒ If marking circles or other parts of a course on plywood or mats, the borders must be marked with materials with a flat, uniform surface and a lip variance not to exceed 3/4 in. Any materials used may not interfere with the free movement of the pole bases.

CRANE SELECTION AND SETUP

- ❒ Crane as identified in the Test Site Layout (CAD)

TEST CRANE

- ❒ This crane has a current annual inspection with supporting documentation.
- ❒ Set up in the location specified, ready for operation in accordance with the manufacturer's recommendations
- ❒ Bridge span minimum of 25 ft.
- ❒ Hook height minimum of 13 ft.

TEST WEIGHT

- ❒ Weight is 1,500–2,000 lb., verified by a weight ticket, crane's load indicating device (LMI, RCI, RCL), or other type of certification documenting the actual load weight available to the Examiner
- ❒ Verified by a weight ticket or other type of certification documenting the actual load weight available to the Examiner
- ❒ Cylindrical in shape with a diameter of 3 ft. and no protruding edges
- ❒ Height of the Test Weight is 2–5 ft.
- ❒ Picking ears are mounted inside the Test Weight, or if mounted on the outside of the Test Weight the bottom of ears are at least 3 ft. 6 in. above the bottom of the weight
- ❒ Method of attachment: Test Weight rigging is 2–4 ft. in length (load-bearing point to load-bearing point); if using multiple sling legs, recommend 60 degree sling angles (minimum 30 degrees required)
- ❒ A 36 in. length of 3/8-inch or 5/16-inch chain
  NOTE: To measure the chain length, attach the Test Weight to the crane hook. Raise the Test Weight until the chain barely touches the ground and measure from the lowest point of Test Weight (including feet) to ground.
  - ❒ Chain is painted orange or red
  - ❒ Chain extends from the center of the Test Weight
- ❒ ***Cab-operated cranes with cab floor/platform more than 25 ft. above ground only:*** Four 36 in. lengths of 3/8- or 5/16-inch chain, of contrasting color to the center chain, removable and attached at 0, 90, 180, and 270 degrees
- ❒ If the Test Weight has feet attached, they do not extend more than 4 in. below the bottom of the Test Weight

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

Test Site #: _____

TEST WEIGHT RIGGING

- ❒ All load-supporting components must be assembled in accordance with proper rigging practice and working load limits for the hardware used. 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 applicable industry standards.

TROLLEY LAYDOWN

- ❒ Carpet approximately 15 ft. × 27 in.
- ❒ Three 9 in. square targets placed per the Task 4 Course Layout drawing
- ❒ Distance from line ***A*** to center of first target is 57 in.
- ❒ Measurement between target centers is 37 in.
- ❒ Chain-and-Ring Assembly is 13 ft. min./15 ft. max. and constructed per CAD drawing
- ❒ Master Links are Crosby 3/8" LOK-A-LOY (A-1337), painted red or orange
- ❒ Pin Assembly is per CAD drawing
  - ❒ Taped or weighted to prevent movement, if necessary

TEST COURSE SETUP

- ❒ The Practical Examiner whose signature appears at the end of this *Site Report* attests that he/she has set up the course. *(Check only if the Practical Examiner has set up the test course.)*
- ❒ The Examiner must have the following items for conducting the Practical Exam:
  - ❒ *Two stopwatches*
  - ❒ *Clipboard*
  - ❒ *Anemometer (wind meter)*
  - ❒ *Pen or pencil*
  - ❒ *30 ft. measuring tape*
  - ❒ *Test Site Layout (CAD)*
  - ❒ *Proctor*
  - ❒ *Verbatim instructions*
  - ❒ *Notification of test email (new test sites, if applicable)*
  - ❒ *Personal protective equipment (hard hats, work boots)*
  - ❒ *Two-way communications device (for cab-operated exams)*

Deviations from the above-noted requirements are not allowed without written consent from the NCCCO Western Regional Office.

PRACTICAL EXAMINER ATTESTATION *(Examiner signature required.)*

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:

NCCCO—Testing Services Department
1960 Bayshore Blvd.
Dunedin, Florida 34698
Phone: 727-449-8525
Fax: 727-461-2746
Email: info@nccco.org

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Crane Report

PRACTICAL EXAMINATION—OVERHEAD CRANES

NCCCO has established specific safety conditions and guidelines that each practical exam must follow. This Crane Report is a verification tool used to ensure that all testing parameters are within strict, safe working conditions. Before testing is conducted, the crane being used for testing must have its own unique report filled out. This report should be completed in ink, signed by the Examiner, and sent with the Site Report to: NCCCO—Testing Services Department, 1960 Bayshore Blvd., Dunedin, FL 34698.

Reminder: ***Each crane used must have a separate report filled out.***

TEST SITE NUMBER	DATE

NAME OF TEST SITE COORDINATOR

NAME OF PRACTICAL EXAMINER

CRANE OWNER/COMPANY NAME

CRANE OWNER/COMPANY POINT OF CONTACT	PHONE NUMBER

CRANE TYPE *(Check all boxes that apply to the characteristics of the crane you plan to test on.)*

Cranes used for CCO Practical Exams must have powered bridge, trolley, and hoist functions.

OVERHEAD BRIDGE CRANES:	❒ TOP RUNNING	❒ UNDERHUNG	
	❒ SINGLE GIRDER	❒ DOUBLE GIRDER	
GANTRY CRANES:	❒ GANTRY	❒ SEMI GANTRY	❒ CANTILEVER GANTRY
METHODS OF OPERATION:	❒ PENDANT CONTROL	❒ CAB OPERATED*	❒ REMOTE CONTROL
TYPES OF CONTROLS:	❒ VARIABLE FREQUENCY DRIVE		❒ MAGNETIC CONTROL

*FOR CAB-OPERATED CRANES, PLEASE LIST THE HEIGHT OF THE CAB FLOOR: _____

CRANE DESCRIPTION *(Provide data for items 1 thru 6 using the manufacturer's operating manual.)*

1. MAKE/MODEL	2. SERIAL NUMBER	3. MAX RATED CAPACITY (TONS)

4. CONFIGURATION OF CRANE (ROPE SIZE AND TYPE, ANCILLARY EQUIPMENT)

Please complete items 5 and 6:

5. BRIDGE LENGTH (25 FT. MIN. REQUIRED): _____ FT.

6. LOAD HOOK HEIGHT (13 FT. MIN. REQUIRED): _____ FT.

The following are the overhead crane Test Weight specifications:

7. TEST WEIGHT: _____ LB. (1,500–2000 LB. REQUIRED)

NOTE: FOR CAB-OPERATED CRANES WITH A CAB FLOOR MORE THAN 25 FT. ABOVE GROUND, THE TEST WEIGHT MUST HAVE FOUR PERIMETER CHAINS IN ADDITION TO THE CENTER CHAIN.

I attest that this is a true and accurate report of the crane and test weight being used for testing.

EXAMINER SIGNATURE	PRINTED NAME OF EXAMINER	EXAMINER'S ACCREDITATION #	DATE

Sample Completed Crane Report
PRACTICAL EXAMINATION—OVERHEAD CRANES

NCCCO has established specific safety conditions and guidelines that each practical exam must follow. This Crane Report is a verification tool used to ensure that all testing parameters are within strict, safe working conditions. Before testing is conducted, the crane being used for testing must have its own unique report filled out. This report should be completed in ink, signed by the Examiner, and sent with the Site Report to: NCCCO—Testing Services Department, 1960 Bayshore Blvd., Dunedin, FL 34698.

Reminder: ***Each crane used must have a separate report filled out.***

TEST SITE NUMBER	DATE
PE-2015	12/20/11

NAME OF TEST SITE COORDINATOR: Amanda Pettigrew

NAME OF PRACTICAL EXAMINER: Mortimer Dufason

CRANE OWNER/COMPANY NAME: ACME Cranes

CRANE OWNER/COMPANY POINT OF CONTACT	PHONE NUMBER
Roger Tinsky	800-555-1212

CRANE TYPE *(Check all boxes that apply to the characteristics of the crane you plan to test on.)*

Cranes used for CCO Practical Exams must have powered bridge, trolley, and hoist functions.

OVERHEAD BRIDGE CRANES:	☑ TOP RUNNING	❒ UNDERHUNG	
	❒ SINGLE GIRDER	❒ DOUBLE GIRDER	
GANTRY CRANES:	❒ GANTRY	❒ SEMI GANTRY	❒ CANTILEVER GANTRY
METHODS OF OPERATION:	☑ PENDANT CONTROL	❒ CAB OPERATED*	❒ REMOTE CONTROL
TYPES OF CONTROLS:	☑ VARIABLE FREQUENCY DRIVE		❒ MAGNETIC CONTROL

*FOR CAB-OPERATED CRANES, PLEASE LIST THE HEIGHT OF THE CAB FLOOR: _____

CRANE DESCRIPTION *(Provide data for items 1 thru 6 using the manufacturer's operating manual.)*

1. MAKE/MODEL	2. SERIAL NUMBER	3. MAX RATED CAPACITY (MINIMUM 3 TONS REQUIRED)
Kone	0102XY21234	15 tons

4. CONFIGURATION OF CRANE (ROPE SIZE AND TYPE, ANCILLARY EQUIPMENT, ETC.)

Please complete items 5 and 6:

5. BRIDGE LENGTH (25 FT. MIN. REQUIRED): 30 FT.

6. LOAD HOOK HEIGHT (13 FT. MIN. REQUIRED): 20 FT.

The following are the overhead crane Test Weight specifications:

7. TEST WEIGHT: 1,600 LB. (1,500–2,000 LB. REQUIRED)

NOTE: FOR CAB-OPERATED CRANES WITH A CAB FLOOR MORE THAN 25 FT. ABOVE GROUND, THE TEST WEIGHT MUST HAVE FOUR PERIMETER CHAINS IN ADDITION TO THE CENTER CHAIN.

I attest that this is a true and accurate report of the crane and Test Weight being used for testing.

EXAMINER SIGNATURE	PRINTED NAME OF EXAMINER	EXAMINER'S ACCREDITATION #	DATE
Mortimer Dufason	Mortimer Dufason	938	12/20/11

NCCCO Information Release Policy

A. Definitions

1. "NCCCO" means and refers to the National Commission for the Certification of Crane Operators acting through its staff and authorized agents and representatives.
2. "Releasable Information" means and refers to the following information: name, certification status, examination dates, certification dates, certification number(s), and designations. In the case of accredited Practical Examiners, "Releasable Information" also means and refers to the following information: name, accreditation status, accreditation dates, accreditation number, and categories in which the Practical Examiner is authorized to administer exams.
3. "Third Party" means and refers to an employer, prospective employer, regulatory agency, or any other person or entity that makes an inquiry to NCCCO.

B. Policies

1. It shall be the policy of NCCCO to provide Releasable Information pertaining to individuals who have successfully passed one or more NCCCO examinations. It shall also be the policy of NCCCO to provide Releasable Information pertaining to such individuals on its website using such protocols as may be established. In addition, it shall be the policy of NCCCO to provide information, as appropriate, concerning individuals who have been sanctioned, suspended or revoked from participation in NCCCO's programs, using such protocols as may be established.
2. Releasable Information may be released to a Third Party who makes a written request, including by electronic correspondence. Generally, Releasable Information will be released within one business day from actual receipt of a written request.
3. If a Third Party requests information concerning an individual who has not taken or successfully passed an NCCCO examination, NCCCO may release a statement confirming that, as of a given date, the individual does not appear on NCCCO's list of successful candidates in one or more categories of certification.
4. If an applicant or certificant is under formal sanction, suspension, or revocation by NCCCO, then NCCCO may release a statement to that effect to any persons and by any reasonable means, including by means of a list published on the NCCCO website. In addition, if an individual applicant or certificant is under formal investigation, sanction, suspension, or revocation by NCCCO, then NCCCO may release a statement concerning the status of the applicant or certificant to any Third Party and to any jurisdiction that requires or accepts CCO certification as a basis for satisfying requirements to work in the jurisdiction. Any such statement to a Third Party or jurisdiction may identify the applicant or certificant, the certifications affected, the actions taken, and the effective dates of any such actions.
5. If an accredited Practical Examiner, authorized Test Site Coordinator, listed Training Provider, or other authorized participant in NCCCO's programs ("Authorized Participant") is under formal sanction, suspension, or revocation by NCCCO, then NCCCO may release a statement to that effect to any persons and by any reasonable means, including by means of a list published on the NCCCO website. In addition, if an Authorized Participant is under formal investigation, sanction, suspension, or revocation by NCCCO, then NCCCO may release a statement concerning the status of the Authorized Participant to any persons and by any reasonable means, including by means of a list published on the NCCCO website. Any such statement may identify the Authorized Participant, the credentials or capacities affected, the actions taken, and the effective dates of any such actions.
6. If a Third Party seeks information other than the foregoing information, generally, absent a subpoena or similar legal process, such information will not be released. However, in the course of business, as circumstances reasonably warrant, NCCCO reserves the discretion to release information other than the foregoing information.
7. Certain situations may require or warrant the immediate verbal confirmation of an individual's certification status or other Releasable Information in response to a written or verbal request. Under such circumstances, NCCCO may provide such immediate verbal confirmation, at its discretion. When such a verbal confirmation is provided, it shall be NCCCO's policy to follow up with a written confirmation.
8. It shall be the policy of NCCCO to discuss score-related and test-specific matters only with a candidate or a candidate's authorized legal representative.
9. NCCCO will release Releasable Information about an individual upon receipt of a written request (including electronic correspondence) from that individual. NCCCO may release information other than Releasable Information about an individual, at its discretion, upon receipt of a signed, notarized, written request from that individual. In addition, NCCCO will release information other than Releasable Information about an individual when required by a legal authority of competent jurisdiction under a duly-issued subpoena, subject to any objection, or as otherwise required by law.

Summary of Changes

TEST SITE COORDINATOR HANDBOOK—MOBILE, TOWER, AND OVERHEAD CRANES

Following approval by the appropriate NCCCO committees, Commissioners, and/or Board of Directors, the following substantive (non-editorial) changes have been made to the *Practical Examination Test Site Coordinator Handbook (*major programmatic changes covered in Test Site Coordinator Bulletins are in **bold**):

Changes made 08/18:

Page(s)	*Section*	*Change*
3	Criteria for Test Sites	• Added that the pole corridors must be free of vegetation.
5	Applying to Host a Practical Examination	• Added that the line pull chart and range diagram must be submitted with the Mobile Crane Data Sheet
5	Permanent Test Sites	• Added that an annual full site report is required for permanent test sites.
10, 33, 51, 71, 89	Pole Barrier Construction	• Removed requirement to use screws to attach string to pole and tennis balls
26	Mobile Crane Data Sheet	• Added that the line pull chart must be submitted with the Mobile Crane Data Sheet
36	**CCO Practical Exam Categories**	• **Added to TLL definition: (These include any cranes for which an operator stands at a control station and "walks" with the controls as they rotate with the boom structure; this definition also applies to any cranes with a rotating operator station, including walk-around, platform, and cab-operated boom trucks.)**
36	Short Boom Restriction	• Adjusted the specifications for TLL and TSS cranes assigned "short boom restriction"
37, 42	Overhaul Ball	• Added that if a second overhaul ball is used for NCCCO testing, the second ball may only be used during Task 3: Ball in Barrels and it must be removed for all other tasks. The method of attachment must permit easy removal of second ball; NCCCO recommends using a sling, not a shackle.
41, 57, 77, 97	Site Reports	• Added that the Corridors must be free of vegetation.
52–53	Test Site Layout Instructions	• Service Truck Crane Operator Test Site Layout Instructions removed
53	Service Truck Crane Selection	• Because of duty cycle limitations on service truck cranes, high volumes of testing during short time period may tax the performance of certain service truck cranes. Test Site Coordinators should consider the limitations for certain models of service truck cranes when selecting cranes to be used for testing.
89	Obstructions	• Updated specifications for horizontal obstructions

Changes made 03/18:

Page(s)	*Section*	*Change*
6	**Score Reporting**	• **Test Site Coordinators now automatically receive Pass/Fail Reports for both written and practical exams at no charge. A Pass/Fail Report Request Form is no longer required to be submitted.**
12	Practical Test Administration Summary Form	• Moved $50.00 fee for Detailed Score Report Request from mandatory to optional charge.
13, 15	Candidate Applications	• Updated candidate attestation statement
32	**Test Site Setup**	• **Plastic HDPE (or equivalent) is no longer allowed to be used as a substitute for plywood under barrels used in practical examinations.**
36	**Short Boom Restriction**	• **Examples added of cranes that would result in "Short Boom Restriction" being noted on a candidate's CCO card.**
36	**Overhaul Ball**	• **Detailed specifications added for overhaul balls used in CCO Mobile Crane Operator Practical Exams.**
40	**Ready Reference Checklist—Mobile Cranes**	• **Detailed specifications added for overhaul balls used in CCO Mobile Crane Operator Practical Exams.**

IMPORTANT CONTACT INFORMATION

NATIONAL COMMISSION FOR THE CERTIFICATION OF CRANE OPERATORS

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