



Lean Construction Institute-Certified Practitioner Design (LCI-CPD) Candidate Handbook



Release Date December 1, 2023

The Lean Construction Institute reserves the right to make changes to this handbook.





Congratulations!

By seeking information on Lean Construction Institute-Certified Practitioner-Construction (LCI-CPD), you have taken the first step to becoming recognized for your experience and expertise in Lean construction.

Certification is achieved through: 1) applying and confirming eligibility, 2) passing a knowledge assessment exam and 3) successfully completing a capability assessment portfolio review.

This Candidate Handbook describes the application criteria, steps, and deadlines for the process in its entirety.

Thank you for your interest, and we wish you much success.

If you have any questions, you may reach out at certification@leanconstruction.org.

Sincerely,
The Lean Construction Institute

STEPS TO CERTIFICATION

STEP 1

3+ years of applying Lean Construction in real-life projects.

STEP 2

Review Candidate Handbook, submit application, and pay fee.

STEP 3

Take and pass a knowledge assessment exam based on the Content Outline.

STEP 4

Submit portfolio based on Content Outline requirements.



TABLE OF CONTENTS

Introduction

Background.....	1
Benefits of Certification	1
About the Lean Construction Institute	2
Contact Information	2

Applying for Certification

Candidacy Requirements.....	3
Fee Schedule	3
Submitting the Application.....	3
Scheduling the Knowledge Assessment	4

Knowledge Assessment

Examination Content Outline.....	5
Example Exam Questions.....	5
Before the Exam	7
Technical Requirements.....	7
On Exam Day	8
Remote Proctored Exam Rules.....	9
After the Examination.....	10

Capabilities Assessment

Capabilities Assessment Information	11
Capabilities Assessment Content	11
Assessment Submission.....	15
Certificate & Badge.....	15

Maintaining Certification

Purpose	15
Recertification Process	15
Continuing Education Credits	15
Ownership and Use of the Credential	18
Verifying Certification Status	18

Policies

Contact Information Changes	19
Nondiscrimination	19
Statement of Impartiality and Fairness.....	19
Confidentiality and Privacy of Information	19
Testing Accommodations for Candidates with Disabilities ..	19
Process for Appeals	21
Program Complaints	22
Complaints against Candidates or Certificants	23

Appendix A

Exam Content Outline.....	24
---------------------------	----

Appendix B

Certification Code of Conduct	27
-------------------------------------	----

Appendix C

Know Before You Go: Tips for Test-Takers	28
Before and on Test Day	



INTRODUCTION

Background

The mission of the certification program within the Lean Construction Institute (LCI) is to support the organizational mission and vision:

- To lead the building industry in transforming its practices and culture.
- A healthy and thriving building industry delivering outstanding project outcomes every time for everyone.

Over time, the need for and development of a certification credential that evaluates and recognizes the ability of individuals to effectively deploy Lean on projects has been recognized as a requirement if LCI is to succeed in accomplishing its mission.

This led to LCI undertaking a robust and rigorous process to bring forth a knowledge and capability-based certification.

Benefits of Certification

The LCI-Certified Practitioner-Construction (LCI-CPD) sets the standard for applied Lean construction. Certification is a huge step forward for the Lean construction industry—moving practitioners, owners and employers toward a shared understanding of Lean practice and promoting a culture of continuous improvement and cooperation.

For Practitioners

For Lean construction professionals, obtaining the LCI-CPD is more than passing an exam—it is a demonstration of professional experience, knowledge and aptitude in applying Lean construction principles, dedication to lifelong learning and commitment to ethical behavior. Anyone can say they know Lean, but only a few have the skills. The LCI-CPD validates Lean skills and differentiates practitioners' abilities.

Certification is an important milestone in a Lean practitioner's career—one that will help individuals lead by example and

promote the value of Lean within the industry. Becoming an LCI-CPD will help practitioners demonstrate that they can effectively apply Lean knowledge and create value in all aspects of their work. Committed practitioners have done the work of learning Lean and staying up to date on new information. Certification validates that hard-earned experience.

For Employers

Certification is a mark of distinction and trust that employers can use to distinguish knowledgeable professionals who are committed to Lean construction and design and can effectively apply these principles to current and future projects. The LCI-CPD serves as a central tool to help employers build the strongest Lean team they can. By supporting team members through certification and looking for the LCI-CPD in hiring, employers are helping to build a more Lean future.

For Owners

The LCI-CPD is the differentiator owners have been waiting for. This certification sets an industry standard and builds a shared understanding to help owners hire teams that truly share their values and will meet expectations. Companies with LCI-certified team members are guaranteed to have a minimum of three years of experience applying Lean in the field. Minimize waste, reduce risk, and find the teams that will deliver on Lean every step of the way with the LCI-CPD.

For Businesses

The LCI-CPD certification distinguishes practitioners and companies by giving them a leg up over others in the industry and proving their excellence. With a team of certified practitioners, your bids will stand out. Owners will know that your team is as committed to Lean as they are, with validated experience and a culture of continuous improvement. Show owners that they can count on your team to meet expectations, minimize waste and deliver on the promises of Lean.



About the Lean Construction Institute

The Lean Construction Institute is a non-profit organization seeking to make standard the use of Lean tools and techniques on all projects in the built environment. Lean thinking, processes and behaviors can integrate our siloed industry into high-performing, success-oriented teams that foster collaboration between all project participants from owners to trade partners.

LCI's Certification Commission is empowered by the LCI Board of Directors to provide oversight and governance for certification programs and to establish policies related to certification programs. The Certification Commission is solely responsible for all essential decisions related to the development, administration, and ongoing maintenance of all Lean Construction Institute certifications.

Contact Information

To learn more about LCI, the value of certification, requirements to earn and maintain certification, to file a complaint or appeal, visit leanconstruction.org/lean-certification or contact us at certification@leanconstruction.org.

Most of your questions can be answered by the Lean Construction Institute; however, we partner with two companies that support the technology behind our certification programs.

- **Prolydian** supports the certification process through their candidate management system, and continuing education manager. Many technical questions can be answered by visiting: prolydian.com/test-taker-faqs. Here you'll find information and videos on remote proctored exams, technical requirements, an overview of the exam-day experience and more. In the unlikely event you'll need technical support with your Prolydian account, you can contact Support+LCI@prolydian.com
- **Examity** provides the online proctoring system and personnel for the LCI certification that enables candidates to take the exam conveniently and securely from their own environment. Should you need support during your exam you can call 855-EXAMITY (select option 1), email support@examity.com or chat directly through the Live Chat feature on the Examity dashboard.



APPLYING FOR CERTIFICATION

Candidacy Requirements

Participation in the LCI-CPD program is voluntary and open to anyone meeting candidacy requirements at the time of application.

Requirements:

- Employer-verified Lean work experience of 3 years equivalent (2,080 hours per year) (to be confirmed via virtual attestation)
- Two professional references each addressing your applied Lean experience (via virtual reference questionnaire)
- Agreement to comply with the Certification Code of Conduct in Appendix A

Note discounts are offered based on LCI membership. If you, or your organization, is a member of LCI, you are entitled to the discount. Please check your membership prior to any applications or submissions.

Fee Schedule

Certification Application Fee:

- \$999 Non-Members
- \$599 LCI Members

This fee covers the exam and portfolio submission.

Note: Please check your membership prior to any applications or submissions. LCI also offers group discounts to Corporate Member organizations. Contact certification@leanconstruction.org for more information.

Exam Reschedule Fee: \$99

You may cancel or reschedule at no fee up to 72 hours prior to your scheduled exam. Any request to reschedule within 72 hours incurs a fee.

Exam Retest Fee: \$149

The retest fee is only applicable to candidates who have previously

taken the LCI-CPD exam but did not receive a passing score. This fee is applicable to each retest.

Incomplete Portfolio Resubmission Fee: \$99

The portfolio resubmission fee is only applicable to candidates who previously submitted a portfolio that was incomplete in submitting the full requirements. This fee is applicable to each resubmission.

Deficient Portfolio Resubmission Fee: \$149

The portfolio resubmission fee is only applicable to candidates who previously submitted a portfolio that was deemed to be deficient, and certification was denied. This fee is applicable to each resubmission.

Recertification Fee:

- \$439 Non-Members
- \$249 LCI Members

Certification Reinstatement Fee:

For certifications that require reinstatement, the fee is the original application amount plus \$149.

Fees are non-transferable from one candidate to another.

Making Payment

Payments are made online by credit card at the time of the initial application and recertification application through the Prolydian portal. Visa, Mastercard and American Express are accepted.

Submitting the Application

Applicants for LCI certification are required to complete and submit the online application within the Prolydian certification management system at app.prolydian.com. If you do not already have a profile in the system, you will be prompted to create one. Applicants with a disability who require assistance in completing the application should contact LCI at certification@leanconstruction.org.



CANDIDATE HANDBOOK

Applicants must complete the application in full, using their name exactly as it appears on a current approved government-issued photo ID. Approved government-issued photo identification includes:

- Driver's license
- Passport
- Any physical government-issued identification card (must include photo)

Eligibility Requirements

At the time of application, applicants will confirm eligibility via Prolydian. Within the virtual application, candidates will provide the name and contact information of their attestation and reference sources. Sources will receive a link from Prolydian to respond.

The attestation source must be a current or former employer. Only one attestation source is required. The attestation source will be asked to verify the candidate has three+ years of Lean experience by completing a simple virtual form. A current employer may attest to a candidate's former experience based on their resume or other employment records.

Reference sources (two required) can be anyone who has worked closely with the candidate in the field, in a collegial or supervisory capacity. The attestation source can also be a reference but does not have to be. References will be asked to complete a short reference questionnaire addressing the candidate's Lean experience, which will come directly from Prolydian.

The applicant must agree to comply with the Certification Code of Conduct (see Appendix A) within the application portal.

Review of Application and Notice of Status

LCI will review applications and provide a notice of application status within 10 business days. If approved, you will receive a verification email with instructions on how to register for the examination. If you are not approved, you will receive notification of next steps. If you have not received a confirmation email with 10 business days following online application submission, you should contact certification@leanconstruction.org to confirm the status of the application.

Application and Testing Deadlines

Since examinations are offered online and year-round, there

are no deadlines for applications. However, candidates must register and take the examination within three months of application approval.

Scheduling the Knowledge Assessment

After application approval, candidates should plan to complete the exam within three months.

Follow the instructions in the approval email to schedule your examination. Once the examination has been scheduled, you will receive a confirmation email listing the date and time of the examination. The email will also contain instructions on how to prepare for a live remote proctored exam session. If you do not receive an email, please check your junk or spam email folders before contacting us.

Testing Accommodations for Candidates with Disabilities

LCI complies with the Americans with Disabilities Act (ADA) and strives to ensure that no individual with a documented disability is deprived of the opportunity to take the certification exam solely by reason of that disability provided that reasonable special accommodations can be made. Applicants requesting accommodations must notify LCI prior to scheduling the exam. Please see the Policies section beginning on page 19 of this document for more information.

Rescheduling

You may reschedule the exam, within the allowed three-month exam window at no charge at least 72 hours before your scheduled test time. If, however, you cancel your appointment with less than 72 hours' notice, or if you miss your appointment, show up late or provide inadequate identification, you will be charged an additional testing fee to make a new appointment. Specific instructions for rescheduling will be included in your exam confirmation email.

Cancellation Policy

No fees will be refunded in the event a candidate fails to report at the scheduled time or fails to register for an exam within the allowed three-month exam window.

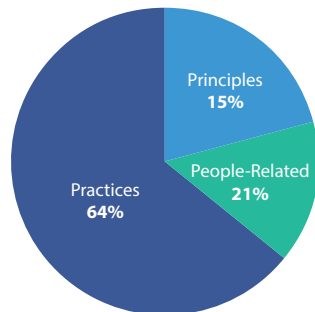


KNOWLEDGE ASSESSMENT

Examination Content Outline

The LCI knowledge assessment utilizes computer-based exams composed of multiple-choice questions administered in one session. Candidates have 180 minutes (three hours) to complete the 150-question multiple-choice exam. The session is planned to be short enough in duration to not require a break. Each multiple-choice question has four response options and one correct answer. The exam questions cover the topic areas detailed in the examination content outline (see Appendix

A). The exam is comprised of three domains: Principles, People-Related and Practices. Candidates are encouraged to develop a study plan based on review of the content outline. The exams is currently offered in English only.



Example Exam Questions

How do Conditions of Satisfaction support a project?

- A. They align a project team's focus and group decision-making, therefore bringing value to all team members.
- B. They confirm that the project team will hire only the right partners and vendors for the job.
- C. They ensure that the project will be run smoothly and with minimal obstacles.
- D. They ensure that all team members will finish the project with most of their objectives and ideas met to their liking.

Correct Answer: A

When you start planning for Lean implementation on a team with limited Lean experience, which first action will best support building a Lean culture?

- A. Scheduling a kick-off meeting, also called a "soft start," with key project participants to mandate the Lean implementation.
- B. Develop a responsibilities matrix so people understand who is accountable for each element of the Lean implementation plan should it fail.
- C. Facilitate a discussion reflecting on why this project is important to people individually and as a team, and how Lean practices play a role in supporting their shared goal.
- D. Make an assessment regarding the level of Lean buy-in each person on the project team has to determine if Lean practices are appropriate for this team.

Correct Answer: C

When work leveling, which of the following remains constant?

- A. Cost
- B. Time
- C. Inventory
- D. Manpower

Correct Answer: B



Knowledge Assessment Exam Content Domains

Certifications offered by LCI are developed using nationally recognized industry standards. The LCI-CPD examination conforms to a content outline based on a job task analysis of professionals working in Lean construction. The initial LCI-CPD practice analysis study was conducted in 2021 with participation from a diverse panel of subject matter experts (SMEs). The practice analysis study focused on identifying what LCI-CPDs need to know and be able to do. Exam questions are based on this analysis, and it is an essential process in identifying required expertise and performance standards.

The LCI Certification Commission provides oversight for the development and ongoing maintenance of the certification examinations. The board and LCI staff work in partnership with testing specialists to ensure the examination is developed and maintained in a manner consistent with generally accepted principles for professional certification programs.

Impartiality Related to Education and Training Leading to Certification

LCI does not require, provide, approve, accredit, recommend, or endorse any specific educational programs, courses, study guides, review materials, or other examination preparation products.

LCI Refresher Resources

LCI resources listed here cover key Lean concepts on which candidates will be tested. Refresh your knowledge with these resources, and review the content outline in Appendix A for specific exam topic areas. Please review the LCI-CPD exam content outline in Appendices A & B for more specific topic areas.

LCI Transforming Design & Construction book

leanconstruction.org/resources/lean-books

LCI Target Value Delivery book

leanconstruction.org/resources/lean-books/

Last Planner System® Standard Work Guidelines

leanconstruction.org/member-hub/last-planner-standard-work/

Lean Topics on LCI website

leanconstruction.org/lean-topics/

Lean Videos on LCI website

leanconstruction.org/learning/videos/

LCI eLearning

leanconstruction.org/learning/e-learning/



Before the Exam

The knowledge assessment is delivered through Prolydian and proctored by Examity. Prior to beginning the exam, candidates must complete an Examity profile setup, including the upload of a government issued photo ID (the ID you must have with you on exam day). **Candidates MUST complete the profile setup and computer requirements check prior to beginning an exam.**

Follow the steps below to complete your profile setup:

1. Log into your Prolydian account at app.prolydian.com (provided by LCI in the application approval email).
2. Click the "Access my Examity account" button from your Prolydian exams dashboard.
3. Click "My profile."
4. Click the "Edit" button in the Account Information section, add your phone number, and then click "Save."
5. Upload a photo of your government issued ID in the examiSHOW section and then click "Upload."
6. Click the "Edit" button in the examiKNOW section. Select your security questions, provide your responses, and then click "Save."
7. Click the "Edit" button in the examiKEY section. Provide the required typed input and then click "Save."
8. Check your computer readiness by clicking on "computer requirements check" or by clicking the following link from the computer you will be testing with prod.examity.com/systemcheck/check.aspx.

IMPORTANT NOTE

Be sure that your computer and the location where you intend to take the examination meet the requirements specified in your confirmation email BEFORE examination day. If they do not meet the requirements, you will not be able to complete the test, and you will not receive a refund.

We strongly encourage you to review these helpful resources to ensure a successful testing experience:

- Online Test Taker FAQ: prolydian.com/test-taker-faqs
- 5 Tips to Boost Test Taker Success: examity.com/5-tips-to-boost-test-taker-success/
- Online Proctoring Troubleshooting Guide: examity.com/online-proctoringtroubleshooting-guide-for-test-takers-v4/
- Examity Check-In Process: youtube.com/watch?v=1J7Fm-8fXyo0

Technical Requirements

Be sure that the computer and the location where you intend to take the examination meet the requirements specified in your confirmation email **BEFORE** examination day. If they do not meet the requirements, you will not be able to complete the test and you will not receive a refund. Additional instructions will be provided to applicants in their confirmation email.

- Browser: Google Chrome or Mozilla Firefox with popup blocker disabled. Other browsers are not supported and may not work as expected.
- Working built-in or external webcam and microphone.
- Desktop computer or laptop (tablets, Chromebook and cell phones do not meet the proctoring requirements).
- Laptops must remain connected to a power source for the duration of the exam.
- macOS X 10.5 or higher, Windows Vista or higher. Examity does not support Linux or Chrome OS.
- Internet speed must be at least 2 Mbps download and 2 Mbps upload. Hot spots are not recommended.

How to Disable Pop-Up Blockers

How to Disable Pop-Up Blocker if you are Using Chrome (Desktop)

1. Open your Chrome browser.
2. In the upper right-hand corner, click the three vertical dots, then select "Settings."
3. At the bottom of the menu, click "Advanced."
4. Scroll down to "Privacy and security," and select "Site Settings."
5. Select "Pop-ups and redirects."
6. At the top of the menu, toggle the setting to Allowed to disable the pop-up blocker.

How to Disable Pop-Up Blocker if you are Using Firefox (Desktop)

1. Open your Firefox browser.
2. Click the "Menu" button, then select "Options."
3. Select "Privacy & Security."
4. Under "Permissions," uncheck "Block pop-up windows" to disable the pop-up blocker.

Power Failure or Loss of Internet

Computer-based tests are delivered via secure Internet connections. Internet connections are subject to local Internet providers. While it is not the norm, Internet connections can on occasion be lost momentarily, requiring the proctor to log you back into your exam. If you lose your Internet connection, inform the proctor, who will assist you in logging back into your exam. Upon logging back into your exam, you will resume at the first unanswered question. Your exam time remaining will be the same as it was when the Internet connection was lost.

On Exam Day

Log in at least 10 to 15 minutes prior to the exam to do the secure verification process.

To access your exam:

1. Log into your Prolydian account at app.prolydian.com.
2. Click the "Access my examity account" button from your Prolydian exams dashboard.
3. Click the "Start exam" button.
4. Install the Examity extension by following the instructions on the exam start page.
5. Click the "Connect to proctor" button. A proctor will:
 - Confirm candidate identification (see Identification Requirements below)
 - Direct the candidate to pan the examination room with their webcam
 - Release the exam for the candidate to start testing

Identification requirements

Candidates are required to present a valid, government issued photo identification to the proctor to gain access to the exam. Acceptable forms of identification (photograph and signature required) include:

- Driver's license
- Passport
- Any physical government-issued identification card (must include photo)

The name and photo on the identification presented must match the examinee as identified at the time of registration.

Candidates will not be permitted to test without proper identification and all fees will be forfeited.

Applicant Statement of Understanding

During the online application process, each applicant will see the Applicant Statement of Understanding. Applications will not be approved without verification of reading and agreeing to the statement containing the following items. Where other documents are referenced, a link to that document will be provided. These documents are also included in this Handbook: the Lean Construction Institute Certification Code of Conduct in Appendix A and the Exam Rules in the next section.

1. I agree that all information provided in my application is complete and accurate.



CANDIDATE HANDBOOK

2. I agree to comply with all rules, policies and provisions of the certification program including the Lean Construction Institute Certification Code of Conduct.
3. I agree to provide any information needed to determine my eligibility for initial and/or continued certification and to cooperate fully with any disciplinary investigations.
4. I agree to make claims regarding certification only with respect to the scope for which certification has been granted. I further agree to not to misuse the credential, certification mark, and or certificate, or to use them in a misleading manner.
5. I agree that LCI examinations are highly confidential and that the examination questions are the property of LCI. I further agree that unauthorized disclosure of the examination questions is prohibited under copyright laws.
6. I agree to comply with all LCI certification exam rules, which are included the next section.
7. I agree to not copy, release, share, or otherwise disclose confidential examination materials or participate in fraudulent test-taking practices.
8. I further understand that:
 - a. Candidates will be observed by a proctor through a web cam at all times while they are taking the LCI-CPD examination. Proctors may not necessarily inform candidates of their observations, but they are required to report behavior that may violate the terms and regulations of LCI or other forms of irregular behavior.
 - b. Any cheating and/or breach of confidentiality/security or any attempt to subvert the examination process by any candidate violates the purpose and principles of the examination. Any candidate, who carries out, takes part in, or who witnesses such behavior must report it to the proctor and/or LCI as soon as possible.
 - c. LCI reserves the right to cancel or withhold any examination results when, in the sole opinion of LCI, a testing irregularity occurs; cheating has occurred; there is an apparent discrepancy in, or falsification of, a candidate's

identification; a candidate engages in misconduct or plagiarism; when aberrancies in performance are detected for which there is no reasonable and satisfactory explanation; or the results are believed to be invalid for any other reason.

- d. Conduct occurring before, during or after testing that violates principles detailed in this Statement of Understanding may result in invalidation of examination results and/or other penalties and will be reported to LCI.

Remote Proctored Exam Rules

To provide a fair and consistent environment for all candidates, exams are delivered using standardized procedures following strict security protocols. Candidates are required to follow all testing rules at all times. Failure to follow these rules may result in termination of a candidate's testing session, invalidation of the candidate's exam score and/or disciplinary action. To ensure the security of the LCI-CPD examination, the following rules will apply.

- Candidates arriving more than 15 minutes after their scheduled exam start time will be required to reschedule the examination.
- Candidates are permitted a beverage only if in a clear, spill-proof container.
- No other individuals are permitted in the testing location with the candidate.
- Talking is prohibited unless directly to the proctor.
- Webcam, speakers, and microphone must remain on throughout the test.
- No watches, cell phones, or other electronic devices are permitted.
- No resources, notes, books, or references of any type are allowed.
- Exam room lighting should be adequate for the proctor to view the candidate and surrounding area.
- Once the exam has started, candidates must remain in view of the proctor. There are no scheduled or allowed breaks during the exam, be prepared to sit for up to the allotted three hours.



CANDIDATE HANDBOOK

- Dual monitors are not allowed.
- Reading out loud or any attempts to capture exam content (e.g., taking photos, copying questions, etc.) are prohibited.
- Attempts to remotely control the computer, resize browsers, or print the screen are prohibited.
- The Prolydian exam notepad or whiteboard may be used for notes, etc.

Note: The only materials candidates should have within reach as they check in are their ID and computer. A beverage as described above may be kept on the desk.

Violating Rules and Dismissal

Any candidate who is observed engaging in any misconduct will be subject to dismissal from the examination, may be barred from future examinations for a period ranging from one year to permanent dismissal, and may be required to forfeit their current examination fee and/or period of eligibility. Proctors are authorized to take immediate, appropriate measures against candidates who are caught violating testing rules. The candidate is entitled to appeal the dismissal determination.

After the Examination

At the conclusion of the knowledge assessment, you will receive an email confirming receipt of the exam. Exam results will be provided by email within 4 business days of testing. The examination score reports will reflect overall scaled score(s) and pass or fail status for the overall examination, based on the passing standard set by the Certification Commission. Additionally, for individuals not passing the exam, the score report will contain sub-scores identifying performance by domain to inform a study plan.

Retesting

Candidates who fail the exam must wait 30 calendar days from the initial exam date before retaking the exam. A retest fee must be submitted during the rescheduling process. If the candidate fails the second attempt, they must wait at least 30 calendar days before retaking the exam.

Appeals

All candidates have the right to file an appeal of an adverse decision resulting in a denial of certification or recertification based on a failure to satisfy application requirements, payment of fees required by LCI, or failure of the certification examination caused by conditions beyond the candidate's control. See the process for appeals beginning on page 21 of this handbook.



CAPABILITIES ASSESSMENT

Capabilities Assessment Information

In addition to the exam, LCI will utilize an essay/portfolio-based capabilities assessment to evaluate candidates' applied knowledge of Lean practices. The submission requirements are developed by SMEs with guidance provided by LCI contracted psychometrician. The portfolio requirements cover the topic areas detailed in the capability assessment content outline. The assessment includes three domains: Principles, People-Related and Practices. Candidates are encouraged to develop a plan for submission based on review of the content outline. The portfolio submission is currently offered in English only.

Certifications offered by LCI are developed using nationally recognized industry standards. The LCI-CPD capability assessment conforms to a content outline based on a job task analysis of professionals working in Lean construction. The initial LCI-CPD practice analysis study was conducted in 2023 with participation from a diverse panel of SMEs. The practice analysis study focused on identifying what LCI-CPDs need to know and be able to do. Submission requirements are based on this analysis, and it is an essential process in identifying required expertise and performance standards.

The passing standard for the capabilities assessment has and will continue to be set using a criterion-referenced methodology. SMEs assigned by the Lean Construction Institute were guided by the contracted psychometrician to determine the passing standard. Rubrics will be scored per Classical Test Theory, with the number of points awarded needed to pass the assessment set via the standard setting process.

LCI Certification Commission provides oversight for the development and ongoing maintenance of the capability assessment. The board and LCI staff work in partnership with testing specialists to ensure the assessment is developed and maintained in a manner consistent with generally accepted principles for professional certification programs.

Capabilities Assessment Content

This assessment will be broken up into two sections. Each section will have specific prompts where the candidate will have to respond to several questions either by essay or portfolio submittal.

- The first section will include seven mandatory prompts focusing on the Last Planner System® content. Each prompt will include two parts. (Prompts 1-7)
- In section two, the candidate will select four of the seven remaining prompts. Again, each prompt will include two parts. (Prompts 8 -14)

The candidate will receive a score for each section. The candidate must pass both sections in order to pass the capabilities assessment.

Timeline:

- The candidate will have one year from notification to proceed to complete the portfolio.
- The assessment may be completed over time with revisits to the Prolydian site as needed. The entries will be saved.
- Upon completion, the portfolio will enter the review process. Notification of being granted or denied certification can be expected within 90 calendar days.



Capabilities Assessment Content Outline

Candidates will be asked to address questions and topics through examples from their experience on real-world projects. The tables below illustrate the major topics presented in the capabilities assessment. This is followed by an example for each part and the assessment scoring details.

SECTION 1: Candidate must complete all seven prompts

Prompt #	Prompt Name
1	Milestone planning – Part 1 and 2
2	Phase pull planning – Part 1 and 2
3	Lookahead planning – Part 1 and 2
4	Weekly work planning – Part 1 and 2
5	Learning / Improving: Daily huddles – Part 1 and 2
6	Learning / Improving: Percent plan complete – Part 1 and 2
7	Learning / Improving: Variance management – Part 1 and 2

SECTION 2: Candidate must complete four of seven prompts

Prompt #	Prompt Name
8	Visual management – Part 1 and 2
9	Risk / Opportunity management – Part 1 and 2
10	Problem solving using A3 – Part 1 and 2
11	Root cause analysis / Five why – Part 1 and 2
12	Process mapping – Part 1 and 2
13	Conduct gemba walks – Part 1 and 2
14	5S Implementation – Part 1 and 2



PART 1: Example Questions

Milestone Planning (Prompt 1)

Question	Grade
1a. Describe the key goals for milestone planning.	
1b. Describe the actions taken to prepare for the milestone planning session.	
1c. Describe who was involved in the session.	
1d. Describe when in the process the milestone planning session was held and the logic for the timing.	
1e. Describe how the term milestone was defined and how the milestones were identified and characterized.	
1f. Describe the impact of the milestone plan for the project.	
1g. Describe how the plan was used moving forward.	
1h. Include milestone planning artifact (materials submitted). Example of a portion or full milestone plan you worked on (i.e., readable picture of plan on wall, digital plan, screen shot, etc.) photos of the team in action during the planning session, photos indicating visual use of milestones	
Total for Prompt 1, Part 1	SCORE

PART 2: Example Questions

Milestone Planning (Prompt 1)

Part 2

Identify how three of the six tenets relate and briefly describe how your team supported the behaviors to create the Lean culture for each of the three.

- Tenet 1: Respect for people
- Tenet 2: Optimize the whole
- Tenet 3: Generate value
- Tenet 4: Eliminate waste
- Tenet 5: Focus on flow
- Tenet 6: Continuous improvement



Capability Assessment Scoring

The scoring scale for all Part 1 prompts will be as follows:

0	1	2	3	4
Does not answer question; Answer does not correctly apply	Identifies correct answer but offers no or incorrect description	Identifies correct answer and offers minimally satisfactory description	Identifies correct answers and offers competent description	Identifies correct answers and offers exemplary description that exceeds expectations

The scoring scale for all Part 2 prompts will be as follows:

0	1	2	3	4
Does not answer question; Answer applies completely incorrect tenets / behaviors	Identifies how three relate but offers no or incorrect description and supporting behaviors	Identifies how three relate but offers minimally satisfactory description and supporting behaviors	Identifies how three tenets relate and offers competent description and supporting behaviors	Identifies how three tenets relate and offers exemplary description and supporting behaviors that exceeds expectations



Impartiality Related to Education and Training Leading to Certification

LCI does not require, provide, approve, accredit, recommend, or endorse any specific educational programs, courses, study guides, review materials, or other examination preparation products.

Capability Assessment Submission

Assessment Review and Notification

Once your submission is scored, you will be emailed an individual score report. The individual score reports will contain an indication of "pass" or "fail" for the overall assessment, based on the passing standard set by the Certification Commission. Additionally, for individuals not passing the assessment, the score report will contain sub scores identifying performance by domain to inform a study plan.

Resubmission

If a candidate's portfolio submission is deemed deficient, the candidate may resubmit a revised portfolio within six months. Candidates may resubmit up to two times after the original submission. There is a fee of \$199 for each resubmission. If the portfolio remains deficient, the candidate may reapply for the certification, including references, attestation and application fee.

Appeals

All candidates have the right to file an appeal of an adverse decision resulting in a denial of certification or recertification based on a failure to satisfy application requirements, payment of fees required by LCI, or failure of the certification examination caused by conditions beyond the candidate's control. See the process for appeals beginning on page 21 of this handbook.

Certificate & Badge

A certificate and badge will be awarded to candidates that are successful in passing the LCI-CPD knowledge and capabilities assessments.

Go to app.prolydian.com/organizations/LCI and click on your "My Achievements" section to download your certificate.

Digital badges are unique to each individual. A link is automatically emailed out when certification is achieved. If you do not receive the link email Support+LCI@prolydian.com.

The certificate and badge may only be displayed during the time period for which the credential is valid.

MAINTAINING CERTIFICATION

Purpose

Those holding an LCI certification demonstrate their commitment to staying abreast of best practices by ensuring their knowledge and expertise remain current via recertification.

Recertification Process

Certificants must recertify every three years to maintain active LCI-CPD status. Recertification requires:

- Continued agreement and compliance with the Lean Construction Institute Code of Conduct.
- Submission of 60 units of continuing education or activities credit (CEU).
- Self-attestation of continued work experience in Lean construction for the equivalent of one year (2,080 hours) minimum during the three-year period.
- Payment of recertification fee. \$249 for LCI members, \$439 for non-members.

All continuing education activities must take place following the date of certification to be eligible for credit.

Continuing Education Credits

Certificants must earn 60 units of credit (CEU) in education and development activities focused on advancing knowledge, skills and capabilities in Lean construction. The credits are to be distributed among each of the domains of Lean construction and must include a minimum of 10 credits in each domain.

- Principles
- People-related
- Practices

All CEUs must be entered online via the Prolydian portal. A listing of pre-approved CEUs is available via the Prolydian online portal, but other courses may be submitted for approval.



Education and development activities may include the following:

Activity	Description	Qualifier	Credit Earned	Limit
Lean-Relevant Education	Attend college, continuing education class, employer education or approved program	Credits earned for time spent in actual learning. Breaks, networking, etc. may not be applied toward credit.	Each hour spent in learning earns one credit.	Unlimited
Event Attendance	Participate in Lean event or program including in-person, virtual or webinar. The event must be of a learning level appropriate to advancing the certificant's knowledge, not of a introductory level.	Credits are earned for time spent learning. Note: LCI events eligible for CEU will be noted as such in invitations.	Each hour spent in learning earns one credit. Attending LCI Congress core days or LCI Design Forum earns five credits per day.	Unlimited
Present	Present on a subject relevant to Lean at an event or program.	Credits are earned for the first time presenting material. Re-presenting materials multiple times may not be applied toward credit.	Each hour spent presenting earns one credit.	12 maximum credits allowed
Develop LCI Educational Materials	Develop Lean educational materials accepted by LCI for inclusion in LCI course offerings.	Materials must be vetted and approved by LCI.	Each hour of course earns three credits Example: four-hour course earns 12 credits.	24 maximum credits allowed
Exam Development	Serve as an Item Writer for updates to the LCI certification exam.	Write and have accepted a minimum of five items (questions) for updates to the LCI certification exam	Five Items earns one credit.	Unlimited
Author Book	Publish a book on a Lean-relevant topic.		Publishing a book earns 20 credits.	20 maximum credits allowed



Publish a White Paper	Write and have a white paper peer reviewed and published by a recognized, relevant organization or outlet. or have a blog post published on a Lean topic. Examples of recognized organizations include: IGLC, LCI, Lean Construction Journal, Lean Enterprise Institute and Shingo Institute	A white paper must address a relevant Lean topic in-depth. It must be peer-reviewed and published to be considered a white paper for credit.	Publishing a white paper earns five credits Publishing a blog post earns one credit	15 maximum credits allowed
Read	Read a Lean-relevant book.		Each book earns two credits.	10 maximum credits allowed
Independent Learning	Submit a self-report on a Lean undertaking.	Self-report must include how the activity supported your growth in Lean construction.	Self-report earns a half credit for each hour spent.	10 maximum credits allowed



Ownership and Use of the Credential

The certification marks and logos are the property of LCI. Permission to use the certification marks or logos are granted to certified persons at the discretion of LCI for permissible uses only.

Persons Authorized to Use the Marks

Use of any LCI certification marks and logos is limited to those persons who have been granted the certification by LCI and who satisfy all maintenance and recertification requirements established by LCI. Use of the mark and logo by individuals who have not been granted and maintained the certification is expressly prohibited.

Non-Assignability and Non-Transferability

Permission to use the certification marks and logos is limited to the certified person and shall not be transferred to, assigned to, or otherwise used by any other individual, organization, or entity.

Mark and Logo Use

Those persons who have been granted permission to use the certification mark and logo shall do so pursuant to the rules and guidelines established by LCI. Persons granted permission to use the certification mark and logo must familiarize themselves with the established rules and guidelines for use and must execute approved agreements setting forth such rules and guidelines for use.

The marks and logos may not be revised or altered in any way. They must be displayed in the same form as produced by the LCI, and they cannot be reproduced unless such reproduction is identical to the mark provided by LCI.

The initials "LCI-CPD" may be used on materials, such as business cards, stationery, letterhead and similar documents on which the name of the individual certified is prominently displayed to promote themselves personally as an individual certified in Lean construction.

The mark or logo may not be used in any manner that could bring LCI into disrepute or in any way considered misleading or unauthorized. The mark or logo may not be used in any

manner that would tend to imply a connection between any business and the certification which, in fact, may not exist. This includes any use of the mark or logo that the public might construe as an endorsement, approval, or sponsorship by the LCI of a certificate holder's business or any product or service thereof.

Proper Use of the Credential

After meeting all eligibility requirements and passing the examination, individuals may use their credential in all correspondence, on resumes/CVs, and promotional materials, such as stationery, websites, business cards, etc. The mark or logo may be used only with the name of the individual certified.



Individuals who have met the certification requirements are authorized to use this certification mark according to the following guidelines:

- The credential may be used as LCI-CPD or Certified Lean Construction Institute-Certified Practitioner-Construction.
- The credential is used after the certificant's name and following any academic degrees or licenses (e.g. Mary Smith, RN, LCI-CPD).
- The credential must be clearly associated with the individual certified or be referenced in general terms, Examples of correct use:
 - Mary Smith is a LCI-CPD.
 - Mary Smith, LCI-CPD.
 - Three employees hold the LCI-CPD certification
- Example of incorrect use:
 - This organization employs three LCI-CPD.

Verifying Certification Status

An online directory of the LCI-CPD credential holders will be available at leanconstruction.org/lean-certification. You can choose whether or not you'd like to be listed in your Prolydian account at app.prolydian.com.



POLICIES

Contact Information Changes

LCI online portal (Prolydian) is the primary method used for communication regarding exam confirmations, exam results and recertification. As a candidate and certificant, you have 24/7 access to exam profile details and are responsible for ensuring that your contact information is kept up to date. LCI recommends using a personal email address and phone number in the event of changes in employment. This information will be handled according to LCI's Confidentiality and Privacy of Information Policy (see below).

Nondiscrimination

LCI does not and shall not discriminate on the basis of age, gender, gender identity, gender expression, ethnic origin, color, religion, race, disability, pregnancy, childbirth or related medical conditions, marital status, sexual orientation, or military status in any of its activities or operations. These include, but are not limited to, approval of certification/recertification applicants, staff decisions (including but not limited to hiring, discipline, promotion and termination), selection of volunteers and vendors and provision of services LCI is committed to providing an inclusive and welcoming environment for certification candidates, certificants, volunteers, staff members, clients, subcontractors, vendors and clients.

Statement of Impartiality and Fairness

LCI's leadership and management, including its Certification Commission, endorse the principles of impartiality and fairness and commit to:

- implement its policies and procedures impartially and fairly,
- not restrict certification based on undue financial or other limiting conditions, and
- not allow commercial, financial, or other pressures to compromise impartiality in certification activities.

Confidentiality and Privacy of Information

LCI shall hold in confidence, and in a secure manner, the information obtained in the course of certification program activities at all levels of the organization, including the activities of all personnel (paid, contracted, or volunteer) acting on its behalf. Except as required in this handbook, information about a particular individual is considered confidential information and shall not be disclosed to a third party by LCI staff, volunteers or contractors without prior written consent of the individual. Where the law requires information to be disclosed to a third party and unless the law restricts it, the individual shall be notified in writing beforehand of the information disclosed.

Testing Accommodations for Candidates with Disabilities

LCI complies with the Americans with Disabilities Act (ADA) and is committed to providing necessary testing accommodations for examinees with documented disabilities, consistent with the requirements of the law. Accommodations may also be approved for examinees with documented qualifying medical conditions that may be temporary or are not otherwise covered by the ADA, such as pregnancy or a temporary impairment following surgery, including conditions that require the use of medical devices or medication during the examination. LCI will also provide testing accommodations for candidates testing in other jurisdictions, to the extent required by applicable laws in those jurisdictions.

An individual is not considered to have a disability requiring accommodation if the limitations arising from the individual's impairment do not significantly restrict the individual's major life activities when compared with the abilities of the average person. Non-specific diagnoses such as individual learning styles, learning differences, academic problems, computer phobias, slow reading, and test difficulty or anxiety in and of themselves do not constitute a disability or impairment.



The decision as to whether a medical condition that is not covered by the ADA is a “qualifying medical condition” for purposes of the LCI-CPD exam accommodation is at the sole discretion of LCI.

Accommodations are provided on an individual basis and depend on the nature of the disability or medical condition and documentation provided. LCI will make reasonable efforts to provide the requested accommodations to examinees provided the functional impairment has been demonstrated through adequate documentation, and the accommodations do not fundamentally alter the measurement of the skills or knowledge the examination is intended to test, do not jeopardize examination integrity and security, are compatible with the nature and purpose of the examination or assessment program, and do not result in an undue burden to LCI. Accommodations cannot be made to the actual content of the examination. A range of available accommodations are considered to assist examinees with disabilities or qualifying medical conditions.

Examination Accommodations

LCI-CPD examination applicants may request accommodations by completing a Request for Accommodation form upon application submission prior to scheduling their examination. In order to fulfill any accommodations, LCI requires at least 30 days between the approved accommodation and the testing date. The Request for Accommodation form is available online at leanconstruction.org/lean-certification.

All requests for examination accommodations are strictly confidential, and documentation submitted in support of the request is used solely for the purpose of evaluating the request. Failure to provide LCI with adequate supporting documentation in a timely manner will cause a delay in the review process and the applicant's ability to schedule and take the examination.

An applicant may request more than one accommodation; however, supporting documentation is required for each requested accommodation.

Examinees cannot schedule their LCI-CPD examination, nor can the examination be administered until the process described above has been completed.

Common Accommodations

LCI will base the accommodations on the requests and required documentation received. Common accommodations include extended time for testing (1.5 time or double time), frequent or additional breaks, access to auxiliary items (food, medication, or medical devices), or provision of a reader and/or scribe. Candidates will not be charged any additional fees for approved accommodations.

Required Supporting Documentation

Adequate supporting documentation from a qualified medical professional certifying to the applicant's disability or qualifying medical condition, with specific identification of the requested accommodation and the medical basis for the request, must be submitted to LCI, either directly from the medical professional or by the applicant. LCI will verify the authenticity of any submissions sent by the applicant. A qualified professional is someone with the credentials, training, and expertise to diagnose the reported disability or qualifying medical condition. The primary relationship of the attesting professional to the individual must be that of a treating medical professional to a patient; there must be no familial, intimate, supervisory or other close relationship between the qualified professional and the individual requesting the accommodation(s).

The documentation must:

- Be on letterhead, typed in English, dated and signed and include the name, title, and professional credentials of the qualified medical professional.
- Contain contact information including address, telephone number, and/or e-mail address of each professional providing documentation.
- Include the name of the specific disability or medical condition.

LCI reserves the right to request further verification, if necessary, of the evaluating professional's credentials and expertise relevant to the diagnosis, to verify the authenticity of the supporting documentation, and to seek clarification of the information provided by the evaluating professional.



Review of Requested Accommodations

LCI will consider requests for examination accommodations following receipt of an examination application and all required documentation in support of the request. The applicant will be sent a notification of LCI's decision regarding the requested accommodation(s).

If accommodations have been approved, the notification will be in the form of a Testing Accommodations Agreement indicating the accommodation(s) that has/have been approved. The applicant must sign the agreement and return it to LCI by the date indicated within the agreement. The application for an applicant requesting examination accommodations will not be complete until the signed agreement is received by LCI.

Process for Appeals

An appeal is a formal request for special consideration regarding a decision made by the Certification Commission or its representatives related to an individual's achievement or retention of a certification.

Appeal Submission

An appeal must be submitted electronically on the LCI website. The appeal must be submitted no later than 30 days after notification by LCI of the adverse decision. All relevant supportive documentation must be included or referenced in the appeal submission.

Initial Appeal Review and Determination

LCI's office of certification will serve as the first level of appeals review. The review will occur within 10 business days of receipt, and a response will be sent to the appellant via email. Staff members will recuse themselves from the appeal consideration if there is any reason for which impartiality might reasonably be questioned or there is actual or apparent conflict of interest.

LCI's office of certification will review the appeal to determine whether it meets the definition of an appeal and whether appeal submission requirements are met. If it does, LCI's office of certification will investigate and consider the appeal, including but not limited to taking into account the results of previous similar appeals, and make a determination on appeal action.

The initial response will be one of:

- Appeal denied (the response will be accompanied by an explanation for the denial and/or information on an alternate course of action where applicable. The denial will include information on the appellant's further recourse if the appellant wishes to pursue the appeal).
- Appeal approved.
- Appeal forwarded to the Appeals & Complaints Panel
- Appeal delayed to provide time to gather further information. Within 30 calendar days, the appellant will be sent either an appeal denied or appeal forwarded notification.

Second Level Appeal Review and Determination

If applicable, appeals are sent to a three-member team pulled from the Appeals Panel for consideration. The appeal will be considered no later than 90 days after the appeal receipt.

Members of the Appeals Panel will recuse themselves from the appeal consideration if there is any reason for which impartiality might reasonably be questioned or there is an actual or apparent conflict of interest.

The appeal will not include a hearing or any similar trial-type proceeding.

The function of the Appeals Panel in a given case is to review the decision being appealed based on the record that was presented at the time of the determination.

The Appeals Panel will review the appeal, including but not limited to taking into account the results of previous similar appeals, and make a determination on appeal action.

The second level response will be one of:

- Appeal denied.
- Appeal approved.
- Appeal delayed to provide time to gather further information.



Written notice of the Appeals Panel determination (appeal denied or appeal approved) or a progress notice (of appeal delayed) will be provided to the appellant within 10 business days of the determination.

Procedural Appeal Review and Determination

If an appellant feels their appeal was handled improperly by the staff or Appeals Panel, a procedural appeal may be filed with the Certification Commission.

The appeal will be considered no later than 90 calendar days after the appeal receipt.

Members of the Certification Commission will recuse themselves from the appeal consideration if there is any reason for which impartiality might reasonably be questioned or there is an actual or apparent conflict of interest.

The appeal will not include a hearing or any similar trial-type proceeding.

The function of the Certification Commission in a given case is to review the handling of the appeal to determine if LCI policies and procedures were followed.

The procedural appeal response will be one of:

- Appeal denied.
- Appeal approved. (In such cases, a new Appeals Panel will be assigned to consider the full appeal again.)
- Appeal delayed to provide time to gather further information.

Written notice of the Certification Commission determination (appeal denied or appeal approved) or a progress notice (of appeal delayed) will be provided to the appellant within 30 business days of the determination.

Program Complaints

Individuals with concerns regarding the certification program materials, personnel or activities are encouraged to discuss these with the individuals involved to try to resolve the matter informally. In some cases, however, informal resolution is not possible, and individuals may wish to file a formal complaint.

Submission of Formal Program Complaints

A formal complaint will be submitted electronically on LCI website at leanconstruction.org/lean-certification within 90 days of the incident's occurrence. In the case of complaints related to exam administration, those must be submitted within two weeks after the applicable exam administration. The submission will include sufficient objective evidence to substantiate the claim(s) and appropriate action to be taken. Dissatisfaction based on hearsay will not be considered as a complaint. Anonymous complaints will not be considered.

Staff Level Review

LCI's office of certification will serve as the first level of complaint consideration to determine its validity. They will investigate the circumstances of any valid complaint and take one of the following actions:

- Determine and implement corrective action.
- Refer the complaint to a different suitable staff member to determine and implement corrective action.
- Escalate the complaint to the Certification Commission for review.

If the complaint is not immediately resolvable, written notice of progress (of a referral or escalation) will be provided to the complainant within 10 business days of complaint receipt.

In all cases, LCI's office of certification will communicate the proposed resolution to the complainant within a period of no longer than 30 days.

Procedure: Certification Commission Review

If a complaint is found to warrant escalation, the Certification Commission Chair will be notified, and the complaint will be reviewed by the Certification Commission or its designees. A decision will be communicated to the complainant within a period of no longer than 30 days.

If for any reason the target deadlines in this policy are not able



to be met, a progress notice will be sent to the complainant, outlining when the findings will be communicated.

Procedure: Appeal of Complaint Determinations

If the determination of LCI staff or the Certification Commission is unsatisfactory and is appealable, the process for appeals will apply.

Complaints against Candidates or Certificants

Lean Construction Institute candidates and certificants commit to adhering to the standards set out in the LCI Code of Conduct. The LCI shall have a process for handling complaints against candidates or certificants in a constructive, impartial and timely manner.

Complaints

A complaint against a candidate or certificant must be submitted electronically on the LCI website at leanconstruction.org/lean-certification. A complaint must meet four criteria:

- Specific to a section of the Lean Construction Institute Code of Ethics or certification rules.
- In writing by the individual lodging the complaint.
- Supported by specific evidence of such accusation.
- Made against a current candidate or holder of an LCI certification.

Complaint Handling and Communications

- The complaint and all related documentation will be dealt with in a strictly confidential manner.
- The complaint form on The LCI website will include a statement that the complainant must agree to hold in strict confidence the filing of the complaint. They will not announce or promote in any manner, or use personal or institutional communication vehicles, to announce filing of a complaint.
- If a preliminary investigation of the information/evidence reveals a valid complaint, the individual(s) named in the written complaint will be sent a "Notice of Complaint." The Certification Commission will also request any additional information needed and a specific timeframe for providing

such information. If this additional information is not received, a decision shall be rendered based on the information initially provided.

- If it is determined that no further action is warranted, the complainant will be advised in writing of the outcome of the initial assessment. The target date for this communication is within 30 days of receipt of the complaint.
- If the initial investigation supports the complaint, an independent investigation will commence, and the information shall be handed over to the Certification Commission.
- The Certification Commission will issue a written report of its findings within 60 working days of receiving all further requested supporting information.
- The final disposition will be communicated to the complainant. The target date for this communication is within 10 working days of the written report findings being accepted.
- If for any reason the target deadlines in this procedure are not able to be met, a progress notice will be sent to the complainant, outlining when the findings will be communicated.

Potential Disciplinary Actions

If a complaint is found to have valid grounds, the Certification Commission may recommend one of the following disciplinary actions depending on the severity of the infraction:

- Warning. A written warning could be issued that outlines the consequences if the situation occurs again, or if there is another violation.
- Suspension. LCI-CPD certification or eligibility to become certified could be suspended.
- Revocation of Certification. LCI-CPD certification could be revoked.

Appeals of Certification Commission's Findings

The subject of the complaint may appeal the disciplinary actions. The process for appeals beginning on page 21 of this handbook will apply.



APPENDIX A: KNOWLEDGE ASSESSMENT EXAM CONTENT OUTLINE

Exam Details:

The exam has 150 multiple-choice questions, each with four response options and one correct answer.

Overall Test Blueprint

Domain	# Items	Percent of Exam
Domain 1: Principles	23	15%
Domain 2: People-Related	31	21%
Domain 3: Practices	96	64%
Total	150	100%

Domain / Sub-Domains	# Items
Domain 1: Principles	
1.1: Identify key features of a Lean culture	3
1.2: Recognize Lean Operating System (Lean Project Delivery System) as an organized implementation of Lean Principles and Tools supporting a Lean culture	2
1.3: Determine if actions represent Respect for People	3
1.4: Determine if actions represent Optimizing the Whole	2
1.5: Determine if actions represent Generating Value	3
1.6: Distinguish 8 types of Waste	2
1.7: Determine if actions reduce or eliminate waste	2
1.8: Determine if actions represent Focus on Flow	2
1.9: Determine if actions support Continuous Improvement/Plan Do Check Act (PDCA)	2
1.10: Identify key features of Integrated Project Delivery/IPD	2
Total	23

Domain 2: People-Related	
2.1: Determine if actions represent creating a Lean Culture	2
2.2: Determine if actions represent exemplary Onboarding/Team Forming	2
2.3: Determine if actions represent building a High-performing Team	2
2.4: Determine if actions represent exemplary methods for assessing the emotional health of the team	2
2.5: Determine if actions support exemplary Early Stakeholder Involvement	2
2.6: Determine if actions support a culture of Commitment/Accountability	2
2.7: Determine if actions support making a Reliable Promise/Commitment	2
2.8: Determine if actions support creating project Conditions of Satisfaction (CoS)	2
2.9: Determine if actions support appropriate use of Conditions of Satisfaction (CoS)	2
2.10: Determine if actions represent effective Distributed Leadership	2
2.11: Determine if actions represent approaches to creating and maintain trust	2
2.12: Determine if actions represent effective communication	3
2.13: Determine if actions represent effective building and maintaining relationships	2



2.14: Determine if actions represent effective use of declaring a breakdown/stopping the line (Andon)	2
2.15: Determine if actions represent effective approach to developing a Shared Purpose/Impact Statement	2
Total	31

Domain 3: Practices

3.1: Identify the 5 Connected Conversations (levels) of the Last Planner System® in design	2
3.2: Last Planner System® Implementation: Determine if actions represent Pull methodology	2
3.3: Last Planner System® Implementation: Determine if actions support creating a Milestone Plan	2
3.4: Last Planner System® Implementation: Determine if actions support creating a Phase Pull Plan	2
3.5: Last Planner System® Implementation: Identify effective practices for stickie note/tag content	2
3.6: Last Planner System® Implementation: Determine if actions support creating a Design Cycle Plan	2
3.7: Last Planner System® Implementation: Determine if actions support Constraint Identification	2
3.8: Last Planner System® Implementation: Determine if actions support Constraint Mitigation	2
3.9: Last Planner System® Implementation: Determine if actions support creating a Weekly Work Plan	2
3.10: Last Planner System® Implementation: Determine if actions support Percent Plan Complete Tracking	2
3.11: Last Planner System® Implementation: Determine if actions support Variance Management	2
3.12: Last Planner System® Implementation: Determine if actions support conducting the Huddle or Check-In	2
3.13: Identify key aspects of Takt Time methodology	1
3.14: Recognize key differences between Last Planner System® use in construction vs. design	2
3.15: Determine if actions support an Effective Big Room approach	2
3.16: Distinguish the difference between leading and facilitating	2
3.17: Determine if actions represent effective facilitation/meeting management	2
3.18: Determine if actions represent effective Visual Management implementation	2
3.19: Determine if actions represent a Target Value Delivery (TVD) approach	2
3.20: Target Value Delivery Implementation: Determine if actions represent the Business Case Phase	2
3.21: Target Value Delivery Implementation: Determine if actions represent the Validation Phase	2
3.22: Target Value Delivery Implementation: Determine if actions represent the Value Delivery Phase	2
3.23: Target Value Delivery Implementation: Determine if actions represent the Value Post Delivery Phase	2
3.24: Target Value Delivery Implementation: Determine if actions represent effective Cost Model relationship to TVD	2
3.25: Target Value Delivery Implementation: Determine if actions represent exemplary definition of value	2
3.26: Target Value Delivery Implementation: Determine if actions represent exemplary tracking of value	2
3.27: Target Value Delivery Implementation: Determine if actions represent exemplary Current Working Estimate implementation	2
3.28: Target Value Delivery Implementation: Determine if actions support Risk/Opportunity Management	2
3.29: Determine if actions represent exemplary Work Cluster/Work Group organization	2



3.30: Work Cluster/Work Group Organization: Determine if actions represent exemplary decision-making and information workflow	2
3.31: Work Cluster/Work Group Organization: Determine if actions represent exemplary Integration Event implementation	2
3.32: Determine if actions represent Set-based Design methodology	2
3.33: Determine if actions represent exemplary collaborative problem-solving using A3 Thinking	2
3.34: Recognize the connection between Root Cause Analysis and 5 Why Analysis	2
3.35: Determine if actions support exemplary 5 Why Analysis methodology	2
3.36: Identify the key aspects of Choosing by Advantages	2
3.37: Determine if actions represent Retrospective/Structured Reflection	2
3.38: Determine if actions support conducting an exemplary Plus/Delta	2
3.39: Identify circumstances to implement Value Stream Mapping	1
3.40: Determine if actions represent exemplary Process Mapping	2
3.41: Determine if actions and behaviors support conducting effective Gemba Walks for design	2
3.42: Determine if actions support conducting effective 3P mock up studies	1
3.43: Determine if actions support implementing 5S	1
3.44: Determine if actions represent effective Mistake Proofing	1
3.45: Recognize the connection between BIM and Lean	2
3.46: Determine if actions support effective use of buffers with Just-in-Time (JIT)	1
3.47: Determine if actions support effective Kaizen/Rapid Improvement event	2
3.48: Determine if actions represent creating and using Standard Work supporting continuous improvement	2
3.49: Recognize if actions represent effective Design for Safety approaches	2
3.50: Determine if actions support effective design for Continuous Flow in Construction	2
3.51: Determine if actions support design for Prefabrication	2
Total	96



APPENDIX B

Certification Code of Conduct

As a certified LCI-CPD, certificants agree to adhere to the Certification Code of Conduct for as long as their certification is valid.

Certificants shall:

- Be accurate, truthful, and complete in any and all communications, direct or indirect with any client, employer, regulatory agency, or other parties as related to the credential.
- Not make misleading or unauthorized statements about the certification, not use the certificate issued in a misleading manner, and not use the certification in such a manner as to bring LCI or its certification program into disrepute.
- Abide by the permissions and use of the certificate and badge as outlined in the Candidate Handbook.
- Comply with requirements for recertification as outlined in the Candidate Handbook in order to maintain valid certification.
- Acknowledge the certification and all associated marks or logos are the property of LCI and agree to discontinue use of all references to certified status should certification be suspended or withdrawn. Agree to return or destroy the certificate and badge if the certification is withdrawn.
- Not have been convicted of a felony in the role of a Lean construction practitioner (refer to second bullet).



APPENDIX C

Before the Test

- Give yourself time to review and develop your study plan based on the LCI-CPD Knowledge & Capability Assessment Content Outline.
- Watch the LCI-CPD certification overview webinar.
- Take a practice quiz to get comfortable answering these types of questions.
- Review LCI's Key Refresher Resources in the LCI-CPD handbook.

Get Your Exam Logistics Ready

- Download Chrome and check technical requirements listed in the LCI-CPD handbook.
- Make sure your Examity profile matches the legal name on your ID.
- Figure out where you'll be taking the test – an enclosed, private, clean room.
- Disconnect any additional monitors you may have set up on your computer.

On Test Day

- Make sure you are rested, nourished and hydrated.
- Don't drink too much liquid in the hour before the exam and take care of any bio needs before sitting down for the test.
- Have your ID handy (the same approved ID you used when registering).
- Be prepared to show your entire test space on camera. The proctor will ask you to move your camera around before you begin.
- Sign on 15 minutes before your scheduled exam to allow plenty of time to go through system checks and not feel rushed.

- You will have 180 minutes to complete 150 multiple-choice questions. There are no scheduled breaks—be prepared to sit for up to the full three hours.
- Plan to use the full three hours and schedule a break for yourself after the exam.

During the Test

- Read every question thoroughly (don't skim!).
- Pause and take a deep breath between questions or sections.
- If you feel stuck, use the process of elimination.
- Don't spend too much time on one question. If you don't know how to answer, flag it for review and move on. If you have time at the end, click "Flagged items" to go back to those questions. (Or click the "Navigation" button at any time, then click "Flagged items.")
- Read the instructions for every section carefully.
- Pace yourself.
- Check your work if you have time at the end.
- Remember that you know this! The test assesses your Lean knowledge – knowledge that you have developed and honed in the field. It might feel intimidating in test format, but always think about connecting questions back to the real world.