

**NRMCA Pervious Concrete Contactor Certification
Policies and Procedures Manual**

September 2013



© Copyright 2013 by the National Ready Mixed Concrete Association
All Rights Reserved





NRMCA Pervious Concrete Contractor Certification
Policies and Procedures Manual
Table of Contents

SECTION	PAGE
Program Summary	PS-1
Certification Policy	PS-1
Local Sponsoring Group Recommended Procedures	RP-1
Examinee Required Personal Protection Equipment	PPE-1
Examinee Required Equipment List	RE-1



NRMCA Pervious Concrete Contractor Certification Program Summary

Certification Levels

NRMCA Pervious Concrete Contractor Certification levels include:

1. **Technician**
2. **Installer**
3. **Craftsman**

Definitions

A Pervious Concrete **Technician** is a person who demonstrated knowledge by successful completion of a written exam about proper procedures to place, compact, finish, edge, joint, cure and protect pervious concrete pavements, but who lacks the requisite field experience to qualify as a pervious concrete Installer or Craftsman.

The Technician level is intended for contractor and non contractor personnel in learning the proper techniques of installing pervious concrete. It is assumed that contractor personnel who are certified as technicians will be supervised by an individual with a higher level of certification and they will upgrade to the higher levels when they achieve the work experience criteria for Installer and Craftsman levels to qualify to install pervious without supervision. This level is also intended for any non-contractor persons such as ready mixed concrete personnel, testing labs, inspectors, admixture personnel, specifiers and engineers that need to understand the pervious concrete system. This certification level is also recommended for individuals who are knowledgeable about pervious concrete who intend to participate in training programs for local sponsoring groups.

A Pervious Concrete **Installer** is a person who has demonstrated the ability to place, compact, finish, edge, joint, cure and protect pervious concrete pavements and has documented a limited project-based field experience in placing pervious concrete.

The Installer level is intended for contractor personnel who have achieved this intermediate level of certification by completing installation of work as indicated by the certification criteria. Installers are expected to assume leadership roles when installing pervious concrete and make decisions on placement conditions and procedures. It is anticipated that contractor personnel will upgrade to Craftsman level when they achieve the work experience criteria for that level.

A Pervious Concrete **Craftsman** is a person who has demonstrated the ability to place, compact, finish, edge, joint, cure and protect pervious concrete pavements and has documented a higher level of field time-based experience in placing pervious concrete.

The Craftsman level is intended for contractor personnel who have achieved this highest level of certification by completing the work experience as indicated by the certification criteria. Craftsman are expected to lead an installing crew, work with the concrete supplier to ensure the mixture is appropriate for the installation, designate duties and assignments to the crew, evaluate site and placement conditions and make decisions when the pour needs to be stopped or re-scheduled.

Specific certification criteria are provided in the Certification Policy.

Recertification is required every five (5) years as stated in the Certification Policy.

Body of Knowledge

The essential body of knowledge deemed necessary to meet the minimum requirements of pervious concrete certification is contained in:

NRMCA Publication #2PPCRT: Text Reference: Pervious Concrete Contractor Certification.



The certification requires knowledge in the following areas of concrete construction:

1. Basic concrete technology
2. General applications and benefits offered by pervious concrete pavements
3. Pervious concrete materials and mix proportioning
4. Proper use of tools and equipment
5. General design principles of pervious concrete pavements
6. Pervious concrete construction
7. Maintenance and troubleshooting

Pricing (for Local Sponsoring Groups)

\$45.00 (list \$60) plus shipping for the Pervious Concrete Contractor Certification textbook.

\$100.00 Written Examination plus shipping

\$25 Installer Application

\$25 Craftsman Application

\$25.00 Expedited fee per exam (results within five business days)

\$25.00 processing fee plus postage for materials being shipped overnight



NRMCA Pervious Concrete Contractor Certification Certification Policy

1 CERTIFICATION CRITERIA

- 1.1 The National Ready Mixed Concrete Association (NRMCA) Pervious Concrete Contractor certification program includes certification of personnel at the following levels
- A. Pervious Concrete Technician
 - B. Pervious Concrete Installer
 - C. Pervious Concrete Craftsman
- 1.2 Personnel achieving the following criteria will obtain certification as a **Pervious Concrete Technician**:
- A. Pass the NRMCA Pervious Concrete Contractor Certification Written Examination with a score of 75% or greater administered by a Local Sponsoring Group approved by NRMCA.
- 1.3 Personnel achieving the following criteria will obtain certification as a **Pervious Concrete Installer**:
- A. Pass the NRMCA Pervious Concrete Contractor Certification Written Examination with a score of 75% or greater administered by a Local Sponsoring Group approved by NRMCA
 - B. Complete a Performance Evaluation administered by a Local Sponsoring Group approved by NRMCA – Form PCC10
 - C. Provide project experience documentation of successful construction of a minimum of 3 projects with a total area exceeding 10,000 square feet (1000 m²) – Form PCC8
- 1.4 Personnel achieving the following criteria will obtain certification as a **Pervious Concrete Craftsman**:
- A. Pass the NRMCA Pervious Concrete Contractor Certification Written Examination with a score of 75% or greater administered by a Local Sponsoring Group approved by NRMCA
 - B. Possess a current ACI Flatwork Finisher Technician or Craftsman certification at the time of application
 - C. Work Experience:
 - a. **OPTION A:** Complete a Performance Evaluation administered by a Local Sponsoring Group approved by NRMCA and documented work experience constructing pervious concrete pavement exceeding 1500 hours – Forms PCC10 and PCC9, respectively
 - OR**
 - b. **OPTION B:** Provide documentation of work experience constructing pervious concrete pavements exceeding 3000 hours – Form PCC9.
 - c. Work experience shall be documented in hours and square footage on a standard spreadsheet. Documentation shall include project and contact, preferably an owner, who can verify the conduct of the work. The craftsman applicant shall document a minimum of 3 problems they have had on pervious concrete jobs and how they resolved these problems. The craftsman application shall be reviewed and approved by a minimum of 3 member certification committee established by the local sponsoring group.
- 1.5 NRMCA Pervious Concrete Contractor Certifications shall be valid for a period of five [5] years. The expiration date for the certification shall be based on the date of completion of the written examination.
- 1.6 A Certified Pervious Concrete Technician may upgrade to Certified Pervious Concrete Installer at any time during the five [5] year certification period by completing the current Installer certification criteria.



- 1.7 A Certified Pervious Concrete Technician or Installer may upgrade to Certified Pervious Concrete Craftsman at any time during the five [5] year certification period by completing the current Craftsman certification criteria.
- 1.8 If a Technician upgrades to Installer or Craftsman status, certification as Installer or Craftsman shall be valid for the remainder of the original Technician certification period – five [5] years from the date of the written examination.
- 1.9 If an Installer upgrades to Craftsman status, certification as Craftsman shall be valid for the remainder of the original Installer certification period – five [5] years from the date of the written examination.
- 1.10 Recertification Criteria – See Section 8.
- 1.11 Certification may be revoked for cause including but not limited to:
 - A. Falsifying information on application
 - B. Cheating on written examination or performance evaluation
 - C. Misrepresenting certification
 - D. Lapsing of certification requirements
- 1.12 Applicant must sign an ethics clause before taking the written examination which states:
 - A. I HEREBY PLEDGE that as a candidate for **Pervious Concrete Contractor Certification (either Technician, Installer or Craftsman)**, that I understand the certification criteria and will maintain the ethical and professional integrity of the certification program should I become certified by meeting the certification criteria. I will immediately withdraw my certification if during the 5-year certification period I discover that I no longer meet the certification criteria for whatever reason. I understand that NRMCA may revoke my certification if it discovers that I no longer meet the certification criteria.

2 EXAMINATION CRITERIA

- 2.1 The content of the written examination and performance evaluation shall be derived directly from NRMCA Publication 2PPCRT, *Text Reference: Pervious Concrete Contractor Certification*.
- 2.2 There will be questions regarding pervious concrete technology on the written examination. Additionally, the examinee will be expected to have a basic knowledge of proper procedures for pervious concrete.
- 2.3 The examination(s) shall be administered through NRMCA-approved Local Sponsoring Groups by NRMCA approved examiner, proctors, and/or supplemental examiners as applicable.
- 2.4 The NRMCA approved examiners, proctors, supplemental examiners, and/or Local Sponsoring Groups shall not have any jurisdiction over the content of the examination(s) or evaluation(s), or over the grading of the written examination.
- 2.5 Both the written examination and performance evaluation are closed book. Notes or other technical material shall not be permitted in the examination and evaluation area. The examinee will be provided an opportunity to review the items included in the performance evaluation checklist prior to the evaluation.
 - A. Applicants for certification are encouraged to engage in training and/or study the Text Reference in advance of taking the written examination or performance evaluation, however, the applicant is not required to do so.



WRITTEN EXAMINATION

- 2.6 The written examination shall consist of at least sixty [60] multiple choice and/or true/false questions. The written examination is based on the material found in NRMCA Publication 2PPCRT.
- 2.7 A maximum of two hours shall be permitted for completion of the written examination.
- 2.8 Oral administration of the written examination shall be permitted, contingent upon approval by the Examiner.
- 2.9 The passing grade of the written examination shall require a score of 75% or greater.

PERFORMANCE EVALUATION

- 2.10 The performance examination is based on the material in NRMCA Publication 2PPCRT.
- 2.11 The performance evaluation of the examinee can be conducted at an organized mock-up or demonstration placement or at an actual project site and shall be administered by approved examiner or supplemental examiner.
- 2.12 The examinee must place, compact, edge, joint and begin curing a pervious concrete slab in the direct presence of the examiner or supplemental examiner.
- 2.13 The examinee's performance shall be evaluated based on the criteria of the performance evaluation checklist (Form PCC10).
- 2.14 The examiner/supplemental examiner shall record the symbols 'P' for passing and 'F' for failing on each step of the checklist.
- 2.15 A passing grade is defined as: no significant variation from proper procedure and no more than 2 variations from proper technique in the execution of the listed finishing operations.
- 2.16 The performance evaluation must be successfully completed according to the aforementioned criteria.
- 2.17 Immediately following completion of the performance evaluation, the examiner/supplemental examiner shall inform the examinee of the results, either pass or fail.
- 2.18 If the first trial was not successfully completed, a second trial shall be allowed after each other examinee has had a turn.
- 2.19 Examinees who fail a second trial, may arrange with the examiner to take the performance evaluation on another day.

PROJECT EXPERIENCE AND WORK EXPERIENCE

- 2.20 Applicant for Installer certification shall complete Form PCC8 and submit it to the principal of the Local Sponsoring Group. Project experience (Installer applicant) shall be verified and signed by the primary contact of the Local Sponsoring Group under which the applicant is applying for certification. Applicant's participation in a pervious concrete demonstration or hands-on training may only count for one (1) of the three (three) required projects. Projects involved as demonstrations but were pervious pavements put into service would not be considered a demonstration project for this limitation



2.21 Applicants for Craftsman certification shall complete Form PCC9 and submit it to the principal of the Local Sponsoring Group. Work experience (Craftsman applicant) and additional statements shall be completed on a standard spreadsheet. The work experience and project information shall be evaluated and signed off by a 3-member certification committee of the Local Sponsoring Group. The application shall be signed by the primary contact of the Local Sponsoring Group under which the applicant is applying for certification. All documentation, including the completed spreadsheet, shall be forwarded to NRMCA with the application.

2.22 NRMCA reserves the right to verify submitted documentation of any applicant.

3 REEXAMINATION CRITERIA

3.1 Failure of the written examination shall require a reexamination on the entire written examination.

3.2 Failure of the performance evaluation shall require reexamination on the performance evaluation in its entirety.

4 APPEALS CRITERIA

4.1 All appeals by applicants shall be directed initially to the examiner.

4.2 In the event that the applicant is not satisfied with the decision of the examiner regarding an appeal, the applicant may pursue an appeal with Local Sponsoring Group Certification Committee.

4.3 In the event that the applicant is not satisfied with the decision of the Local Sponsoring Group Certification Committee, the applicant may pursue an appeal with the NRMCA Pervious Concrete Contractor Certification Committee. All appeals shall be submitted, in writing, to the NRMCA Certification Department within sixty (60) days after being notified by the Local Sponsoring Group Certification Committee of their decision. All appeals shall be handled in order as follows:

A. A 3-member review panel composed of one NRMCA staff representative and members of the NRMCA Pervious Concrete Contractor Certification Committee shall review the appeal. Within sixty (60) days after receiving the appeal, NRMCA shall acknowledge receipt of all appeals and notify the appellant, in writing as to:

- a. how the appeal will be reviewed by the review panel (i.e., meeting, letter ballot, telephone conference, etc.) and
- b. when a decision will be rendered.

B. The review panel may at its sole discretion, allow the appellant to personally appear before them to present arguments. Not less than thirty (30) days in advance of the meeting, NRMCA will notify the appellant, in writing, of the date, time and location of the review panel meeting as well as the length of time that will be allotted for presentation and discussion of the appeal. NRMCA shall notify the appellant, in writing, of the review panel's decision within sixty (60) days after the review panel has reached a decision.

C. All decisions made by the NRMCA Pervious Concrete Contractor Certification Committee are final.

4.4 For the written examination, examinees can challenge individual questions in the provided section of the examination. Challenges on exam questions should be made at the time of writing the exam only. NRMCA will address the challenge and provide credit for the questions if appropriate.



5 LOCAL SPONSORING GROUP CRITERIA

- 5.1 Local Sponsoring Groups shall be approved, in writing, by NRMCA before they will be permitted to conduct an NRMCA certification. In all cases, approval of Local Sponsoring Groups shall be at the sole discretion of NRMCA. NRMCA will preferentially approve state ready mixed concrete associations or other organizations that are affiliates of NRMCA. The Local Sponsoring Group shall apply for approval using NRMCA Form PCC1.
- 5.2 The preferred Local Sponsoring Group shall be a state ready mixed concrete association or other organization that has obtained active and formal “Affiliate” status with NRMCA. The NRMCA Affiliate state ready mixed concrete association or other organization shall have the first rights to exclusively sponsor the Pervious Concrete Contractor Certification program(s). Where no such entity exists, or if an NRMCA Affiliate status changes, a non-Affiliated state ready mixed concrete association will be eligible. In the event that neither entity exists, other related groups such as existing ACI chapters, state concrete promotion groups, or other local or national entities such as ACPA chapters, may petition NRMCA to become an eligible Local Sponsoring Group.
- 5.3 In approving Local Sponsoring Groups, NRMCA will consider, among other factors, the following:
 - A. The group(s) shall, to the extent feasible, represent segments of the local industry involved in the production, design, construction and testing/inspection of concrete and concrete products; and/or shall establish a certification committee(s) with such broad representation.
 - B. The group(s) and/or their certification committee(s) shall have the interest, experience and technical expertise necessary to conduct the program(s).
- 5.4 Local Sponsoring Groups shall establish a certification committee to administer the NRMCA certification program(s). The certification committee shall consist of at least three (3) individuals, with at least one working for an organization other than the Local Sponsoring Group. NRMCA shall be notified of the composition of the committee on NRMCA Form PCC2 that shall accompany the Local Sponsoring Group application (Form PCC1).
- 5.5 The certification committee shall obtain the services of an NRMCA-approved examiner(s) to conduct the NRMCA certification Written Examination(s) and Performance Evaluation(s). Examiners are permitted to conduct NRMCA certification examinations and evaluations only under the auspices of NRMCA-approved Local Sponsoring Groups; and they must comply with all NRMCA certification policies and procedures.
- 5.6 NRMCA shall assign Local Sponsoring Groups a specific geographical area(s) as per their request within which they will have authority to conduct the NRMCA certification program(s). Approved Local Sponsoring Groups wishing to hold programs in a geographic region covered by another group shall notify the group that has responsibility for that region. In those cases where a Local Sponsoring Group is unable to meet the local demands of their assigned geographical area(s), NRMCA reserves the right to authorize an additional group to meet the needs of that area. NRMCA reserves the right to reassign a previously assigned geographical area when an application is received from a Local Sponsoring Group that can better serve that area.
- 5.7 NRMCA shall approve each Local Sponsoring Group on a calendar year basis for a period not to exceed five (5) years. At the conclusion of this period, all groups shall reapply to NRMCA for approval to continue to act as an NRMCA Local Sponsoring Group.
- 5.8 Where no NRMCA Affiliate exists or participates, NRMCA reserves its sole right to select a Local Sponsoring Group(s) who appears to be the most able to serve the interests of NRMCA and the successful implementation of the NRMCA Pervious Concrete Contractor Certification Program.



- 5.9 Groups wishing to sponsor NRMCA certification program(s) on a "national" or "regional" basis will, in appropriate circumstances, be authorized by NRMCA to conduct examinations and evaluations in a specific geographic area(s) on a "case-by-case" basis. All necessary agreements of coordination between these groups and groups responsible for that geographical area shall be submitted to NRMCA at least two (2) months prior to the anticipated examination and/or evaluation date(s).
- 5.10 Sponsoring groups shall be charged with the following responsibilities:
- A. Maintain the ethical and professional integrity of the NRMCA certification program(s).
 - B. Conduct the program(s) in a manner which complies with the intent of NRMCA's policies and procedures governing certification.
 - C. Conduct a sufficient number of examination sessions to adequately meet the need for NRMCA certification within the Local Sponsoring Group's area of jurisdiction.
- 5.11 NRMCA has the right to revoke a Local Sponsoring Group's authority to conduct an NRMCA certification program(s) at will, with an explanation of reason and with 30 days notice.
- 5.12 If a group is denied approval or if approval is revoked by NRMCA, the group may appeal the decision. All appeals shall be submitted, in writing, to NRMCA Certification Department within sixty (60) days after being notified by NRMCA of denial or revocation. All appeals shall be handled in order as follows:
- A. A 3-member review panel composed of one NRMCA staff representative from the NRMCA Engineering Department and members of the NRMCA Pervious Concrete Contractor Certification Committee shall review the appeal. Within sixty (60) days after receiving the appeal, NRMCA shall acknowledge receipt of all appeals and notify the group (appellant), in writing as to:
 - a. how the appeal will be reviewed by the review panel (i.e., meeting, letter ballot, telephone conference, etc.) and
 - b. when a decision will be rendered.
 - B. The review panel may in its sole discretion, allow a representative of the group (appellant) to personally appear before them to present arguments. Not less than thirty (30) days in advance of the meeting, NRMCA will notify the group (appellant), in writing, of the date, time and location of the review panel meeting as well as the length of time that will be allotted for presentation and discussion of the appeal. NRMCA shall notify the group (appellant), in writing, of the review panel's decision within sixty (60) days after the review panel has reached a decision.
 - C. All decisions made by the NRMCA Pervious Concrete Contractor Certification Committee are final.
- 5.13 All Local Sponsoring Group employees who administer the certification program must sign the ethics statement on Form PCC1.
- 5.14 All Local Sponsoring Group Certification Committee members must sign the ethics statement on Form PCC2.
- 6 EXAMINER, SUPPLEMENTAL EXAMINER, AND PROCTOR CRITERIA**
- 6.1 The examiner shall be a registered professional engineer and should preferably have experience in pervious concrete technology and construction. Alternatively, the primary contact of the Local Sponsoring Group is permitted to serve as the examiner for a local sponsoring group regardless of whether or not he/she is a registered professional engineer.



- 6.2 The examiner shall submit an application to NRMCA for approval and sign an ethics statement on NRMCA Form PCC3 along with a statement of qualifications.
- 6.3 The examiner shall be approved and thereby authorized by NRMCA to conduct the NRMCA Pervious Concrete Contractor Certification written examination and performance evaluation.
- 6.4 The examiner may identify supplemental examiners to assist in administering written examinations and performance evaluations.
- 6.5 The examiner may identify proctors to assist in administering written examinations.
- 6.6 Examiners/supplemental examiners/proctors shall be unrelated professionally and personally to the examinees. Local Sponsoring Groups may petition NRMCA in writing, and request a waiver of this requirement if it creates a hardship to the organization. Waivers shall be granted only if it can be shown that the intent of the policy will be maintained.
- 6.7 Examiners/supplemental examiners/proctors shall not examine anyone on the performance evaluation who is employed in the same organization. Organizations may petition NRMCA in writing, and request a waiver of this requirement if it creates a hardship to the organization. Waivers shall be granted only if it can be shown that the intent of the policy will be maintained.
- 6.8 Supplemental examiners shall be permitted to assist the examiner in proctoring the written examination and conducting the performance evaluation.
- 6.9 Supplemental examiners shall satisfy the following requirements:
 - A. Have had recent experience in pervious concrete construction;
 - B. Be selected and adjudged qualified by the examiner; and
 - C. Be considered trustworthy and conscientious by the Examiner.
- 6.10 Proctors shall be permitted to assist the examiner in proctoring the written examination.
- 6.11 Proctors shall be selected by the examiner by virtue of their being trustworthy and conscientious.
- 6.12 The examiner shall be directly and solely responsible for the following:
 - A. Final approval of the supplemental examiners and proctors;
 - B. Verify conformance to this Policy;
 - C. Order and receive examinations from NRMCA and keep custody of exams until time of administration. Examiner may assign this task to staff of the Local Sponsoring Group.
 - D. Verify the identity of each examinee and assure that the examinees are aware of the certification criteria;
 - E. Verify the performance evaluations conducted by the supplemental examiners by co-signing the cover sheet of the performance evaluation checklists;
 - F. Enter the appropriate grade for the completed performance evaluation on the checklists; and
 - G. Return all Written Examinations (used and unused), Performance Evaluations (used and unused) to NRMCA Certification Department.
 - H. On completion of an examination and/or evaluation, complete and sign a Post Examination Report, Form PCC6 and Examination Material Checklist, Form PCC7.
- 6.13 Examiners, supplemental examiners or proctors are not allowed to define terms or interpret examination questions during the written examination.



- 6.14 Examiners or supplemental examiners shall not observe more than six examinees during the performance evaluation.
- 6.15 The examination session(s) must be supervised constantly by the examiner, or by the supplemental examiner(s) and/or proctor(s).
- 6.16 Examiners, supplemental examiners and proctors shall not be permitted to provide training for examinations or evaluation for which they will administer.

7 NRMCA DUTIES AND RESPONSIBILITIES

- 7.1 NRMCA shall maintain a NRMCA Pervious Concrete Contractor Certification Committee.
- 7.2 This policy shall become effective immediately upon approval by the NRMCA Pervious Concrete Contractor Certification Committee.
- 7.3 NRMCA shall approve the Local Sponsoring Group.
- 7.4 NRMCA shall approve examiners.
- 7.5 NRMCA shall authorize the Local Sponsoring Group to conduct examination sessions for Pervious Concrete Technician, Installer, and Craftsman certifications.
- 7.6 NRMCA shall grade the Written Examinations and review the results of the Performance Evaluations, and notify the examinee of the final results in writing. The examinee will receive the score obtained on the Written Examination and/or Performance Evaluation and pass/fail status. The examiner will receive a list of examinees that have met the certification requirements.
- 7.7 NRMCA shall issue a certificate to successful examinees.
- 7.8 NRMCA shall conduct annual surveillance of certified personnel (see section 9).
- 7.9 NRMCA shall revoke certifications for cause.
- 7.10 NRMCA shall maintain the ethical and professional integrity of the certification program.
- 7.11 NRMCA reserves the right to modify, expand, or reduce the scope of the certification program. Existing certified personnel would be required to meet any new certification requirements at the time of recertification. Any changes to the certification policy will be approved by a consensus of the Certification Committee.
- 7.12 NRMCA will notify certified personnel of certification policy changes in writing at time of recertification.
- 7.13 NRMCA shall review the written examination questions and performance evaluation checklist periodically, but at least annually, to determine if the examination is fair, valid and reliable. Changes to the written examination and performance evaluation will be made immediately if such a review requires changes.
- 7.14 All NRMCA employees who administer the certification program must sign an ethics statement on Form PCC12.



8 RECERTIFICATION CRITERIA

- 8.1 Recertification shall extend the NRMCA certification as a Pervious Concrete Technician, Installer, or Craftsman for a period of five [5] years, Expiration of the recertification shall be based on the date of completion of the written examination.
- 8.2 Recertification for Technicians by passing the NRMCA Pervious Concrete Contractor Certification Written Examination with a score of 75% or greater; administered by a Local Sponsoring Group approved by NRMCA. Prior certification ID and expiration date shall be documented by the applicant.
- 8.3 Recertification for Installers shall be obtained by passing the NRMCA Pervious Concrete Contractor Certification Written Examination administered by a Local Sponsoring Group approved by NRMCA with a score of 75% or greater; and submitting project experience documentation of successful construction of a minimum of 3 projects with a total area exceeding 10,000 square feet (1000 m²) since the date of previous submission of work experience (not the date of the test). Prior certification ID and expiration date shall be documented by the applicant.
- 8.4 Recertification for Craftsman shall be obtained by passing the NRMCA Pervious Concrete Contractor Certification Written Examination administered by a Local Sponsoring Group approved by NRMCA with a score of 75% or greater; submitting documentation of work experience hours of at least an average of 40 hours per year since the previous submission of work experience (not the date of the test).. Current ACI Flatwork Finisher Certification is not required for recertification. Prior certification ID and expiration date shall be documented by the applicant.
- 8.5 Persons applying for a higher level of certification at the time of recertification shall complete the other criteria for that level.

9 PERIODIC SURVEILLANCE

- 9.1 All Installers and Craftsman are subject to random surveillance while they hold a valid certification.
- 9.2 Surveillance will be limited to a mail survey to a random sample of certified personnel (a minimum of 10% of certified Installers and Craftsman will be surveyed annually). The survey shall include questions related to the certified person's use of the certification and their compliance with the certification policies.

10 NRMCA CERTIFICATION COMMITTEE

- 10.1 The NRMCA Pervious Concrete Contractor Certification Committee shall make all decisions regarding certification policy.
- 10.2 The committee shall fairly and equitably represent the interests of all parties significantly impacted by the certification, without any particular interest predominating.
- 10.3 The committee shall be made up of a minimum of 9 members representing contractors, concrete producers, and design professionals with not more than half of the committee nor less than 1 representative(s) from each group. A chairman and vice chairman shall be elected by committee members.
- 10.4 An NRMCA staff member shall serve as the NRMCA staff liaison to the committee but shall not have a vote on the committee. The NRMCA staff liaison shall facilitate Committee deliberations through meetings, teleconference, web conferences and letter ballots as deemed appropriate. Minutes of such meetings shall be maintained and disseminated to the Committee in a timely manner.



- 10.5 Decisions made by the committee shall be determined by a consensus process. However, when disagreement on an issue cannot be made by consensus a vote shall be called and 51% majority of those voting rules. At least half of the members must vote for the vote to be considered valid.
- 10.6 The committee shall meet at least once per year (either in person or via teleconference) to consider changes to the certification policy or to revalidate the current policy.
- 10.7 The committee shall make decisions regarding certification policy based on feedback from certified individuals, local sponsoring group representatives, pertinent technical committees and the general public.
- 10.8 The committee shall be independent of the NRMCA board of directors. The NRMCA board of directors may appoint one NRMCA board member to serve on the committee as a non-voting member of the committee in addition to the minimum number.
- 10.9 NRMCA membership shall not be a requirement of committee membership.
- 10.10 All NRMCA Pervious Concrete Contractor Certification Committee Members must sign the ethics statement on Form PCC13.

11 LOGOS, CERTIFICATES AND MARKS

- 11.1 Only NRMCA and Local Sponsoring Groups may use the NRMCA Pervious Concrete Contractor Certification logo in their marketing materials.
- 11.2 Certified Technicians, Installers and Craftsman are permitted to use the NRMCA Pervious Concrete Contractor Certification logo in their marketing materials, contingent on current certification. They may publicize that they are certified by stating that they are:
 - A. NRMCA Certified Pervious Concrete Technician
 - B. NRMCA Certified Pervious Concrete Installer
 - C. NRMCA Certified Pervious Concrete Craftsman
- 11.3 Employers of Certified Technicians, Installers and Craftsman are permitted use the NRMCA Pervious Concrete Contractor Certification logo in their marketing materials, contingent on current certification. They may publicize that they have certified personnel in their employ by stating:
 - A. We have NRMCA Certified Pervious Concrete Technicians
 - B. We have NRMCA Certified Pervious Concrete Installers
 - C. We have NRMCA Certified Pervious Concrete Craftsmen



NRMCA Pervious Concrete Contractor Certification Local Sponsoring Group Recommended Procedures

Introduction

The purpose of this document is to offer guidance to Local Sponsoring Groups that will sponsor NRMCA's Pervious Concrete Contractor Certification Program. In a perfect world, this would be a complete cookbook on how to run the program, but respecting local differences, this is more of a broad recommendation than a step-by-step guide.

As a first step, please review the Certification Policy of the program. The document lays out the Pervious Concrete Contractor Certification structure, rules, and responsibilities, as they relate to all parties involved. If you have any questions, please feel free to contact NRMCA Certification Department staff at any time. Although not a requirement of the program or for certification, it is recommended that a Local Sponsoring Group plan for a training session when they plan on offering a certification program. The training session should include both classroom time and demonstration of placement of pervious concrete. At the same time, the demonstration can be used to conduct a performance evaluation for those seeking Installer or Craftsman certification.

As a Local Sponsoring Group, your first step is to form a certification committee to oversee the program's administration. If your group is an industry association, then your committee will be made up of interested members. The certification committee will work with your staff to schedule certification sessions, generate attendees, and coordinate logistics for the training, demonstration, written examination and performance evaluation. Staff will handle paperwork, advertising, coordinating space, and communicating with NRMCA staff.

Once your group completes that process, please submit the appropriate forms to NRMCA. Those forms are:

- Form PCC1: Sponsoring Group Application
- Form PCC2: Certification Committee Member Qualification Statement, and
- PCC3: Examiner Application

Setting up a program

There is a lot of work to set up a Pervious Concrete Contractor Certification program. As already mentioned, a coordinated effort between the committee and staff, planned well in advance, can help make the process run smoothly. To help your planning, Table 1 summarizes your key tasks.

Many of these steps will not apply if you only plan to offer the written examination.

There are several elements for your committee members to consider when figuring what to charge each attendee per session. Your group's costs will include the cost for the NRMCA text, written examination, performance evaluation, your staff time, speakers, examiners, supplemental examiners, proctors, the demonstration, concrete, rented space, and possibly food and beverage. To save your group's expenses and keep the cost of the certification reasonable for attendees, consider finding volunteers and sponsors to help carry as much of the load as possible. And remember, not all of these elements will apply each time you conduct a session so we recommend calculating hosting costs and attendee's certification fees in component parts.

The first step is to select a time frame to hold the program. Prototypes not only ran successfully as one-day sessions, but also as Friday afternoon/Saturday morning sessions. Your sponsoring group has a feel for your local market and the schedules the contractors like to keep. The best advice is to work around the typical contractor's schedule. The schedule for a typical session might look like the schedule presented in Table 2.



Table 1: Example Schedule of Tasks for Each Session

3 Months	2 Months	1 Month	2 Weeks	1 Week	Day After
Schedule Date	Release Ads	Order Exams from NRMCA	Check Exams	Order Concrete for Demo/Exams	Mail Exams to NRMCA
Coordinate Classroom Space	Order Books Find and price caterer (if needed)	Confirm registration with attendees and Mail Out Books	Confirm Speaker	Order Catering (if needed)	
Coordinate Demo/Exam Space		Mail Out Tool/Equipment Lists to attendees	Confirm Demo Crew		
Prepare Ads		Coordinate A/V. Order (if needed)	Confirm Proctors and Examiners		
Schedule Examiners					
Schedule Speakers					
Schedule Proctors					
Coordinate Demo Crew					

Table 2: Example Schedule for an Examination Session

Technicians and Craftsmen			Craftsmen Only			
Friday			Saturday			
1:00pm	2:30pm	6:00pm	8:00	10:00	10:30	12:30
Demonstration	Classroom Training Session Begins	Classroom Training Session Ends	Written Exam Begins	Written Exam Ends	Performance Evaluation Begins	Performance Evaluation Ends

Pervious Concrete Contractor Certification can be administered not only to contractors but many other job categories, including municipal and private inspectors, concrete producer quality control technicians or technical service managers, drivers, batchmen, engineers, architects, and testing lab personnel. Therefore, when scheduling sessions, remember the market for Technicians will probably be bigger than the market for Installers and Craftsmen, so try to schedule sessions with Technicians in mind, too. Designing a marketing piece for the Pervious Concrete Contractor Certification should start at least three months from the date of the program because whatever advertising medium you choose, it will take time to put it together. Advertising should hit your intended audience two months before the program date.

As each attendee registers with your organization, he/she should promptly be sent a copy of the craftsman text, with an accompanying note asking the person to begin reviewing before the program session. Additionally, tool and equipment lists should be sent to those seeking Installer or Craftsman certification. Your registration form should explain the three certification options as described in the Certification Policies. The form should have a place for the attendee to indicate whether he/she is seeking Technician, Installer, or Craftsman level certification.

Classroom Training Session

While not required for certification, it is recommended that your sponsoring group conduct a classroom review session in advance of administering a written examination and/or performance evaluation. The session should be conducted by a pervious concrete expert who can share his knowledge with those





seeking certification. NRMCA has PowerPoint presentations that may be used to guide a three to four hour workshop. The presentation covers the critical information presented in the textbook. Additionally, if your group would like to confer continuing education units (CEUs), this review session may be the opportunity to do so.

When planning for the space to hold a classroom review session, consider an area that is large enough to spread out all registered attendees during the written examination portion of the program. In prototype programs, both corporate conference rooms and rented hotel conference rooms were used successfully. The classroom A/V needs will depend on the size of the group to be certified. For a small group, the list might include simply a laptop, LCD projector, and screen. For a bigger group microphones and laser pointers should be added to the list.

The speaker for the classroom session should be your local expert on pervious concrete or a team of experts. This team might include contractors, engineers, or industry association staff. If you don't have local experts, NRMCA's staff can help you locate experts that might travel to your area. Keep in mind that the Certification Policy does not allow the Examiner to provide training for a certification written examination session of performance evaluation session he is administering.

Demonstration Session

The demonstration session is not a mandatory part of the program but should be included. Since pervious concrete is relatively new to contractors who might do conventional flatwork, it is important to organize a demonstration session to ensure they know the procedures that are unique to pervious concrete installation. Many procedures used in placing and finishing conventional flatwork should not be used in pervious concrete placements. The demonstration session is time for an expert in the field of placing and finishing pervious concrete to share his knowledge with those seeking certification.

The demonstration session is typically held wherever the performance evaluation will be conducted. Either may be held anywhere that has room (or need) for pervious concrete – such as your office, a concrete producer's yard, or existing construction site. In general, a certified Installer or Craftsman should conduct the demonstration. If there are no certified Installers or Craftsmen in your area, experienced Technicians may be utilized.

Common sense should prevail when selecting a site for the demonstration and performance evaluation. The site should be large enough for each crew to set up their forms and maneuver a ready mixed concrete truck easily. There should be no problem holding the session at a concrete producer's yard. When considering other locations, please give thought to the fact that examinees might not place the best piece of pervious concrete during their performance evaluation. Care should be taken to select a site that can tolerate a bad piece of pervious concrete without giving the industry a black eye. Simply select a site where the pavement cast during the evaluation can be easily removed if necessary.

Safety should be a primary concern when conducting the demonstration. All attendees should be notified when they initially register that they will need to bring appropriate safety gear to wear during the demonstration, including: hard hats, safety glasses, chemical resistant safety gloves, long pants, long sleeved shirts and steeled toed shoes or boots.

Selecting the suppliers for the demonstration should be done when the date of the session is selected (wouldn't want to schedule a Saturday demo only to find out no concrete plants are open on Saturday.) The laborer supplier for the demonstration should make sure he has his best crew available for the demo. The concrete supplier should also have experience batching pervious concrete. There's nothing worse than bringing out a load of concrete for a demonstration that's not batched properly or having a crew that doesn't know what they're doing.

When conducting the demonstration, the speaker should be familiar with the checklist that will be used to evaluate those taking the performance evaluation so that he can highlight those points as the crew performs each task. Additionally, the crew should be made aware of all of the points on the checklist so



that they actually demonstrate each required element of installing a pervious concrete pavement. (See Form PCC10.)

Written Examination

For a detailed list of instructions, please see Form PPC4 “Examiner Step-by-Step Instructions.” Each examinee must sign in before the exam. The examiner also signs the sheet at the end of the exam, noting that all the exam pieces are turned in and the specific numbered exam components are in order. Please see Form PCC6: Written Exam Sign-in/Sign-Out Sheet.

To highlight the key components of the written examination process, please note that each examinee will receive two items, (1) an exam booklet and (2) a Scantron answer sheet. There are several different versions of the written exam; the version of the exam will be indicated on the exam cover. Examinees should be given a different version of the exam than the person sitting next to them.

Supplemental Examiners and Proctors may be used to help administer the written exam. They must meet the qualification mentioned in the Certification Policy. Questions may not be clarified or commented on by the Examiner, Supplemental Examiners, or Proctors. The exam is a timed test; each examinee gets two (2) hours to complete the exam. If an examinee cannot read the questions, the exam may be administered orally, with a notation made by the Examiner and signed by the Examiner on the test book cover.

It’s probably a good idea for the Local Sponsoring Group to have supplies available for the examinees to help them take the exams. These might include #2 pencils, scratch paper, and erasers. If your budget allows, coffee and donuts might be appropriate too.

Performance Evaluation

For those taking the performance evaluation the examiner should pass out Form PCC10 along with Form PCC8 for Installer candidates and Form PCC9 for Craftsman candidates. The performance evaluation should be administered to individuals working together as a crew. The individuals may normally work together or be from different organizations. Either way, there must be at least a four-man crew to conduct the performance evaluation. As the examinees go through the evaluation process, they should rotate positions so that each examinee completes each element on the performance evaluation checklist. To help the examiner proctor all this, there should be a supplemental examiner for each examinee.

Safety is of critical importance in this process. Everybody involved must have the appropriate safety gear including hard hats, safety glasses, chemical resistant gloves, long pants, long sleeved shirts, and steel-toed shoes or boots. Each examinee must be made aware of the safety rules at the time of registration.

The examinees will typically be REQUIRED to bring their own tools and equipment to the performance evaluation. This includes forms, screed, roller, jointer, and curing materials. A tool and equipment list should be sent to each examinee when they register so that they know what they have to bring for the performance evaluation. The Local Sponsoring Group may choose the option of providing the needed tools and equipment for the performance evaluation.

Individual Results

Written examination and performance evaluations should be sent back no later than the next business day to NRMCA Certification Department for processing. Each examinee’s exam materials should be kept together. Do not organize booklets, scanner sheets, and forms into separate stacks. Carefully repackage all materials and send via tracked delivery (such as UPS, FedEx, or DHL).

Exams will be graded within four weeks. Examination results will be sent to the examinee along with a certificate for those who pass directly from the NRMCA Certification Department. Pass/fail status of all the examinees in the session will be sent to the Examiner and the principal of the Local Sponsoring Group.



NRMCA Pervious Concrete Contractor Certification Examinee Required Personal Protection Equipment

Each attendee must bring the following Personal Protection Equipment for the Demonstration Session and/or Performance Evaluation

Equipment:

- Hard Hat
- Safety Glasses
- Steeled toed shoes or boots
- Chemical Resistant Safety Gloves
- Long Pants
- Shirt WITH long sleeves



NRMCA Pervious Concrete Contractor Certification Examinee Required Equipment

Each examinee must bring the following equipment for the Performance Evaluation:

- Screed*
- Roller (10" Schedule 40 Steel Pipe)*
- Pizza Cutter (6" Schedule 40, with center flange)
- Rakes
- Square Nose Shovels
- Hand Floats
- Edgers
- 6 mil Polypropylene Sheet
- Spray Can with Vegetable Oil
- String Line
- Forms and tools and equipment to set forms
- Riser Strips and tools and equipment to place riser strips*

* Note: Some examinees may chose to use a motorized roller creed that replaces the need for separate screed, manual roller, and riser strip.