

ADMINISTRATIVE MANUAL
FOR
**CONSTRUCTION TECHNICIAN
TRAINING AND CERTIFICATION**

LOUISIANA DEPARTMENT OF TRANSPORTATION
AND DEVELOPMENT

Louisiana Transportation Research Center
Louisiana Department of Transportation and Development
Technology Transfer and Training
2003

CREDITS

This manual was developed by the DOTD Construction Technician Training and Certification Committee. The contents have been approved by the Chief, DOTD Construction Division, the Materials Engineer Administrator and the DOTD Chief Engineer.

The information in this manual is current as of the printing date. This manual can be accessed on LTRC's web site at:

http://www.ltrc.lsu.edu/pdf/2004/admin_manual_final1004.pdf

The manual can be downloaded from that site. Any updates to the manual will be made to the web site.

TABLE OF CONTENTS

Topic	Page
History	1
Federal Government Requirements	1
Policy.....	3
DOTD.....	3
Industry	4
Ethics	4
Certification Committee	4
Affected Personnel	5
Transition to Certification 2000.....	5
Re-qualification and Updates	5
Conversion from Department Status to Nondepartment Status	6
Experience	6
Testing	7
Authorized Tester	7
Certified Technician.....	7
Letter of Authorization	8
Revocation of Certification or Authorization	8
Evaluation of Equivalent Training.....	9
QC/QA Qualifications.....	11
Trainee.....	11
Authorized Tester	11
Certification	12
Procedures.....	13
DOTD Employees.....	13
Application	13
Test District.....	13
Program Entry.....	13
Experience.....	13
Official Record	14
Non-Department	14
Application	14
Evaluation of Equivalent Training.....	14
Test District.....	15
Program Entry.....	15
Training Materials	15
Experience.....	15
Official Records	16
Fees for Non-DOTD Personnel	17

TABLE OF CONTENTS - Continued

APPENDIX	Page
Appendix A	
Acceptance of Responsibilities	A-1
Authorized Tester Requirements	B-1
Asphaltic Concrete Plant	
Superpave Mix Design	A-5
Asphaltic Concrete Paving	A-6
PCC Plant Operations	A-6
Authorized PCC Plant Tester	A-6
Authorized PCC Field Tester	A-6
Prestressed Plant Operations (DOTD only).....	A-6
PCC Paving Inspection	A-7
Authorized PCC Field Tester	A-7
Authorized PCC Paving Tester	A-7
Structural Concrete Inspection.....	A-7
Authorized PCC Field tester.....	A-7
Authorized Structural Concrete Tester	A-7
Embankment and Base Course.....	A-7
Authorized Embankment and Base Course Field Tester	A-7
Soil and Base Course Technician (Lab)	A-8
Authorized Soil and Base Course Lab Tester	A-8
Reciprocity Requirements for Industry.....	C-1
Forms.....	D-1
Glossary.....	E-1

ADMINISTRATIVE MANUAL

HISTORY

The Louisiana Department of Transportation and Development (DOTD) has placed emphasis on the training and qualification of personnel in the transportation construction industry for more than forty years. The purpose of the training program has always been to provide Louisiana with a confident, skilled transportation work force of high integrity, with a comprehensive knowledge of specifications and up-to-date construction techniques. The overall objective of the program has been to ensure that these front line employees can work competently together to provide the citizens of Louisiana with fair value and quality in the development of the state's transportation infrastructure.

The training program began informally in the district laboratories under the Louisiana Department of Highways. The early program concentrated on materials sampling and testing, with emphasis on the correct performance of standardized sampling and testing procedures. In the 1960s, the training program became formalized with the creation of a training and development staff at headquarters and staffs of training specialists in each district to provide hands-on individualized training. This organizational concept is still in existence today. In the 1970s, successful completion of training, in conjunction with satisfactory job performance, became the basis for DOTD career advancement for engineering technicians. Structured training programs were established first for construction personnel, followed by structured training programs for nearly every engineering division in DOTD. With the move away from method specifications to early Quality Assurance (QA) concepts, which started in asphaltic concrete plant operations in the mid-70s and was implemented full scale with the 1977 *Standard Specifications*, the department developed the first certification programs to qualify engineering technicians for job performance.

As programs for the technical qualification of personnel matured, the emphasis shifted gradually from the determination that an individual was capable of performing tests correctly to the determination that a certified individual could not only perform sampling and testing correctly, but had the skill, knowledge and understanding to be responsible for material production and plant operation or jobsite responsibility for the oversight of project construction. Additional certification areas were developed to cover all areas of construction and material production and testing. The implementation of new technology and the need for qualified individuals in specialized tasks led to the development of authorizations, a qualification process similar to certification, but in an area of limited scope.

FEDERAL GOVERNMENT REQUIREMENTS

In 1995, the U.S. Congress amended the Code of Federal Regulations (CFR), Part 637, to require all personnel performing sampling and testing for control or acceptance (QC/QA) to be "qualified" after June 29, 2000. This required that each state highway department implement a qualification program for individuals who perform such sampling and testing. The program had to be approved by the Federal Highway Administration (FHWA) and in-place by the June 29, 2000 deadline in order to continue eligibility for federal funding. The FHWA issued guidelines to the states defining the parameters to be used in the approval process. Louisiana's existing program already met most of these guidelines; however, some adjustments were required.

DOTD felt that this was an appropriate time to make changes to the existing program to make it more flexible for our industry partners and at the same time, ensure that technicians were qualified for their job duties.

POLICY

DOTD has long supported the philosophy that properly trained construction personnel are critical to the provision of a quality transportation system. DOTD is committed to assisting the construction workforce, both those employed by DOTD and those employed by industry, to develop the capability to perform the tasks required for each job assignment.

It is the policy of DOTD that personnel performing quality assurance and quality control functions on DOTD construction projects be authorized or certified to perform their required function. All personnel performing inspections, sampling, and testing are to hold the appropriate authorizations or certifications. For DOTD, certified personnel are official representatives of the department and are responsible for ensuring that the contractor's materials and production meet the requirements of the department's quality assurance program and conform to all requirements of the contract, plans, specifications, and department policies. The non-department certified technician is responsible for the contractor's quality control program and will organize a sampling program and perform tests as established in the specifications, quality assurance manuals, and other department publications.

The Authorized Tester designation allows employees (department and non-department) to perform specified sampling and testing duties for record prior to achieving full certification. However, the ultimate responsibility for the proper inspection of the project lies with the project engineer and the QC technician. They must ensure that their personnel are trained and qualified to perform the required tests and have adequate knowledge to perform inspection duties.

It is the policy of the department that DOTD personnel be physically present on the job whenever construction activities are in progress. Industry and DOTD shall prohibit any individual from performing the duties of an authorized tester or certified technician in an area in which the individual is not authorized or certified except for the purposes of on-the-job training necessary for the authorization and certification process. The names and credentials of qualified QC personnel are to be provided to the project engineer at the preconstruction conference. Credentials for QC personnel are to be presented and verified prior to their reporting to work at the jobsite or materials plant. Questions about individual credentials are to be referred to the district training coordinator.

All personnel and their employees, including consultants, professional engineers, and project managers, who perform inspection duties for DOTD or who perform QC technician services are required to hold the appropriate certification or authorization.

DOTD

It is the policy of DOTD to provide training for its workforce to ensure that personnel have adequate information to properly perform their job tasks. Supervisors are encouraged to allow time during working hours for studying. Employees are to realize

that study time must be scheduled around regular work activities. It is a responsibility of the gang supervisor to determine training and certification areas for the employee and provide on-the-job training.

It is the responsibility of the individual employee to seek training and to qualify for all job assignments. Employees are to pursue training in a continual and progressive fashion and are encouraged to proceed beyond the minimum requirements of the Structured Training Program.

INDUSTRY

DOTD expects industry to take the lead in training personnel in their employ to perform the tasks required for Quality Control and to develop the competency needed to construct a quality transportation project. DOTD personnel are available for qualifying industry workers and will assist in their training as time allows. Industry participants are encouraged to participate in scheduled class instruction when space allows. It is the responsibility of the technician to seek training and to schedule testing in a timely fashion. Industry is encouraged to demand the highest ethical standards from their employees and to expect them to pursue training beyond the minimum required by DOTD for QC/QA approval.

ETHICS

DOTD expects individuals who are certified or authorized under the auspices of this program to maintain the highest ethics in the performance of their duties. Each person applying to be an Authorized Tester or Certified Technician will read the "Acceptance of Responsibilities" statement (reprinted in Appendix A). There will be no tolerance for impropriety in the sampling, testing, or documentation of test results. Qualified personnel are expected to represent facts honestly, provide complete information about activities, and follow standard policies and procedures in accordance with the intent of the standard. Deviations from adherence to ethical behavior will be dealt with in accordance with the guidelines established in the Acceptance of Responsibilities document.

Sampling and testing is to be performed independently by the individual holding the appropriate authorization or certification. Trainees are allowed to perform sampling and testing for training purposes only and under the direct observation, supervision and guidance of an individual who is fully authorized or certified in the appropriate area. No sampling and testing is to be performed independently by unapproved employees and the report signed by the certified/authorized technician or inspector. Signing reports of testing performed by unapproved individuals may result in the revocation of all qualifications.

CERTIFICATION COMMITTEE

The Materials Engineer Administrator is the certifying authority for DOTD. He is assisted in this function by the Certification Committee, the membership of which consists of the Construction Division Chief, the LTRC Construction and Materials Training Program Manager, a district construction engineer, a district training coordinator, a project engineer, and a district laboratory engineer. The Materials Engineer Administrator has

full authority to grant or to revoke certification of all DOTD and non-DOTD personnel. The Certification Committee advises the Materials Engineer Administrator and is charged with the evaluation and approval of training personnel to conduct the certification/authorization programs in the districts.

AFFECTED PERSONNEL

DOTD employees, whose positions require certification or authorization, either by Structured Training Program requirements or by job assignment, must be certified or authorized. Areas of certification and authorization are to be assigned to the employee by the gang supervisor.

Industry technicians and employees of consulting firms who provide quality assurance inspection for DOTD must complete the certification or authorization programs for those areas requiring authorizations or certifications.

All professional engineers performing sampling or testing are to be authorized or certified to perform those functions.

TRANSITION TO CERTIFICATION 2000

DOTD will automatically extend all credentials for department personnel with authorizations or certifications valid before January 1, 2001 until January 1, 2006. New certifications or authorizations issued after January 1, 2001 are valid for a period of five years from the date of issuance. Re-qualification under the new procedures will be required at expiration.

RE-QUALIFICATION AND UPDATES - DOTD EMPLOYEES AND NON-DOTD PERSONNEL

Certifications and authorizations are valid for five years from the date of issuance. The expiration date is shown on the card issued by LTRC after certification or authorization has been granted and is recorded in the DOTD employee training records mainframe computer system (ETRN). Certified or authorized technicians are to re-qualify prior to the expiration date. Re-qualification will be issued based on successful completion of department requirements. Re-qualification may be initiated by the individual within one year of the expiration date. It is the responsibility of the employee to report to the district training office at least 90 days prior to the expiration date of any qualification to make arrangements to complete the update before the credential expires. When significant changes in technology, specifications, policies, procedures, etc., are made, personnel may also be required to update their existing certifications or authorizations. There is no fee for re-qualification when required to update credentials or for the continuance of credentials when re-qualification is performed prior to expiration. DOTD will notify the individual of the upcoming expiration date of an authorization or certification by electronic, departmental, or U.S. mail 90 days prior to expiration. The address of the individual will be the most current in the authorization and certification database. DOTD is not responsible for electronic or U.S. mail address changes that would cause a lack of expiration notification.

Re-qualification will require experience and may include continuing education, professional development hours, classes, course updates or other training materials and evaluations as deemed appropriate by the department.

Failure to update credentials by the expiration date or by the completion date established by the department will cause the certification or authorization to become invalid. Personnel whose credentials are no longer valid are prohibited from performing QC/QA sampling and testing on department projects. Once a certification or authorization has become invalid, the department's certification committee will determine the additional training and testing required, up to complete re-qualification, for the applicant to regain the expired credential. The person holding the expired credential will be required to pay a minimum late fee of half the fee for initial qualification and may be required to pay the complete fee for re-qualification when that is required. Requests for late re-qualification must be in writing and should be sent to LTRC through the district training office.

CONVERSION FROM DEPARTMENT STATUS TO NONDEPARTMENT STATUS

When DOTD personnel leave the department, valid certifications and authorizations continue in effect until expiration. At that time, they must recertify. For DOTD to continue to identify and track these credentials, the employee must notify the district training office or LTRC. Since ETRN uses unique numbers to record certifications issued to department and non-DOTD personnel, these credentials must be converted to non-DOTD status. Notification should be in writing and be submitted prior to official separation from DOTD.

EXPERIENCE

Prior to receiving authorization or certification status, the applicant must have the required work experience in the area requested. Six months experience is required for Certified Technician. The Authorized Tester applicant must train for the amount of time it takes to become proficient in performing the test procedures in the area in which they want to become authorized. Work experience is defined as on-the-job training for the purpose of developing an understanding of the material being used, normal methods for handling construction materials, application of specification requirements for inspection and testing activities, the desired final product produced by the contractor, and how these factors work together to produce a quality product. On the job training shall be under the direction and close supervision of a certified technician in which the applicant assists in testing, inspection, or material production for DOTD projects or similar projects related to the certification area. Work experience for authorization to perform tests can be under the supervision of an Authorized Tester. Work experience for certification must be documented to the satisfaction of the Certification Committee and verified in writing by the DOTD project or laboratory engineer or appropriate firm representative and verified by a District Training specialist. (Refer to Appendix D for a copy of the Experience Documentation Form.) Exceptions to this requirement will be considered only on the basis of position requirements and will be judged individually. Applications for a substitution of education or equivalent experience or qualification through another state's program or a recognized industry program must be submitted in writing to the

District Training Specialist and be evaluated and approved by the Certification Committee.

TESTING

District training personnel approved by the Certification Committee will conduct authorization and certification testing and performance evaluations.

AUTHORIZED TESTER

Authorized tester applicants are required to successfully complete a series of written examinations and performance evaluations designed to demonstrate competency in sampling and testing for a specific structure area. If a written examination is failed, there will be a waiting period of at least one week before the examination can be attempted again.

Performance evaluations may be discontinued for inadequate performance at the end of any phase at the discretion of the evaluator. If an applicant is unable to pass any phase of a performance evaluation, 14 calendar days must elapse before the evaluation can be attempted again. If the applicant is unable to successfully complete a performance evaluation on the third attempt, the applicant may attempt one more time after a one-month waiting period. If this attempt is also failed, the applicant will be regarded as having failed in the attempt to become an Authorized Tester and will have to wait six months before retaking the performance evaluations.

CERTIFIED TECHNICIAN

All prerequisite courses must be successfully completed prior to attempting the written specialty area examination. Lists of prerequisite courses are maintained in the ETRN System and are available from district or LTRC training offices.

If the applicant does not pass the written examination, 30 days must elapse between the first and second attempts or the second and third attempts before the exam may be taken again. If the written exam is not successfully completed on the third attempt, six months from the date of the last failure must elapse before the exam can be attempted again. The waiting period between attempts is intended to provide the applicant with additional experience and preparation time for certification. For non-DOTD technicians, when the applicant is unsuccessful three times at the written exam, fees must be repaid at the time of reapplication. Any time the written examination for a prerequisite course is failed, there will be a waiting period of at least one week before the examination can be attempted again.

After obtaining six months experience in the field, which would include three months experience required to become an authorized tester, and successfully passing the written specialty area examination, the applicant will take a performance evaluation. Performance evaluations may be discontinued for inadequate performance at the end of any phase at the discretion of the evaluator. If an applicant is unable to pass any phase of a performance evaluation, fourteen calendar days must elapse before the evaluation can be attempted again. If the applicant is unable to successfully complete a performance evaluation on the third attempt, the applicant will be regarded as having

failed in the attempt to gain certification. There will be a six-month waiting period before the performance can be attempted again. For non-DOTD technicians, after the six-month waiting period, fees must be repaid at the time of reapplication. Experience gained during the certification process will count if reapplication is within two years of having started the certification process.

LETTER OF AUTHORIZATION

Certification or authorization will be granted following the successful completion of all requirements and the receipt of a Letter of Authorization prepared by the District Training Specialist. For DOTD employees, this Letter of Authorization must be approved by the project engineer or laboratory engineer and the District Construction Engineer or Section Head (if other than a district). For non-DOTD technicians, the Letter of Authorization must be signed by the appropriate firm representative. The supervisors' signatures on the Letter of Authorization signify that they are recommending certification or authorization of the individual and that they are willing to allow the individual to act for DOTD or their firm in the stated certification or authorization area. This recommendation is to be based on their assessment of the individual's work performance beyond the technical expertise evaluated by formal testing.

REVOCAION OF CERTIFICATION OR AUTHORIZATION

When a certified technician or authorized tester is performing substandard work, is not able to satisfactorily perform the duties routinely required of certified or authorized personnel, engages in unethical activities, the certification or authorization may be revoked.

Proceedings to revoke a certification or authorization can be initiated by DOTD representatives, including DOTD certified technicians, district training specialists, laboratory engineers, project engineers, construction engineers, or any member of the Certification Committee. The appropriate representative of the employing firm may also request revocation of certifications or authorizations granted to non-DOTD personnel. The request that certification or authorization be revoked must be directed to the Certifying Authority and be accompanied by documentation of the unsatisfactory performance. The request will be evaluated by the Certification Committee. In the event of deliberate disregard of standard sampling or testing procedures, specifications, policies, or other contract requirements, the department may immediately suspend a certification or authorization, pending final resolution by the Certification Committee. When a certification or authorization has been revoked and the individual requests a new certification or authorization in any area, the employee must request the issuance of certification or authorization from the Certification Committee.

When revocation is due to substandard work performance, the applicant must present the Certification Committee with evidence that the unsatisfactory performance has been corrected and will not be repeated before a new certification or authorization can be attempted. When a certification or authorization is revoked, complete re-qualification and retesting may be required before a new certification or authorization will be granted in the same area. If the certified or authorized employee is a DOTD employee, the revocation of certification may result in disciplinary action in accordance with the *Secretary's Policy and Procedure Memorandum No. 26*. Non-DOTD technicians whose certifications or authorizations are revoked are prohibited from performing QC/QA duties

on DOTD projects until the credential is reinstated.

Evaluation of Equivalent Training

DOTD will recognize certification from another state transportation agency as equivalent to the required six months experience and allow the applicant to begin certification testing. Applicants holding equivalent certifications from the transportation department of another state may elect to take the certification exam one time without completing prerequisite courses. If the applicant passes the written exam, the applicant may continue the certification process. Credit will be given for prerequisite courses at the minimum passing score. If the applicant does not pass the written exam on the first attempt, the applicant will be required to successfully complete all prerequisites prior to a second attempt at the exam. Standard waiting periods and attempt limits will apply.

Certification candidates holding credentials from another state transportation agency or a recognized industry program may submit their credentials to the Certification Committee for evaluation. The committee will consider these credentials on a case by case basis, up to granting a DOTD credential based on another state's certification or an equivalent industry standard. The evaluation of individuals applying for a reciprocal certification may require that they complete performance evaluations and complete an examination of DOTD specifications and procedures.

Recognized industry associations are encouraged to work with DOTD to establish reciprocity of their programs for DOTD's programs by sharing course content and authorization or certification requirements. Guidelines for reciprocity with specific industries are included in Appendix C.

QC/QA QUALIFICATIONS

DOTD's trainee, authorized tester and certified technician programs establish a systematic approach for developing the skills of individuals working in construction quality control and quality assurance programs.

TRAINEE

A trainee is an individual who is formally enrolled in the Authorized Tester program. The trainee is to receive on-the-job training from a Certified Technician or Authorized Tester. When the trainee is proficient at performing sampling and testing procedures, an approved department representative will evaluate the trainee. After successful evaluation (including passing all written exams and performance evaluations), the trainee will be allowed to perform individual sampling and testing procedures for record. This will allow use of an individual for formal QC/QA during the training process prior to achieving full certification or authorization.

AUTHORIZED TESTER

DOTD offers the credential of Authorized Tester in the following topics:

- ◆ Embankment and Base Course
- ◆ Asphaltic Concrete Plant
- ◆ Asphaltic Concrete Paving
- ◆ Structural Concrete Properties
- ◆ PCC Plant Operations
- ◆ PCC Paving

*See Appendix B for a complete listing of the Authorized Tester Requirements.

Experience as a trainee under the direction of a certified technician or authorized tester is required, in addition to successful completion of all prerequisite training materials, including written exams and performance evaluations. This qualification is designed to allow an employee to perform specimen duties for record prior to achieving full certification.

Once the individual has successfully completed evaluation for a test, the trainee may perform that test for record. The designation Authorized Tester will be granted following completion of all QC/QA tests specified in that area. There is no expiration date for the Authorized tester designation, however, if any testing procedure included in an Authorized Tester block is significantly changed or a new testing procedure added, anyone holding Authorized Tester credentials in that area will be required to complete an update.

CERTIFICATION

DOTD offers full certification in the following areas:

- ◆ Embankment and Base Course
- ◆ Soil and Base Course Technician
- ◆ Asphaltic Concrete Plant
- ◆ Asphaltic Concrete Paving
- ◆ PCC Paving
- ◆ Structural Concrete
- ◆ PCC Technician
- ◆ Prestressed Concrete Plant
- ◆ Laboratory Testing

Certification requires that the individual successfully complete four requirements:

- Course completions in the certification area.
- A written specialty area test in certification area.
- Performance evaluations in the certification area.
- Verifiable six months experience in the certification area.

PROCEDURES

DOTD EMPLOYEES

APPLICATION

Employees of DOTD are not required to make formal application to the certification program. Construction and materials personnel are automatically trained toward certification as they progress through the structured training program (STP). The gang supervisor will determine the appropriate certification areas and their sequence of completion. These areas are entered in the ETRN system and form the specific career path for the employee's personal STP.

Employees of DOTD will become qualified to perform sampling and testing for record during their progress in the STP and toward certification. When an employee has completed all the requirements for the designation Authorized Tester in a certification area, the Authorized Tester designation will be issued. However, the goal for DOTD employees is Certified Technician.

TEST DISTRICT

The DOTD assigned district is the test district for DOTD employees. If special circumstances require that the employee be tested in a different district, arrangements for testing in a different location will be coordinated by the district training staff through the LTRC program manager.

PROGRAM ENTRY

DOTD employees in construction and district laboratory gangs are automatically entered into the program.

Training materials are supplied at no cost to employees of DOTD.

EXPERIENCE

In addition to satisfactorily completing all required courses and exams, the trainee must submit a completed Experience Documentation Form (see Appendix) prior to the trainee being granted status as a Certified Technician. The form must document (at least six months for Certified Technician) work under the direction of a Certified Technician, performing the duties covered by the application. This experience must be verifiable by the department.

OFFICIAL RECORDS

DOTD maintains official records of all certified technicians or authorized testers. These records are kept in ETRN. Department employees are sent a monthly notice of changes made to their ETRN records. It is the responsibility of the employee to review this notice and to contact the district/section training coordinator immediately if there are any errors.

All certification examinations are graded at LTRC. LTRC sends notices of scores for DOTD examinations to the appropriate district training coordinator. These letters serve as duplicate records and must be presented in the event the ETRN record is questioned. A card and certificate are issued identifying the individual as an Authorized Tester or Certified Technician. The expiration date of the authorization or certification is printed on the card. When these credentials are renewed or reissued, a new card will be issued with the new expiration date.

Additional historical records are also maintained at LTRC. Applications for authorizations or certification based on previous credentials will be checked against official records when the application is received at LTRC.

NON-DEPARTMENT

APPLICATION

To be evaluated to perform QC sampling and testing as an Authorized Tester or Certified Technician in any tester or certification area, an individual must complete a standard application, available from any district training office. The application, accompanied by payment in the form of a check or money order payable to DOTD is to be sent to:

Louisiana Transportation Research Center
Technology Transfer and Training Office
4101 Gourrier Avenue.
Baton Rouge, LA 70808-4443

Attention: Construction and Materials Program Manager

Trainees have a maximum of two years to complete all testing for qualification as an Authorized Tester. If the trainee is unable to successfully complete qualification within this time period, a new application must be submitted and the fees repaid. At that time, the trainee must provide the Certification Committee with reason for the previous failure to complete the training phase. The Certification Committee will evaluate this submittal prior to the payment and application for a second attempt.

EVALUATION OF EQUIVALENT TRAINING

Requests for substitutions based on other states' or industries programs are to be directed to the Program Manager at LTRC for evaluation by the Certification Committee.

TEST DISTRICT

DOTD has training offices at nine district headquarters spread geographically throughout the state. These district offices are in the following locations:

- ◆ Bridge City
- ◆ Lafayette
- ◆ Chase
- ◆ Hammond
- ◆ Lake Charles
- ◆ Monroe
- ◆ Baton Rouge
- ◆ Alexandria
- ◆ Bossier City

Contacts in these district offices are located on LTRC's web site –

<http://www.ltrc.lsu.edu/certification.html>

The applicant is to identify on the application the district office at which testing will be done. Once this test district has been assigned, all testing will be arranged through this office. After the applicant has begun the program, the test district can only be changed by written request to the LTRC Technology Transfer and Training Office. Such requests must explain why a change in test district is justified and must be approved by the LTRC Construction and Materials Program Manager prior to an applicant's reporting to a different district for testing. No change in test district will be approved for the continuation of testing in a different district after the applicant has begun certification or authorization testing, written or performance, except as recommended by the original district training office and approved in writing by the certifying authority.

PROGRAM ENTRY

When application and fees have been processed by the LTRC Technology Transfer and Training Office, a receipt will be sent to the applicant and the requested test district training office. The applicant should then report to the district training office to obtain training materials and arrange for evaluations.

TRAINING MATERIALS

The appropriate training materials are covered by fee payment. Most materials are self-study. The district training coordinator will make arrangements for the applicant to participate in any courses that require classroom attendance. It is expected that industry will provide hands-on training and routine preparation to their personnel. The district trainer can provide limited assistance to the applicant in preparing for exams. It is to be noted that the training of DOTD Employees is the primary job duty of district trainers; therefore, such assistance for non-DOTD trainees must be scheduled in advance.

Training materials are also available for a nominal cost without payment of authorization or certification fees. For prices of individual materials, contact the district training office.

EXPERIENCE

In addition to satisfactorily completing all required courses and exams, the individual must submit a completed Experience Documentation Form before they are allowed to begin the process of becoming an Authorized Tester or prior to taking the performance evaluation for full certification. The form must document at least six months experience for full certification. This experience must be verifiable by the department.

OFFICIAL RECORDS

DOTD maintains official records of all certified technicians and authorized testers. These records are kept in ETRN.

All certification examinations are graded at LTRC. LTRC sends notices of scores for non-department examinations to the appropriate district training coordinator. These letters serve as duplicate records and must be presented in the event the ETRN record is questioned. A card and certificate are issued identifying an individual as an Authorized Tester or Certified Technician. The expiration date of the authorization or certification, if applicable, is printed on the card. When these credentials are renewed or reissued, a new card will be issued with the new expiration date.

Additional historical records are also maintained at LTRC. Applications for authorizations or certification based on previous credentials will be checked against official records when the application is received at LTRC.

FEES FOR NON-DOTD PERSONNEL

Certified Technician: \$800.00

DRAFT \$200.00

Late Fees: One half the applicable full fee

Payment is to be made by check or money order, payable to Louisiana Department of Transportation and Development. Mail payment to:

Louisiana Transportation Research Center
Technology Transfer and Training Office
4101 Gourrier Avenue
Baton Rouge, LA 70808-4443

Attention: Construction and Materials Training Program Manager

The authorized tester or certified technician fees are applicable for each area in which the individual participates. If an individual is an authorized tester, the 200.00 fee can be applied to full certification. If an individual wants to become an Authorized Tester and wants to become a certified technician instead, the 200.00 fee can be transferred.

APPENDIX

APPENDIX A - ACCEPTANCE OF RESPONSIBILITIES

CERTIFICATION/AUTHORIZATION

The certification program is an integral part of the Quality Control/Quality Assurance (QC/QA) Program of DOTD. All QC/QA personnel must be certified or authorized as appropriate. The purpose of the QC/QA program is to improve the quality of construction to increase the performance life of our transportation infrastructure. These goals can only be accomplished by competent, qualified QC/QA personnel who work as a team performing their duties in an ethical, professional and cooperative manner. Quality Control (QC) refers to activities by representatives of the contractor to monitor the construction process to ensure that the product is built to meet the standards for which it was designed. Quality Assurance (QA) refers to activities by representatives of the DOTD to evaluate the final quality of the product to ensure that the standards for which it was designed have been met.

RIGHTS AND RESPONSIBILITIES

Certification/Authorization carries inherent rights and responsibilities, including inspection, sampling, testing, and the reporting of test results for Quality Control (QC) and Quality Assurance and Acceptance (QA). The Certified Technician representing the interests of DOTD has the right to act as a legal representative of DOTD in that certification area to accept or reject work performed under contract in accordance with the plans and specifications; to require the contractor to perform work that meets the plans and specifications; to approve the QC methods employed by QC technicians; to document acceptance test results and to verify QC results. The Certified Technician representing the interests of the contractor has the right to act as a legal representative of the contractor for the QC program for that certification area to ensure that:

- material and work produced meet the contract requirements of the plans and specifications;
- to evaluate the QC program and make changes as necessary;
- to perform QC tests and document their results.

The Certified Technician/Authorized Tester (hereinafter referred to as Certified Person) is to perform these duties in an ethical, professional manner at all times and to work cooperatively with other QC/QA personnel, engineers, trainers, and other personnel involved in DOTD operations. Adversarial behavior toward other personnel involved in the QC/QA function will not be tolerated and may result in the revocation of all certifications/authorizations.

All tests are to be performed by personnel authorized or certified in the appropriate area. The Certified Person is to insure that all procedures are performed in accordance with the frequencies and standards delineated in DOTD's officially published documents to the accuracy and precision specified. The Certified Person shall agree to abide by the rules and to follow the procedures outlined by the DOTD in regard to the certification process, including documentation of experience, completion of prerequisite courses,

testing, and registration. **It is the responsibility of the Certified Person to notify the department of any change of address, to take any steps necessary to ensure the continuance of the certification, and to successfully complete any required updates within the specified time frame.** The Certified Person shall agree to perform all work in accordance with the standards of behavior described in this document.

REVOCACTION OF CERTIFICATION/AUTHORIZATION

Findings of **negligence** or **abuse** of the rights and responsibilities by the Certified Person may result in the revocation of certification/authorization. Such revocation may be temporary or permanent and may be applied to only an individual area or to all certifications and authorizations held by the technician. Failure to successfully complete any required update within the time frame stipulated will automatically result in the revocation of the certification/authorization. A certification/authorization may be revoked for substandard work performance, including the failure of the Certified Person to conduct duties in accordance with the performance guidelines of this document. Penalties associated with Structured Training Program compliance may also be enforced for employees of DOTD.

Negligence is defined as unintentional deviations from approved standard procedures that may or may not cause erroneous results. Negligence can be minor, which will result in a warning and required correction of performance, or gross, which will result in stiffer penalties. Gross negligence is defined as failure to correct performance resulting in repeated minor errors or an error that has a significant impact on the quality of the product or validity of the test results. The first finding of gross negligence will result in at minimum six-month suspension of the certification/authorization and the banning of the Certified Person from working on DOTD projects in any capacity which involves sampling, testing, the reporting of test results, or the supervision of personnel involved in these activities during this period; the second finding of gross negligence will result in at minimum a one-year suspension of the certification or authorization and the banning of the Certified Person from working on DOTD projects in any capacity which involves sampling, testing, the reporting of test results, or the supervision of personnel involved in these activities during this period; the third finding of gross negligence will result in the permanent revocation of all certifications or authorizations and the permanent banning of the Certified Person from working on DOTD projects in any other capacity which involves sampling, testing, or the reporting of test results.

Abuse is defined as intentional deviations from approved standard procedures. The first finding of abuse will result in no less than a one-year suspension of all certifications/authorizations and the banning of the Certified Person from working on DOTD projects in any capacity which involves sampling, testing, the reporting of test results, or the supervision of personnel employed in these activities during this period. Any subsequent finding of abuse will result in the permanent revocation of all certifications/authorizations and the permanent banning of the Certified Person from working on DOTD projects in any other capacity which involves sampling, testing, or the reporting of test results. The finding of abuse, even a first offense, may result in criminal charges.

The Certified Person is hereby notified that both state and federal laws may govern DOTD projects, including Title 18, United States Code, Section 1020 that in brief states that anyone making falsifications on Federal-aid projects "shall be fined not more than

\$10,000 or imprisoned not more than five years, or both.” The falsification of test results, making false statements regarding the QC/QA test program, or the documentation of falsified test results will result in the immediate revocation of all certifications/authorizations and the possible filing of criminal charges. DOTD reserves the right to prosecute to the full extent of the law.

Charges of **negligence** or **abuse** may be made by representatives of DOTD or industry. Representatives of DOTD who may file charges include, but are not limited to, district training specialists, project or laboratory engineers, and district construction engineers. These charges are to be made in writing and submitted to the **Certifying Authority**, with copies to each member. The charges must be specific as to time, place, and contain a detailed description of the instance(s) of negligence or abuse, any documentation and proof of the incident(s), and the names of any witnesses to the incident. The Certification Committee will conduct an investigation of the charges and reach a determination of the appropriate penalty, if any, to be enacted in accordance with the guidelines of this document. Non-DOTD program users and supervisors are to follow the same procedure for reporting abuse or negligence.

Nothing in this document will prohibit DOTD from taking appropriate disciplinary action in accordance with the Secretary’s Policy and Procedure Memorandum No. 26, in addition to the penalties herein, against any employee for violations of these policies.

APPENDIX B - AUTHORIZED TESTER REQUIREMENTS

Numbered blocks list procedures that will be evaluated together. Once a block is successfully completed, a trainee may perform those procedures for record in the QC/QA program. After all blocks listed are successfully completed and the trainee has met all other requirements, the designation Authorized Tester will be granted.

ASPHALTIC CONCRETE PLANT

Superpave Mix Design

Block 1 – Preliminary Aggregate Sampling and Testing

- S:101 – Sampling Aggregates
- TR 108 – Splitting and Quartering
- TR 112/TR 113 – Gradation
- TR 403 – Moisture of Aggregate
- DOTD TR 300 – Determination of Specific Gravity of Aggregates, Fine and Coarse

Block 2 – Aggregate Consensus Testing

- DOTD TR 121 – Fine Aggregate Angularity
- DOTD TR 120 - Sand Equivalency
- ASTM D 4791 – Flat and Elongated Particles
- DOTD TR 306 – Percent Crushed for Coarse Aggregate

Block 3 – Loose Mixture Sampling and Testing

- S:203 – Sampling HMA Mixtures
- AASHTO PP 2 – Standard Procedure for Short and Long Term Aging of HMA
- AASHTO TP 4 – Standard Method for Preparing and Determining the Density of HMA Specimens by Means of the SHRP Gyrotory Compactor
- DOTD TR 327 – Bulk Maximum Specific Gravity
- DOTD TR 304 – Bulk Specific Gravity of Compacted Mixtures

Block 4 – Moisture Sensitivity and Moisture Content

- DOTD TR 322 – Determining the Effect of Moisture on Asphaltic Concrete Paving Mixtures
- TR 319 – Moisture Content of HMA

Block 5 –

- DOTD TR 323 – Ignition Oven

EMBANKMENT AND BASE COURSE

Authorized Embankment and Base Course Field Tester

Block 1

- Authorized Density Tester

Block 2

- S:401 – Sampling Soils and Soil Aggregate
- TR 431 – Determining Pulverization
- TR 436 – Determining % Additives in Stabilization or Treatment Processes

Block 3

- S:401 – Sampling Soils and Soil Aggregate
- TR 403 – Determination of Moisture Content
- TR 415 – Field Moisture Density Relationship

Block 4

- TR 602 – Measuring Thicknesses and Widths of Base and Subbase Courses

ASPHALTIC CONCRETE PAVING

- Equipment inspection
- Coordination of Laydown and Production
- Yield
- Tack Coat
- Determining Spread Height, Calculating Fluff, Measuring Mat Thickness
- Measuring Tolerances for Cross Slope and Transverse Surface Finish

PCC AND STRUCTURAL OPERATIONS

Block 1 – Authorized PCC Field Tester

- S:301 – Sampling Plastic Concrete
- TR 202 – Air Content of Freshly Mixed Concrete
- TR 207 – Slump of Portland Cement Concrete
- TR 226 – Making, Field Curing and Transporting Concrete Test Specimens
- Determining Mix Temperature

Block 2

- TR 229 – Measuring Texture Depth of PCC with Metal Tine Finish

PCC Field Tester

- S:301 – Sampling Plastic Concrete
- TR 202 - Air Content of Freshly Mixed Concrete
- TR 207 – Slump of Portland Cement Concrete
- TR 226 – Making, Field Curing and Transporting Concrete Test Specimens
- Determining Mix Temperature
- Job Site Water Adjustment

PRESTRESSED PLANT OPERATIONS

- S:301 – Sampling Plastic Concrete
- TR 202 - Air Content of Freshly Mixed Concrete
- TR 207 – Slump of Portland Cement Concrete
- TR 226 – Making, Field Curing and Transporting Concrete Test Specimens
- TR 100 – Spinning and Quartering
- TR 206 – Moisture Content
- Determining Mix Temperature
- Job Site Water Adjustment

PROFILOGRAPH OPERATOR AND EVALUATOR

- DOTD TR 641

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APPENDIX C- RECIPROCITY REQUIREMENTS FOR INDUSTRY

AMERICAN CONCRETE INSTITUTE (ACI)

The department will accept ACI credentials in Concrete Field Tester and Concrete Transportation Construction Inspector with the stipulation that the applicant successfully complete a rider test and a performance evaluation covering LADOTD specifications and sampling and testing methods. The following will apply:

The ACI Concrete Field Testing Technician - Grade I certification can be substituted for the department's Field Tester Authorization and it can substitute for the six months experience required for the PCC Technician, Structural Concrete, Prestressed Concrete and PCC Paving certifications.

If an applicant has the ACI Concrete Field Testing Technician - Grade I certification and the ACI Concrete Transportation Construction Inspector Certification, the applicant must complete a rider test and a performance evaluation to become certified in Structural Concrete, PCC Paving, and Prestressed Concrete. These tests cover specifications and testing methods unique to LADOTD.

If an applicant has the ACI Concrete Field Testing Technician - Grade I certification and the ACI Concrete Laboratory Testing Technician - Grade 1 certification, the applicant must complete a rider test and a performance evaluation to be certified as a PCC Technician.

The charge for those already ACI certified to receive DOTD certifications would be \$250.00.

APPENDIX D - FORMS

This section of the Administrative Manual contains the forms used to apply for certification in the various areas. **Please see your District Training Office to obtain copies of these forms.**

Application for Trainee/Authorized Tester

Experience Documentation Form for Non-Department Certification

Experience Documentation Form for Department Certification

Non-Department Application for Specialty Area Test

Non-Department Recertification Form

Form to Request Transfer of Department Certifications to Non-Department Status

APPENDIX E - GLOSSARY

Certification Committee – committee charged with the evaluation and approval of training personnel to conduct the certification/authorization programs throughout the state.

Certifying Authority – the DOTD Materials Engineer Administrator – head of the certification committee- has full authority to grant or to revoke certifications or authorizations for department and non-department personnel.

ETRN – The DOTD Mainframe computer program used to record and monitor training records for department and non-department employees.

LTRC – Louisiana Transportation Research Center – a research, technology transfer, and training center administered jointly by the Louisiana Department of Transportation and Development and Louisiana State University.

Quality Assurance – All those planned and systematic actions necessary to provide confidence that a product will perform satisfactorily in service.

Quality Control – the process used by the contractor to assess and adjust production and construction processes so as to control the level of quality being produced in the end product.

