ODOT Material Testing Technician

Training Program

The use of this Program to develop future technicians is allowed, but companies must strictly follow the requirements and procedures in this Appendix. The Program is for development and exposure to testing procedures prior to obtaining certification. This Program is not intended to be a substitute for employing certified technicians. A non-certified technician may not perform testing or sampling under the Program for more than eight (8) months for any certification for the same employer. An uncertified technician may not participate in the Program if he or she is certified or has in the past been certified under the ODOT Technician Certification Program as a Certified Aggregate Technician, Certified Asphalt Technician I or II; Certified Density Technician; Certified Embankment and Base Technician; or Certified Mix Design Technician. A written training plan ("Training Plan") shall be submitted to the QAE for review and approval prior to implementation.

The Training Plan shall contain:

- The company name, and geographic location where the mentoring will be performed.
- Identify by name the uncertified technician ("technician-in-training").
- Anticipated start and finish dates of training under the Training Plan.
- The certification(s) for which the non-certified technician is training.
- The testing and sampling procedures (by name and number) that will be performed by the technician-in-training.
- The name and certification number of the certified technician responsible for performing the role of "Mentoring Technician." The Mentoring Technician shall have a minimum of three (3) years of experience as an ODOT certified Technician in the specific discipline(s) applicable to the training of the non-certified technician. The Mentoring Technician may have a maximum of two technicians-in-training at any given time.
- The Mentoring Technician's resume.
- A description of how the Mentoring Technician will monitor and train the technician-in-training for each procedure.
- A description of how the company will:
    - Create and maintain a separate file for the technician-in-training with a copy of the Training Plan
    - Create and maintain a training log that includes dates, content, and format of training provided, and the dates and times when the technician-in-training was performing testing for ODOT project(s). The log must also identify whether the work was observed, by whom, and to what extent.
    - Include copies of all completed test result forms in the technician-in-training's file
    - Notify the Sr. QAE and coordinate with the regional Sr. QAC when the Mentoring Technician believes the technician-in-training no longer requires direct observation of the test procedure(s) in the laboratory. The Sr. QAC will coordinate with the Mentoring Technician a split sample (IA type of test) for test procedure(s) for the technician-in-training.

        - This is a step in the training program and is not part of the certification process. The technician-in-training must complete the separate certification process to become certified.
    - Include copies of all verification and acceptance tests performed by or with the technician-in-training's assistance in the technician-in-training's file.

The Training Plan will be reviewed to determine compliance with the requirements. The Training Plan will be rejected if it does not contain enough detail for ODOT to determine that the planned training and monitoring will be sufficient to ensure the quality of work performed and compliance with ODOT's Quality Assurance Program. The Training Plan must include detail about how the Mentoring Technician will monitor the technician-in-training.

The Mentoring Technician:

1. Is responsible for ensuring that the technician-in-training follow proper procedures and protocols and shall follow the Training Plan to ensure accuracy in all testing, calculations, and reporting performed by the technician-in-training.
2. Must be continuously present for all sampling or testing performed in the field outside of a laboratory by the technician-in-training.
3. Must be present in the same laboratory and reasonably observe testing and analysis (including the completion of all calculations and forms) by the technician-in-training.
4. Shall carefully review all forms and calculations completed by or with the technician-in-training's help. The Mentoring Technician will sign the forms as the certified technician. The technician-in-training will sign in the comments section.
5. Shall follow the Training Plan while the technician-in-training remains in the Program.

Example of Reasonably Observing Sieve Analysis (AASHTO T27/T11): If the technician-in-training has little to no experience, the Mentoring Technician would demonstrate all test steps and explain the purpose of each step. The Mentoring Technician would repeat demonstrations until the technician-in-training believed he or she understood the steps and could perform them correctly. The Mentoring Technician would then visually observe the technician-in-training performing each step and confirm that the technician understood the purpose of the steps. The Mentoring Technician would continue to visually observe the technician-in-training performing subsequent tests until the Mentoring Technician is confident that the technician-in-training can perform all steps in the test procedure correctly. After the technician-in-training has demonstrated that he or she can correctly perform all steps, the Mentoring Technician does not need to continuously visually observe the technician-in-training, but must be present in the same laboratory facility and periodically observe the technician-in-training to confirm that he or she is continuing to perform the steps correctly. It is expected that the number of demonstrations and the amount of direct visual observation will vary depending on the technician-in-training's experience and competence.

Example of Reasonably Observing Rice Test (AASHTO T209): If the technician-in-training has little to no experience, the Mentoring Technician would demonstrate all test steps and explain the purpose of each step. The Mentoring Technician would repeat demonstrations until the technician-in-training believed he or she understood the steps and could perform them correctly. The Mentoring Technician would then visually observe the technician-in-training performing each step and confirm that the technician understood the purpose of the steps. The Mentoring Technician would continue to visually

observe the technician-in-training performing subsequent tests until the Mentoring Technician is confident that the technician-in-training can perform all steps in the test procedure correctly. After the technician-in-training has demonstrated that he or she can correctly perform all steps, the Mentoring Technician does not need to continuously visually observe the technician-in-training, but must be present in the same laboratory facility and periodically observe the technician-in-training to confirm that he or she is continuing to perform the steps correctly. One of the periodic observations would include checking that the sample is properly placed in the pycnometer, the pycnometer is sealed and ready for vacuuming, and the vacuum is set on the correct suction level. Again, it is expected that the number of demonstrations and the amount of direct visual observation will vary depending on the technician-in-training's experience and competence.

Example of Reasonably Observing Calculations for a Soil Curve (AASHTO T99): After all test procedure steps have been performed according to AASHTO T99, technicians must perform calculations and complete a Maximum Density of Construction Materials form. The Mentoring Technician would demonstrate how to perform the calculations and complete the form and would explain the purpose of each calculation during the process. After the technician-in-training has demonstrated that he or she understands the calculations and how to complete the form, the Mentoring Technician does not need to continuously visually observe the technician-in-training performing the calculations or completing the form, but must check the calculations and form and confirm that they were completed correctly before submitting them to the Agency.

Example of Remaining Continuously Present for Sampling Base Aggregate (AASHTO R90): If the technician-in-training has little to no experience, the Mentoring Technician would demonstrate all sampling steps and explain the purpose of each step. The Mentoring Technician would repeat demonstrations until the technician-in-training believed he or she understood the steps and could perform them correctly. The Mentoring Technician would then visually observe the technician-in-training performing the sampling and confirm that the technician performed all sampling steps correctly. Because the Mentoring Technician must be continuously present for all sampling and testing performed by any technician-in-training in the field outside of a laboratory, the Mentoring Technician must remain present and visually observe the technician-in-training for all subsequent sampling.

Example of Remaining Continuously Present for Compaction Testing (AASHTO T355): If the technician-in-training has little to no experience, the Mentoring Technician would demonstrate all testing steps and explain the purpose of each step. The Mentoring Technician would repeat demonstrations until the technician-in-training believed he or she understood the steps and could perform them correctly. The Mentoring Technician would then visually observe the technician-in-training performing the testing and confirm that the technician performed all testing steps correctly. Because the Mentoring Technician must be continuously present for all sampling and testing performed by any technician-in-training in the field outside of a laboratory, the Mentoring Technician must remain present and visually observe the technician-in-training for all subsequent testing. The only exception would be if the technician-in-training was taking tests for information that would not be used for acceptance. In such case, the Mentoring Technician must be present in the field, but need not visually observe each test.

All test results require signatures from the Mentoring Technician and the technician-in-training. The Mentoring Technician responsible for assuring all work meets the requirements of the QA program and is

complete, accurate and submitted within appropriate timelines. If ODOT determines that a company is not strictly following all Program requirements, ODOT may prohibit the company or specific certified laboratories within a company from participating in the Program for up to 24 months from the time ODOT determines that Program requirements were not strictly followed. Negligence or abuse by the company or the Mentoring Technician may be grounds for suspension or revocation of the Mentoring Technician's certification(s) as deemed appropriate by the Certification Advisory Committee.

ODOT, through the QAE, may rescind the Program and any Training Plan approval at any time.

Unless rescinded, the Program will be a pilot program through 2024. At the conclusion of the 2024 paving season, the Program will be evaluated to determine if it should be modified, adopted, or rescinded. The determination will be based on factors that will include but not be limited to: feedback from Mentoring Technicians and technicians-in-training; the extent of errors in sampling, testing, calculations, and reporting by Program participants; the extent of instances where employers failed to keep the required documentation in Training Plans; the extent participation in the Program helps technicians-in-training become certified; and difficulties in administration.