

## OKLAHOMA DEPARTMENT OF TRANSPORTATION

### LABORATORY QUALIFICATION POLICY

#### **SCOPE:**

This policy defines the process a lab shall follow to become qualified to conduct acceptance and QC/QA testing on Oklahoma Department of Transportation (ODOT) projects. This policy also includes additional qualifications for Asphalt and Asphalt Mix Design labs. **(See Note 1&2)**

This policy applies to all qualified testing laboratories. The intent of the lab qualification process is to document to the Department that a lab has the necessary calibrated equipment, competent technicians, and a quality system in place to conduct testing on highway construction materials.

#### **BACKGROUND:**

[Federal Highway Administration Regulations \(23 CFR Part 637\)](#) “Quality Assurance Procedures for Construction” require that testing by all contractors, vendors, and DOT’s used in project acceptance be performed by qualified laboratories. This policy also applies to any lab performing QC/QA testing since Contractor quality control testing may be utilized for acceptance under the QC/QA special provisions. Asphalt Mix design labs are included when required by specifications.

AASHTO R18, “Standard Recommended Practice for Establishing and Implementing a Quality System for Construction Materials Testing Laboratories,” includes numerous examples of how to document many parts of a Laboratory Quality System. It is strongly recommended to utilize the same formatting and documentation examples whenever possible, to expedite approval of the Quality Manual.

#### **QUALIFICATION REQUIREMENTS:**

This policy requires a “Qualified Laboratory Agreement” between the private testing lab (or contractor’s QC Lab) and the Oklahoma Department of Transportation, Materials Division. A separate Agreement and inspection is required for each physical laboratory. The Materials Division, Independent Assurance Branch (IA) will inspect each lab facility. A lab will be placed in “Qualified Status” and listed as an [ODOT Qualified Lab](#) based upon this inspection. The lab will remain qualified for 2 years. The site inspection will include a review of documentation addressing requirements listed in the Lab Manual Checklist Append. ‘A’. The lab will receive notification from an IA inspector to set up an inspection. The Qualified Laboratory Agreement and Laboratory Evaluation Review can be found at <http://www.odot.org/materials/html-smap/11069el.pdf>. It is recommended that you print the Laboratory Agreement from the link above to place in your Quality Manual.

*Note 1:* Qualified Asphalt testing laboratory requires:

- Participate in Proficiency Sample Program. (AASHTO re:source)
  - Hot mix Asphalt Ignition Oven Test Sample
  - Hot Mix Asphalt Gyrotory
- List Oklahoma Department of Transportation as “Specifier” for AASHTO re:source test.
- Copy of the AASHTO re:source Results within 15 days of final report to the Materials Engineer.
- Copy of the AASHTO re:source Correction Action Report if any within 30 days of final report to the Materials Engineer.

*Note 2:* Asphalt Mix Design qualification requires:

- Current Level I and II Certified Technician in Asphalt Mix Design from the OHMTCB to submit designs.
- Existing qualified lab status for testing Aggregate.
- Existing qualified lab status for testing Asphalt.

Revision 3/6/2015: Changed “ODOT Qualified Lab” hyperlink, located under section “QUALIFICATION REQUIREMENTS”, to new URL.

Revision 4/27/2015: Changed “ODOT Qualified Lab” hyperlink, located under section “QUALIFICATION REQUIREMENTS”, to new URL.

Revision 6/16/2016: Changed all instances of “Materials and Research Division” to “Materials Division” and “Materials and Research Engineer” to “Materials Engineer”. Changed “ODOT Qualified Lab” hyperlink, located under section “QUALIFICATION REQUIREMENTS”, to new URL.

Revision 6/5/2017: Changed all instances of “AMRL” to “AASHTO re:source”.

Revision 5/2/2018: Changed “ODOT Qualified Lab” hyperlink, located under section “QUALIFICATION REQUIREMENTS”, to new URL.

Revision 8/29/2018: Changed “The Lab will receive written notification of qualification along with signed agreement” to “The Qualified Laboratory Agreement and Laboratory Evaluation Review can be found at <http://www.odot.org/materials/htm-smap/11069el.pdf>”, located near bottom of first paragraph of section “QUALIFICATION REQUIREMENTS”. Added the sentence “It is recommended that you print the Laboratory Agreement from the link above to place in your Quality Manual.” to the bottom of first paragraph of section “QUALIFICATION REQUIREMENTS”. Changed “Federal Highway Administration Regulations (23 CFR Part 637)” hyperlink, located under section “BACKGROUND”, to new URL.

Revision 8/27/2019: Changed “Copy of the AASHTO re:source Corrective Action Report if any to the Materials Engineer. To “Copy of the AASHTO re:source Corrective Action Report if any within 30 days of final report to the Materials Engineer.” Located in the last sentence in (*Note 1* on Page 2).

## **OKLAHOMA DEPARTMENT OF TRANSPORTATION QUALIFIED LABORATORY AGREEMENT**

This is an agreement between the Oklahoma Department of Transportation and a private laboratory. This agreement is for a specific laboratory in a single location (or mobile lab) and is not an endorsement of other labs owned or operated by the same company.

To assure proper testing procedures for materials used on Oklahoma Department of Transportation projects,

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*Lab Name and Physical Location for Permanent Labs. (Location for Mobile Labs just indicate Mobile)*  
agrees to the following regarding testing of materials for; acceptance, QC/QA, and mix designs performed on such projects:

1. Maintain a Quality System as established by the Company's Laboratory Quality Manual and approved by the Oklahoma Department of Transportation Materials Division. As a minimum, the quality system must satisfy the quality manual checklist in Appendix "A"
2. Provide quality system records when requested by Department.
3. Cooperate with Department representatives in the inspection of the testing laboratory, equipment, and testing procedure.
4. Cooperate with the Department's Independent Assurance (IA) representatives in the sampling and testing of split/comparison samples, and technician performance evaluations.
5. Participate in proficiency sample Programs requested by the Department.
6. Select Oklahoma Department of Transportation as the specifier for any AASHTO re:source proficiency samples.
7. Use only technicians with a current certification issued by the Oklahoma Highway Construction Technician Certificate board to perform all sampling and testing.

8. Clearly show the Certification Board Seal with the responsible testing technician's number and signature on printed test reports
9. Correct/Respond to deficiencies in equipment or procedures within 30 days of discovery, or notification. Clearly document corrective action taken in the QM.
10. Inform the Materials Division Independent Assurance Branch whenever a lab is moved to a new location.

The Department may suspend the laboratory's qualification when deficiencies in the Quality System are not corrected in a timely manner. Failure to notify the department of a move or change in contact information may result in laboratory suspension. The suspension will continue in effect until adequate correction of deficiencies is established to the Department's Independent Assurance Branch satisfaction.

This agreement is effective on the date signed by the Independent Assurance Supervisor and remains in effect for 2 years or until an unsatisfactory onsite inspection.

The Quality Assurance Manager will review and approve documents if the IA Supervisor performs a lab evaluation or is absent.

\_\_\_\_\_  
Signature (Date)

\_\_\_\_\_  
Name and Title (Print or Type)

\_\_\_\_\_  
Company

APPROVED:

\_\_\_\_\_  
Jason Baggett (Date)  
Independent Assurance Supervisor  
Oklahoma Department of Transportation

Revision 3/6/2015: Changed all instances of “Materials Division” and “Materials and Research Division” to “Materials & Research Division” and all instances of “Materials Engineer” and “Materials & Research Engineer” to “Materials & Research Division Engineer”. Changed name of “Materials & Research Division Engineer”, located underneath the “APPROVED” line near the bottom of Page 2 of 3, from “Scott S. Seiter” to “Scott Seiter” (middle initial was incorrect).

Revision 6/16/2016: Changed all instances of “Materials and Research Division” to “Materials Division” and all instances of “Materials & Research Division Engineer” to “Materials Division Engineer”. Changed the old ODOT logo to the new ODOT logo.

Revision 6/5/2017: Changed “AMRL”, located in 6. (agreement term No. 6) above, to “AASHTO re:resource”.

Revision 5/2/2018: Changed name from “Scott Seiter, P.E.” to “Kenny Seward, P.E.” and person title from “Materials Division Engineer” to “Assistant Materials Division Engineer” (located underneath the “APPROVED” line near the bottom of Page 2 of 3).

Revision 8/29/2018: Changed name from “Kenny Seward, P.E.” to “Kelly Steinhouse” and person title from “Assistant Materials Division Engineer” to “Independent Assurance Supervisor” (located underneath the “APPROVED” line near the bottom of Page 2 of 3).

Revision 8/29/2018: Changed “Materials Division Liaison Branch”, located in (agreement term No. 10) to “Materials Division Independent Assurance Branch”.

Revision 8/29/2018: Changed “Department’s Materials Division Engineer” to “Department’s Independent Assurance Branch” in paragraph below (agreement term No. 10).


Revision 8/27/2019: Changed “remains in effect until an unsatisfactory onsite inspection.” to “remains in effect for 2 years or until an unsatisfactory onsite inspection.” located in last paragraph of Page 2.

Revision 3/11/2020: Updated old ODOT logo to new ODOT logo.

Revision 11/2/2022: Added last paragraph to Page 2 “The Quality Assurance Manager will review and approve documents if the IA Supervisor performs a lab evaluation or is absent.”

Revision 11/2/2022: Removed the word “mobile” located in (agreement term No. 10) on Page 2.

Revision 9/13/2023: Changed name of Independent Assurance Supervisor from “Kelly Steinhouse” to “Jason Baggett” (located underneath the “APPROVED” line near the bottom of Page 2 of 3).

					Oklahoma Department Of Transportation				
					<b>Lab Audit Review / Lab Manual Review</b>				
					Lab Name		Lab Manager		Const Res Lab Portable Permanent
<u>1 SiteManager#</u>					<u>Lab ID#</u>				
<u>2 SiteManager#</u>					<u>Lab ID#</u>				
<b>Question</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Comment</b>	<b>Questions</b>				
					<b>AASHTO R-18 General Information</b>				
1					Laboratory would like to be qualified for. (Aggregates, Asphalt, Concrete, Soils or Asphalt Design Lab)				
2					Physical Location if mailing address is different: (Zip Code)				
3					Mailing Address: (Zip Code)				
4					Contact Information? (Phone number, Fax Number, and Email)				
5					Documentation of Biographical Sketch of lab (Chain of Command)				
6					The laboratory shall maintain records of technician training and competency evaluation activities. The records shall include the test method for which the technician was evaluated, the date on which competence was determined or confirmed, the name of the individual who evaluated the technician's competency, and comments about the training or competency evaluation activity. ( IA evaluation checklist will work)				
7					Proof of technician certification by the OHCMTCB?				
8					Is applicable lab equipment, calibrated with specified frequency listed in AASHTO R-18 tables A1.1 through A1.8 or in accordance with lab's QM whichever is less?				
9					Master inventory list of all major and surplus equipment with serial numbers, model , last calibration dates, current calibration dates.				
10					Document that lab resolved its equipment issues, and malfunction of equipment in 30 days?				

11				Document in the QM Manual stating how AASHTO and OHDL manuals are accessed?(book or internet)
12				Documentation of AASHTO re:source test results? (if applicable)
13				Documentation of Calibration Records for each Nuclear Gauge?
14				AASHTO re:source Number.
15				Current calibration records for each pieces of equipment document on the master inventory list.
				<b>***** Note make sure all out of service equipment is marked and stored separately.</b>

Question	Yes	No	N/A	Comment	Questions
					<b>Aggregates</b>
16					(R 76) - Does lab have aggregate splitter with correct number of size openings and what type of splitter used?(for various sizes)
17					(T 27) Sieve Analysis of Fine and Coarse Aggregates - Oven, Balance, Sieves, Mech. Sieve Shaker. Are sieves in good working order?
18					(T 11) - Balance, Sieves, Oven, Container and Wetting Agent.
19					Does lab have right number of sieves to run various aggregate samples and are sieves in good working order.
Question	Yes	No	N/A	Comment	Questions
					<b>Concrete</b>
20					(T 23) - Does lab have adequate curing tanks or wet room for concrete cylinders?
21					(T 22) - On site Documentation of Neoprene Pad usage.
22					(T 152) - On site Documentation of Air Meter calibration records.
23					(T 22) - Does lab have concrete cylinder breaker machine and what type of breaker?
24					(C1064) - On site Documentation of thermometer calibration records.
25					(T 121) Concrete Unit Weight - Unit Weight Measure, Tamping Rods, Balance, Mallet, Strike Off Plate and Scoop.



Question	Yes	No	N/A	Comment	Soil
26					(R-58) Dry Preparation of Soil Sample - Pulverizing Apparatus: Mortar and rubber coated Pestle, Mechanical Device with rubber coated Muller or other Apparatus that will not reduce the size of the individual grains. Splitter and Sieves.
27					(T 88) Particle Size Analysis of Soils - Mechanical Mixer and Dispersion Cup, Dispersing Agent, Sieves, Shaker, Balance, Oven and Containers.
28					(T-89) Liquid Limit - Liquid Limit Apparatus, Mixing Dish, Small Spatula, Balance, Oven and Containers.
29					(T-90) Plastic Limit - Large Glass Plate, Mixing Dish, Spatula, Balance, Oven and Containers.
30					(T-99) 4"and 6" Proctor Molds, 5.5lb Hammer with 12" drop, Balance, Straight Edge with beveled edge, Mixing Tools, Containers and Sieves.
31					(T-180) 6" Proctor Mold 10lb Hammer with 18" drop, Balance, Straight Edge with beveled edge, Mixing Tools, Containers and Sieves.
Question	Yes	No	N/A	Comment	Questions
					Asphalt Design
32					Are sieves in good working order?
33					(T84) Specific Gravity and Absorption of Fine Aggregate - Balance, Pycnometer, Mold, and Tamper.
34					(T85) Specific Gravity and Absorption of Coarse Aggregate - Balance, Sample Container, Water Tank.
35					(T-283) Moisture Induced Damage - Freezer, Heatable Bath, Timer, and Compression Machine with Correct Head.
36					(T-304) Uncompacted Void Content of Fine Aggregate - Cylindrical Measure and Funnel with Funnel Stand, Glass Plate, Pan & Spatula, Balance.
37					(OHDL-44) Water Permeability - Permeability Apparatus, Water, Grease, and Timer, outlet pipe at least as high as the specimen. Do they know the X distance?

Question	Yes	No	N/A	Comment	Asphalt
38					Are sieves in good working order?
39					(T 30) Mechanical Analysis of Extracted Aggregate - Sieves, Balance, Mechanical Sieve Shaker, Oven and Wetting agent.
40					(OHD L-14 & T 166) Bulk Spec. Gravity of SSD Asphalt. Spec. - Balance, Oven, Suitable Suspension Apparatus with Holder, A Thin Wire, Water Bath and Thermometer. Vacuum Device such as CoreDry if using R 79 to dry cores.
41					(T 209) Rice's - Large Flask or Equivalent Container, Balance, Vacuum Pump, Manometer, Mech. Shaker and Timer.
42					(OHD L-26) Asphalt Content by Ign. Method - Vented Ignition Oven, Balance, Basket for Ignition Oven and Oven.
43					(T 312) Gyratory - Gyratory, Balance, Oven, Suitable Suspension Apparatus with Holder, A Thin Wire, Water Bath and Thermometer.
44					(T 176) Sand Equivalent - Shaker, Cylinders, Timer, Tins, Straight Edge and Solution.
45					(OHD L-45) - Corelok, Bags, Balance, Water Bath and Thermometer. Does lab have Corelok present?(If not where are cores tested when >2.0% moisture)

<b>Partial/No</b>				<b>Inspector:</b>	<b>Lab Rep:</b>
<b>Question</b>	<b>Major Finding</b>	<b>Minor Finding</b>	<b>Issue Resolved</b>	<b>Comments</b>	