POLICY MEMORANDUM

Revised: March 15, 2013
This Policy Memorandum supersedes number 30-12.0 dated October 15, 2012.

TO: REGIONAL ENGINEERS AND HIGHWAY BUREAU CHIEFS AND RESISTIVITY TESTING LABORATORIES

SUBJECT: MINIMUM LABORATORY REQUIREMENTS FOR RESISTIVITY TESTING

1.0 DEFINITIONS

AASHTO R 18 - The American Association of State Highway and Transportation Officials (AASHTO) Standard for "Establishing and Implementing a Quality System for Construction Materials Laboratories." The principles of AASHTO R 18 are used by the Bureau of Materials and Physical Research (BMPR) to administer the minimum laboratory requirements for Resistivity Testing Laboratories.

RESISTIVITY TESTING LABORATORY - Any laboratory that performs Illinois Modified AASHTO T 288 test. This includes Contractor, Producer, or Consultant laboratories.

BMPR LABORATORY - The Department's central laboratory maintained and operated by the Bureau of Materials and Physical Research (BMPR).

CONSULTANT - A Private firm which performs construction materials testing for the Department, Producer, or Contractor.

CONTRACTOR - The individual, firm, partnership, joint venture, or corporation contracting with the Department for performance of prescribed work.

DEPARTMENT – Illinois Department of Transportation (IDOT), including its Districts and Central Bureau offices.

PRODUCER - An individual or business entity providing materials for performance of prescribed work.

TECHNICAL MANAGER - The individual with responsibility for the overall operations, condition, and maintenance of the Resistivity Testing Laboratory.

2.0 SCOPE

This policy governs the minimum qualifications for Resistivity Testing Laboratories operated by Contractors, Producers and Consultants.
3.0 PURPOSE

To ensure that Resistivity Testing Laboratories are equipped and maintained at a uniform and high level of quality.

To establish a uniform procedure for evaluating and approving Resistivity Testing Laboratories.

4.0 REFERENCE DOCUMENTS

IDOT Standard Specifications for Road and Bridge Construction.

Applicable Special Provisions.

AASHTO, ASTM, and IDOT Test Procedures.

5.0 RESISTIVITY TESTING LABORATORY REQUIREMENTS

All resistivity testing for Department contracts shall be performed by Resistivity Testing Laboratories approved by the Department and listed on the Approved List of Laboratories to Perform Resistivity Test as maintained by the Department.

6.0 QUALITY SYSTEM CRITERIA

6.1 Inspection

Each Resistivity Testing Laboratory approved by the Department to perform Illinois Modified AASHTO T 288 test shall have been inspected by the BMPR Laboratory.

6.2 Technical Manager

Each Resistivity Testing Laboratory shall have a Technical Manager (however titled) who has overall responsibility for the technical operations of the Resistivity Testing Laboratory. The Technical Manager shall be responsible for equipment maintenance and calibration, maintaining records, and ensuring that current test procedures are utilized.

6.3 Equipment Calibration and Verification

The Resistivity Testing Laboratory or designee shall calibrate or verify all testing equipment associated with tests performed by the Resistivity Testing Laboratory. The frequency shall be per the test method.

6.4 Proficiency Testing

Resistivity Testing Laboratory qualifications will include successful comparison of Illinois Modified AASHTO T 288 testing by the Resistivity Testing Laboratory and BMPR Laboratory. Results will be considered in the overall evaluation of the Resistivity Testing Laboratory to conduct Illinois Modified AASHTO T 288.

Each Resistivity Testing Laboratory approved by the Department to perform Illinois Modified AASHTO T 288 may be required to periodically participate in round-robin proficiency testing conducted by the Department.
Round-robin proficiency testing will be administered by the BMPR Laboratory. Round-robin proficiency tests shall begin within 2 weeks of receipt of materials, and results shall be submitted to the BMPR Laboratory within 2 weeks of completion.

6.5 Records

Test Records – Each Resistivity Testing Laboratory shall maintain test records which contain sufficient information to permit verification of any test report.

Records Retention – Each Resistivity Testing Laboratory shall maintain documentation of the internal quality controls. At a minimum, the records shall include:

1. Documentation of assignment of personnel responsible for internal quality controls.
2. Documentation of equipment calibration.
3. Logs of sample pick-up shall be maintained for a minimum period of three years.
4. All documentation shall be maintained and available to Department inspection for a period of three years.

Equipment Calibration and Verification Records – Calibration records shall include the minimum information listed below. AASHTO R 18 provides additional guidance for calibration of most testing equipment.

1. Description
2. Model & Serial Number
3. Name of person calibrating
4. Calibration equipment used (e.g., standard weights, proving rings, thermometers)
5. Date calibrated & next due date
6. Reference procedure used
7. Results of calibration /verification

Technical Training and Evaluation Records – Each Resistivity Testing Laboratory shall maintain records of technician training and evaluation.

6.6 Publications

Each Resistivity Testing Laboratory shall maintain a current copy of the test procedure performed.

7.0 LABORATORY INSPECTIONS

Inspection by the BMPR Laboratory of the Contractor, Producer, or Consultant laboratory is a prerequisite for approval as a Resistivity Testing Laboratory.
An inspector from the BMPR Laboratory will conduct the scheduled visit. The Contractor, Producer, or Consultant shall be responsible for payment of transportation, per diem (meals), lodging, and incidental travel costs incurred by the BMPR Laboratory inspector when:

1. The Contractor, Producer, or Consultant laboratory facilities are located further than 50 miles outside the border of Illinois, and
2. The trip from the BMPR Laboratory to the Contractor, Producer, or Consultant laboratory facility, the inspection and the return trip to the BMPR Laboratory cannot be completed within one day’s normal work hours of 8:00 AM to 4:30 PM.

Reimbursement for travel costs shall be provided no later than 30 calendar days after receipt of costs submitted by the Department.

The BMPR Laboratory will provide written notification to the Resistivity Testing Laboratory, indicating the approval. Approval will be based on the results of the BMPR Laboratory inspection and the results of the Illinois Modified AASHTO T 288 test by the Resistivity Testing Laboratory.

8.0 APPROVED LABORATORY LIST

The Department will maintain a list of approved Resistivity Testing Laboratories on the Internet. The list will be entitled “Approved List of Laboratories to Perform Resistivity Test” and will include the following information:

1. Laboratory Name
2. Address
3. Contact Person and Phone No.
4. Approved Test
5. Website

The Department may remove a Resistivity Testing Laboratory from the list if deficiencies in the facility, equipment, or test procedure are indicated through inspections, proficiency testing, or other circumstances, unless the Resistivity Testing Laboratory takes immediate action and corrects the deficiency.

David L. Lippert, P.E.
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