Standard Practice for
Minimum Requirements for Agencies Engaged in Testing
and/or Inspection of Soil and Rock as Used in Engineering
Design and Construction¹

This standard is issued under the fixed designation D3740; the number immediately following the designation indicates the year of
original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A
superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope*

1.1 This practice establishes minimum qualifications for
agencies engaged in the testing and inspection of soil and rock.
Minimum requirements for field and laboratory personnel are
defined. The practice also covers the establishment and main-
tenance of a quality system.

1.2 Criteria are provided for evaluating the capability of an
agency to properly perform designated tests on soil and rock,
and for establishing essential characteristics pertaining to an
agency’s organization, personnel, facilities, and quality system.
This practice may be supplemented by more specific criteria
and requirements for particular projects.

1.3 This practice can be used as a basis to evaluate testing
and inspection agencies, or both, and is intended for use for the
qualifying or accrediting, or both, of testing or inspection
agencies, public or private, engaged in the testing and inspec-
tion of soil and rock as used in engineering design and
construction.

1.4 This practice is applicable to all standards which include
a reference to Practice D3740.

1.5 This standard does not purport to address all of the
safety concerns, if any, associated with its use. It is the
responsibility of the user of this standard to establish appro-
priate safety and health practices and determine the applica-
bility of regulatory limitations prior to use.

1.6 This practice offers a set of instructions for performing
one or more specific operations. This document cannot replace
education or experience and should be used in conjunction
with professional judgment. Not all aspects of this practice may
be applicable in all circumstances. This ASTM standard is not
intended to represent or replace the standard of care by which
the adequacy of a given professional service must be judged,
nor should this document be applied without consideration of

1 This practice is under the jurisdiction of ASTM Committee D18 on Soil and
Rock and is the direct responsibility of Subcommittee D18.99 on Quality Control.
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10.1520/D3740-12a.

2 For referenced ASTM standards, visit the ASTM website, www.astm.org, or
contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM
Standards volume information, refer to the standard’s Document Summary page on
the ASTM website.

3 The last approved version of this historical standard is referenced on
www.astm.org.

4 Available from American Association of State Highway and Transportation
Officials (AASHTO), 444 N. Capitol St., NW, Suite 249, Washington, DC 20001,

*A Summary of Changes section appears at the end of this standard

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3.1.1 For definitions of terms used in this practice see Terminologies D653 and E1187.
3.1.2 Soil and Rock — as used in this standard, any test method, practice, specification or guide developed by D18 and listed in volumes 04.08 and 04.09.
3.2 Definitions of Terms Specific to This Standard:
3.2.1 agency—an organization, or part of an organization, engaged in activities of technically oriented testing or inspection, or both.
3.2.2 quality manual—a document stating the quality policy, quality system and quality practices of an organization.
3.2.3 qualified national authority—an organization recognized throughout the country, with the capability to assess and monitor the professional and technical activities of an inspection or testing agency, or both.

4. Significance and Use

4.1 This practice provides the basic minimum criteria for use in evaluating the qualifications of a testing or inspection agency, or both, for soil and rock. The criteria may be supplemented by more specific criteria and requirements. An individual user can also use it to judge the qualification of an agency. The existence of a formal accrediting body such as a federal, state, or independent agency is not necessary for the use of this standard.

Note 1—Users of this practice should be aware that certain of these requirements may not be achievable and/or applicable to work performed outside of the U.S.A. In such cases, users should ensure that all necessary modifications are made to these requirements such as to render them appropriate to each specific set of circumstances.

4.2 The intent of this practice is to provide a consensus basis for evaluating a testing or inspection agency, or both, with respect to that agency’s capability to objectively and competently provide the specific services needed by the user.

4.3 This practice may be used as a basis for accreditation.

4.4 To qualify for accreditation to this standard, the agency must include at least five standards relating to testing methods, inspection methods, or both, from the standards covered under the jurisdictions of Committee D18, in its certificate of accreditation.

4.5 The users of an accredited agency must review the agency’s scope of accreditation to ensure the agency has been accredited for its technical competence to perform the tasks requested by the user.

5. Responsibilities and Duties

5.1 The agency shall ensure that only inspections or tests for which it is adequately equipped and staffed are performed.

5.2 The agency shall ensure that personnel perform only inspections and tests for which they are adequately trained, qualified and certified in accordance with applicable specifications.

5.3 The agency shall ensure that all equipment is properly maintained in good operating condition and is calibrated as applicable.

5.4 The agency shall perform all testing and inspection in accordance with appropriate standards and quality control criteria.

6. General Capabilities

6.1 Laboratory Testing—The agency performing laboratory testing of soil and rock shall have suitable test equipment and laboratory facilities for storing and testing samples and preparing samples for test.

6.2 Field Testing and Inspection—The field services of a soil and rock testing and inspection agency shall include some or all of the following capabilities:

6.2.1 testing of in situ materials,
6.2.2 testing of materials being processed,
6.2.3 checking on adequacy of production equipment or construction equipment used for reworking or processing soil and rock,
6.2.4 observation and inspection of soil or rock placement, and
6.2.5 in-place testing of constructed components.

6.3 Sampling—the services of an agency responsible for sampling soil and rock shall include some or all of the following capabilities:

6.3.1 sampling of in situ materials,
6.3.2 sampling of materials which are to be reworked, processed, and reused,
6.3.3 sampling of materials being processed, and
6.3.4 sampling of constructed components.

7. Personnel Qualifications

7.1 Management and Supervision—The testing and inspection services of the agency shall be under the direction of a person charged with the engineering managerial or scientific managerial responsibility. The person shall be a licensed registered engineer or other licensed registered professional and a full-time employee of the agency and shall have a minimum of 5 years engineering or scientific experience, as appropriate, in the inspection and testing of soil and rock; or a person with equivalent science-oriented education and experience in having satisfactorily supervised or directed testing or inspection services, or both, of soil and rock is acceptable.

7.2 Supervising Laboratory Technician—The supervising laboratory technician shall have at least 3 years experience performing tests on soil and rock.

7.2.1 This person must demonstrate, by written examination(s), the ability to perform the tests in the manner stipulated under ASTM or other governing procedures and shall be capable of evaluating the test results in terms of specification compliance. Current certification by national, regional or state authorities shall be considered as one means of evidence of fulfilling the written examination requirement (Note 2). The certification shall be appropriate to the work required. At a minimum, the written examination(s) shall include at least five test methods listed in ASTM Volumes 4.08 and 4.09.

7.2.2 In addition, a performance evaluation reviewing the technician’s competency to perform the test method correctly shall be conducted prior to the technician performing the test
independently and at least every 36 months thereafter for each test the person is authorized to perform.

7.3 Supervising Field Technician—This person shall have at least 3 years experience in inspecting the kind of work involved in the soil and rock construction project.

7.3.1 This person must demonstrate, by written examination(s), the ability to perform the tests and duties in the manner stipulated under ASTM or other governing procedures and shall be capable of evaluating the test results in terms of specification compliance. Current certification by national, regional or state authorities shall be considered as one means of evidence of fulfilling the written examination requirement (Note 2). The certification shall be appropriate to the work required. At a minimum, the written examination(s) shall include at least five of the testing or inspection methods listed in ASTM Volumes 4.08 and 4.09.

7.3.2 In addition, a performance evaluation reviewing the technician’s competency to perform the test method correctly shall be conducted prior to the technician performing the test independently and at least every 36 months thereafter for each test the person is authorized to perform.

7.4 Inspecting or Testing Technician—This person shall have a high school diploma or equivalent or trade school training and have had sufficient on-the-job training to properly perform the test or inspection to which the person is assigned.

7.4.1 This person must demonstrate, by written examination(s), the ability to perform the tests in the manner stipulated under ASTM or other governing procedures. Current certification by national, regional or state authorities shall be considered as one means of evidence of fulfilling the written examination requirement (Note 2). The certification shall be appropriate to the work required. At a minimum, the written examination(s) shall include at least five of the testing or inspection methods listed in ASTM Volumes 4.08 and 4.09. Technicians that perform fewer than 5 of the applicable testing or inspection methods will meet the written exam requirement provided the examination(s) includes each testing or inspection method performed.

7.4.2 In addition, a performance evaluation reviewing the technician’s competency to perform the test method correctly shall be conducted prior to the technician performing the test independently and at least every 24 months thereafter for each test the person is authorized to perform.

7.4.3 A trainee may perform this work while advancing toward certification under the direct physical supervision of a person meeting the requirements above. The trainee cannot independently evaluate test results or sign as responsible for an inspection or testing report.

Note 2—Refer to Practice D5255 for other guidance on certification.

7.5 Written Examinations—The written examinations required for the Supervising Laboratory Technician, Supervising Field Technician, and the Inspecting or Testing Technician shall be of sufficient length and detail to cover the entire test or inspection method, including as applicable: the significance of the test or inspection method, sampling, specimen preparation, procedure, and reporting of results.

7.6 Performance Evaluations—The performance evaluations required for the Supervising Laboratory Technician, Supervising Field Technician, and the Inspecting or Testing Technician for reviewing the technician’s competency shall include a demonstration of the test or inspection method to document the technician’s ability to perform the procedure in accordance with the standard.

7.7 It is satisfactory for a person to fill one or more of the levels of management, supervision, inspector, or technician positions in accordance with 7.1, 7.2, 7.3, and 7.4 provided that person qualifies for the highest level. It is also recognized that frequently a few laboratory control tests or inspections are conducted at small field or peripheral locations. It is not the intent of this practice that the supervisory personnel be directly present at such locations at all times.

8. Quality System Criteria

8.1 The agency shall establish and implement a quality system which meets the following criteria:

8.1.1 Quality Manual—The agency shall establish and maintain a quality manual that conforms to the requirements in Section 9, Quality Manual (Requirements). Each document in the quality manual shall indicate its preparation date. If a document is revised, the date of revision shall be indicated on the document. The quality manual shall be available for use by laboratory staff.

8.1.2 Quality Management—The agency shall designate a person(s) having responsibility for determining if quality system implementation activities are being conducted by agency staff in the manner specified in the agency’s quality manual. This individual(s) shall have direct access to top management (Note 3).

Note 3—This individual(s) may have other responsibilities (for example, laboratory manager).

8.1.3 Laboratory Procedure Manual—The agency shall establish and maintain a procedures manual, outlining the customary method or inspection procedures for each test or service performed by the laboratory. Copies of current ASTM, AASHTO, or other national standards used need not be included in the manual. However, for each procedure, the manual shall include specific references to such standards along with any exceptions to them or any special instructions (such as requirement for forms, calculation programs, checking, review, or combinations thereof, etc.) (or both). The referenced standards shall be readily available for use by personnel performing the test or service.

8.1.4 Equipment Calibration and Verification—The agency shall calibrate or verify all significant testing equipment associated with tests covered by the scope of this standard which the agency performs. As a minimum, the equipment listed in Table 1 shall be included if it is associated with tests performed by the agency. Applicable equipment shall be calibrated or verified at the intervals specified in the agency’s quality manual. The intervals specified in the quality manual shall be no greater than those indicated in Table 1 (Note 4). Newly acquired equipment without manufacturer’s certification and equipment that has not been calibrated or verified because it has been removed from service shall be calibrated or verified...
before being placed in service. The agency shall have detailed written procedures for all in-house calibration and verification activities not addressed in standards. These procedures shall indicate the equipment required to perform the calibration or verification.

**NOTE 4**—When a maximum calibration or verification interval for a specific piece of test equipment is specified in a standard, the maximum interval specified by this document is intended to be the same as the maximum interval specified by the standard. The agency shall have its facilities inspected at intervals of not more than 3 years by a qualified national authority. The agency shall maintain its test records current and are readily accessible to employees performing the work.

### 8.1.5 Equipment Calibration and Verification Records—The agency shall maintain calibration and verification records for all equipment specified in the quality manual. Such records shall include:

- Detailed results of the work performed (dimensions, mass, force, frequency, temperature, time, and the like).
- Description of the equipment calibrated or verified including model and serial number or other acceptable identification (Note 10).
- Date the work was done.
- Identification of the individual performing the work.
- Identification of the calibration or verification procedure used.
- The previous calibration or verification date and the next due date, and
- Identification of any in-house calibration or verification device used.

### 8.1.6 Inspection of Facilities—The agency shall have its facilities inspected at intervals of not more than 3 years by a qualified national authority. The agency shall, within 30 days of the receipt of the evaluation report, submit to the qualified national authority a written report documenting how any deficiencies were corrected.

### 8.1.7 Proficiency Sample Testing—The agency shall participate in a formal proficiency sample program(s) as described in Guide E1301. An inhouse program or a program operated by an independent third party is acceptable. The scope of participation shall be sufficient to validate quality system operation.

### 8.1.8 External Audit Records—The agency shall maintain records of any external audits and documentation describing how the deficiencies were corrected.

### 8.1.9 Proficiency Sample Records—The agency shall retain results of participation in proficiency sample programs including data sheets, summary reports, and documentation describing steps taken to determine the cause of poor results and corrective actions taken.

### 8.1.10 Test Methods and Procedures—The agency shall maintain copies of standard and nonstandard procedures for testing performed which is covered by the scope of this standard and shall ensure that the procedures are the most current and are readily accessible to employees performing the work.

### 8.1.11 Test Records—The agency shall maintain test records which contain sufficient information to permit verification of any test reports. Records pertaining to testing shall include original observations, calculations, derived data and an identification of personnel involved in sampling and testing. The agency shall prepare test reports which clearly, accurately and unambiguously present, but are not limited to, the information specified in Table 2 (Note 5). The procedure for amending reports shall require that the previously existing report be clearly referenced when an amendment is made. The references shall establish a clear audit trail from the latest issuance or deletion to the original report and its supporting data.

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### Table 1 Test Equipment Calibration and Verification Requirements

<table>
<thead>
<tr>
<th>Equipment—Test Method</th>
<th>Requirement</th>
<th>Interval (Month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Shakers</td>
<td>Check Sieving Thoroughness</td>
<td>12</td>
</tr>
<tr>
<td>Gen. Purpose Balances, Scales &amp; Weights</td>
<td>Verify Measurements</td>
<td>12</td>
</tr>
<tr>
<td>Compression or Loading Device</td>
<td>Verify Measurements</td>
<td>12</td>
</tr>
<tr>
<td>Mechanical Compactor</td>
<td>Calibrate Compactive Effort</td>
<td>12</td>
</tr>
<tr>
<td>CA Kneading Compactor</td>
<td>Calibrate Compactive Effort and Dwell</td>
<td>24</td>
</tr>
<tr>
<td>Ovens</td>
<td>Verify Temperature Setting(s)</td>
<td>12</td>
</tr>
<tr>
<td>Vacuum System</td>
<td>Check Pressure</td>
<td>24</td>
</tr>
<tr>
<td>Molds</td>
<td>Check Critical Dimensions</td>
<td>12</td>
</tr>
<tr>
<td>Manual Hammer</td>
<td>Check Wt. &amp; Critical Dimensions</td>
<td>12</td>
</tr>
<tr>
<td>Sieves</td>
<td>Check Physical Condition</td>
<td>12</td>
</tr>
<tr>
<td>Liquid Limit Device</td>
<td>Check Wear &amp; Critical Dimensions</td>
<td>12</td>
</tr>
<tr>
<td>Grooving Tool</td>
<td>Check Critical Dimensions</td>
<td>12</td>
</tr>
<tr>
<td>Hydrometers</td>
<td>Check Critical Dimensions</td>
<td>24</td>
</tr>
<tr>
<td>Straightedge</td>
<td>Check planeness of edge</td>
<td>12</td>
</tr>
<tr>
<td>Weighted Foot Assembly</td>
<td>Check weight</td>
<td>12</td>
</tr>
<tr>
<td>CBR Annular and Slotted Weights</td>
<td>Check weight</td>
<td>12</td>
</tr>
<tr>
<td>CBR Penetration Piston</td>
<td>Check diameter</td>
<td>12</td>
</tr>
<tr>
<td>Standard Metal Specimen</td>
<td>Check outside diameter</td>
<td>12</td>
</tr>
<tr>
<td>Metal Follower</td>
<td>Check diameter</td>
<td>12</td>
</tr>
<tr>
<td>Dial Gages, LVDTs, Micrometers</td>
<td>Verify Indications</td>
<td>12</td>
</tr>
<tr>
<td>Pressure Gages and Transducers</td>
<td>Calibrate Measurements</td>
<td>12</td>
</tr>
<tr>
<td>Load Cells</td>
<td>Calibrate Measurements</td>
<td>12</td>
</tr>
<tr>
<td>Flow Meters</td>
<td>Calibrate Measurements</td>
<td>12</td>
</tr>
<tr>
<td>Thermal Meters and Transducers</td>
<td>Calibrate Measurements</td>
<td>12</td>
</tr>
<tr>
<td>Sonic Transducers</td>
<td>Verify Measurements</td>
<td>12</td>
</tr>
</tbody>
</table>
9.1.2.5 The quality manual shall contain a document describing the method(s) used to ensure that each test performed by the agency is evaluated in accordance with standard procedures. This description shall include the frequency of evaluations for each technician and indicate what position(s) or employee(s) is responsible for evaluating staff competency and maintaining records. These procedures shall ensure that each technician performing the test method is evaluated.

NOTE 9—There may be several different methods employed for differing conditions of staff experience and background including (1) on-the-job apprentice training (one on one) for new employees with little or no experience in laboratory or inspection work; (2) formal in-house training sessions for certification, rating, or competency evaluation; and (3) training by external organizations. An individual with prior experience performing a specific test need only have competency confirmed by the agency.

9.1.2.6 The quality manual shall contain a form(s) for recording training and competency evaluation activities summarized under 9.1.2.4 and 9.1.2.5 including the name of the trainee, name of the evaluator, test method evaluated, the dates and results.

9.1.3 Facilities and Equipment:

9.1.3.1 Inventory—The quality manual shall contain an inventory of major sampling, testing, calibration and verification equipment associated with the test methods covered by the scope of this standard. A reference to where the inventory is located is acceptable if it is not included in the quality manual. The inventory shall include, for each piece of major equipment, the name, manufacturer, model and serial number (Note 10 and Note 11).

NOTE 10—Major equipment includes equipment such as shakers, physical or chemical testing machines, balances, baths, ovens, microscopes, and computing equipment dedicated to testing. Equipment such as chairs, desks and file cabinets may be excluded. Major equipment does not usually include expendable items such as miscellaneous glassware, sieves, molds and viscometers.

NOTE 11—An identification number assigned by the agency or other unique identifying information may be substituted for the model and serial number if this is the practice normally followed by the agency.

9.1.3.2 Equipment Calibration and Verification:
(1) The quality manual shall contain a list(s) giving a general description of equipment for performing tests covered by the scope of this standard that require calibration or verification. For each item listed, the list shall include the interval of calibration or verification, a reference to the calibration or verification procedure used (Note 12), and the location of calibration and verification records (Note 13).

Note 12—When standard calibration procedures are used, the standard shall be referenced. When the procedure used has been prepared by the agency, the in-house designation shall be referenced. It shall be indicated if the work is performed by an outside agency.

Note 13—In addition to being in the quality manual, this information may also be included in the calibration and verification records on each piece of equipment.

(2) The quality manual shall contain a document that describes the agency's method for ensuring that the calibration and verification procedures are performed for all required equipment at the specified intervals. This document shall include the name of individual(s) responsible for ensuring that calibration and verification activities are carried out, and procedures for handling equipment that is new, removed from service, out of calibration or defective.

(3) The quality manual shall contain in-house equipment calibration and verification procedures, when they cannot be referenced in applicable standards, or have a reference to their location.

(4) The quality manual shall contain certificates or other documents that establish the traceability of in-house equipment or reference standards used for calibration and verification, or have a reference to their location.

Test Records and Reports:

9.1.4 The quality manual shall contain a document that describes methods used by the agency to produce test records and to prepare, check and amend test reports.

9.1.4.1 The quality manual shall contain typical test report forms which illustrate the manner in which tests results and supporting information (see 8.1.11) are documented.

Note 14—A printout showing a typical test record is acceptable if the laboratory uses electronic media for report storage.

9.1.5 Sample Management—The quality manual shall contain a document describing procedure(s) for sample identification, storage, retention, and disposal of samples.

Note 15—In this context, the term storage refers to what is done before testing. The term retention refers to what is done after testing.

9.1.6 Diagnostic and Corrective Action:

9.1.6.1 The quality manual shall contain a document(s) describing participation in proficiency sample and on-site inspection programs, methods used to identify poor results and procedures followed when poor results occur or deficiencies occur.

9.1.6.2 The quality manual shall contain a document outlining the method(s) used in responding to external technical complaints.

9.1.7 Internal Quality System Review—The quality manual shall contain a document describing the scope of internal quality system reviews, establishing the frequency of these reviews, identifying individuals responsible for the review, describing the distribution of reports to management and identifying the location of resulting records.

9.1.8 Subcontracting—The quality manual shall contain a document describing the policies that the agency follows relative to subcontracting, if it engages in such activities. A reference to where the policies may be found is acceptable if they are not included in the quality manual. These policies shall include procedures followed by the agency in selecting competent subcontractors who meet the requirements of this practice and reporting the results of testing performed by subcontractors. If the agency does not engage in such activities, the quality manual shall contain a statement to that effect.

10. Records and Reporting Requirements

10.1 The agency shall maintain a system of records that permits verification of any issued report. A record of each report and related records shall be retained for at least three years and shall include the name of the person performing the test(s).

10.2 The agency shall maintain the following records:

10.2.1 Detailed results (for example, worksheets) of all required equipment calibration and verification,

10.2.2 Results of internal audits,

10.2.3 The results of any on-the-job training performed including name of person, date of training, by whom and type of training,

10.2.4 The results of any activities performed to ensure continued competence in performing standard test methods, including name of person, date of competency check, by whom, what type of activity,

10.2.5 The results of audits and inspections of the agency and certifications of agency personnel with applicable dates, and

10.2.6 Records of verification of competency of any external organizations used, and

10.2.7 Records or resumes that document the qualifications, work experience, and training history of each person.

10.2.8 The agency shall maintain the following records:

10.2.9 Detailed results (for example, worksheets) of all required equipment calibration and verification,

10.2.10 Results of external audits,

10.2.11 The results of any activities performed to ensure continued competence in performing standard test methods, including name of person, date of competency check, by whom, what type of activity,

10.2.12 The results of audits and inspections of the agency and certifications of agency personnel with applicable dates, and

10.2.13 Records of verification of competency of any external organizations used, and

10.2.14 Records or resumes that document the qualifications, work experience, and training history of each person.

10.3 Each report, as a minimum, shall include:

10.3.1 The name and address of the agency,

10.3.2 The date the report was issued and the date the test or inspection was performed,

10.3.3 The name of the client,

10.3.4 Identification of the report, the project, and the name and title of the person technically responsible for the report, and the standard test method(s) used,

10.3.5 Specific identification and description of the test specimen or item inspected that includes field identification and detailed location information, for example, applicable horizontal and vertical coordinates of the sample source,

10.3.6 The date the test sample or item inspected was received by the agency, if applicable,

10.3.7 The standard test method(s) used with a notation of all known deviations from the referenced methods or requirements of the method(s), or both, not performed by the agency,

10.3.8 Identification of test results or other data, or both, obtained from subcontractor(s), and,

10.3.9 The results and other pertinent data required by the test or inspection method(s) used.
10.4 Agency test reports shall accurately and clearly present the specified test results and all pertinent data.

10.5 Corrections or additions to reports shall clearly reference the report being amended.

11. Keywords

11.1 construction materials testing; quality assurance; quality control; quality manual; quality system

SUMMARY OF CHANGES

Committee D18 has identified the location of selected changes to this practice since the last issue, D3740–12, that may impact the use of this practice. (Approved May 1, 2012)

(1) Revised the calibration, verification, and check intervals for several pieces of equipment in Table 1.

Committee D18 has identified the location of selected changes to this practice since the last issue, D3740–11, that may impact the use of this practice. (Approved March 1, 2012)

(1) Added new 7.5 and 7.6 and renumbered subsequent paragraphs.

Committee D18 has identified the location of selected changes to this practice since the last issue, D3740–10, that may impact the use of this practice. (Approved September 1, 2011)

(1) Revised 1.4. (2) Revised 7.4.1.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

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