



Designation: E2174 – 24

Standard Practice for On-Site Inspection of Installed Firestop Systems¹

This standard is issued under the fixed designation E2174; 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.

1. Scope

1.1 This practice covers the establishing of procedures to inspect firestop products and firestop systems, including methods for field verification and inspection.

NOTE 1—This practice is referenced in the International Building Code, Chapter 17, Special Inspections.

1.2 This practice addresses all types of firestop products that become firestop systems once installed to the tested and listed system or judgment into fire resistive assemblies.

NOTE 2—Firestop system is defined in Test Method E814. Firestop products are the products used in constructing a firestop system.

1.3 This practice provides methods by which qualified inspectors verify that required firestops on a project have been installed and that their installations are in accordance with the inspection documents.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

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 appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *The text of this standard references notes and footnotes that provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.*

1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This practice is under the jurisdiction of ASTM Committee E06 on Performance of Buildings and is the direct responsibility of Subcommittee E06.21 on Serviceability.

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2. Referenced Documents

2.1 ASTM Standards:²

C1241 Test Method for Volume Shrinkage of Latex Sealants During Cure

E176 Terminology of Fire Standards

E631 Terminology of Building Constructions

E699 Specification for Agencies Involved in Testing, Quality Assurance, and Evaluating of Manufactured Building Components (Withdrawn 2025)³

E814 Test Method for Fire Tests of Penetration Firestop Systems

E3038 Practice for Assessing and Qualifying Candidates as Inspectors of Firestop Systems and Fire-Resistive Joint Systems

2.2 Other Standard:⁴

UL 1479-94 Fire Tests of Through-Penetration Firestops

2.3 Other Document:⁵

International Building Code

3. Terminology

3.1 *Definitions*—Terms defined in Terminology E631, Terminology E176, and Specification E699 will prevail for terms not defined in this document.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *accredited testing laboratory, n*—a company engaged in conducting testing and possesses a valid evaluation report for testing services and is recognized by the AHJ.

3.2.2 *authority having jurisdiction (AHJ), n*—the designated authority, or their duly authorized representative, charged with the administration and enforcement of the local fire code or building code, or both.

3.2.3 *authorizing authority (AA), n*—the designated person, or organization, or their duly authorized representative,

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. 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 Underwriters Laboratories (UL), 2600 N.W. Lake Rd., Camas, WA 98607-8542, <http://www.ul.com>.

⁵ Available from International Code Council (ICC), 500 New Jersey Ave., NW, 6th Floor, Washington, DC 20001, <http://www.iccsafe.org>.

charged with the administration and enforcement of the provisions of this inspection document.

3.2.3.1 *Discussion*—Examples of the AA include the responsible architect, engineer, building owner, or their representative.

3.2.4 *evaluation report, n*—an approved document issued by the Model Code Body Evaluation Service or by the AHJ.

3.2.5 *inspection document, n*—any information provided to the inspector by the AA that is to be used as the basis for the inspection process; this information shall include, but is not limited to, project specifications, contract drawings, listed designs, judgments, manufacturer’s instructions and designs, building codes, and other documentation.

3.2.5.1 *Discussion*—The approved firestop submittal typically includes the firestop manufacturer’s product data, a design listing of the tested firestop system or the engineering judgment design with illustrated drawings or descriptive text or both for the purpose of verifying each installation and conducting the field-inspection procedures.

3.2.6 *inspection form, n*—the document contained in this standard practice that is used to record information obtained during the inspection(s).

3.2.7 *inspector, n*—an individual meeting the qualifications set forth in this document and who performs the inspection.

3.2.8 *judgment, n*—an evaluation of a field condition which does not conform to an existing tested and listed system.

3.2.8.1 *Discussion*—Judgments are expected to be issued by a manufacturer or an accredited testing laboratory on the basis of an appropriate combination of engineering principles and testing.

3.2.8.2 *Discussion*—The judgment is commonly referred to as an “engineering judgment” in the firestopping industry. These judgments are not always issued by engineers.

3.2.8.3 *Discussion*—Some AHJs allow a judgment by the manufacturer if there is no tested and listed system for the non-typical condition, others do not. Most AHJs will allow judgments by accredited testing laboratories.

3.2.9 *listing label, n*—identification applied to the product that includes the name of a quality assurance agency indicating that a representative sample of the product or material has been tested and evaluated by the quality assurance agency.

3.2.10 *quality assurance agency, n*—a company that is engaged in conducting inspections, or certification, or listing and labeling services, or any combination, and possessing a valid evaluation report for quality assurance and is recognized by the AHJ.

4. Summary of Practice

4.1 This practice sets forth the minimum requirements to qualify an inspector to use this practice.

4.2 This practice identifies the types of firestops subject to the inspection procedures outlined in this practice.

4.3 This practice provides the minimum information required to verify compliance of installed firestops with inspection documents.

4.4 This practice provides a standard inspection form that is to be used when inspecting firestop products and firestop systems.

4.5 This practice provides a standard report format that is to be used when reporting the inspection results.

5. Significance and Use

5.1 This practice is intended to provide a standard set of guidelines that are to be followed when conducting and reporting on inspections of installed firestop systems.

5.2 This practice is intended to provide a means to verify compliance of the installed firestop systems to the inspection documents.

5.3 This practice is not intended to provide a basis for selecting installers or products or both.

5.4 This practice is not intended to establish any performance criteria of the inspected firestop systems.

6. Inspector

6.1 *Qualifications*—An inspector shall be acceptable to the AHJ and shall meet at least one of the following requirements:

6.1.1 Meet the criteria contained in Specification E699 for agencies involved in quality assurance; or

6.1.2 Meet the criteria contained in Practice E3038; or

6.1.3 Have a minimum of two years experience in construction field inspections and have education, credentials, and experience acceptable to the AA; or

6.1.4 Be a quality assurance agency accredited by the AHJ.

6.2 *Conflicts of Interest:*

6.2.1 The inspector shall be completely independent of, and divested from, the installer, contractor, manufacturer, or supplier of any material being inspected.

6.2.2 The inspector shall not be a competitor of the installer, contractor, manufacturer, or supplier of any material being inspected.

6.3 The inspector shall submit notarized statements to the AA assuring compliance with 6.2.

6.4 The inspector shall make a written submission to the AA requesting acceptance. If accepted, the AA shall present the inspector with written confirmation of acceptance.

7. Inspection Documents

7.1 The inspection documents shall be reviewed by and acceptable to the AA and AHJ.

7.2 The AA shall be responsible for ensuring that the inspection documents do not contain conflicting information.

7.3 The AA shall provide the inspector with a complete set of inspection documents at least ten working days prior to the inspection. The inspector shall review all inspection documents prior to conducting any inspection. When the inspector believes that the inspection documents contain conflicting information or documentation that the inspector believes is insufficient to perform the inspection, the inspector shall submit written notification of the potential conflict and obtain written clarification from the AA before conducting any inspection.