



Standard Specification for Agencies Engaged in System Analysis and Compliance Assurance for Manufactured Building¹

This standard is issued under the fixed designation E541; 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 reappraisal. A superscript epsilon (ε) indicates an editorial change since the last revision or reappraisal.

1. Scope*

1.1 This specification provides the criteria for the administrative agency that has regulatory authority as granted by the authority having jurisdiction AHJ to evaluate the capabilities and qualifications of building evaluation agencies, that performs system analysis or compliance assurance or both for certification of manufactured building on behalf of an authority having jurisdiction (AHJ) that meet the needs of regulatory programs. Administrative agencies and building evaluation agencies (third-party agencies) are the primary users of the standard.

1.2 To establish an appropriate degree of intra- and interstate credibility regarding building system evaluations made through governmental or private agencies, the authorities having jurisdiction should utilize an oversight and approval process for the building-evaluation agencies that provide the services of system analysis or compliance assurance on behalf of the AHJ that may include: approval by the AHJ for both oversight and or auditing of the regulatory body, or approval by the AHJ and oversight, and or auditing by an independent auditor for the regulatory body, or approval with the AHJ and oversight, and auditing by an independent accreditation agency.

1.3 Building-evaluation agencies examined under this specification may include governmental or private agencies or both.

1.4 Practice E651 may be used to support the evaluation of building-evaluation agencies. Other criteria such as independence, financial stability, and objectivity may need to be considered.

NOTE 1—Practice E651 is intended as a companion standard to Specification E541 and includes questions that should be asked of system analysis and compliance assurance agencies in order for the administrative agency to evaluate their competency.

¹ This specification is under the jurisdiction of ASTM Committee E36 on Accreditation & Certification and is the direct responsibility of Subcommittee E36.70 on Agencies Performing Construction Inspection, Testing and Special Inspection.

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1.5 These criteria set forth the minimum personnel requirements and the technical and organizational procedures required for building-evaluation agencies engaged in evaluating manufactured building.

1.6 Criteria are included for building-evaluation agencies evaluating innovative as well as conventional building systems, against applicable requirements.

1.7 Building-evaluation agencies involved in testing, quality assurance, and evaluating building components can be evaluated by using Specification E699.

1.7.1 Specification E699 is used in conjunction with Specification E541 and Practice E651. This specification defines the minimum requirements for agencies engaged in inspections and testing performance in accordance with ASTM standards for factory-built building components and assemblies. The criteria in this specification are provided for assessing the competence of an agency to properly perform designation testing, quality assurance, and inspection.

1.8 *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.*

1.9 *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.*

2. Referenced Documents

2.1 ASTM Standards:²

E651/E651M Practice for Evaluating Capabilities of Agencies Involved in System Analysis and Compliance Assurance for Manufactured Building
E699 Specification for Agencies Involved in Testing, Quality

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.

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

Assurance, and Evaluating of Manufactured Building Components

3. Terminology

3.1 Definitions:

3.1.1 *administrative agency, n*—an authority having jurisdiction (AHJ) granted with regulatory authority to evaluate the capabilities and qualifications of building-evaluation agencies.

3.1.2 *agency, n*—a building-evaluation agency acting on behalf of the authority having jurisdiction (AHJ) in structural analysis, compliance assurance, and certification of manufactured building.

3.1.3 *applicable requirements, n*—the specific material and performance specifications included in designated codes, standards, and approved documents. They may include special requirements adopted by the administrative agency or other jurisdictions.

3.1.4 *authority having jurisdiction (AHJ), n*—an organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving a building, a building component, equipment, materials, an installation, or a procedure.

3.1.4.1 *Discussion*—The authority having jurisdiction AHJ may be a federal, state, commonwealth, province, region, local, territory, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having regulatory authority charged with administering the legislation, act, or oversight.

3.1.5 *building component, n*—a subsystem, subassembly, or other system designed for use in or as part of a structure which may include structural, electrical, mechanical, plumbing, and fire protection systems, or any other system affecting health and safety.

3.1.6 *building-evaluation agency, n*—a third-party agency that performs one or more of the building evaluation services of systems analysis or compliance assurance or both.

3.1.7 *closed construction, n*—any building, building assembly, or system manufactured in such a manner that concealed parts or processes of manufacture cannot be inspected at the building site without disassembly, damage, or destruction.

3.1.8 *compliance assurance, adj*—the process of appraising the manufacturer's compliance control program in conjunction with monitoring or auditing and inspection of production, implemented to provide objective evidence that the manufactured building conforms to the approved documents.

3.1.8.1 *Discussion*—In conventional construction, the compliance assurance function roughly corresponds to field inspection of construction to ensure that the building is constructed in accordance with the approved plans.

3.1.8.2 *Discussion*—Remote video inspections at the discretion of the AHJ. The administrative agency may allow building evaluation agencies to use remote video inspections (RVI) procedures as long as the RVI procedures are comparable to traditional in-plant inspection procedures. The RVI procedures shall be reviewed and approved by the AHJ prior to imple-

menting the RVI process within the production facility based on the complexity and type of inspection.

3.1.9 *compliance assurance manuals, n*—a document employed as part of the manufacturer's compliance control program for the purpose of periodic monitoring, surveillance, or audit by the manufacturer and the compliance assurance agency of the manufacturer's production and product compliance programs.

3.1.10 *compliance control manual, n*—a document prepared by the manufacturer detailing the methods, procedures, and systems employed in the compliance control program.

3.1.11 *compliance control program, n*—the manufacturer's system, including directly related quality and process controls, for assuring compliance with applicable codes and standards and approved documents.

3.1.12 *criteria, n*—the minimum standards or limits on which judgments may be based.

3.1.13 *innovative building systems, n*—new concepts or alternative materials, design, or method of construction.

3.1.14 *manufactured building, n*—any unit, components, module, building, or manufactured home that are factory-built off-site, using closed construction methods, for design, fabrication, assembly, and installation on the building site.

3.1.15 *manufactured home, n*—prior to 1976, a manufactured home was referred to as a mobile home.

3.1.15.1 *Discussion*—A manufactured home means a structure designed and constructed on or after July 15, 1976, to be used as a dwelling that is factory-built off-site to meet the Federal Manufactured Home and Construction Safety Standards, otherwise known as the "HUD Code." The HUD Code is nationally recognized and preempts all state and local building codes and is regulated by the US Department of Housing and Urban Development.

3.1.15.2 *Discussion*—A manufactured home can be transported in one or more sections, which, in the traveling mode, is eight body feet or more in width, or 40 body feet or more in length, or when erected on site, is 320 or more square feet and built on a permanent chassis.

3.1.16 *open construction, n*—any building, building assembly, or system manufactured in such a manner that all portions can be readily inspected at the building site without disassembly, damage, or destruction.

3.1.17 *service equivalent, n*—the experience that an individual has accumulated in the engineering or architectural discipline(s) involved that serves as a substitute for academic requirements. In general, eight years of experience in engineering or architectural practice indicative of growth in engineering or architectural competency and responsibility are considered an alternative to the engineering or architectural education requirements.

3.1.18 *system analysis, adj*—the process employed to determine whether a proposed manufactured building conforms to applicable requirements.

3.1.18.1 *Discussion*—In conventional construction, the system analysis function roughly corresponds to plan review.