Designation: E2018 – 24

Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process[1]

This standard is issued under the fixed designation E2018; 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 *Purpose*—The purpose of this guide is to provide a framework for conducting a *property condition assessment* (PCA) of the *primary improvements* at *commercial real estate* properties by performing a *walk-through survey* and conducting research as outlined within this guide.

1.1.1 *Physical Deficiencies*—The goal of the *baseline* process for *property condition assessments* is to identify and communicate *material physical deficiencies* to a *user*.

1.1.2 *Walk-Through Survey*—This guide outlines procedures for conducting a *walk-through survey* to identify *physical deficiencies*, and recommends various *building systems* and *building components* that should be *observed* by the *field observer*.

1.1.3 *Document Reviews and Interviews*—The scope of this guide includes document reviews, research, and *interviews* to augment the *walk-through survey* to assist with understanding the *subject property* and identification of *physical deficiencies*.

1.1.4 *Property Condition Report*—The work product resulting from completing a PCA in accordance with this guide is a *property condition report* (PCR). The PCR incorporates the information obtained during the Walk-Through Survey, the Document Review and Interviews sections of this guide and includes *opinions of costs* for *suggested remedies* of *observed physical deficiencies*.

1.2 *Objectives*—Objectives in the development of this guide are to: *(1)* provide a framework for conducting a *property condition assessment* (PCA) of the *primary improvements* located on a parcel of *commercial real estate*; *(2)* facilitate consistent and pertinent content in PCRs; *(3)* develop pragmatic and reasonable recommendations and expectations for site *observations*, document reviews and research associated with conducting PCAs and preparing PCRs; *(4)* establish reasonable expectations for PCRs; *(5)* assist in developing an industry standard of care for appropriate *baseline observations* and research; and *(6)* recommend protocols for the *consultants* for communicating *observations*, opinions, and recommendations in a manner meaningful to the *user*.

1.3 *Out of Scope Considerations and Excluded Activities*—The use of this guide is strictly limited to the scope set forth herein. Section 12 and Appendix X1 of this guide identify, for informational purposes, certain considerations and physical conditions that may exist on the *subject property*, and certain activities or procedures (not an all-inclusive list) that are beyond the scope of this guide but may warrant consideration by parties to a *commercial real estate transaction* to enhance the PCA. *Users* should work with a knowledgeable *consultant* to identify additional considerations and concerns to be evaluated. The decision to inquire into out-of-scope considerations or extend the assessment to include excluded activities is to be made by the *user*. No assessment of out-of-scope considerations is required for a PCA to be conducted in conformance with this guide.

1.4 *Organization of This guide*—This guide consists of several sections, an Annex and two (2) Appendixes. Section 1 is the Scope. Section 3 on Terminology contains definitions of terms both unique to this guide and not unique to this guide, and acronyms. Section 4 sets out the Significance and Use of this guide, and Section 5 describes the User's Responsibilities. Sections 6 through 11 provide guidelines for the main body of the PCR, including the scope of the *walk-through survey*, preparation of the *opinions of costs* to address *physical deficiencies*, and preparation of the PCR. Section 12 provides additional information regarding out-of-scope considerations, activities, and procedures (see section 1.3). Annex A1 provides guidance relating to specific asset types that are considered as integral to this guide. Appendix X1 describes additional concerns a *user* may consider in modification of the scope of the PCR. Appendix X2 and Appendix X3 outline an approach to limited accessibility screenings.

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[1] This guide is under the jurisdiction of ASTM Committee E50 on Environmental Assessment, Risk Management and Corrective Action and is the direct responsibility of Subcommittee E50.02 on Real Estate Assessment and Management.

Current edition approved Jan. 1, 2024. Published January 2024. Originally approved in 1999. Last previous edition approved in 2023 as E2018– 23. DOI: 10.1520/E2018-24.

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

1.5 *Multiple Buildings*—If the *subject property* is comprised of multiple buildings, it is the intent of this guide that all of the *primary improvements* are discussed in one PCR.

1.6 *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.*

1.7 *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.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

E1527 Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process

E1528 Practice for Limited Environmental Due Diligence: Transaction Screen Process

E2026 Guide for Seismic Risk Assessment of Buildings

E2557 Practice for Probable Maximum Loss (PML) Evaluations for Earthquake Due-Diligence Assessments

E2797 Practice for Building Energy Performance Assessment for a Building Involved in a Real Estate Transaction

E3026 Guide for Readily Observable Moisture Affected Materials and Conditions Conducive to Elevated Moisture in Commercial Buildings: Limited Moisture Assessment Process

E3224 Guide for Building Energy Performance and Improvement Evaluation in the Assessment of Property Condition

2.2 *Other Publications:*

Fair Housing Act[3]

The Fair Housing Act Design Manual[4]

28 CFR Part 36 Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities[5]

ADA Accessibility Guidelines (ADAAG)[6]

ADA Standards for Accessible Design[7]

3. Terminology

3.1 This section provides definitions, descriptions of terms, and a list of acronyms, where applicable, for the words used in

[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] Department of Justice/Civil Rights Division, https://www.justice.gov/crt/fair-housing-act-1.

[4] https://www.hudexchange.info/resource/5933/fair-housing-act-design-manual/

[5] Available from U.S. Government Publishing Office (GPO), 732 N. Capitol St., NW, Washington, DC 20401, http://www.gpo.gov.

[6] https://www.access-board.gov/ada/

[7] https://www.ada.gov/law-and-regs/design-standards/

this guide. The terms are an integral part of the guide and are critical to an understanding of this guide and its use.

3.2 *Definitions:*

3.2.1 *actual knowledge, n*—information that is possessed by an individual, as distinguished from information that is suspected, or would have been expected to be known.

3.2.2 *appropriate inquiry, n*—a request for information conducted by verbal, or written, or electronic request including a good-faith effort conducted by the *consultant* to obtain the information considering the time constraints to prepare and deliver the PCR.

3.2.3 *architect, n*—designation reserved by law for a person professionally qualified, examined, and registered by the appropriate governmental board having jurisdiction, to perform *architecture*.

3.2.4 *architecture, n*—professional services conducted by an *architect*.

3.2.5 *base building, n*—the core (common areas) and shell of the building and its systems that typically are not subject to improvements to suit tenant requirements.

3.2.6 *baseline, n*—the minimum level of *observations*, *due diligence*, inquiry/research, documentation review, and *opinions of costs* to remedy *material physical deficiencies* recommended to satisfy the intent of this guide.

3.2.7 *building codes, n*—rules and regulations adopted by the governmental authority having jurisdiction that govern the design, construction, alteration, and repair of *commercial real estate*.

3.2.8 *building component(s), n*—a portion of a *building system*, piece of equipment, or building element.

3.2.9 *building department records, n*—those records of the local government agency in which the *subject property* is located related to permission of the local government to construct, alter, or demolish improvements on the *subject property*.

3.2.10 *building envelope, n*—the outer elements of a building, both above and below ground, that divide the external from the internal environments; commonly included are exterior walls, windows, doors, roofs, and subfloors.

3.2.11 *building system(s), n*—interacting or independent *building components* or assemblies, that form integrated units that comprise a building and its site work, such as, pavement and flatwork, *structural frame*, roofing, exterior walls, plumbing, HVAC, electrical, etc.

3.2.12 *commercial real estate, n*—improved real property, except a dwelling or property with four or less dwelling units exclusively for residential use; including, but is not limited to, improved real property used for industrial, retail, office, hospitality, agriculture, other commercial, medical, or educational purposes; property used for residential purposes that has more than four residential dwelling units; and property with four or less dwelling units for residential use when it has a commercial function, as in the operation of such dwellings for profit.

3.2.13 *commercial real estate transaction, n*—a transfer of title to or possession of improved real property or receipt of a security interest in improved real property, except that it does not include the transfer of title to or possession of improved real property with respect to an individual dwelling or building containing four or less dwelling units.

3.2.14 *consultant, n*—the entity or individual that is contracted by a *user* and responsible for completion of the tasks outlined in this guide.

3.2.15 *dangerous conditions, n*—conditions that may pose a threat or possible injury to the *field observer*, and that may require the use of special protective clothing, safety equipment, access equipment, or any other precautionary measures.

3.2.16 *de minimis, n*—any consideration, finding or condition that, in the sole opinion of the *consultant*, does not represent an imminent threat of physical harm to occupants, and *(1)* can be remedied through *routine maintenance* or *(2)* where the cost of corrective action is expected to be below the agreed reporting threshold.

3.2.17 *deferred maintenance, n—physical deficiencies* that could have been remedied with *routine maintenance* or similar action.

3.2.18 *dismantling, n*—to take apart, move, or remove any component, device, or piece of equipment that is bolted, screwed, held in-place (mechanically or by gravity), secured, or fastened by other means.

3.2.19 *due diligence, n*—the process of inquiring into the characteristics of *commercial real estate*, usually in connection with a *commercial real estate transaction*.

3.2.19.1 *Discussion*—The degree and type of the assessment may vary for different properties, different *user* purposes, and time allotted.

3.2.20 *easily visible, adj*—describes items, components, and systems that are conspicuous, patent, and that may be *observed* during the *walk-through survey* without: intrusion, relocation or removal of materials, exploratory probing, or use of special equipment or protective clothing.

3.2.21 *effective age, n*—an opinion representing the difference of the *expected useful life* and the *remaining useful life*.

3.2.21.1 *Discussion*—The opinion of *effective age* may be more or less than the actual age and can vary significantly based upon maintenance history, location, weather conditions, and other factors.

3.2.22 *engineer, n*—designation reserved by law for a person professionally qualified, examined, and licensed by the appropriate authority having jurisdiction to perform *engineering* services.

3.2.23 *engineering, n*—analysis or design work conducted by an *engineer*.

3.2.24 *expected useful life (EUL), n*—the average amount of time in years that a *building system* or *building component* is estimated to function without *material* repair when installed new and appropriate maintenance is performed.

3.2.25 *field observer, n*—the individual that conducts the *walk-through survey*.

3.2.26 *fire department records, n*—records maintained by or in the possession of the local fire department having jurisdiction over the *subject property*.

3.2.27 *guide, n*—a series of options and instructions that do not recommend a specific course of action.

3.2.28 *immediate costs, n—opinions of costs* to correct *physical deficiencies* that require immediate action as a result of any of the following: *(1)* conditions that the *consultant* concludes represent an imminent life-safety issue, *(2)* conditions that if left uncorrected would be expected to result in or contribute to *building system* or *building component* failure or result in a significant escalation of its remedial cost, or *(3)* recorded or reported violations of *building codes* or *fire codes*.

3.2.29 *interview(s), n*—discussions with those knowledgeable about the *subject property*.

3.2.30 *long-term cost(s), n—opinions of cost* for anticipated replacement of *building systems* and *building components* over an evaluation period defined by the *user*.

3.2.30.1 *Discussion—Long-term costs* are generally based on the findings of the PCA and are frequently presented in tabular format. Unless expressly agreed between the *user* and *consultant*, *long-term costs* are not intended to represent enhancements or upgrades to the *subject property*. Refer to Section 10 for additional discussion of *opinions of cost*.

3.2.31 *material, adj*—that which is pertinent to the objectives of the assessment and which a reasonable observer would expect to influence the judgments and actions of any party to the assessment.

3.2.32 *observation, n*—the act of *observingbuilding systems* and *building components* that are readily accessible and easily visible.

3.2.33 *observe, v*—to collect information by visual, auditory, and olfactory means while performing the PCA within the context of *easily visible* and *readily accessible*.

3.2.34 *obvious, adj*—that which is plain, evident; a condition *easily visible* or fact could not be ignored or overlooked by a reasonable observer.

3.2.35 *opinions of cost(s), n*—preliminary, order of magnitude, budgetary projection to assist the *user* in developing a general understanding of the *physical condition* of the *subject property*.

3.2.36 *owner, n*—the entity holding the title to the *commercial real estate*.

3.2.37 *owner's representative(s), n*—the person or entity authorized by, and acting on behalf of, the *owner* to provide information regarding and/or access to the *subject property*.

3.2.38 *PCR reviewer, n*—the individual that exercises responsible control over the *field observer* and reviews the PCR prior to delivery to the *user*.

3.2.39 *physical condition, n*—the physical state of a *subject property*, *building system* or *building component*.

3.2.39.1 *Discussion*—Within the context of the assessment, the *consultant* may offer opinions of the *physical condition* of the *subject property*, or of *observed building systems* or *building components*. Such opinions commonly employ terms such as good, fair, and poor; though additional terms such as excellent, satisfactory, and unsatisfactory may also be used, provided that the utilized terms are defined within the PCR.

3.2.39.2 *good condition*—in working condition and does not require immediate or short term repairs above an agreed threshold as discussed in section 10.3.1.

3.2.39.3 *fair condition*—in working condition, but may require immediate or short term repairs above an agreed threshold.

3.2.39.4 *poor condition*—not in working condition or requires immediate or short term repairs substantially above an agreed threshold.

3.2.39.5 *Discussion*—Where used to describe the physical condition of a *subject property*, *building system*, or *building component* the opinion is intended to reflect the predominant condition. For example, an air conditioning system may be in *good condition* despite a requirement to replace a limited number of units. Alternatively, a range of conditions may be described by combining terms such as "good to fair", or "fair to poor." Where conditions are not uniform, an explanation of the various disparate conditions shall be included in the report. Terms not defined above should be defined in the report or agreement for services.

3.2.40 *physical deficiency(ies), n—easily visible* defect or *deferred maintenance* of *material building systems* or *building components* as identified during completion of the PCA.

3.2.40.1 *Discussion*—This definition specifically excludes conditions that are *de minimis* or may be remedied with *routine maintenance*, miscellaneous minor repairs, normal operating maintenance, or similar action, and excludes *de minimis* conditions.

3.2.41 *point of contact (POC)—owner*, *owner's representative*, or other person or persons identified to the *consultant* as knowledgeable about the physical characteristics, maintenance, and repair of the *subject property*.

3.2.42 *practically reviewable, adj*—describes information that is *readily available* and provided in a manner and form that, upon review, yields information relevant to the *subject property* without the need for significant analysis, measurements, or calculations.

3.2.43 *primary improvements, n*—the site work, structures, *building systems* and *building components* that are of fundamental importance with respect to the *subject property*; excluding ancillary buildings that provide support uses such as maintenance sheds, security booths, utility garages, pool filter and equipment buildings, and similar elements.

3.2.44 *property condition assessment (PCA), v*—the process by which a person or entity *observes* a *subject property*, conducts *interviews*, and reviews available documentation for the purpose of developing an opinion and preparing a PCR.

3.2.45 *property condition report (PCR), n*—a written report, prepared in accordance with the recommendations contained in this guide, documenting the findings and opinions developed during completion of the PCA.

3.2.46 *publicly available, adj*—describes information to which the source allows access to anyone upon request.

3.2.47 *readily accessible, adj*—describes areas of the *subject property* that are made available for *observation* by the *field observer* at the time of the *walk-through survey* and do not require the removal or relocation of materials, such as furniture, floor, wall, or ceiling coverings, equipment, or personal property.

3.2.48 *readily available, adj*—describes information that is easily and promptly provided to the *consultant* upon making a request through *appropriate inquiry* and without the need for researching archive files.

3.2.49 *reasonably ascertainable, adj*—information that is *(1) publicly available*, *(2)* obtainable from its source within reasonable time and cost constraints, and *(3)* is *practically reviewable*.

3.2.50 *remaining useful life (RUL), n*—a subjective opinion of the number of remaining years that an item, component, or system is estimated to be able to function in accordance with its intended purpose before warranting replacement.

3.2.50.1 *Discussion*—An opinion of *remaining useful life* is affected by the initial quality of an item, component, or system, the quality of the initial installation, the quality and amount of preventive maintenance exercised, climatic conditions, extent of use, and other factors, and is not a guarantee of the remaining service life.

3.2.51 *representative observations, n*—the *survey* of a reasonable number of samples of repetitive systems, components, and areas, that is conducted by the *field observer* during the *walk-through survey*.

3.2.51.1 *Discussion*—The concept of *representative observations* extends to all conditions, areas, buildings, *building systems* and *building components* to the extent that they are similar and representative of one another.

3.2.52 *routine maintenance, n*—an activity that can be conducted within the budget and skill set of typical maintenance staff and does not require specialized equipment, professional services, or contractors.

3.2.53 *short-term costs, n—opinions of costs* to remedy *physical deficiencies* that may not warrant immediate attention but require repairs or replacements that should be undertaken on a priority basis.

3.2.54 *shutdown, adj—building systems* or *building components* that are not operating at the time of the *walk-through survey*.

3.2.55 *site visit, n*—the visit to the *subject property* during which *observations* are made pursuant to the *walk-through survey* section of this guide.

3.2.56 *specialist(s), n*—individuals or entities with detailed, specialized knowledge and experience in the fields of *architecture* or *engineering*, or with the design, evaluation, operation, repair, or installation of any specific *building systems* or *building components*.

3.2.57 *structural frame, n*—the *building system* that supports the structural loads of a building.

3.2.58 *subject building(s), n*—referring to the primary building or buildings on the *subject property*, and that are within the scope of PCA.

3.2.59 *subject property, n*—the *commercial real estate* consisting of the site and *primary improvements* that are assessed in completion of the PCA.

3.2.60 *suggested remedy, n*—an opinion as to a course of action to remedy or repair an *observed* condition.

3.2.60.1 *Discussion*—Such an opinion may also be to conduct further research or testing for the purposes of discovery to gain a better understanding of the cause or extent of a *physical deficiency* (whether *observed* or highly probable) and the appropriate remedial or reparatory response. A *suggested remedy* may be preliminary and does not preclude alternate methods or schemes that may be more appropriate to remedy the *observed* condition or that may be more commensurate with the *user's* requirements.

3.2.61 *survey(ed), n—observations* made by the *field observer* during a *walk-through survey* to obtain information concerning the *readily accessible* and *easily visible building systems* and *building components*.

3.2.62 *technically exhaustive, adj*—describes the use of measurements, instruments, testing, calculations, exploratory probing or discovery, or other means to discover, or a combination thereof, or troubleshoot *physical deficiencies* or develop findings, conclusions, *suggested remedies*, or recommendations.

3.2.63 *timely access, n*—entry provided to the *field observer* at the time of the *site visit*.

3.2.64 *user, n*—the entity or individual that retains the *consultant* to complete the tasks outlined in this guide.

3.2.65 *walk-through survey, n*—nonintrusive *observations* of *readily accessible*, observable property improvements.

3.3 *Abbreviations and Acronyms:*

3.3.1 *ADA, n*—The Americans with Disabilities Act

3.3.2 *ASTM, n*—ASTM International

3.3.3 *BOMA, n*—Building Owners and Managers Association

3.3.4 *FEMA, n*—Federal Emergency Management Agency

3.3.5 *FHA, n*—Fair Housing Act

3.3.6 *HVAC, n*—Heating, Ventilating and Air Conditioning

4. Significance and Use

4.1 *Use*—This guide is intended to reflect a reasonable *baseline* process for the completion of PCAs for use on a voluntary basis. No implication is intended that use of this guide be required to have conducted a PCA in a commercially prudent and reasonable manner. The *baseline* process described in this guide is subject to a moderate level of uncertainty. Because the objectives, risk tolerance, schedule, and budget of *users* can be dramatically different there are varying levels of PCA and *due diligence* that can be exercised that are both more and less comprehensive than this guide that may be appropriate to meet the objectives of the *user*. In

accordance with ASTM protocols, this guide does not recommend a specific course of action or scope of work. *Users* should consider their requirements, the purpose that the PCA is to serve, and their risk tolerance to refine the scope of assessment and *consultant* qualifications in order to establish appropriate objectives for the assessment.

4.2 *Clarification of Use of Assessments:*

4.2.1 *Specific Point in Time*—A *user* should only rely on the PCR for the point in time that the *observations* and research were conducted.

4.2.2 *Site-Specific*—The PCA prepared in accordance with this guide is site-specific in that it relates to the *physical condition* of *primary improvements* on a specific parcel of *commercial real estate*. Consequently, this guide does not address many additional issues in *commercial real estate transactions* such as economic obsolescence, the purchase of business entities, or *physical deficiencies* relating to off-site conditions.

4.2.3 *Specific Objectives*—PCAs are completed to address specific objectives identified to the *consultant* by the *user*. The *consultant* should be consulted prior to use of the PCA to address any other objective.

4.2.4 *Intended Users*—PCAs are typically completed for use by contracting parties. In some cases, the use of or reliance on reports may be extended to additional parties by mutual agreement of the contracting parties. Use of or reliance on PCAs by others may violate the rights of contracting parties and fail to satisfy the objectives of such unauthorized parties.

4.3 *Principles*—The following principles are an integral part of this guide. They are intended to be referred to in resolving ambiguity, or in exercising discretion accorded the *user* or *consultant* in conducting a PCA, or in judging whether a *user* or *consultant* has conducted *appropriate inquiry* or has otherwise conducted an adequate PCA.

4.3.1 *Uncertainty Not Eliminated*—No PCA can wholly eliminate the uncertainty regarding the presence of *physical deficiencies* and the performance of *building systems* or *building components*. Preparation of a PCR in accordance with this guide is intended to reduce, but not eliminate, the uncertainty regarding the potential for *building system* or *building component* failure and to reduce the potential that such *building system* or *building component* may not be initially *observed*. This guide also recognizes the inherent subjective nature of reported opinions as to such issues as workmanship, quality of original installation, and estimating the RUL of any given component or system. *Users* should work with their *consultant* to consider modifications to the scope of the PCA that may reduce uncertainties.

4.3.2 *Suggested Remedies*—The guide recognizes that a *suggested remedy* may be determined under time constraints, formed without the aid of *engineering* calculations, testing, exploratory probing, the removal or relocation of materials, design, or other *technically exhaustive* means. Furthermore, there may be other alternatives or more appropriate schemes or methods to remedy a *physical deficiency*. The *suggested remedies* are generally formed without detailed knowledge from those familiar with the historical or actual performance of the *building system* or *building component*.

4.3.3 *Not Technically Exhaustive*—The PCA is not intended to be construed as *technically exhaustive*. There is a point at which the cost of information obtained, or the time required to conduct the PCA and prepare the PCR, may outweigh the usefulness of the information and, in fact, may be a *material* detriment to the orderly and timely completion of a *commercial real estate transaction*. It is the intent of this guide to attempt to identify a balance between limiting the costs and time demands inherent in performing a PCA and reducing the uncertainty about unknown *physical deficiencies* resulting from completing additional inquiry.

4.3.4 *Representative Observations*—The purpose of conducting *representative observations* is to convey to the *user* the expected magnitude of commonly encountered or anticipated conditions. Recommended *representative observation* quantities for various asset types are provided in Annex A1; however, if in the *consultant's* opinion, the recommended *representative observations* are unwarranted as a result of homogeneity of the asset or other reasons deemed appropriate, the *field observer* may survey sufficient units, areas, buildings, *building systems*, and *building components* so as to comment with reasonable confidence as to the representative presence of *physical deficiencies* at such repetitive or similar areas, *building systems*, and *building components*. If there is more than one building on the *subject property*, and they are homogeneous with respect to approximate age, use, basic design, materials, and systems, it is not a requirement of this guide for the *field observer* to *observe* the *building systems* and *building components* within each individual building to describe or comment on their condition within the PCR. The descriptions and *observations* provided in the PCR are to be construed as representative of all similar improvements.

4.3.4.1 *User-Mandated Representative Observations*—A *user* may mandate the *representative observations* required for a given *subject property* or a particular *building system* or *building component*. Such *representative observations* may be more or less detailed than this guide's recommended *representative observations* as provided in Annex A1.

4.3.4.2 *Extrapolation of Findings—Consultant* may reasonably extrapolate *representative observations* and findings to all typical areas or systems of the *subject property* for the purposes of describing such conditions within the PCR and preparing the *opinions of costs* for *suggested remedies*.

4.3.5 *Level of Due Diligence is Variable*—Not every *subject property* will warrant the same level of assessment. The appropriate level of assessment is guided by the purpose the PCA is to serve; type of *subject property*; age of the improvements; expertise and risk tolerance of the *user*; and time available for preparing and reviewing the opinions contained in the PCR.

4.4 *Prior PCR Usage*—This guide recognizes that PCRs prepared in accordance with this guide may include information that subsequent *users* and *consultants* may want to use to avoid duplication and to reduce cost. Therefore, this guide includes procedures to assist *users* and *consultants* in determining the appropriateness of using such information. In addition to the specific procedures contained elsewhere in this guide, the following should be considered:

4.5 *Use of Prior PCR Information*—Information contained in prior *property condition reports* may be helpful to assist in understanding the *subject property* and planning the *walk-through survey* and research for the completion of a current PCR. Such information should serve only as an aid to a *consultant* in fulfilling the requirements of this guide and to assist the *field observer* in the *walk-through survey*, research, and the *field observer's* understanding of the *subject property*; and should be verified during the completion of a current assessment.

4.5.1 *Comparison with a Previously Prepared PCR*—Discrepancies between a PCR and a previously prepared PCR are not indicative that either PCR is deficient. *User* requirements and objectives, the purpose of the PCR, qualifications and experience of the assessment team, time available to complete the PCR, access to and availability of information, hindsight, new or additional information, enhanced visibility because of improved weather or site conditions, equipment not in a *shutdown* mode, specific *building systems* and *building components observed*, and other factors may significantly impact the findings and opinions of the PCR. It should not be concluded or assumed that a previous PCR was deficient because the previous PCA did not discover a certain *physical deficiency*, or because *opinions of costs* in the previous PCR are different. Because a PCR contains a representative indication of the condition of the *subject property* at the time of the *walk-through survey* and is dependent on the information available to the *consultant* at that time, the PCR should be evaluated on the reasonableness of judgments made at the time and under the circumstances in which they are made.

4.5.2 *Conducting Current Walk-Through Surveys*—At a minimum, for a PCR to be consistent with this guide, a new *walk-through survey*, *interviews*, and solicitation and review of building and *fire department records* for recorded *material* violations should be performed.

4.6 *Actual Knowledge Exception*—If the *user* or *consultant* conducting a PCA has *actual knowledge* that the information from a prior PCR is not accurate, or if it is *obvious* to the *field observer* that the information is not accurate, such information from a prior PCR should not be used.

4.7 *Contractual Issues*—This guide recognizes that contractual and legal obligations may exist between prior and subsequent *users* of PCRs, or between *users* and *consultants* who performed prior PCRs, or both. Consideration of such contractual obligations is beyond the scope of this guide. Furthermore, a subsequent *user* of a prior PCA should be apprised that the report may have been prepared for purposes other than the current desired purpose of the PCR and should determine the contractual purpose and scope of the prior PCA.

4.8 *Rules of Engagement*—The contractual and legal obligations between a *user* and *consultant* (and other parties, if any) are outside the scope of this guide. No specific legal relationship between the *user* and *consultant* was considered during the preparation of this guide.

5. User's Responsibilities

5.1 *Objectives and Scope of Assessment*—The *user* should identify the objectives of the PCA and work with the *consultant* to modify the scope of assessment to satisfy those objectives. In the absence of other notation in the PCR the objective should be assumed to be the identification of *physical deficiencies* to support continuation of the current use of the *subject property* without rehabilitation, change of use, or other modification.

5.2 *Point of Contact*—Prior to the start of work the *user* should identify a person with good knowledge of the physical characteristics, maintenance, and management of the *subject property* to arrange access and coordinate information to facilitate the PCR.

5.3 *Access*—*User* should arrange for the *field observer* to receive timely complete, supervised, and safe access to the *subject property* (including roofs). In addition, *timely access* to the *subject property's* POC, staff, vendors, and appropriate documents should be promptly provided by *owner*, *owner's representative* or made available by the *user*, or a combination thereof. In no event should the *field observer* seek access to any portion of the *subject property*, interview property management staff, vendors, or tenants, or review documents, if the *owner*, *user*, or occupant objects to such access or attempts to restrict the *field observer* from conducting any portion of the *walk-through survey*, research or *interviews*, or taking of photographs. Any conditions that significantly impede or restrict the *field observer's walk-through survey* or research, or the failure of the *owner* or occupant to provide access, information, or requested documentation should be communicated to the *user* in a timely manner. If such conditions are not remedied, the *consultant* should document all such limiting conditions that would be expected to significantly impact their ability to satisfy the objectives of the assessment.

5.4 *User Disclosure*—The *user* should seek to obtain relevant information to assist in completion of the PCR and disclose all relevant information in the *user's* possession that may assist the *consultant's* efforts. The *user* should not withhold any pertinent information that may assist in satisfying the assessment objectives including, but not limited to, previously prepared PCRs; any study specifically prepared on a *building system*, *building component* or the *subject property*; any knowledge of actual or purported *physical deficiencies*; or any information such as pending proposals or costs to remedy known *physical deficiencies*.

6. Property Condition Assessment

6.1 *Objective*—The purpose of the PCA is to *observe* and report, to the extent feasible pursuant to the processes prescribed herein, on the *physical condition* of the *subject property*.

6.2 *PCA Components*—The PCA should have four components:

6.2.1 *Documentation Review and Interviews*—Refer to Section 8.

6.2.2 *Walk-Through Survey*—Refer to Section 9.

6.2.3 *Preparation of Opinions of Costs to Remedy Physical Deficiencies*—Refer to Section 10.

6.2.4 *Property Condition Report*—Refer to Section 11.

6.3 *Coordination of Components:*

6.3.1 *Components Used in Concert*—The Documentation Review, Interviews, and Walk-Through Survey components of this guide are interrelated in that information obtained from one component may either indicate the need for more information from another or impact the preparation of Opinions of Cost to Remedy Physical Deficiencies.

6.3.2 *Information Provided by Others*—The *consultant* should note in the PCR the sources of information that were used in identifying any *physical deficiencies* of the *subject property* that were not *observed* by the *consultant* or that supplemented the *consultant's observations*.

6.4 *Consultant's Duties:*

6.4.1 *Who May Conduct Portions of the PCA*—The documentation review and interviews, walk-through survey, and preparation of opinions of cost to remedy physical deficiencies, and the writing of the PCR may be performed by the *consultant*, *field observer*, members of the *consultant's* staff, or third party contractors engaged by the *consultant*.

6.4.2 *Responsibility for Lack of Information*—The *consultant* is not responsible for providing or obtaining information should the source contacted fail to respond, respond only in part, or fail to respond in a timely manner.

6.4.3 *Opinions of Costs Contingent on Further Discovery*—The *consultant* is not required to provide *opinions of costs* to remedy *physical deficiencies* that may require the opinions of *specialists* or the results of testing, intrusive evaluation, exploratory probing, or further research to determine the cause of the *physical deficiency* and the appropriate remedy, scope, and scheme for repair or replacement unless *user* and *consultant* have agreed to such an expansion of the scope of work.

6.4.4 *Representative Observations*—The *field observer* is not expected to survey every recurring component or system during a *walk-through survey*. For example, it is not the intent to survey every HVAC unit, balcony, window, roof, toilet room facility, utility closet, every square foot of roofing, etc. Only *representative observations* of such areas are to be conducted. The concept of *representative observations* extends to all conditions, areas, buildings, *building systems* and *building components* to the extent that they are similar and representative of one another.

7. The Consultant

7.1 *Qualifications of the Consultant*—This guide recognizes that the competency of the *consultant* is highly dependent on many factors that may include professional education, training, experience, certification, or professional licensing/registration. It is the intent of this guide to identify factors that should be considered by the *user* when retaining a *consultant* to conduct a PCA and by the *consultant* in selecting the appropriate *field observer* and *PCR reviewer*. No standard can be designed to eliminate the role of professional judgment, competence, and the value and need for experience during the *walk-through survey* and to conduct the PCA. Consequently, the qualifications of the *field observer* and the *PCR reviewer* are critical to the performance of the PCA and the resulting PCR. This guide further recognizes that the *consultant* has the responsibility to select, engage, or employ the *field observer* and the *PCR reviewer*. Therefore, each PCR should include as an exhibit a statement of qualifications of both the *field observer* and the *PCR reviewer*.

7.2 *Staffing of the Field Observer*—This guide recognizes that for most of the *commercial real estate* subject to a PCA, the *field observer* assigned by the *consultant* to conduct the *walk-through survey* most likely will be a single individual having a general, well rounded knowledge of pertinent *building systems* and *building components*. However, a single individual is not likely to have knowledge, expertise, or experience with all *building codes*, whether such codes are nationally or locally accepted, *building systems*, *building components*, and asset types. The decision to supplement the *field observer* with *specialists*, mechanics, specialized service personnel, or any other specialized contributor to the PCA, should be a mutual decision made by the *user* and *consultant* prior to engagement. This decision should be made in accordance with the requirements, risk tolerance, and budgetary constraints of the *user*, the purpose the PCA is to serve, the expediency of PCR delivery, and the complexity of the *subject property*.

7.3 *Independence of the Consultant*—This guide recognizes that the *consultant* normally is a person or entity, acting as an independent contractor, who has been engaged by the *user* to conduct a PCA. In the event the *consultant*, the *field observer*, the *PCR reviewer*, or members of the *consultant's* staff are employees of, or subsidiary of, the *user*, such affiliation or relationship should be disclosed in the Executive Summary of the PCR.

7.4 *Qualifications of the Field Observer*—Refer to X1.1.1 for guidance on the qualifications of the *field observer*.

7.5 *Qualifications of the PCR Reviewer*—Refer to X1.1.2 for guidance on the qualifications of the *PCR reviewer*.

7.6 *The Field Observer and PCR Reviewer May Be a Single Individual*—The *PCR reviewer* also may act as the *field observer* and conduct the *walk-through survey*. In such an event, the *PCR reviewer* should identify such dual responsibilities and sign the PCR indicating that they have performed both functions.

7.7 *Not a Professional Architectural or Engineering Service*—It is not the intent of this guide that by conducting the *walk-through survey* or reviewing the PCR that the *consultant*, the *field observer*, or the *PCR reviewer* is practicing *architecture* or *engineering*. Furthermore, it is not the intent of this guide that either the *field observer* or the *PCR reviewer*, if they are an *architect* or *engineer*, must either sign or seal the PCR as an instrument of professional service or identify their signatures as being that of an *architect* or *engineer*.

8. Document Review and Interviews

8.1 *Objective*—The objective of the document review and *interviews* is to augment the *walk-through survey* and to assist the *consultant's* understanding of the *subject property* and identification of *physical deficiencies*. Records or documents, that are *readily available* and *reasonably ascertainable* may be reviewed during completion of the PCA.

8.2 *Verification of Information Provided by Others*—The *consultant* is not required to independently verify the provided information and may rely on the information provided to the extent that it appears reasonable.

8.3 *Accuracy and Completeness*—Accuracy and completeness of information vary among information sources. The *consultant* is not obligated to identify mistakes or insufficiencies in the provided information. However, the *consultant* should make a reasonable effort to compensate for mistakes or insufficiencies that are *obvious* considering other information obtained in the process of conducting the PCA or otherwise known to the *consultant*.

8.4 *Government Agency Provided Information:*

8.4.1 *Document Review—Consultant* should solicit and review: the *base building* certificate of occupancy, along with *material* outstanding and recorded *building code* and *fire code* violations.

8.4.2 *Reasonably Ascertainable/Standard Government Record Sources*—Availability of records or document information varies from information source to information source, including governmental jurisdictions. The *consultant* should make *appropriate inquiry* and review only such record information that is *reasonably ascertainable* from standard sources. If information is not *practically reviewable* or not provided to the *consultant* in a reasonable time for the *consultant* to formulate an opinion for inclusion in the PCR, such fact should be stated in the PCR, and the *consultant* is to have no further obligation of retrieving such documentation or reviewing it if it is subsequently provided.

8.4.3 *Drawings—Readily available* plans, as-built drawings, or other design/construction documents drawings should be provided to the *consultant* by the *user*, *owner*, *owner's representative* to serve as an aid to the *consultant* in describing the *primary improvements*, in developing quantities for *opinions of cost* for *suggested remedies*, and to assist in preparing brief descriptions of the *building systems* and *building components*; however, such review is not intended to serve as a verification of as-built conditions.

8.4.4 *Reasonable Time and Cost*—It is the intent of this guide that information will be provided to the *consultant* within ten (10) business days of the source receiving *appropriate inquiry*, without an in-person request by the *consultant* being required, and at no more than a nominal cost to cover the source's cost of retrieving and duplicating the information. However, this is not to preclude the *consultant* from personally researching such files if, in the opinion of the *consultant*, this could be reasonably accomplished at the time of the *site visit*.

8.5 *Pre-Survey Questionnaire*—The *consultant* may provide the *owner*, POC, or *owner's representative* with a pre-survey questionnaire. The questionnaire, complete with responses, should be included as an exhibit within the PCR unless directed otherwise by *user*. If the *user* directs the *consultant* to omit the questionnaire from the PCR or directs the *consultant* not to forward the questionnaire to the *owner*, the *consultant* should disclose this information within the PCR.

8.6 *Owner/User Provided Documentation and Information*—The *consultant* should review the following documents and information that may be in the possession of or provided by the *owner*, *owner's representative*, *user*, or combination thereof, as appropriate. Such information also could aid in the *consultant's* knowledge of the *primary improvements*, extent and type of use, or assist in identifying *material* discrepancies between reported information and *observed* conditions, or a combination thereof. The *consultant's* review of documents submitted should not include commenting on the accuracy of such documents or their preparation, methodology, or protocol. If the *consultant* discovers a significant discrepancy, it should be disclosed within the PCR.

8.6.1 Appraisal, either current or previously prepared.

8.6.2 Certificate of Occupancy.

8.6.3 Safety inspection records.

8.6.4 Warranty information (roofs, boilers, chillers, cooling towers, etc.).

8.6.5 Records indicating the age of *material building systems* such as roofing, paving, plumbing, heating, air conditioning, electrical, etc.

8.6.6 Historical costs incurred for repairs, improvements, recurring replacements, etc.

8.6.7 Pending proposals or executed contracts for *material* repairs or improvements.

8.6.8 Descriptions of future improvements planned.

8.6.9 Outstanding citations for *building code*, and *fire code* violations.

8.6.10 All existing ADA and FHA evaluations and status of any improvements implemented to effect physical compliance.

8.6.11 Previously prepared PCRs or studies pertaining to any aspect of the *physical condition* of the *subject property*.

8.6.12 Records indicating building occupancy percentage.

8.6.13 Building rent roll as it relates to tenant count or leasable area.

8.6.14 Leasing literature, listing for sale, marketing/promotional literature such as photographs, descriptive information, reduced floor plans, etc.

8.6.15 Drawings and specifications (as-built or construction).

8.7 *Interviews*—The *consultant* should contact the POC to forward the pre-survey questionnaire to inquire about the *subject property's* historical repairs and replacements and their costs, level of preventive maintenance exercised, pending repairs and improvements, known deficiencies, frequency and history of repairs and replacements, age of the systems and components, warranties and bonds in effect, and existence of ongoing or pending litigation related to the *physical condition* of the *subject property*. In connection with the research or *walk-through survey*, the *consultant* may also *interview* others who are knowledgeable of the *physical condition* and operation of the *subject property*. It is within the discretion of the *consultant* to decide what questions to ask before, during, or after the *site visit*.

8.7.1 *Method*—Questions to be asked pursuant to this section are at the discretion of the *consultant* and may be asked in a method chosen by the *consultant*.

8.7.2 *Incomplete Answers*—While the *consultant* should make inquiries in accordance with this section, the persons to whom the questions are addressed may have no obligation to

cooperate. The inability to conduct desired *interviews*, refusal to respond to requests for information, and limited knowledge of those interviewed should be disclosed in the PCR along with any additional limitations encountered.

9. Walk-Through Survey

9.1 *Objective*—The objective of the *walk-through survey* is to *observe* the *subject property* so as to obtain information on *material building systems* and *building components*.

9.2 *Frequency*—It is not expected that more than one *site visit* to the *subject property* be conducted.

9.3 *Photographs—Consultant* should document representative conditions with photographs and use reasonable efforts to document typical conditions present including *material physical deficiencies*, if any. Photographs should include as a minimum: front and typical elevations and exteriors, site improvements, parking areas, roofing, structural systems, plumbing, HVAC, and electrical systems, conveyance systems, life safety systems, representative interiors, and any special or unusual conditions present, provided that such *building systems* and *building components* are within the scope of the PCA as defined between the *user* and *consultant*.

9.4 *Scope*—During the *site visit*, and in accordance with the principles of conducting *representative observations*, the *field observer* should *observe material building systems* and *building components* in order to evaluate their condition and identify *physical deficiencies*. The schedule of specific items of the *building systems* and *building components* to be *observed*, which are presented in the subsequent subsections, should not be considered all-inclusive, and the *consultant* should utilize professional judgment regarding adding or deleting subsections as necessary to complete the PCR. Similarly, subsections identified as "out of scope considerations" identified at Section 12 and elsewhere in this document are provided for clarification and should not be construed as all-inclusive. The extent of improvements *surveyed* in each construction phase should be sufficient to allow the *field observer* to develop an opinion with reasonable confidence regarding the present condition of the *subject property*.

9.4.1 *Site:*

9.4.1.1 *Topography—Observe* the general topography and any unusual or problematic features or conditions.

9.4.1.2 *Storm Water Drainage—Observe* the storm water collection and drainage system and note the presence of on-site surface waters, and retention or detention basins.

9.4.1.3 *Ingress and Egress—Observe* the major means of ingress and egress.

9.4.1.4 *Paving, Curbing, and Parking—Observe* the *material* paving and curbing systems. Identify the types of parking (for example, garage, surface, subsurface), the number and types of parking and loading spaces, and any reported parking inadequacies. Note the source of the information relating to the number and types of parking and loading spaces.

9.4.1.5 *Flatwork—Observe* sidewalks, plazas, patios, and similar improvements.

9.4.1.6 *Landscaping and Appurtenances—Observe* landscaping (for example, trees, shrubs, lawns, fences, retaining walls,) and *material* site appurtenances, such as irrigation systems, fountains, lighting, signage, and ponds.

9.4.1.7 *Recreational Facilities—Observe* on-site facilities used for purposes such as entertainment, exercise, swimming pools, spas, saunas, steam baths, sport courts, fitness rooms, playground equipment and jogging, walking, and bicycle paths.

9.4.1.8 *Special Utility Systems*—Identify the presence of any *material* special on-site utility systems such as water or wastewater treatment systems, special power generation systems. If *readily available*, identify related system information, such as system type, manufacturer, system capacity, system age, and system operator.

9.4.2 *Structural Frame:*

9.4.2.1 Identify the primary buildings, including parking structures, on the *subject property*, and identify the basic type of structure. *Observe* the building substructure, including the foundation system (noting the presence of cellars, basements, or crawl spaces), superstructure or *structural frame* (floor framing system and roof framing system).

9.4.3 *Roofing and Building Envelope:*

9.4.3.1 Identify and *observe* the roof and *building envelope* systems. Roof *observations* should include the waterproofing membrane, flashings, parapets, slope, drainage, and any special installations. *Observe* for evidence and/or the need for *material* repairs, evidence of significant ponding, or evidence of roof leaks. Additionally, the facades or curtain wall, glazing system, sealants, and exterior balconies, doors and stairways should be *observed* and identified. *Observations* of the building's exterior generally are to be limited to vantage points that are on-grade or from *readily accessible* balconies or rooftops.

9.4.4 *Plumbing:*

9.4.4.1 Identify and *observe* the *material* plumbing systems including piping (sanitary, storm and supply water), fixtures, domestic hot water production, note any special or unusual plumbing systems.

9.4.5 *Heating:*

9.4.5.1 Identify and *observe* the basic heat generating and distribution system, and the apparent or reported age of the equipment, past *material* component replacements or repair, and the apparent level of maintenance exercised. If heating equipment is *shutdown* or not operational at the time of the *walk-through survey*, provide an opinion of the condition to the extent *observed*. Also, *observe* any special or unusual heating systems or equipment present, such as solar heat. Identify in general terms *material* tenant-owned systems that are reported or believed to be outside the scope of the PCA.

9.4.6 *Air Conditioning and Ventilation:*

9.4.6.1 For *material* air conditioning and ventilation systems, identify the basic type of air-conditioning and ventilation systems including cooling towers, chillers, package units, split systems, air handlers, thermal storage equipment, distribution systems, including type of reported refrigerant. Identify the apparent or reported age of the systems, past *material* component upgrades/replacements, apparent level of preventive maintenance exercised, and whether a maintenance contract is reported to be in place. If air conditioning and ventilation systems are *shutdown* or not operational at the time

of the *walk-through survey*, provide an opinion of the condition to the extent observable. Identify any special or unusual air conditioning and ventilation systems or equipment, such as refrigeration equipment for ice skating rinks, cold storage systems, and special computer cooling equipment. Identify in general terms *material* tenant-owned systems that are reported or believed to be outside the scope of the PCA.

9.4.7 *Electrical:*

9.4.7.1 Identify the electrical service provided and *observe* the *material* electrical distribution system including distribution panels, transformers, meters, emergency generators, general lighting systems, and other such equipment or systems. Identify any *observed* or reported special or unusual electrical equipment, systems, or devices at the *subject property*.

9.4.8 *Vertical Transportation:*

9.4.8.1 Identify equipment type, number of cabs/escalators, and capacity. *Observe* elevator cabs, finishes, control panel, call and communication equipment. Identify whether a maintenance contract is reported to be in place, and if so, identify the service contractor.

9.4.9 *Life Safety/Fire Protection:*

9.4.9.1 Identify and *observe* life safety and fire protection systems, including sprinklers and standpipes (wet or dry, or both), fire hydrants, fire alarm systems, water storage, smoke detectors, fire extinguishers, emergency lighting, stairwell pressurization, and smoke evacuation. If available, provide the date(s) and findings of the most recent inspection(s).

9.4.10 *Interior Elements:*

9.4.10.1 *Observe* typical common areas including, but not limited to, lobbies, corridors, assembly areas, and restrooms. Identify and *observe* typical finishes, and *material* building amenities or special features, such as spas, fountains, clubs, shops, and restaurants.

9.5 *Additional Considerations*—There may be additional issues or conditions at a *subject property* that *users* may wish to assess that are outside the scope of this guide (out of scope considerations). Refer to Section 12 for further discussion of additional considerations.

10. Opinions of Costs to Remedy Physical Deficiencies

10.1 *Purpose*—Based upon the *walk-through survey* and information obtained in accordance with following this guide, general-scope *opinions of costs* are to be prepared for the *suggested remedy* of *material physical deficiencies*. These *opinions of costs* are to assist the *user* in developing a general understanding of the *physical condition* of the *subject property*.

10.2 *Scope—Opinions of costs* should be provided for *physical deficiencies* and not for repairs or improvements that could be classified as: *(1)* cosmetic or decorative; *(2)* part of a building renovation program *(3)* tenant improvements/finishes; *(4)* enhancements to reposition the *subject property* in the marketplace; *(5)* for warranty transfer purposes; or *(6)* routine or normal preventive maintenance, repair of conditions that are *de minimis* or not *material*, or a combination thereof.

10.3 *Opinions of Costs Attributes:*

10.3.1 *Threshold Amount for Opinions of Costs*—It is the intent of this guide that the *opinion of costs* to correct *physical deficiencies (1)* be commensurate with the market value and complexity of the *subject property*; *(2)* not be minor or insignificant; and *(3)* serve the purpose of the *user* in accordance with the *user's* risk tolerance. *Opinions of cost* that are less than a threshold amount of $3,000 are to be omitted from the PCR. If there are more than four separate like items that are below this threshold requirement, but collectively total over $10,000, such items should be included. This guide recognizes that for properties of large scope or market value, these thresholds may be inappropriate to be meaningful to a *user*, and the *user* may adjust the thresholds provided that they are disclosed within the Executive Summary under the heading "Deviations from the Guide."

NOTE 1—This guide recognizes that most PCRs include material life-safety code and building code violations regardless of cost.

10.3.2 *Actual Costs May Vary—Opinions of cost* should only be construed as preliminary, order of magnitude budgets. Actual costs most probably will vary from the *opinions of cost* depending on such matters as type and design of *suggested remedy*, quality of materials and installation, manufacturer and type of equipment or system selected, field conditions, whether a *physical deficiency* is repaired or replaced in whole, phasing of the work (if applicable), quality of contractor, quality of project management exercised, market conditions, and whether competitive pricing is solicited, and other factors.

10.3.3 *Extrapolation of Representative Observations—Opinions of costs* may be based upon the extrapolation of *representative observations*, conditions deemed by the *consultant* as highly probable, results from information received, or the commonly encountered EULs or RULs of the components or systems, or a combination thereof.

10.3.4 *Estimating of Quantities*—It is not the intent of this guide that the *consultant* is to prepare or provide exact quantities or identify the exact locations of items or systems as a basis for preparing the *opinions of costs*.

10.3.5 *Basis of Costs*—The source of cost information utilized by the *consultant* may be from one or more of the following resources: *(1) user* provided unit costs; *(2) owner's* historical experience costs; *(3) consultant's* cost database or cost files; *(4)* commercially available cost information such as published commercial data; *(5)* third-party cost information from contractors, vendors, or suppliers; or *(6)* other qualified sources that the *consultant* determines appropriate. *Opinions of cost* should be provided with approximate quantities, units, and unit costs by line item. If in the reasonable opinion of the *consultant*, a *physical deficiency* is too complex or difficult to develop an opinion of probable cost using the quantity and unit cost method, the *consultant* may apply a lump sum opinion of probable costs for that line item. *Opinions of cost* should be limited to construction-related costs; those types of costs that commonly are provided by contractors who perform the work. Business related, design, construction management fees, general conditions, and indirect costs should be excluded.

10.3.6 *Costs for Additional Study*—For some *physical deficiencies*, determining the appropriate *suggested remedy* or scope may warrant further study/research or design, testing, exploratory probing, and exploration of various repair schemes, or a combination thereof, all of which are outside the

scope of this guide. In these instances, the *opinions of costs* for additional study should be provided.

10.3.7 *Cost Segregation—Opinions of cost* should be differentiated within the PCR into the categories of *immediate costs*, and *short-term costs*. When included, *long-term costs* should be presented separately. Additional discussion of *long-term costs* is provided in Appendix X1.2.5.

11. Property Condition Report

11.1 *Format*—This guide does not present a specific PCR format to be followed. This should be determined between the *user* and the *consultant*.

11.2 *Writing Protocols:*

11.2.1 *Suggested Remedy*—For each *material physical deficiency*, the *consultant* should provide a *suggested remedy*, which may include recommending further research or testing, or both.

11.2.2 *Significance of Physical Deficiency*—If the significance of the *physical deficiency* is not readily discernible, the *consultant* should explain its significance in a simple manner meaningful to a *user*. For example, stating that "the *subject property* has aluminum distribution wiring" may be insufficient to the *user*, since this statement reveals nothing about the significance of this adverse condition.

11.2.3 *Disclosure of Information Source*—The *consultant* should differentiate between *material* information obtained by the *field observer's actual knowledge* and that reported or provided by others or obtained from documents provided. The source of such *material* information should be reported.

11.2.4 *Representative Description and Observed Conditions*—The descriptions of *building systems* and *building components* and their general *physical condition* may be based upon extrapolations of *representative observations*.

11.3 *Documentation*—The PCR should include pertinent documentation such as photographs; copies of *material building department records* and *fire department records*; *building code* violation notices to the extent deemed *material*; certificates of occupancy; and copies of repair cost documentation submitted by *owner* or *owner's representatives* or contractors for past or existing *physical deficiencies*. All photographs should be numbered and captioned and may be correlated to the PCR text.

11.4 *Executive Summary*—The general content for the PCR Executive Summary is discussed in this section.

11.4.1 *General Description*—Identify the *subject property* along with pertinent information such as use, size, age, location, construction type, design style, and apparent occupancy status. Also identify the name of the *consultant* that prepared the PCA, the name of the *user*, the *user's* position with respect to the *subject property*, the *commercial real estate transaction* (if known), the purpose the PCR is to serve, and the date of the *site visit*.

11.4.2 *Findings and Opinions*—Provide a summary of the findings of the assessment including an opinion of overall *physical condition* of the *subject property*, a description of the apparent level of preventive maintenance exercised, and *material* capital improvements that are pending, in-progress, or were recently implemented, along with a description and schedule of *physical deficiencies* of *primary improvements*, *suggested remedies*, and an *opinion of cost* to address the physical deficiencies..

11.4.3 *Deviations from this Guide*—Present all *material* deviations and deletions from this guide, if any, listed individually along with all additional *consultant* services that have exceeded the *baseline* presented in this guide.

11.4.4 *Consultant/Field Observer Relationship*—If the *consultant* or *field observer*, or both are not at arm's-length with the *user*, such a relationship should be disclosed.

11.4.5 *Recommendations/Discussions*—Briefly identify those components and systems necessitating further study, research, testing, intrusive evaluation, or exploratory probing. This section also may be used to discuss any *obvious* major deviations from the *subject property* description provided by the *user* to the *consultant*, ongoing repairs or improvements, or other relevant issues.

11.5 *Purpose and Scope:*

11.5.1 *Purpose*—Provide a short paragraph specifically stating the purpose the PCR should serve and the *user's* position with respect to the *commercial real estate transaction*. If the *user* does not disclose the PCR's purpose or its role to the *consultant*, the PCR should so state.

11.5.2 *Scope*—Identify the improvements that comprise the *subject property*. Provide an outline of the scope of work completed for the PCA and methods utilized. If either the PCA or the PCR *materially* deviate from this guide or if there were any constraints preventing the *consultant* from performing the PCA in accordance with this guide, these constraints should be identified.

11.6 *Walk-Through Survey*—Identify the areas *surveyed* and rationale for their selection, along with areas not available for survey and the reported reasons that the areas were not available. Provide the information that is outlined in Section 9. Such information should include a brief description of each *building system* or *building component* and *observed physical deficiencies*, if any. Both the brief descriptions and the *observed physical deficiencies* may be based upon *representative observations*. A general description of *material* tenant-owned equipment that is outside the scope of the PCA should be provided in this section.

11.7 *Document Reviews and Interviews*—Identify any *material* information relating to *physical deficiencies* resulting from the review of documents and *interviews* conducted.

11.8 *Additional Considerations*—Identify additional *material* considerations or Out of Scope considerations that are included in the PCR.

11.9 *Qualifications*—The PCR should name the *field observer* and the *PCR reviewer* and should include their statement of qualifications.

11.10 *Limiting Conditions*—Describe all conditions that limited your ability to *observe* improvements at the property.

11.11 *Exhibits:*

11.11.1 Representative photographs (may be correlated directly into text or numbered and labeled in exhibit).

11.11.2 Questionnaire.

11.11.3 *User/owner* submitted documents.

11.11.4 Plot plans, sketches, and similar supporting documentation.

11.11.5 Other exhibits considered appropriate by the *consultant*.

12. Out of Scope Activities and Considerations

NOTE 2—The decision to inquire into out of scope considerations or extend the assessment to include excluded activities is to be made by the *user*. *Users* should work with a knowledgeable *consultant* in order to identify additional considerations and concerns to be evaluated. When included, the approach and methodology of related activities should follow the expectations and intent outlined in this guide and should be expressly agreed with the *consultant*. Whether or not a *user* elects to inquire into out of scope considerations in connection with this guide is a decision to be made by the *user*. No assessment of non-scope considerations or performance of activity exclusions is required for a PCA to be conducted in conformance with this guide.

12.1 *Activity Exclusions*—The activities listed below are excluded from, or otherwise represent limitations to, the scope of a PCA prepared in accordance with this guide. These should not be construed as all-inclusive or imply that any exclusion not specifically identified is required for the completion of a PCA in conformance with this guide.

12.1.1 Identifying capital improvements, enhancements, or upgrades to *building systems* or *building components*. The *consultant* must be aware of the distinction between repair and replacement activities that maintain the *subject property* in its intended design condition, versus actions that improve or reposition the *subject property*;

12.1.2 Interpretation of legal documents such as leases, purchase agreements, and contracts;

12.1.3 Identifying improvements, capital expenditures, repairs, maintenance, and other activities that are or may be required at a future date, except as needed to address the objectives of the report;

12.1.4 Removing, relocating, or repositioning of materials, ceiling, wall, or equipment panels, furniture, storage containers, personal effects, debris, finishes or personal property that obstructs access or visibility;

12.1.5 Conducting exploratory probing or destructive testing;

12.1.6 Removal of access panels, *dismantling* or operating of equipment or appliances;

12.1.7 Determining water pressure and flow rate, fixture-unit values and counts, verifying pipe sizes, or verifying the point of discharge for underground drains;

12.1.8 Determining National Fire Protection Association hazard classifications, identifying, classifying, or testing fire rating of assemblies. Determination of the necessity for or the presence of fire areas, fire walls, fire barriers, accessible routes, construction groups or types, or use classifications;

12.1.9 Preparing *engineering* calculations to determine the adequacy or compliance any *building system* or *building component* with any specific or commonly accepted design requirements or *building codes* or preparing designs or specifications to remedy any *physical deficiency*;

12.1.10 Taking measurements or quantities, such as to establish or confirm any information or representations provided by the *owner* or *user*; size and dimensions of the *subject property* or *subject building*; any legal encumbrances, easements; dwelling unit count and mix; building or property line setbacks or elevations; or number and size of parking spaces;

12.1.11 Reporting on the presence or absence of pests such as wood damaging organisms, rodents, or insects;

12.1.12 Reporting on subterranean conditions such as soil types and conditions, underground systems and utilities, separate sewage disposal systems, wells, manholes, utility pits; systems that are either considered process-related or peculiar to a specific tenancy or use; or items or systems that are not permanently installed;

12.1.13 Entering or accessing any area of the premises deemed to potentially pose a threat of *dangerous conditions*, including, but not limited to, entering of plenum, crawl, or confined-space areas, entering elevator/escalator pits or shafts, walking on pitched roofs, or any roof areas that appear to be unsafe, or roofs without built-in access, and removing of electrical panel and device covers;

12.1.14 Performing any procedure that may damage or impair the physical integrity of the *subject property*, any *building system* or *building component*;

12.1.15 Providing an opinion on the condition of any *building system* or *building component* that is *shutdown*. However, the *consultant* is to provide an opinion of its *physical condition* to the extent reasonably possible considering its age, *obvious* condition, manufacturer, etc;

12.1.16 Evaluating *building system* or *building component* assemblies for adherence to design intent or code compliance including, without limitation, sound transmission class, impact isolation class, occupant load, fire rating, or load bearing capacity;

12.1.17 Evaluating the flammability of materials and related regulations;

12.1.18 Providing an opinion on matters regarding security of the *subject property* and protection of its occupants or *users* from unauthorized access;

12.1.19 Operating or witnessing the operation of lighting, lawn irrigation, or other systems typically controlled by time clocks or that are normally operated by the operation staff or service companies;

12.1.20 Providing an environmental assessment or opinion on the presence of any environmental issues such as potable water quality, hazardous building materials, hazardous wastes, toxic materials, the location or presence of designated wetlands, mold, fungus, indoor air quality, electromagnetic fields, etc;

12.1.21 Evaluating *building systems* or *building components* that require specialized knowledge or equipment, including but not limited to process-related equipment, flue connections, interiors of chimneys, flues or boiler stacks; testing and operating of *building components* or *building systems*; examination of elevator and escalator cables, sheaves, controllers, motors;

12.1.22 Identifying or evaluating third-party or tenant-owned or maintained systems, components and equipment that are not considered to be *primary improvements* (refer to section 11.4.2);

12.1.23 Evaluation of the adequacy or accuracy of costs to complete improvements, construction budgets or schedule for work in progress or planned improvements.

12.2 *Warranty, Guarantee, and Code Compliance Exclusions*—By conducting a PCA and preparing a PCR, the *consultant* merely is providing an opinion and does not warrant or guarantee the present or future condition of the *subject property*, nor may the PCA be construed as either a warranty or guarantee of any of the following:

12.2.1 The *physical condition* or appropriate use of any *building system* or *building component*, nor is a PCA to be construed as substituting for a warranty transfer inspection;

12.2.2 Compliance with any federal, state, or local statute, ordinance, rule or regulation including, but not limited to, *fire codes*, *building codes*, life safety codes, ADA, FHA, and other provisions concerning accessibility, environmental regulations, health codes, zoning ordinances, compliance with trade/design standards, or standards developed by the insurance industry;

12.2.3 Compliance of any *building system* or *building component* with a certification or actuation rate program, vendor or manufacturer warranty provisions, or provisions established by any standards that are related to insurance industry acceptance/approval, such as Factory Mutual, State Board of Fire Underwriters, etc.

12.3 *Additional/General Considerations:*

12.3.1 *Further Inquiry*—There may be *physical condition* issues or certain physical improvements at the *subject property* that the parties may wish to assess in connection with a *commercial real estate transaction* that are outside the scope of this guide.

12.3.2 *Out of Scope Considerations*—Whether or not a *user* elects to inquire into non-scope considerations in connection with this guide is a decision to be made by the *user*. No assessment of such non-scope considerations is required for a PCA to be conducted in compliance with this guide.

12.3.2.1 Natural Hazard Exposure; for example, flooding, hurricanes, high winds, seismic activity, etc;

12.3.2.2 Damageability, vulnerability, and resilience of *building systems* and *building components*;

12.3.2.3 Environmental matters such as potable water quality, the presence, use, etc. of hazardous substances, asbestos, hazardous wastes, toxic materials, the location or presence of designated wetlands, mold, fungus, indoor air quality, electromagnetic fields, etc; release of hazardous materials, indoor air quality;

12.3.2.4 Accessibility; for example, ADA, FHA and state and local requirements;

12.3.2.5 Building energy performance, energy consumption, and carbon emissions;

12.3.2.6 Warranty, Guarantee, and Code Compliance.

12.3.3 *Other Standards*—Other standards or protocols may exist for the discovery or assessment of *physical deficiencies* or out of scope considerations. The satisfaction of such standards and protocols is expressly excluded from the scope of the assessment unless otherwise agreed between the *user* and *consultant*. A partial list of standards and protocols published by ASTM is provided:

12.3.3.1 E2026 Guide for Seismic Risk Assessment of Buildings

12.3.3.2 E2557 Practice for Probable Maximum Loss (PML) Evaluations for Earthquake Due-Diligence Assessments

12.3.3.3 E3026 Guide for Readily Observable Moisture Affected Materials and Conditions Conducive to Elevated Moisture in Commercial Buildings: Visual Moisture Assessment Process

12.3.3.4 E2797 Practice for Building Energy Performance Assessment for a Building Involved in a Real Estate Transaction

12.3.3.5 E3224 Guide for Building Energy Performance and Improvement Evaluation in the Assessment of Property Condition

12.3.3.6 E1527 Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process

12.3.3.7 E1528 Practice for Limited Environmental Due Diligence: Transaction Screen Process

13. Keywords

13.1 ASTM; physical assessment report; property condition assessment (PCA); property condition report (PCR)

ANNEX

(Mandatory Information)

A1. SPECIFIC PROPERTY TYPES

INTRODUCTION

This annex is to be used to supplement or complement previous sections of this guide for various asset types as if integral to the preceding sections.

A1.1 *Multifamily Properties*:

A1.1.1 *Representative Observations*—For complexes with multiple buildings, *representative observations* of the *building envelopes* apply to all similar residential buildings. For complexes built in phases, each construction phase should be *surveyed*. *Representative observations* of the interiors should include a mix of units, including occupied, vacant, damaged, and under renovation or repair. *Representative observations* of the interiors of each construction phase should include a sufficient number of the top and bottom floors. If not specified in the agreement between *user* and *consultant*, the number of units, buildings, and components *surveyed* in each construction phase should be sufficient to allow the *field observer* to develop an opinion with reasonable confidence regarding the present condition of the *subject property* and should be determined using the professional judgment and experience of the *field observer* at the time of the *walk-through survey*. In addition to identifying the units *surveyed* and the rationale for selection, the PCR should provide the number of reported units that are not available for occupancy and the reported reasons that they are not available.

A1.1.2 *Patios and Balconies*—The *field observer* should conduct *representative observations* of patios, balconies, enclosures, and railings, and report on the *observed* condition.

A1.1.3 *Plumbing*—The *field observer* should identify the type of supply piping (to the extent that it is *easily visible*) and note any reported replacement or historical leaks.

A1.1.4 *Electrical*—The *field observer* should note the size of the electrical service serving representative units, and whether units are individually metered. To the extent *readily accessible* and *easily visible*, including the removal of switch or outlet covers by building maintenance personnel for *representative observations*, the type of distribution wiring for 120-V circuits should be provided in the PCR. If aluminum wiring is *observed*, the presence or absence of mitigation devices should be noted.

A1.1.5 *Attic*—The presence or lack of an attic should be specifically addressed. If the attic(s) is *readily accessible*, the *field observer* should note the means of access, ventilation, evidence of water leakage, daylight entering through defects, the amount and type of insulation and the presence and condition of draft stops.

A1.1.6 *Roof Sheathing*—Indications of the presence of fire retardant treated (FRT) plywood that are discovered during completion of the PCA should be noted.

A1.1.7 *Interviews*—For multifamily properties, residential occupants do not need to be interviewed unless appropriate and with the consent of the *owner* or *user*. If the *subject property* also has nonresidential uses and the *owner* or *user* provides authorization, the *field observer* should *interview* nonresidential occupants in accordance with this guide.

A1.2 *Commercial Office Buildings*:

A1.2.1 *Representative Observations*—For complexes of buildings built in phases, each construction phase should be *surveyed*. For a *subject property* that contains a complex of multiple buildings, the concept of *representative observations* extends to each building individually and not collectively to all buildings. *Representative observations* should include a mix of tenant (occupied and unoccupied) and common areas. *Representative observations* of the interiors of each construction phase should include a sufficient number of the top and bottom floors. If not specified in the agreement between *user* and *consultant*, the quantity of floor area and the number of components and systems *surveyed* in each construction phase should be sufficient to allow the *field observer* to develop an opinion with reasonable confidence regarding the present condition of the *subject property* and should be determined using the professional judgment and experience of the *field observer* at the time of the *walk-through survey*. In addition to identifying the areas *surveyed* and the rationale for selection, the PCR should provide the quantity of area that is not available for occupancy and the reported reasons that the areas are not available.

A1.3 *Retail Buildings*:

A1.3.1 *General Exclusions*—The *consultant* is not required to survey the interior condition of shell-finish tenancies or the interior/*base building* conditions of anchor stores, unless specifically included in the scope of the PCA. Furthermore, pad buildings having different ownership than the primary building(s) are excluded from the scope of the PCA survey.

A1.3.2 *Representative Observations*—For complexes of buildings built in phases, each construction phase should be *surveyed*. For a *subject property* that contains a complex of multiple buildings, the concept of *representative observations* extends to each building individually and not collectively to all

buildings. *Representative observations* should include a mix of tenant (occupied and unoccupied) and common areas. *Representative observations* of the interiors of each construction phase should include a sufficient number of the top and bottom floors. If not specified in the agreement between *user* and *consultant*, the quantity of floor area and the number of components and systems *surveyed* in each construction phase should be sufficient to allow the *field observer* to develop an opinion with reasonable confidence regarding the present condition of the *subject property* and should be determined using the professional judgment and experience of the *field observer* at the time of the *walk-through survey*. In addition to identifying the areas *surveyed* and the rationale for selection, the PCR should provide the quantity of area that is not available for occupancy and the reported reasons that the areas are not available.

A1.3.3 *Interviews*—With the consent of the *owner* and the *user*, the *field observer* should *interview* proprietors or store managers of the tenant spaces *surveyed* in addition to other knowledgeable persons identified by the *owner* or *user* as described in section 8.7. The *consultant* should use discretion and should not disclose the purpose of the PCA to tenants unless the *user* grants permission. This guide recognizes that there is no obligation for the proprietors or store managers to cooperate.

A1.3.4 *Roofing*—In addition to the *observations* made of the main roofs of buildings, a description and *observed* condition of canopy roofs, viewed either from the main roof or, if appropriate, from the ground should be reported along with any generally *observed physical deficiencies* with the parapets, canopies, soffit, or fascia system.

A1.3.5 *Flatwork*—Loading dock areas, if any, should be *observed* along with the condition of any flatwork, such as the loading dock platform, loading dock exterior stairs, and concrete trailer pads.

APPENDIXES

(Nonmandatory Information)

X1. GUIDANCE AND ENHANCED DUE DILIGENCE SERVICES

INTRODUCTION

The information presented in this appendix is not necessary for completing the *baseline* scope of PCA pursuant to this guide; however, a *user* and *consultant* may wish to utilize some or all of the information presented in this appendix to increase or supplement the extent of *due diligence*. When incorporated into the assessment, the approach and methodology of related activities should follow the expectations and intent outlined in this guide and should be expressly agreed between parties to the agreement for services.

X1.1 *Qualifications*—This guide recognizes that the quality of a PCR is highly dependent on the qualifications of the *field observer* and *PCR reviewer*. These qualifications include such factors as experience, education, training, certification, and professional registration/licensure in *architecture* or *engineering*. Additionally, this guide recognizes that appropriate qualification levels may vary for different PCAs depending on such factors as asset type and scope and objective the PCR is to serve and specific needs and risk tolerance level of the *user*.

X1.1.1 *Qualifications of the Field Observer*—The *field observer* is the person or entity engaged by the *consultant* to perform the *walk-through survey*; the *field observer* also may be the *PCR reviewer*. The *consultant* should establish the qualifications of the *field observer*, but as the accuracy and completeness of the *walk-through survey* will determine the quality of the PCR, the *consultant* should carefully consider education, training, and experience when selecting the *field observer*. Additionally, this guide recognizes that appropriate qualification levels may vary for different PCAs depending on such factors as asset type and scope (size, age, complexity, etc.) as well as the purpose the PCR is to serve and specific needs and risk tolerance level of the *user*.

X1.1.1.1 Due to the scope or complexity of the *subject property* or the purpose of the PCA, the *user* may direct the *consultant* to augment the *field observer* with *specialists*, or the *user* may define the level of qualifications of the *field observer*.

X1.1.1.2 The *field observer*, as a representative of the *consultant*, should be identified in the PCR. As required by section 7.1, the statement of qualifications of the *field observer* should be included in the PCR.

X1.1.2 *Qualifications of the PCR Reviewer*—The *PCR reviewer* is the qualified individual designated to exercise responsible control over the *field observer* and to review the PCR. This guide recognizes that the *consultant* is ultimately responsible for the PCA process.

X1.1.2.1 As indicated in the main body of the guide, all PCAs prepared in accordance with this guide should be reviewed and signed by the *PCR reviewer*.

X1.1.2.2 It is recommended that the *user* consider a *PCR reviewer* who possesses a professional designation in *architecture* or *engineering*, or appropriate experience and/or certifications in the construction fields. The *PCR reviewer* should have experience commensurate with the *subject property* type and scope (size, complexity, etc.), and experience in the preparation of PCRs. Generally, professional *architecture* or

engineering licensure/registration, and/or certifications, education, or appropriate construction experience related to these disciplines are recognized as acceptable qualifications for reviewing PCRs. However, the *user* and the *consultant* may mutually agree to define qualifications for the *PCR reviewer* that may depend on the specific experience of the *PCR reviewer* and the scope of the PCA, or type and complexity of the *subject property*.

X1.2 *Modifications to the Baseline Process*—The *baseline* process is subject to a moderate degree of uncertainty that may not be appropriate for all *users*. Uncertainties can be reduced, but not eliminated, by modifications to the scope of work. Clear communication of an expectation for reduced uncertainty, along with identification of the *user's* objectives and risk tolerance will facilitate identification of appropriate modifications to the *baseline* process. When included, supplemental services should be identified in the report along with a description of related activities, information obtained, findings and opinions. A non-exhaustive list of modifications is discussed below:

X1.2.1 *Cost and Time*—As with the *baseline* scope of work, modifications represent a balance of *user* objectives, risk tolerance, budget, and schedule. Increases in the budget or schedule will not guarantee a more robust assessment but should be anticipated when a reduced degree of uncertainty is desired.

X1.2.2 *Qualifications*—Requirements for the *field assessor* and/or *PCA reviewer* to demonstrate specific length or type of experience, sometimes in combination with education or training. Possession of professional registrations in *architecture* or *engineering* can also provide value but will not typically compensate for a lack of related experience.

X1.2.3 *Specialists*—The *baseline* protocol is typically performed by a single individual having a general, well-rounded knowledge of pertinent *building systems* and *building components*; however, *observation* of high-cost or critical *building systems* such as structure, roofing, facades, elevators and mechanical, plumbing, electrical, and fire protection systems by one or more *specialists* can significantly reduce uncertainties associated with the related systems.

X1.2.4 *Additional Observations*—The presence of significant additional improvements *observed* during completion of the assessment may be noted in the report; however, the identification and evaluation of the *physical condition*, *physical deficiencies*, *suggested repairs* are beyond the scope of the PCA except as otherwise agreed between the *user* and *consultant*: A partial list of such improvements is provided below.

(1) Electrical generation equipment
(2) Telecom towers and equipment
(3) Electric vehicle charging stations
(4) Building and energy management systems
(5) Tenant-owned equipment affixed to the *subject property*

X1.2.5 *Long-term Costs*—An opinion of *long-term costs* may be included in the report as agreed between the *user* and *consultant*. Based on an evaluation of the *remaining useful life* of certain *building systems* and *building components*, the opinion of *long-term costs* reflects major refurbishment and replacements typically expected during an agreed evaluation term consistent with protocols described at Section 10. The *effective age* of such improvements may be greater or less than the chronological age. An *opinion of costs* to replace or refurbish *building systems* and *building components* anticipated to reach the end of their useful life beyond the immediate short-term periods and within the evaluation term that exceed an agreed threshold should be included in the opinion of *long-term costs*. *Routine maintenance* and the repair or replacement of *primary improvements* that are expected to exceed the evaluation period or are the responsibility of tenants or others are generally excluded from the opinion of *long-term costs*. *Primary improvements* that are the responsibility of others may be excluded or separately identified. In such cases, the report should describe how the responsibility for maintenance was determined.

X1.2.5.1 *Inflation Factors*—Opinions of *long-term costs* are sometimes adjusted to reflect inflation. Inflation factors are typically applied at a constant rate throughout the period of consideration and do not represent an economic projection or expectation of the maximum possible change in costs.

X1.2.5.2 *Variability of Costs*—Consistent with Section 10, *long-term costs* are intended to provide an order-of-magnitude opinion that excludes design, permitting and other costs. Such estimates can differ significantly from actual costs. Related uncertainties can be reduced by the collection of additional information, discussion with *specialists* or local providers, development of preliminary designs, solicitation of bids, etc. *Users* should work with the *consultant* to develop more robust *opinions of cost*, if needed, to satisfy their objectives and risk tolerance.

X1.2.5.3 *Variability of Schedule*—The service life of *building systems* and *building components* can vary significantly. In some cases, replacement or refurbishment may be warranted sooner than expected. The opinion of *long-term costs* provides guidance regarding the expected performance but is not a guarantee of longevity or performance.

X1.2.5.4 *Restricted Use*—Opinions of *long-term costs* included in PCAs are not considered to be suitable for the establishment of reserves for condominium and other common interest properties that may be subject to regulatory and accounting requirements that have not been considered herein.

X1.2.5.5 *Budgeted Long-Term Costs—Users* may wish to reserve funds to address *long-term costs*. Such budgets should allow for variations in the actual cost and timing of the work, and should include allowances for unexpected costs as well as design, permitting, fees, ancillary tasks, and other considerations that are excluded by this guide. In some cases, early replacement of *building systems* or *building components* should be considered where warranted to avoid related downtime or improve the efficiency and utility of systems.

X1.2.5.6 *Proactive Management*—Proactive maintenance and management can significantly extend the useful life of systems and can help to minimize the impacts of system failures.

X1.2.6 *Verification of Measurements and Quantities:*

X1.2.6.1 *Parking Spaces:*

X1.2.6.1.1 *Based Upon Review of Drawings*—The *field observer* should review the submitted as-built site drawings and *survey* for the purposes of identifying the number of parking spaces provided.

X1.2.6.1.2 *Actual Field Count*—The *field observer* should physically count each delineated parking space that has been provided for the *subject property*.

X1.2.6.2 *Count of Multifamily Units:*

X1.2.6.2.1 *Based Upon Review of Drawings, Schedules, and Similar Documentation*—The *field observer* should review documents submitted by the *owner* to determine the number of multifamily dwelling units.

X1.2.6.2.2 *Actual Field Count*—The *field observer* should physically count each dwelling unit. This implies that a *walk-through survey* of each building and the floor of each building.

X1.2.6.3 *Building Areas:*

X1.2.6.3.1 *Gross Areas:*

(1) Based Upon Review of As-Built Drawings—The *consultant* should review as-built drawings submitted by the *owner* to determine the gross building area on a floor-by-floor basis. Such review of drawings may consist of a review of schedules or dimensions. For purposes of this clause, gross building area should be that definition as required by the local zoning board at the time of construction and as presented on the drawings' zoning schedule, if any.

(2) Actual Field Measurement—The *field observer* should take measurements and prepare calculations physically to determine gross area. Current BOMA definition of gross area is to be used unless the *user* provides the *consultant* with an alternate definition/protocol for the method of calculating such areas. The *consultant* should state the criteria under which the calculations are prepared and submit all quantities on a per floor basis.

X1.2.6.3.2 *Net Usable Areas:*

(1) Based Upon Review of As-Built Drawings—The *user* should provide the *consultant* with a set of as-built drawings for all space available for lease. Based solely on such drawings, the *consultant* should determine usable area by use of digitizer or other means. Current BOMA definition of usable area is to be used unless *user* provides the *consultant* with an alternate definition/protocol for the method of calculating such areas.

(2) Actual Field Measurement—The *field observer* should take measurements and prepare calculations physically to determine usable area. Current BOMA definition of usable area is to be used unless the *user* provides the *consultant* with an alternate definition/protocol for the method of calculating such areas. The *consultant* should state the criteria under which the calculations are prepared and submit all quantities on a per floor basis.

X1.2.7 *Service Company Research*—Documentation from service companies that is provided during the *baseline* PCA process is typically considered in completion of the PCR. Depending on the objectives and risk tolerance of the *user*, additional *interviews* and research can help to reduce the uncertainties. When requested, the research of service company records typically consists of contact with companies servicing selected systems such as plumbing, HVAC, fire protection, electrical, roofing, or elevator systems to obtain information concerning the related general condition; extent of major or chronic repairs and replacements; pending repairs and replacements; and outstanding proposals to provide repairs and replacements, etc. Within the PCR, the *consultant* should provide the name of the parties contacted and pertinent information received.

X1.2.8 *Flood Plain Designation*—Note whether the *subject property* encroaches upon a 100-year flood area designated as "Special Flood Hazard Areas Inundated by 100-year Flood" on FEMA maps, as amended.

X2. AMERICANS WITH DISABILITIES ACT (ADA) ABBREVIATED ADA SCREENING

X2.1 *Overview of The Americans with Disabilities Act*—The Americans with Disabilities Act is a civil rights law that was enacted in 1990 to provide persons with disabilities with accommodations and access equal to, or comparable to, that available to the general public. Title III of the ADA, as implemented by 28 CFR Part 36, requires that new construction and alterations to buildings classified as places of public accommodation comply with the Act, and that owners of existing buildings (constructed prior to March 15, 2012) remove architectural barriers and communications barriers that are considered readily achievable as defined by 28 CFR Part 36.

X2.1.1 It is important to understand that ADA is not a *building code*; it is a civil rights law. As a result, local building departments may not be responsible for enforcing compliance with ADA requirements and failure to meet ADA requirements may not be considered a *building code* violation. State and local accessibility laws may be more stringent than the ADA requirements. Opinions of conformance with ADA, state, local, and other applicable accessibility requirements are beyond the scope of this section.

X2.2 *Overview of the ADA Standards for Accessible Design*—As required by the ADA, the U.S. Architectural and Transportation Barriers Compliance Board promulgated the ADA Accessibility Guidelines (ADAAG). ADAAG provided guidelines for implementation of the ADA by providing specifications for design, construction, and alteration of facilities in accordance with the ADA. The ADAAG was superseded by the 2010 ADA Standards for Accessible Design. These guidelines specify quantities, sizes, dimensions, spacing, and locations of various components of a facility to achieve compliance with the ADA.

X2.3 *Abbreviated ADA Screening*—The abbreviated ADA screening is a limited scope visual *survey* of selected ADA elements, as documented on the checklist provided herein. The

abbreviated screening excludes measurements and counts. Since the screening is limited in scope and is based on representative observations, conditions that are not compliant with ADA, state, local and other requirements may exist that will not be identified. A detailed *survey* to evaluate the conformance of the *subject property* with ADA or other accessibility requirements is beyond the scope of this guide. Consistent with the principles and intent of this guide, the

TABLE X2.1 Uniform Abbreviated Screening Checklist for the 2010 Americans with Disabilities Act

	Item	Yes	No	NA	Comments
A.	**History**				
1.	Has an ADA survey previously been completed for the subject property.				
2.	Have any ADA improvements been made to the subject property since original construction?				
3.	Has building ownership/management reported any ADA complaints or litigation?				
B.	**Parking**				
1.	Does the required number of standard ADA-designated spaces appear to be provided?				
2.	Does the required number of van-accessible designated spaces appear to be provided?				
3.	Are accessible spaces part of the shortest accessible route to an accessible building entrance?				
4.	Is a sign with the International Symbol of Accessibility at the head of each space?				
5.	Does each accessible space have an adjacent access aisle?				
6.	Do parking spaces and access aisles appear to be relatively level and without obstruction?				
C.	**Exterior Accessible Route**				
1.	Is an accessible route present from public transportation stops and municipal sidewalks on the subject property?				
2.	Are curb cut ramps present at transitions through curbs on an accessible route?				
3.	Do the curb cut ramps appear to have the proper slope for all components?				
4.	Do ramps on an accessible route appear to have a compliant slope?				
5.	Do ramps on an accessible route appear to have a compliant length and width?				
6.	Do ramps on an accessible route appear to have compliant end and intermediate landings?				
7.	Do ramps on an accessible route appear to have compliant handrails?				
D.	**Building Entrances**				
1.	Do a sufficient number of accessible entrances appear to be provided?				
2.	If the main entrance is not accessible, is an alternate accessible entrance provided?				
3.	Is signage provided indicating the location of alternate accessible entrances?				
4.	Do doors at accessible entrances appear to have compliant clear floor area on each side?				
5.	Do doors at accessible entrances appear to have compliant hardware?				
6.	Do doors at accessible entrances appear to have a compliant clear opening width?				
7.	Do pairs of accessible entrance doors in series appear to have the minimum clear space between them?				
8.	Do thresholds at accessible entrances appear to have a compliant height?				
E.	**Interior Accessible Routes and Amenities**				
1.	Does an accessible route appear to connect with all public areas inside the building?				
2.	Do accessible routes appear free of obstructions and/or protruding objects?				
3.	Do ramps on accessible routes appear to have a compliant slope?				
4.	Do ramps on accessible routes appear to have a compliant length and width?				
5.	Do ramps on accessible routes appear to have compliant end and intermediate landings?				
6.	Do ramps on accessible routes appear to have compliant handrails?				
7.	Are adjoining public areas and areas of egress identified with accessible signage?				
8.	Do public transaction areas have an accessible, lowered counter section?				
9.	Do public telephones appear mounted with an accessible height and location?				
10	Are publicly-accessible swimming pools equipped with an entrance lift?				
F.	**Interior Doors**				
1.	Do doors at interior accessible routes appear to have compliant clear floor area on each side?				
2.	Do doors at interior accessible routes appear to have compliant hardware?				
3.	Do doors at interior accessible routes appear to have compliant opening force?				
4.	Do doors at interior accessible routes appear to have a compliant clear opening width?				
G.	**Elevators**				
1.	Are hallway call buttons configured with the “UP” button above the “DOWN” button?				
2.	Is accessible floor identification signage present on the hoistway sidewalls?				
3.	Do the elevators have audible and visual arrival indicators at the entrances?				
4.	Do the elevator hoistway and car interior appear to have a minimum compliant clear floor area?				
5.	Do the elevator car doors have automatic re-opening devices to prevent closure on obstructions?				
6.	Do elevator car control buttons appear to be mounted at a compliant height?				
7.	Are tactile and Braille characters mounted to the left of each elevator car control button?				
8.	Are audible and visual floor position indicators provided in the elevator car?				
9.	Is the emergency call system at the base of the control panel and not require voice communication?				
H.	**Toilet Rooms**				
1.	Do publicly-accessible toilet rooms appear to have a minimum compliant floor area?				
2.	Does the lavatory appear to be mounted at a compliant height and with compliant knee area?				
3.	Does the lavatory faucet have compliant handles?				
4.	Is the plumbing piping under lavatories configured to protect against contact?				
5.	Are grab bars provided at compliant locations around the toilet?				
6.	Do toilet stall doors appear to provide the minimum compliant clear width?				
7.	Do toilet stalls appear to provide the minimum compliant clear floor area?				
8.	Do urinals appear to be mounted at a compliant height and with compliant approach width?				
9.	Do accessories and mirrors appear to be mounted at a compliant height?				
I.	**Hospitality Guestrooms**				
1.	Does property management report the minimum required accessible guestrooms?				

checklist (Table X2.1) may be used as a screen to document *obvious* ADA barriers at the *subject property* with respect to the checklist elements. Supplemental assessment may be needed to satisfy the risk tolerance and desired level of *due diligence* of some *users*.

X3. FAIR HOUSING ACT (FHA) ABBREVIATED FHA SCREENING

X3.1 *Overview of the Federal Fair Housing Act* —The Fair Housing Act (FHA) is a civil rights law that prohibits discrimination in housing on the basis of race, color, religion, sex, national origin, familial status, and disability. One of the types of disability discrimination prohibited by the Act is the failure to design and construct covered multifamily dwellings.

X3.2 *Overview of the Fair Housing Act Design Manual*— The Fair Housing Act Design Manual was developed by the US Department of Housing and Urban Development to provide guidance for the design and construction of multifamily housing covered by the Act. The Manual provides seven design and construction requirements for accessible housing.

X3.3 *Abbreviated FHA Screening*—The abbreviated FHA screening is a limited scope visual *survey* of selected FHA elements, as documented on the checklist provided herein. The abbreviated screening excludes measurements and counts. Since the screening is limited in scope and is based on *representative observations*, conditions that are not compliant with FHA, ADA, state, local and other requirements may exist that will not be identified. A detailed *survey* to evaluate the conformance of the *subject property* with FHA and/or other accessibility requirements is beyond the scope of this guide. Consistent with the principles and intent of this guide, the checklist (Table X3.1) may be used as a screen to document *obvious* FHA barriers at the *subject property* with respect to the checklist elements. Supplemental assessment may be needed to satisfy the risk tolerance and desired level of *due diligence* of some *users*.

TABLE X3.1 ASTM E2018-23 Uniform Abbreviated Screening Checklist Fair Housing Act (FHA)

	Item	Yes	No	NA	Comments
A.	**History**				
1.	Was first occupancy at the subject property achieved after March 13, 1991?				
2.	Does the subject property consist of four or more dwelling units?				
3.	Was property management or the owner aware of any areas of non-compliance resulting in litigation?				
B.	**Requirement 1– Accessible Routes; Site**				
1.	Do designated accessible parking spaces appear to be provided in sufficient number at appropriate locations?				
2.	Do appropriate transitions from paved areas to sidewalks appear to be provided?				
3.	Do walkway slopes/cross slopes appear to be adequate and not excessive?				
4.	Do walkways appear to be the correct width, and clear of obstructions, including overhanging vehicles?				
5.	Do ramps appear to have appropriate handrails and edge protection?				
6.	Do building entry point/access doors appear to be provided along an apparent accessible route?				
7.	Do the main entrances appear to be barrier free and readily accessible (that is, no steps, obstacles, or revolving doors)?				
C.	**Requirement 2– Accessible Common Areas**				
1.	Does a continuous accessible route appear to be provided throughout the subject property, including the site, parking areas and amenities?.				
2.	Do common area/visitor restrooms appear to be barrier free and readily accessible?				
3.	Do the amenities appear to be barrier free and readily accessible?				
D.	**Requirement 3– Usable Doors**				
1.	Do appropriate doors/entries appear to be designed for accessibility?				
2.	Do interior doors appear to be designed for accessibility?				
E.	**Requirement 4– Accessible Routes; Covered Units**				
1.	Do the interiors of the covered units appear to provide adequate maneuverability?				
F.	**Requirement 5– Environmental Controls; Covered Units**				
1.	Do the environmental controls within the covered units appear to be at appropriate heights/locations?				
G.	**Requirement 6– Reinforces Walls; Covered Units**				
1.	Are reinforcements reportedly provided for future installation of grab bars at appropriate locations in the covered units?				
H.	**Requirement 7– Usable Kitchens/Bathrooms; Covered Units**				
1.	Do the interior kitchen areas of the covered units appear to provide adequate clearances for maneuverability?				
2.	Do the interiors of the covered units appear to provide adequate clearances in the bathrooms?				

SUMMARY OF CHANGES

Committee E50 has identified the location of selected changes to this standard since the last issue (E2018–23) that may impact the use of this standard. (Approved January 1, 2024)

(1) Section 2 was added.
(2) Previous section 1.6 was deleted.
(3) Section 3.2.32 was revised.
(4) Section 3.2.33 was revised.
(5) Section 3.2.45 was revised.
(6) Section 10.3.1 was revised.
(7) Note 1 was added.
(8) Section 11.4.2 was revised.
(9) Section X3.1 was revised.
(10) Section X1.2.6.1.1 was revised.

Committee E50 has identified the location of selected changes to this standard since the last issue (E2018–15) that may impact the use of this standard. (Approved June 1, 2023)

(1) Changes were made throughout the entire standard.