Cleveland, OH Code of Ordinances

TITLE XIII: BUILDING CODE

CHAPTER 3143 - EXTERIOR WALLS AND APPURTEINANCES

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§ 3143.01 Definitions

(a) "Substantial structure" means any structure of any construction type or use that is five (5) stories or seventy-five (75) feet above grade, whichever is shorter, at any point along its perimeter.

(b) "Protected distance" means the horizontal distance measured perpendicular from any substantial structure to a public way, public land, other structure or adjoining property.

(c) "Qualified inspector" means either of the following: (1) a design professional certified in inspection of the specific elements that make up the facade of the structure, and licensed by the State of Ohio; or (2) a special inspector or inspection agency accredited and experienced in the specific type of structure being inspected, and qualified under the Ohio Building Code for special inspectors.

(Ord. No. 1533-15. Passed 4-4-16, eff. 6-6-16)

§ 3143.02 Inspection and Reporting Requirements for Exterior Walls and Appurtenances; Fee

In order to maintain a building's exterior walls and appurtenances in a safe condition, the following requirements shall apply to all buildings that are at least five (5) stories or seventy-five (75) feet above grade, whichever is shorter, have a protected distance that is equal to or less than the height of the substantial structure from its tallest height above grade, and are thirty (30) years or older. This section shall not apply to one-, two- or three-family residential buildings:

(a) Inspection Requirements. The owner of a substantial structure shall conduct a critical inspection of the condition of exterior walls and appurtenances at least once every five (5) years.

(1) Such inspection shall be conducted and witnessed by a qualified inspector, by or on behalf of the owner of the building. Such inspection shall meet or exceed the general inspection standards under the ASTM Standards for Periodic Inspection of Building Facades for Unsafe Conditions contained in
Designation E2270-14. Any areas found to be deficient in the general inspection shall require a detailed inspection.

(2) The owner shall complete such inspection and file a report within the following time:

A. All new inspections and reports for structures fifty (50) years or older shall be completed and filed within one (1) year of the effective date of this section, and successive inspections and reports shall be completed every five (5) years from the date of the original inspection report filed in accordance with division (b).

B. All new inspections and reports for structures thirty (30) years to fifty (50) years shall be completed and filed within two (2) years of the effective date of this section, and successive inspections and reports shall be completed every five (5) years from the date of the original inspection report filed in accordance with division (b).

C. If a structure has already been inspected prior to the adoption of this chapter, the owner must file a report of that inspection within one (1) year of the effective date of this section, and successive inspections and reports shall be completed every five (5) years from the date of the original inspection report filed in accordance with division (b).

(b) Inspection Report. The owner of a substantial structure shall register with the Director of Building and Housing by submitting a written report, prepared by a qualified inspector who conducted or supervised the inspection, as follows:

(1) Such report shall clearly document the condition of the exterior walls and appurtenances as either safe, unsafe, or safe with a repair and maintenance program. The report shall document all significant deterioration, unsafe conditions, and movement observed, in sufficient detail so that a comparison of successive reports will indicate any change of condition. Such report must be signed by and bear the professional seal of the qualified inspector.

(2) Such report shall be filed with the Director of Building and Housing together with a fee, in an amount to be determined by the Board of Control, within the time specified in division (a)(2).

(3) Such report shall include the following:

A. The location of the building by address and permanent parcel number;

B. The year the building was built;

C. The date the building was inspected;

D. The name, address, and title of the person or firm who conducted the inspection;

E. Complete description of inspections conducted based on ASTM E2270-14, including the locations of and descriptions the general inspection areas and any of detailed inspection areas.
(4) Such inspection report shall be filed with Director of Building and Housing every five (5) years from the date of the original report. The owner shall keep and maintain the complete and full inspection documentation on-site or produce said documentation within forty-eight (48) hours of any request by the Director of Building and Housing or the Chief of Fire, or their designees.

(c) **Notice of Unsafe Condition.** Upon the discovery of an unsafe condition relating to the exterior walls or appurtenances, the owner shall notify the Director of Building and Housing immediately in writing of such condition, and immediately begin repair, reinforcement or precautionary measures, with the required permits, to abate the unsafe condition to ensure public safety.

(Ord. No. 1533-15. Passed 4-4-16, eff. 6-6-16)

§ 3143.03 Certificate of Exterior Walls and Appurtenances Inspection

(a) **Issuing of Certificates.** The Director of Building and Housing shall issue an exterior wall and appurtenances certificate only after having received satisfactory proof of inspection, and after the inspection report of the architect or engineer reports a safe condition. No building owner or person in control of a building, subject to the requirements in this chapter shall permit the substantial structure to be occupied without such certificate.

(b) **Keeping and Producing of Certificates.** The owner or person in control of a building subject to the requirements of this chapter shall keep and maintain such certificate on-site or produce said certificate within forty-eight (48) hours of any request by the Director of Building and Housing or officials or the Chief or Fire or officials, or their designees. No building owner or person in control subject to the requirements of this chapter shall fail to keep and maintain or produce the required certificate.

(Ord. No. 1533-15. Passed 4-4-16, eff. 6-6-16)

§ 3143.04 Rules

The Director of Building and Housing shall promulgate any rules as may be necessary for the purposes of carrying out the provisions of this chapter.

(Ord. No. 1533-15. Passed 4-4-16, eff. 6-6-16)

§ 3143.99 Penalties

In addition to any other method of enforcement provided for in Chapter 3103, whoever violates any provision of this chapter is guilty of a misdemeanor of the first degree. Each day during which noncompliance or a violation continues shall constitute a separate offense. Organizations convicted of an offense shall be fined as provided by Cleveland Codified Ordinance Sections 601.10 and 601.99.

(Ord. No. 1533-15. Passed 4-4-16, eff. 6-6-16)
Standard Practice for
Periodic Inspection of Building Facades for Unsafe Conditions

This standard is issued under the fixed designation E2270; 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 (e) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This standard practice covers methods and procedures for inspection, evaluation, and reporting for periodic inspection of building facades for unsafe conditions. In the context of this practice, unsafe conditions are hazards caused by or resulting from loss of facade material.

1.2 This standard practice does not purport to address the nature of deterioration of various building facade materials nor the performance of their assemblies. It is the responsibility of the owner to retain a qualified professional who can demonstrate expertise in the evaluation of various facade materials and their assemblies.

1.3 Investigative techniques discussed may be intrusive, disruptive, or destructive. It is the responsibility of the qualified professional to anticipate, advise on the nature of procedures, and to plan for implementing repair as necessary.

1.4 It is the responsibility of the specifying authority to establish the usage of this standard practice and to supplement this practice with additional requirements suitable to its local jurisdiction. It is also the responsibility of the specifying authority to determine compliance with local licensing regulations and customary practices.

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

1.6 This standard may involve hazardous materials, operations, and equipment. 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 and health practices and determine the applicability of regulatory limitations prior to use. Awareness of safety and familiarity with safe procedures are particularly important for above-ground operations on facades and destructive investigative procedures, which typically are associated with the work described.

2. Referenced Documents

2.1 ASTM Standards:
E631 Terminology of Building Constructions

3. Terminology

3.1 Refer to Terminology E631.

3.2 Definitions:
3.2.1 categories of facade conditions:
3.2.1.1 ordinary maintenance—a condition identified at the time of inspection that is not characterized as an “unsafe condition” or “requires repair/stabilization,” but requires maintenance.

3.2.1.2 requires repair/stabilization—a condition identified at the time of inspection that shall be repaired or stabilized in order to prevent progression into an “unsafe condition” prior to the next scheduled inspection.

Note 1—The immediacy of actions to address conditions requiring repair other than unsafe conditions is highly variable and should be determined by the owner. Such determination may require more detailed investigation than addressed herein to assess the urgency of such action.

3.2.1.3 unsafe condition—a condition identified at the time of inspection of a component or system that presents an imminent threat of harm, injury, damage, or loss to persons or property.

3.2.2 facade—all areas on the exterior of the building, except for horizontal roof areas. The facade includes all exterior walls, windows, balconies, cornices, parapets, and appurtenances. The facade also includes walls supported at roof level, such as penthouse walls, chimneys, and so forth.

3.2.3 facade age—number of years since the original Certificate of Occupancy for building was issued, or since entire facade replacement.

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1 This practice is under the jurisdiction of ASTM Committee E06 on Performance of Buildings and is the direct responsibility of Subcommittee E06.55 on Performance of Building Enclosures.


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.
3.2.4 facade inspection category—category assigned to building facade based on the facade material, construction, age, and inspection level/extent required, as outlined in Annex A1 of this document.

3.2.5 facade inspection report—a detailed documentation of qualified professional’s findings, observations, discussions, conclusions, and recommendations about the subject building facades.

3.2.6 levels of facade inspections:

3.2.6.1 detailed inspection—visual observation from less than 6 ft (1.8 m) and tactile evaluation of facade components, including probing and non-destructive testing to observe concealed conditions of wall construction.

3.2.6.2 general inspection—visual observation of facade components from distances equal to or greater than 6 ft (1.8 m) with or without magnification or remote optical devices.

3.2.7 maintenance personnel—personnel who have been involved in maintenance of the subject building facades. 

3.2.8 non-destructive testing (NDT)—a test that causes no significant structural damage to building components.

3.2.9 owner—the owner, agent, manager, or person in charge, of possession, operation, or management of the building, or any combination thereof.

3.2.10 probe—disassembly/removal of selective portions of a facade to observe concealed conditions of wall construction.

3.2.11 public access area—any sidewalk, street, alley, park, plaza, playground, schoolyard or other area that is open and accessible to the public, regardless of whether it is publicly or privately owned.

3.2.12 qualified inspector—a qualified professional or a person working under the direct supervision of a qualified professional.

3.2.13 qualified professional—an architect or civil/structural engineer duly licensed. The qualified professional must be knowledgeable of the design, construction, and inspection of building facades, stability, and deterioration mechanisms relating to the specific materials and assemblies particular to the facade being inspected.

3.2.14 specifying authority—party requiring inspection of a building facade.

Note 2—The specifying authority may be a governmental body.

3.2.15 watertight integrity—the means a facade employs to prevent water intrusion to areas or materials where water intrusion is not intended.

4. Significance and Use

4.1 Intent—This standard practice is intended to establish the minimum requirements for conducting periodic inspections of building facades to identify unsafe conditions that could cause harm to persons and property. It addresses the required content of the facade inspection to convey to the specifying authority the condition of the facade and allow comparisons of facade conditions at other times. Facade Inspection reports conducted and prepared as outlined in this standard practice will provide specifying authorities the information necessary to mitigate the threat of harm, injury, damage, or loss to persons or property from unsafe conditions on subject facades.

4.2 Need for Periodic Facade Inspections—Due to age, lack of maintenance, design or construction errors, or a combination of these factors, building facades deteriorate. Based on the knowledge gained about the performance of building facades through investigation and research, governing authorities, owners, and qualified professionals are becoming more aware of potential unsafe conditions on building facades that, if unaddressed, can jeopardize public safety and surrounding properties.

4.3 Facade Service History—Facades require periodic maintenance and repairs to extend their useful life and to minimize and/or correct problems. As a part of any facade inspection, facade service history shall be reviewed because: (1) it may indicate patterns of leakage or other performance problems leading to concealed damage and an unsafe condition; (2) it may show a poorly conceived or improperly implemented maintenance or repair procedure that can contribute and aggravate unsafe conditions; and (3) it is necessary to distinguish between original construction and subsequent repairs or modifications during the inspection process and help identify the source of potential problems.

4.4 Who Shall Perform the Inspection—Facade inspection shall be performed by a qualified inspector familiar with the available service history and the available design documents relevant to the building facade. The qualified inspector shall be capable of assessing both the watertight integrity and exterior conditions of the building facade to evaluate and identify potential unsafe conditions. The qualified professional who seals and signs the report shall also oversee all work of the qualified inspector and the inspection process.

4.5 Facades Requiring Inspection—Those facades are determined by the specifying authority that pose a potential threat of harm, injury, damage or loss to persons or property.

4.6 Frequency, extent, and the required level of facade inspections are dependent on facade age, material, and construction.

4.7 Observed facade deficiencies shall be categorized and documented in Facade Inspection Report as “unsafe condition,” “requires repair/stabilization,” or “ordinary maintenance.”

4.8 Limitations—Due to the construction techniques and physical properties of the many materials used in facade construction, and the inherent limitations in detecting concealed facade distress based on limited observation and probes, conducting a facade inspection does not assure that all unsafe conditions will be identified.

FACADE INSPECTION PROCEDURE

5. Overview

5.1 The following sequence of activities is intended to lead to an accumulation of information in a rational and efficient manner, so that each step enhances and supplements the
information gathered in the preceding step. Each activity is discussed in sections below:

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6. Review of Project Documents

6.1 Review available project documents provided by the Owner, including original architectural, structural, and shop drawings.

6.2 The qualified inspector shall verify that such documents pertain to the subject building facades.

6.3 Building facades, especially historic and older buildings, may have been detailed in accordance with common practices of the time. Such information may be available in building construction and design reference books dating back to the original construction of the facade.

7. Preparation of Inspection Drawings

7.1 Prior to beginning the facade inspection, the qualified inspector shall oversee the acquisition or development of sufficient drawings for documentation of the inspection findings.

7.2 As a minimum, the following information shall be included:

7.2.1 Plot plan showing relationship to adjacent properties and publicly accessible areas,

7.2.2 Ground level floor plan,

7.2.3 Supplemental floor plans if the footprint changes between the ground and roof,

7.2.4 Elevation drawings of the facades to be inspected,

7.2.5 Penthouse level/main roof plan, and

7.2.6 Typical wall details.

7.3 Drawing development using digital photography, perspective corrected photography, or other photographic methods, or any combination thereof, are acceptable as long as the drawings provide a clear depiction of the facade.

7.4 In the case of a facade inspection that is precipitated by discovery of an unsafe condition, the inspection shall not be delayed to acquire or prepare drawings.

8. Determination of Service History

8.1 The service history of a facade includes previous maintenance, repairs, modifications and performance issues information. Gathering documentation of this history as part of a facade inspection program serves the following purposes: (a) review and confirmation of previous findings; (b) identification of wall areas or facade details that may have been repaired beyond the scope of normal maintenance, may indicate an underlying problem; (c) understanding of past and present water infiltration activity, which can focus attention on facade areas where concealed damage is likely; and (d) prioritization of inspection areas.

8.2 As a minimum, the owner shall provide where feasible, and the inspector shall review, the following information about the facade obtained from maintenance records and interviews with the building owner, maintenance personnel or maintenance contractors, or any combination thereof, and engineers/architects involved in past inspections/repairs:

8.2.1 Performance problems, such as leaks, rust stains, efflorescence, cracking, spalling, bowing, and so forth,

8.2.2 Prior repairs, noted repeated repairs, and

8.2.3 Previous facade inspection reports.

9. Assessment of Watertight Integrity

9.1 Qualified inspector shall perform a cursory interior leak survey of the exterior facades. The information obtained from the leak survey and from the review of the service history of the facade is useful in selecting locations for detailed inspection and probes. If the specifying authorities require a more thorough assessment, refer to the guidelines in Appendix X1.

10. Facade Inspection

10.1 Facade inspections are categorized by two levels: general inspection, and detailed inspection as defined in Section 3 and noted below. A combination of general and detailed inspection is required for a facade inspection. Selection of facade inspection level and frequency is dependent upon the facade age, materials, construction, and service history of the facade. Unless otherwise determined by the specifying authority, use Annex A1 to determine scope of inspection. Detailed inspection shall be on areas with greatest exposure and risk to persons or property.

10.2 Documentation—Regardless of the inspection level selected, document overall appearance of the facade and all significant categorized (unsafe conditions, requires repair/stabilization, and ordinary maintenance) observations on the prepared inspection drawings and by photographs.

10.3 General Inspections—General inspection is visual observation of facade components from distances equal to or greater than 6 ft (1.8 m) with or without magnification or remote optical devices. The qualified inspector shall methodically scan facade areas and check for out-of-plane displacement of facade elements while scanning the facade horizontally and vertically.

10.4 Detailed Inspection—Based upon the findings of the general inspection, the review of project documents, and the service history, the qualified inspector shall choose the representative areas to receive detailed inspection. Detailed inspection is visual observation and tactile evaluation of facade components, including probing and NDT to observe concealed conditions of wall construction. This level of inspection requires tactile contact with facade elements. The qualified inspector shall use, at a minimum, the following techniques in performing the inspection:

10.4.1 Viewing horizontal surfaces that can pond water (such as sills, ledges, cornices, water tables, and other such horizontal bands) from above wherever possible,
10.4.2 Checking for out-of-plane displacement of facade elements while scanning the facade horizontally and vertically.
10.4.3 Checking for signs of staining, spalling, water or moisture damage, weathering or distress of facade components.
10.4.4 Sounding of the facade surface with a hammer\(^3\) if material delamination of facade components is possible.
10.4.5 Pushing against or pulling on facade elements, or both.
10.4.6 Pull test on adhesively attached components at building corners and in the field of the wall.
10.4.7 Evaluating sealant adherence by NDT.
10.4.8 Probing (exterior or interior, or both) and NDT to observe concealed facade components such as anchors, inserts or support of facade components.
10.4.9 Removing loose or fractured components to reveal cause of distress, where safe to do so, and
10.4.10 Sampling of material obtained from probes for visual examination and laboratory testing as required.

11. Reporting Procedures for Unsafe Conditions

11.1 Report unsafe conditions to the specifying authority immediately.
11.2 Written notification shall follow promptly, including potential repair and remedial options to address the unsafe condition.
11.3 Notify the owner of the need to take immediate action to protect the public by appropriate means and that such protection shall not be removed until the unsafe condition has been remedied.
11.4 The qualified professional’s responsibility to report unsafe conditions is limited to 11.1, 11.2, and 11.3.

12. Standard Reporting Procedures

12.1 Intent—The primary intent of the report is to convey to a layperson clearly and succinctly any threat to persons or property. The secondary purposes of the report are to:

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\(^3\) Use non-metallic hammer when damage to the facade is probable.

12.1.1 Convey to the specifying authority information obtained about the service history of the facade and the inspection.
12.1.2 Discuss the implications of these findings.
12.1.3 Inform the specifying authority about the condition of the facade.
12.1.4 Make general maintenance and repair recommendations, and
12.1.5 Document conditions of the facade so that it may be compared with past or future observations to establish a rate of deterioration.
12.2 Report Content—As a minimum, information in the report shall include:
12.2.1 Identification of all information sources.
12.2.2 Documentation and assessment of facade service history.
12.2.3 Description of observation methods and extent of inspection.
12.2.4 Documentation of relevant conditions of the facade.
12.2.5 Statement on the watertight integrity of the facades.
12.2.6 Identification of detailed inspection method and facade category.
12.2.7 Classification of conditions as “unsafe condition,” “requires repair/stabilization,” and “ordinary maintenance.”
12.2.8 Facade elevations showing relevant findings (drawings or photographs).
12.2.9 Photographic documentation of each unsafe condition.
12.2.10 Representative photographic documentation of “requires repair/stabilization” or “ordinary maintenance” conditions.
12.2.11 Discussion of the significance of findings and description of remedial recommendations and options, and
12.2.12 Signature and seal of the qualified professional, and date of inspection and report.

13. Maintenance of Reports

13.1 The specifying authority and the owner shall maintain a readily available copy of the facade inspection report for future reference.

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ANNEX

(Mandatory Information)

A1. FREQUENCY, EXTENT, AND THE REQUIRED LEVEL OF PERIODIC INSPECTION OF BUILDING FACADES FOR UNSAFE CONDITIONS

A1.1 Scope of facade inspections is dependent on facade age, material, and construction as outlined in Table A1.1, unless otherwise determined by the specifying authority.

A1.2 Frequency of Facade Inspection—Unless otherwise required by the specifying authorities, inspections should be performed at least once every 5 years.
<table>
<thead>
<tr>
<th>Facade Material and Construction</th>
<th>Facade Age</th>
<th>Facade Inspection Level and Extent</th>
<th>Facade Inspection Category</th>
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</thead>
<tbody>
<tr>
<td>Brick</td>
<td>More than 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s).</td>
<td>A</td>
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<tr>
<td>Stone</td>
<td>More than 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade. 3 Probes per facade per subject building.</td>
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<tr>
<td>Concrete/Cast Stone</td>
<td>More than 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s). 3 Probes per facade per subject building. where movement or rusting is apparent.</td>
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<tr>
<td>Terracotta</td>
<td>More than 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s). 3 Probes per facade per subject building.</td>
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</tr>
<tr>
<td>Glass Block</td>
<td>More than 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s). Close-up when no movement or rust staining is apparent. Otherwise, Inspect 25 % of each subject facade(s) and. 3 Probes per facade per subject building when movement or rust staining is apparent.</td>
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</tr>
<tr>
<td>GFRC</td>
<td>More than 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s). 3 Probes per facade per subject building when movement or rust staining is apparent.</td>
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<tr>
<td>Stucco</td>
<td>More than 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s).</td>
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<td>Barrier EIFS</td>
<td>5 to 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s). 3 Probes per facade per subject building. where movement or rusting is apparent.</td>
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<td>Wall panels with adhesive attachment</td>
<td>5 to 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s). 3 Probes per facade per subject building. where movement or rusting is apparent.</td>
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<tr>
<td>Wall panels with mechanical attachment</td>
<td>More than 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s). 3 Probes per facade per subject building. where movement or rusting is apparent.</td>
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<tr>
<td>All other materials</td>
<td>More than 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s). 3 Probes per facade per subject building when movement or rust staining is apparent.</td>
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<td>5 to 20 years</td>
<td>General inspection: 100 % of subject facade(s). Detailed inspection: Inspect 25 % of each subject facade(s). 3 Probes per facade per subject building when movement or rust staining is apparent.</td>
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**APPENDIX**

*(Nonmandatory Information)*

**X1. DETAILED ASSESSMENT OF WATER TIGHTNESS INTEGRITY OF EXTERIOR FACADES**

X1.1 As a part of periodic inspection for unsafe conditions, qualified inspector shall perform a cursory interior leak survey of the exterior facades. The information obtained from the leak survey and from the review of the service history of the facade is useful in selecting locations for detailed inspection and probes.

X1.2 If the specifying authorities require a more thorough assessment, as a minimum, qualified inspector should assess the watertight integrity of the following facade components:

X1.2.1 Rain water conductors on the exterior facade,
X1.2.2 Gutters, cornice collectors and drainage details which could impact facade components,
X1.2.3 Balconies and their rain water collection systems,
X1.2.4 Scupper assemblies,
X1.2.5 Mortar and sealant joint,
X1.2.6 Exposed flashing,
X1.2.7 Membrane or sheet metal coverings, or both,
X1.2.8 Coping systems, and
X1.2.9 Any horizontal surface, component or assembly, for insufficient or improper slope.
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