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FAÇADE INSPECTION SAFETY PROGRAM

P R E S E N T E D B Y

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PRESENTATION OVERVIEW

This presentation reviews how mandatory periodic façade inspections further public safety. A review of 1 RCNY-103-04 provisions and the regulatory basis for NYC's **Façade Inspections and Safety Program (FISP)**. Additionally, the presentation goes over:

- NYC's FISP – the first mandatory façade inspection program enacted in the United States;
- FISP requirements and how to apply these requirements to specific buildings;
- FISP regulations as they pertain to potential safety concerns in order to mitigate safety risks; and
- Review the critical examination of the building façade process and be able to identify signs of façade deterioration to mitigate unsafe conditions.

FAÇADE INSPECTION SAFETY PROGRAM (FISP)/LOCAL LAW



FAÇADE



INSPECTION



SAFETY



PROGRAM

FAÇADE INSPECTION SAFETY PROGRAM (FISP)/LOCAL LAW

The mandate of the **Façade Inspection Safety Program/Local Law Unit** is to ensure dangerous and potentially dangerous conditions are identified and repaired before catastrophic failure occurs.

- The FISP/Local Law team is made up of specialized Plan Examiners, Inspectors, and Administrative Staff.
- The unit oversees buildings over 6 stories
 - 16,000 in Cycle 9

INVESTIGATIVE ENGINEERING SERVICES (IES)

The Façade/Local Law Unit is part of DOB's enforcement arm. The unit falls under the umbrella of DOB's **Investigative Engineering Services**, which includes:

- Forensic Engineering Unit (FEU)
- Concrete Enforcement Unit (CEU)
- Retaining Wall Unit (RWU)

Other IES initiatives include Structurally Compromised Buildings, Cooling Towers, and Sprinklers.

FAÇADE ORDINANCES: MANDATORY PERIODIC FAÇADE INSPECTIONS

■ Purpose: Identify & Prevent Dangerous Conditions

A façade ordinance furthers public safety by requiring certain buildings to be periodically inspected to assess the status of their exterior wall and appurtenances to identify and prevent dangerous conditions from developing before catastrophic failure occurs.

Façade ordinances establish:

- establish procedures for inspection, evaluation, and reporting requirements
- which buildings are subject to inspection and compliance filings (over a certain height or certain number of stories)
- who can inspect the buildings and the qualifications needed to conduct inspection
- when and how often an inspection must occur

OTHER CITIES WITH PERIODIC FAÇADE INSPECTION REQUIREMENTS

City	Enacted	Frequency	Inspection Performed by
New York, NY	1980	5 years	QEWI
Columbus, OH	1985	5 years	Registered Architect or Registered Structural Engineer
Boston, MA	1995	5 years (1 year if unoccupied)	Registered Architect or Registered Structural Engineer
Chicago, IL	1996	2 years* (Critical exam every 4, 8, or 12 years)	Registered Architect or Registered Structural Engineer
Milwaukee, WI	2001	5, 8 or 12 years (Based on age)	Registered Architect or Registered Structural Engineer
Detroit, MI	2003	5 years	"competent persons" (contractor or inspector, PE, or RA)
Pittsburgh, PA	2004	5 Years	Architect or Professional Engineer
St. Louis, MO	2009	5 Years, or 3 years for balconies, stairs, and fire	Architect or Professional Engineer
Philadelphia, PA	2010	5 years	Architect or Professional Engineer
Quebec	2013	5 years	Architect or Professional Engineer
San Francisco, CA	2016	5 years	Architect or Professional Engineer
Cincinnati, OH	2016	5, 8, or 12 yrs (based on construction)	Architect or Professional Engineer
Cleveland	2016	5 years	design professional or special inspector
Singapore	2020	7 yrs	Architect or Professional Engineer

NYC FISP ORIGINS

- **May 16, 1979** – Barnard College freshman Grace Gold was walking with a friend when a piece of terra cotta fell from 601 West 115th Street in Manhattan, fatally striking her on the head.
- **February 21, 1980** – - **Local Law 10 of 1980** amended NYC Administrative Code adding section C26-105.3 to require periodic inspection of exterior walls and appurtenances of buildings greater than six stories every five years
- Longest continually running façade ordinance program in the country
- Multiple revisions often in response to fatal incidents or other tragic accidents

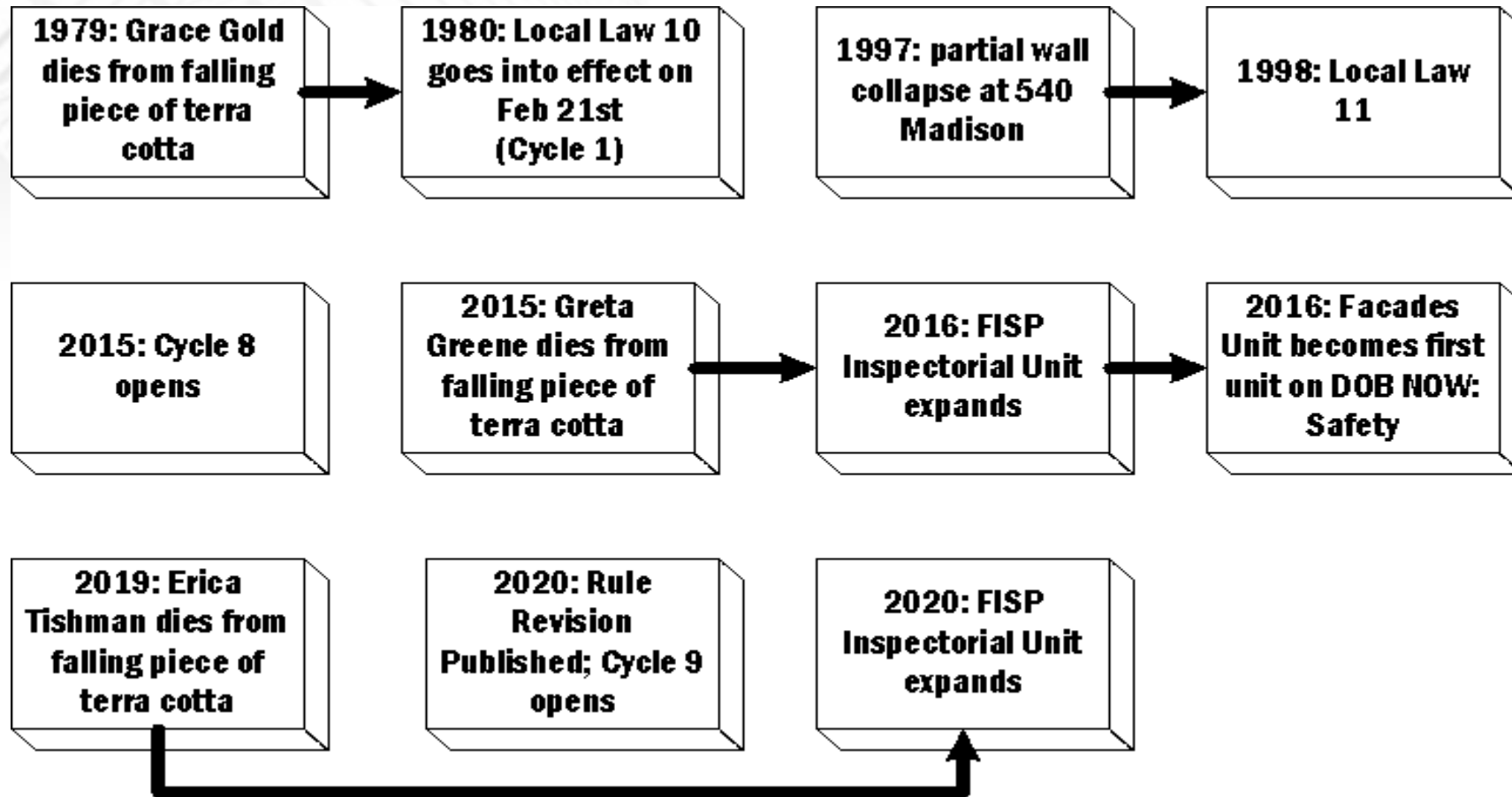
MAIN PROVISIONS of LOCAL LAW 10 of 1980 & 1 RCNY 32-03

- Over 6 stories > façade inspection every 5 years
- By or under supervision of registered design professional (PE or RA)
- Submitted to the Department of Buildings
- Inspection program = complete inspection
- ***Unsafe or Precautionary*** > recommendations for repair and maintenance.
- Immediate repairs of unsafe conditions
- Notification of completion of repairs (of unsafe conditions)

FIRST LAW & RULE MAIN LIMITATIONS

- Physical presence not required
- Close-up inspection not required
- No amended report for unsafe conditions
- Exemption for facades 25' or more from the street line
- Mapping not required

TIMELINE OF DEVELOPMENT OF FISP/LOCAL LAW



1986 REVISION TO 1 RCNY 32-03

- Introduced requirement for a *detailed* amended report, following an unsafe report
- Established 30-day time frame for completion of repairs
- Established filing of time extensions for work that could not be completed within 30-day time frame

540 MADISON AVENUE



MAJOR RULE REVISIONS: LOCAL LAW 11 OF 1998

- December 9, 1997- brick cavity wall failure at 540 Madison Avenue > more than 25 feet from the street line> not subject to LL10/80.
- Removed Section 26-105.3 (Local Law 10 of 1980) and added Section 27-129 to the 196
- Walls more than 25' from street line no longer exempt from inspection
- A physical examination from a scaffold or other observation platform is **required** for a representative sample of the exterior wall
- Introduced classifications SAFE, UNSAFE, or SWARMP still in use today.

2008 BUILDING CODE > 1 RCNY 103-04

- July 2008: first major overhaul of the New York City Building Code in 40 years enacted
- Façade inspection requirement incorporated to Article 302 of the accompanying Administrative Code
- 1 RCNY 103-04 enacted on January 29, 2011
- Introduced staggered filing cycles

2020 REVISIONS TO 1 RCNY 103-04

- Close-up inspection requirements increased: physical examinations required at intervals no greater than 60' for all walls facing a public right-of-way
- Probes required for cavity walls every odd-numbered cycle, at the same interval as close-up inspections
- Mapping of unsafe and SWARMP conditions required
- Qualified Exterior Wall Inspector (QEWI) to indicate type and location of public protection

NYC ADMINISTRATIVE CODE §28-301.1

MAINTENANCE OF BUILDINGS: SAFE

CHAPTER 3

MAINTENANCE OF BUILDINGS

ARTICLE 301 GENERAL

§28-301.1 Owner's responsibilities. All buildings and all parts thereof and all other structures shall be maintained in a safe condition. All service equipment, means of egress, materials, devices, and safeguards that are required in a building by the provisions of this code, the 1968 building code or other applicable laws or rules, or that were required by law when the building was erected, altered, or repaired, shall be maintained in good working condition. Whenever persons engaged in building operations have reason to believe in the course of such operations that any building or other structure is dangerous or unsafe, such person shall forthwith report such belief in writing to the department. The owner shall be responsible at all times to maintain the building and its facilities and all other structures regulated by this code in a safe and code-compliant manner and shall comply with the inspection and maintenance requirements of this chapter.

§28-301.2 Filing of reports in writing or electronically. Reports required to be filed under this chapter shall be filed in writing or electronically as the commissioner may require.

§28-301.1 IN SUMMARY

- Owner's responsibility to maintain buildings in safe and code compliant condition.
- Code compliance with codes and regulations in effect at time the building was constructed.
- Obligation to *report in writing* (FISP 3) any dangerous or unsafe conditions to the Department.
- Establishes *owner* shall comply of requirements of this Chapter > Article 302 > FISP Rule (the Rule)

ADMINISTRATIVE CODE § 28-302: REPORT MAINTENANCE OF EXTERIOR WALLS > 6 STORIES

ARTICLE 302 MAINTENANCE OF EXTERIOR WALLS

§28-302.1 General. A building's exterior walls and appurtenances thereof shall be maintained in a safe condition. All buildings greater than six stories shall comply with the maintenance requirement of this article.

Exception: The requirements imposed by this article shall not apply to any part of an exterior wall that is less than 12 inches (305 mm) from the exterior wall of an adjacent building.

§28-302.2 Inspection requirements. A critical examination of a building's exterior walls and appurtenances thereof shall be conducted at periodic intervals as set forth by rule of the commissioner, but such examination shall be conducted at least once every five years. No later than January 1, 2009 the commissioner shall by rule establish staggered inspection cycles for buildings required to comply with this section. The initial examination for a new building shall be conducted in the fifth year following the erection or installation of any exterior wall and/or appurtenances as evidenced by the issuance date of a temporary or final certificate of occupancy or as otherwise prescribed by rule.

1. Such examination shall be conducted on behalf of the building owner by or under the direct supervision of a registered design professional with appropriate qualifications as prescribed by the department.
2. Such examination shall include a complete review of the most recently prepared report and an inspection.
3. Such examination shall be conducted in accordance with rules promulgated by the commissioner.

ADMINISTRATIVE CODE §28-302: REPORT MAINTENANCE OF EXTERIOR WALLS > 6 STORIES

- Inspection requirements call for critical examination, not a scope of repairs document
- It talks about the five-year cycles and the staggered inspection cycles (A, B, and C)
- Registered Design Professional with appropriate qualifications as prescribed by the Department (the requirements for qualified exterior wall inspectors are listed in 1 RCNY 101-07)
- Reference to the Rule (1 RCNY 103-04)

ADMINISTRATIVE CODE §28-302: REPORT MAINTENANCE OF EXTERIOR WALLS > 6 STORIES

§28-302.5 Repair of exterior walls, unsafe condition. Upon the notification to the department of an unsafe condition, the owner, the owner's agent or the person in charge shall immediately commence such repairs, reinforcements or other measures as may be required to secure public safety and to make the building's exterior walls or appurtenances thereof conform to the provisions of this code.

1. All unsafe conditions shall be corrected within 90 days of filing the critical examination report.
2. The registered design professional shall reinspect the premises and file an amended report within two weeks after the repairs have been completed certifying that the unsafe conditions of the building have been corrected.
3. The commissioner may grant an extension of time of up to 90 days to complete the repairs required to correct an unsafe condition upon receipt and review of an initial extension application submitted by the registered design professional together with such additional documentation as may be prescribed by rule.
4. The commissioner may grant further extensions of time to complete the repairs required to remove an unsafe condition upon receipt and review of an application for a further extension submitted by the registered design professional together with such further documentation as may be prescribed by rule.

§28-302.6 Safe condition with a repair and maintenance program. The registered design professional shall not file a report of a safe condition with a repair and maintenance program for the same building for two consecutive filing periods unless the second such report is accompanied by his or her professional certification attesting to the correction of all conditions identified in the prior report as requiring repair.

ADMINISTRATIVE CODE §28-302: SUMMARY

- Repairs of unsafe conditions must begin immediately
- Repairs must be completed within 90 days OR
- Extension for up to 90 days (FISP 1) – the filing of an extension allows the Façade Unit to ensure public protection is still in place and follow up on the progress of repairs
- Additional extensions may be filed (FISP 2)
- §28-302.6 is about **SWARMP** conditions. SWARMP conditions must be repaired and can not carry over into the cycle. SWARMP conditions carried over from the previous cycle must be filed as **UNSAFE**

1 RCNY 103.04: REPORT SPECIFICATION HIGH POINTS

- **Safe condition.** *A condition of a building wall, any appurtenances thereto or any part thereof not requiring repair or maintenance to sustain the structural integrity of the exterior of the building and that will not become unsafe during the next five years.*
- **Safe with a repair and maintenance program (hereinafter ‘SWARMP’).** *A condition of a building wall, any appurtenances thereto or any part thereof that is safe at the time of inspection, but requires repairs or maintenance during the next five years, but not less than one year, in order to prevent its deterioration into an unsafe condition during that five-year period.*
 - > Public protection required once repairs begin
 - > Repairs may or may not require a permit

1 RCNY 103.04: REPORT SPECIFICATION HIGH POINTS

- **Unsafe condition.** *A condition of a building wall, any appurtenances thereto, or any part thereof that is hazardous to persons or property and requires repair within one (1) year of completion of critical examinations. In addition, any condition that was reported as SWARMP in a previous report and that is not corrected at the time of the current inspection must be reported as an unsafe condition.*
 - > Public protection is generally required immediately
 - > Public protection **must remain in place** until amended report is accepted or PSR granted.

1 RCNY 103-04: REPORT REQUIREMENTS (HIGHLIGHTS)

- Minimum 3 typical conditions for SAFE buildings
- Standard of care
- Photos of all elevations must be included
- Plot plan showing close-up inspections
- Mapping of all UNSAFE and SWARMP conditions
- Direct supervision by QEWI and review of previous reports required

1 RCNY 103-04: REPORT REQUIREMENTS (HIGHLIGHTS)

- Probes required for brick cavity wall 9th cycle and every odd cycle
- Close ups/drops every 60-0” along public right of way
- Previous maintenance repairs permits #s and violations must be listed on report
- Extreme caution if NRF

(c)(2)(vi) HANDS-ON INVESTIGATIONS

- Close-up inspection to be performed at intervals of **not more than 60'-0"** fronting public right-of-way per table in rule
- QEWI to determine most deleterious locations
- Drones, high resolution photos, non-destructive testing, or other similar methods do not eliminate requirements for close-up inspections

(c)(2)(v) PROBE AT CAVITY WALL

- Starting in Cycle 9 and every **odd** cycle thereafter
- QEWI determines the location of the probes
- Minimum of a single probe along each required close-up inspection
- Report the presence, condition, and spacing of wall ties
- Exceptions for building repairs, new buildings, or alternative method

(c)(3)(iii)(M)(3) PHOTO REQUIREMENTS OF CAVITY WALL PROBE

- Each probe opening showing location and size of probes
- Interior of probe showing cross section of the wall
- Measurement of the spacing of the wall ties
- Close-up of the wall tie type and installation
- Any other condition that indicates the soundness of the wall ties and cavity wall

(c)(3)(iii)(G) MAPPING



Inspection findings could be documented either on elevation drawings, marked-up elevation photographs, or a combination of both as long as a clear depiction of the locations of all of the façade conditions is provided.

(c)(3)(iii)(K) RECOMMENDED TIMEFRAME FOR REPAIRS OF UNSAFE ITEMS

- QEWI must provide recommended time frame for repairs to bring the building to **SWARMP** or **SAFE** status, and must indicate the date the work will be completed
- Time frames of more than five (5) years will not be accepted
- Extensions will not be granted after the recommended timeframe

(d) REVISED CIVIL PENALTY SCHEDULE



- Civil Penalty for Failure to File is quadrupled to \$1,000 per month plus late filing of \$5,000 annually
- Failure to Correct Civil Penalty is now dependent on length of shed on property
- New Civil Penalty for SWARMP conditions turning into UNSAFE conditions

(f) POSTING OF CONDITIONS CERTIFICATE

- Tenants of the building should be aware of the status. A Conditions Certificate issued by the Commissioner must be posted in the lobby or vestibule of the building within thirty (30) days of certificate issuance. The certificate can be printed from DOB NOW: *Safety*.
- The certificate must indicate the most recent condition of the exterior walls and appurtenances of the building.

PHOTO OF QEWI

- Dated photo documentation of the QEWI and/or inspectors performing physical ('close-up') inspections.
- The photo documentation requirement will be satisfied by including a dated photo of the QEWI or their delegated individual performing the close-up inspection while that inspection is in progress with the compliance filing report. The photo can be taken by anyone.



PROCESS OF CRITICAL EXAMINATION

- Review of previous reports
- History of repairs, permits, alterations
- Inspection program designed by QEWI for the specific building
- Close up inspections
- Cavity wall probes
- Photos and mapping of conditions
- Final inspection

NOTE: The inspection program must be based on the building envelope construction type, age of the material components, façade specific exposure to environmental conditions, and the presence of specific details and appurtenances. Consideration shall be given to the façade maintenance history and repairs as described in previous reports and submittals to DOB.

UNSAFE CONDITIONS

When uncovering UNSAFE conditions QEWIs must:

- Contact ownership to arrange for required public protection to be installed immediately.
- Call **311** or **911** immediately and file a complaint
- File a FISP3 form (Notification of Unsafe Conditions) in **DOB NOW: Safety**
- File an UNSAFE report and time extensions if necessary
- File an amended report after UNSAFE conditions are corrected

NOTE: Building owners are also required to report unsafe conditions.

EIFS FAILURES



NOTE: The inspection program must be based on the building envelope construction type, age of the material components, façade specific exposure to environmental conditions, and the presence of specific details and appurtenances. Consideration shall be given to the façade maintenance history and repairs as described in previous reports and submittals to DOB.

EIFS FAILURE: 25-40 31st STREET (QNS)



August 2020 – Exposure #2 Southwest Façade STUCCO/ (FIES)

Exterior Insulation and Finish System materials dislodged and fell on adjoining roof from 3rd floor level to 6 floor level approximately 25' X 25' area 625 SQFT

EIFS FAILURE: 25-40 31st STREET (QNS)



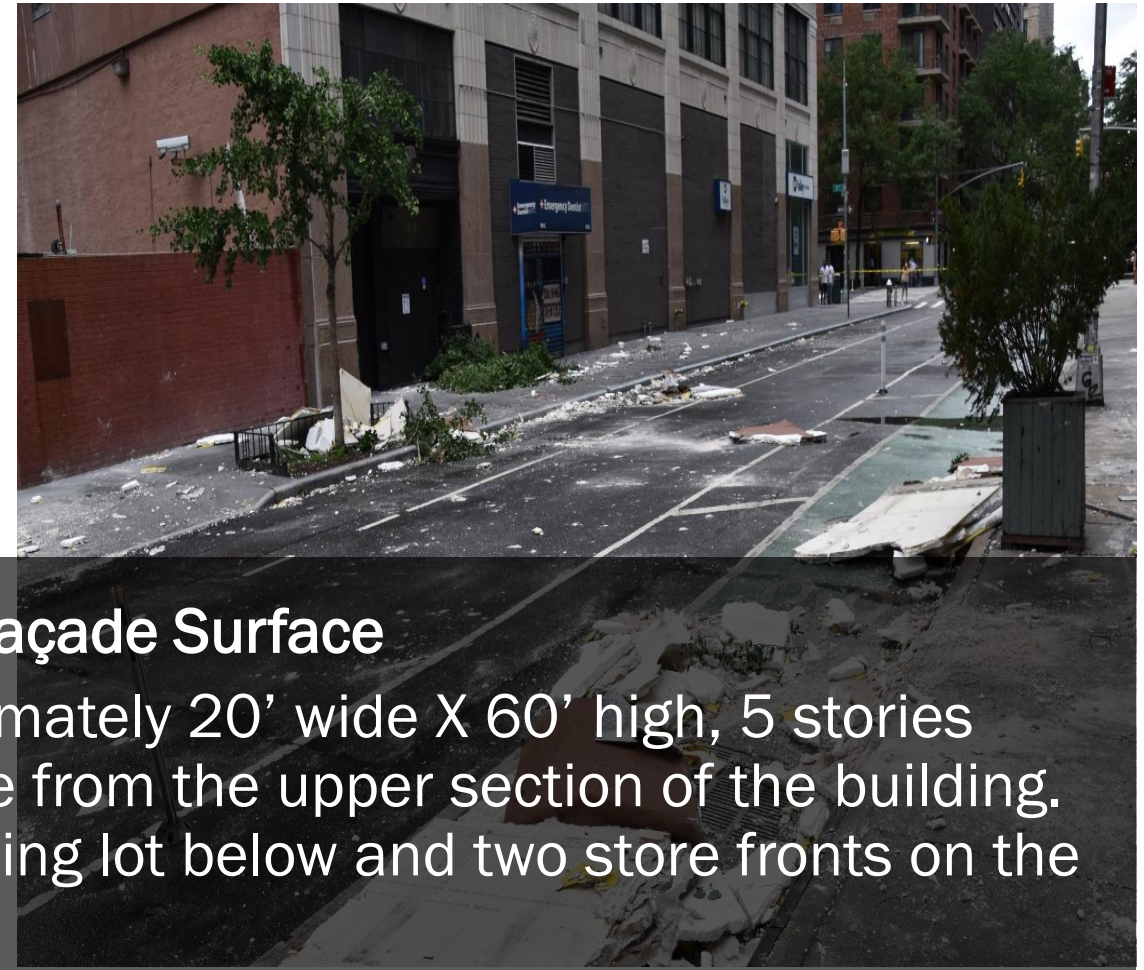
EIFS FAILURE: 25-40 31st STREET (QNS)



RECOMMENDATIONS

- Install sidewalk shed protection along the street elevation.
- Remove and replace the south wall EIFS cladding.
- Reinforce the north wall EIFS cladding attachment by installing mechanical anchors.

EIFS FAILURE: 100 EAST 12TH STREET



Exposure #3 East Elevation Section of Façade Surface

Laminated stucco board system approximately 20' wide X 60' high, 5 stories high, delaminated and fell off the façade from the upper section of the building. Damage was sustained to cars in a parking lot below and two store fronts on the opposite side of the street

EIFS FAILURES



CAUSE: Poor workmanship; missing/defective fasteners



THANK YOU

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