

Façade Inspection Safety Program: Deterioration of Historic Construction & Prior Codes - How They Mesh

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Objectives

1. To **protect** the public who live and work in New York City in and around its large population of buildings from falling pieces of façade (+/- 1M bldgs, 14.5K > 6 stories FISP bldgs)
2. Inform our audience how to research and understand the current and prior NYC Administrative and Building Code for maintaining SAFE building facades.
3. Inform our audience how to recognize different types and ages of buildings and their respective façade characteristics and performance.
4. Inform our audience how to identify typical chronic façade failures and deficiencies.
5. Inform our audience to free web sites for codes, laws, and regulatory filings with the Department.

FISP Requirements

Façade Inspection safety program

Since 1980 NYC Laws, Rules and affidavits are effect that govern the reporting and maintenance of facades for structures over 6 stories.

Local Law 10 of 1980 became 1968 Building Code § 27-129 which was accompanied by Rule 32-03 and TR6

Local Law 11 of 1998 again immediately incorporated in 1968 Building Code.

Currently 2014:

Administrative Code § 28-302

1 RCNY § 101-07: FISP Qualifications

1 RCNY § 103-04: FISP Rule

Administrative Code Provisions

Structural Evaluation / General

2014 NYCBC

- § 28–102.1 – Applicability – General – Most restrictive provision shall govern
- § 28–102.4 – The lawful use of an existing building or structure may continue unless there is a retroactive change required
- § 28–103.2 – Interpretation - This code shall be **liberally** interpreted to secure the beneficial purposes thereof.
- § 28–103.8 – Matters Not Provided For – To be determined by the DOB.
- § 28–301.1 – Failure to Maintain – Owner’s Responsibilities – Safe
- § 28–301.2 – Intent – Minimum Standards

Big Picture Topics

- Building Codes – Intent – Provide minimum standards
- **Safe** vs. **Unsafe** and the condition in-between
- All buildings governed by Administrative Code
 - Buildings shall be maintained **Safe**.
- Evaluation vs. Repair
- Buildings are governed by the code at the time they were built:
 - How does this help? Assessment and Evaluation
- Code Evolution: Integrated System vs. Disparate Systems
- Structural Specification: Prescriptive vs. Engineering, Materials
- Age vs. Environment vs. Material Science
 - Interior vs. Exterior , Brittle vs. Ductile
- Thresholds

(1/4) NYC Administrative Code § 28–301.1 Maintenance of Buildings: SAFE

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.

(2/4) Admin 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.

- Conditions report, not a repair scoping document.
- Safe - at all times (*meets minimum standards*)
- Unsafe – always with public safety measures
- *Safe With a Repair and Maintenance Program -*
(Always a precursor to repairs)
- 5 year report cycle – owners must file
- Qualified licensed design professional

(3/4) 1 RCNY 103.04: report specification high points

- 1 RCNY 103-04 is a LAW and accompanies A/C 28-302. This 7 page document provides minimum specifications for the FISP report. There are 10 previous versions of rule. **Minimum** specifications apply to SAFE buildings.
- All facades must be maintained **SAFE** by owners (§ 103.04 b.1.)
- All facades SAFE to remain so for minimum of 5 years.
- Examinations by owners on a 5 yearly basis. Extreme caution if NRF.
- QEWI must immediately notify DOB of UNSAFE conditions (311 and FISP 3)
- Direct supervision by QEWI and review of previous reports required.
- Close-up inspections required. Probes and physical tests. Standard of Care.
- Previous maintenance repairs, Alt filings and vios must be incorporated.
- Balcony enclosures need permits. Balcony railings included in report (code inc'd)

(4/4) TR 6: affidavit of

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6 Owner of Record Information (Not a Representative or Business Manager or Agent)			
Last Name		First Name	MI
Bus. Name		Bus. Address	Bus. Tel.
City	State	Zip	Bus. Fax
E-Mail		Mobile Phone	

7 Statements and Signatures	
Owner / Owner Representative <p>(A) I hereby state that I am the owner/owner's representative of the premises referenced in the attached report. Furthermore, I have received and read a copy of the attached report and I am aware of the required repairs and/or maintenance, if any and the recommended time frame for same.</p> <p>(B) I certify that all items noted as SWARMP conditions in the previous cycle's report have been corrected/repared; or this report must be rated as Unsafe as per Administrative Code section §28-302.1, if applicable.</p> <p>Name _____ Signature _____</p> <p>Relationship to owner _____ Phone _____</p> <p>Email _____ Date _____</p>	Qualified Exterior Wall Inspector (QEWI) <p>Name (please print) _____</p> <p>Signature _____ Date _____</p> <p>I hereby state that the Owner./Owner's Representative has authorized me to submit this report. Furthermore, I hereby state that all statements are correct and complete to the best of my knowledge. A copy of this report has been given to the owner.</p> <p>P.E. / R.A. Seal (apply NYS seal, then sign and date)</p>

§28-211.1 False statements in certificates, forms, written statements, applications, reports or certificates of correction. It shall be unlawful for any person to make a material false statement in any certificate, professional certification, form signed statement, application, report or certification of the correction of a violation required under the provisions of this code or any rule of any agency promulgated there under that such person knew or should have known to be false.

QEWI must inform OWNER of inspection conditions.
Means that QEWI and Owner comply with other 3 provisions

Sample FISP buildings

FISP bearing wall buildings – commercial and residential



+/- 1900's to 1930's. 15 to 30 story +/-
steel framed buildings. Solid masonry walls



Post war reinforced concrete flat slab cavity wall buildings

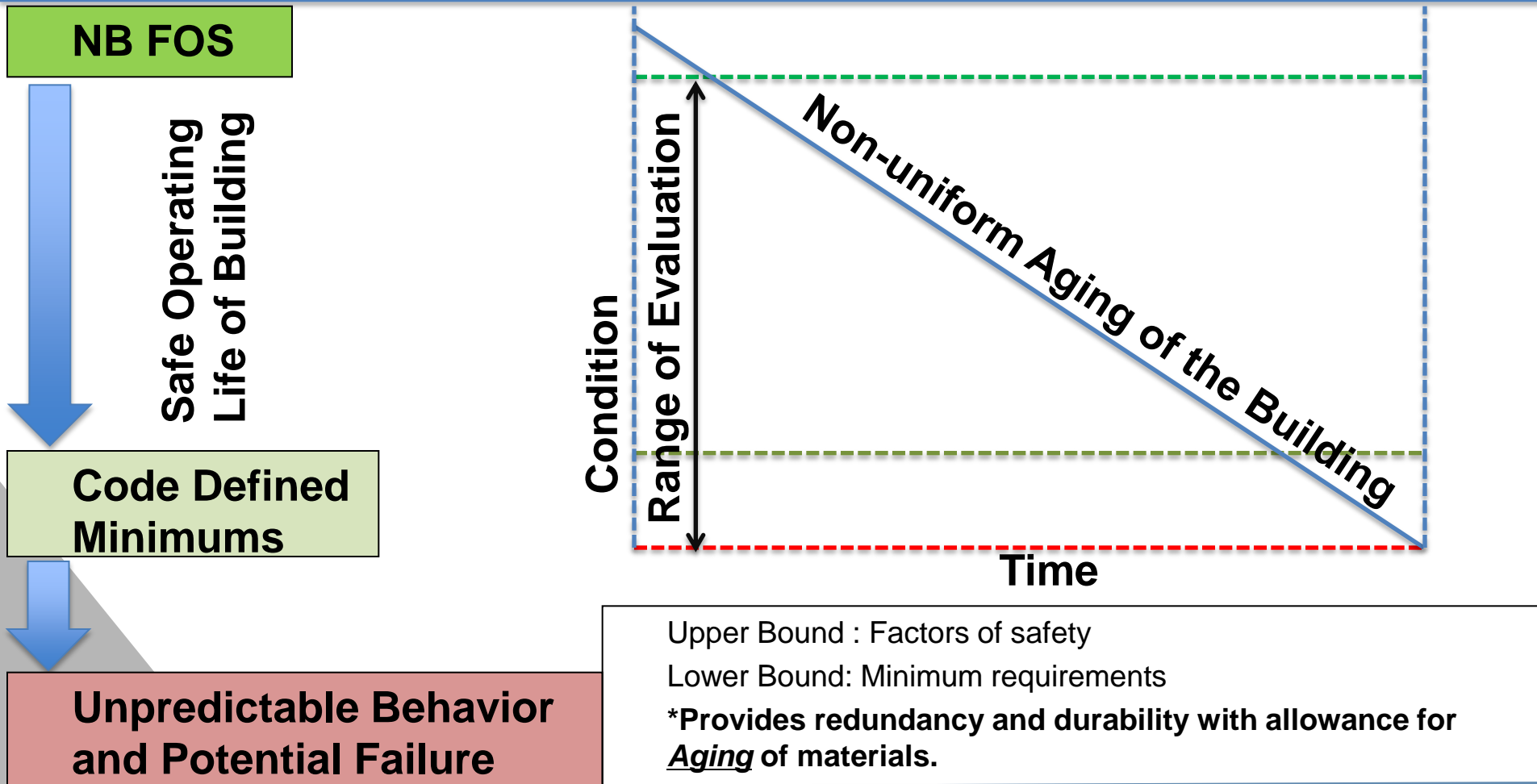


Contemporary high rises with window / curtain walls



Structural Evaluation:

Key Factors - Condition vs. Time

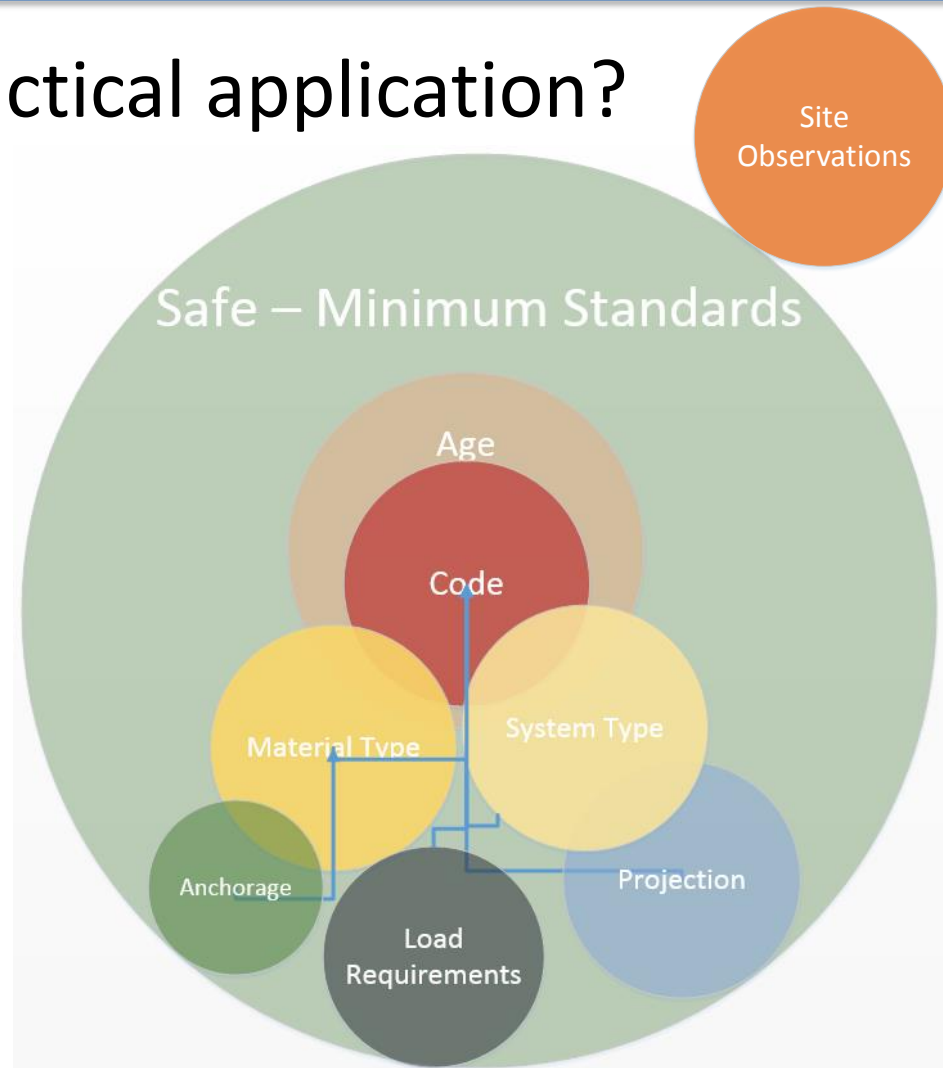


Application of Evaluation Principles

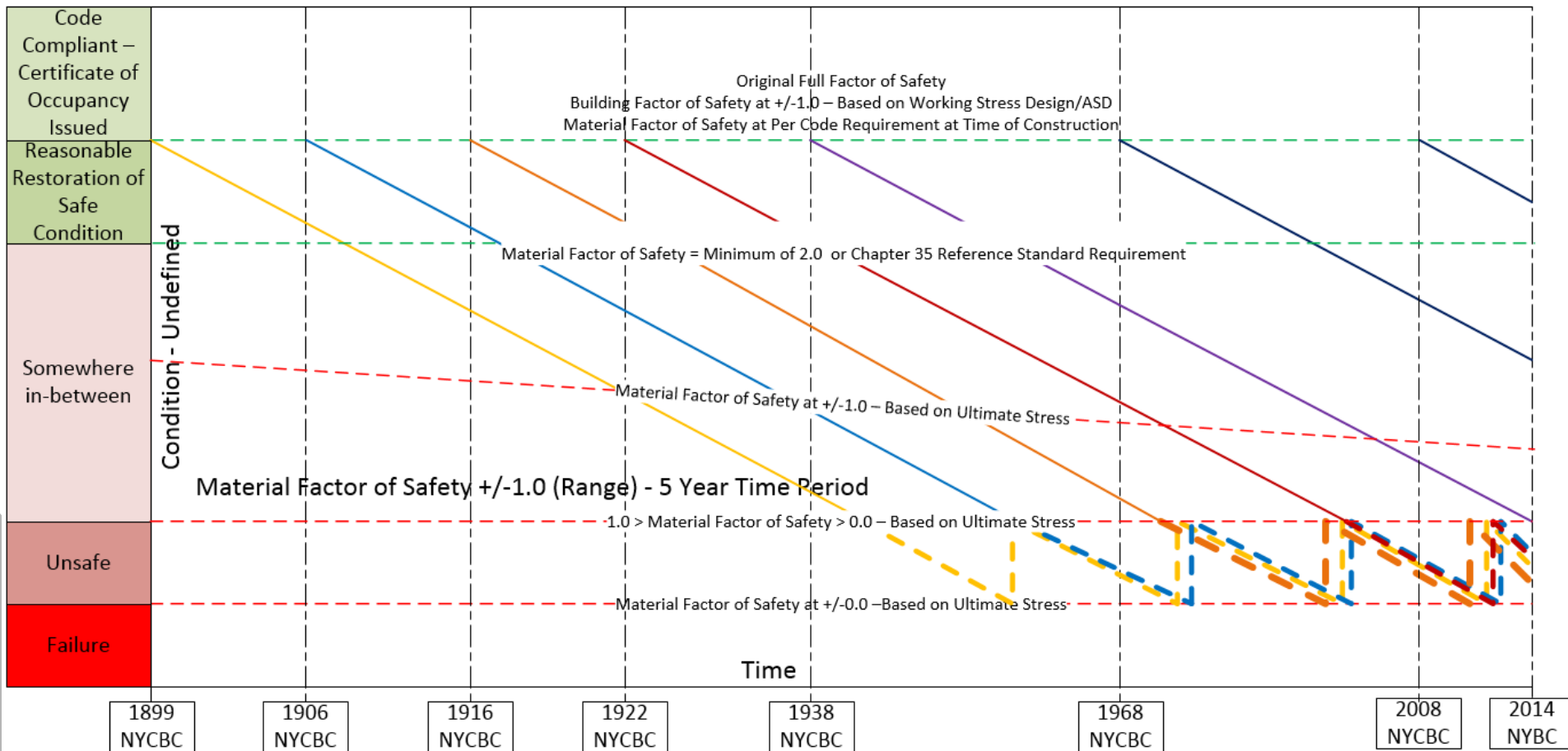
What's an example of a practical application?

– Façade Evaluation

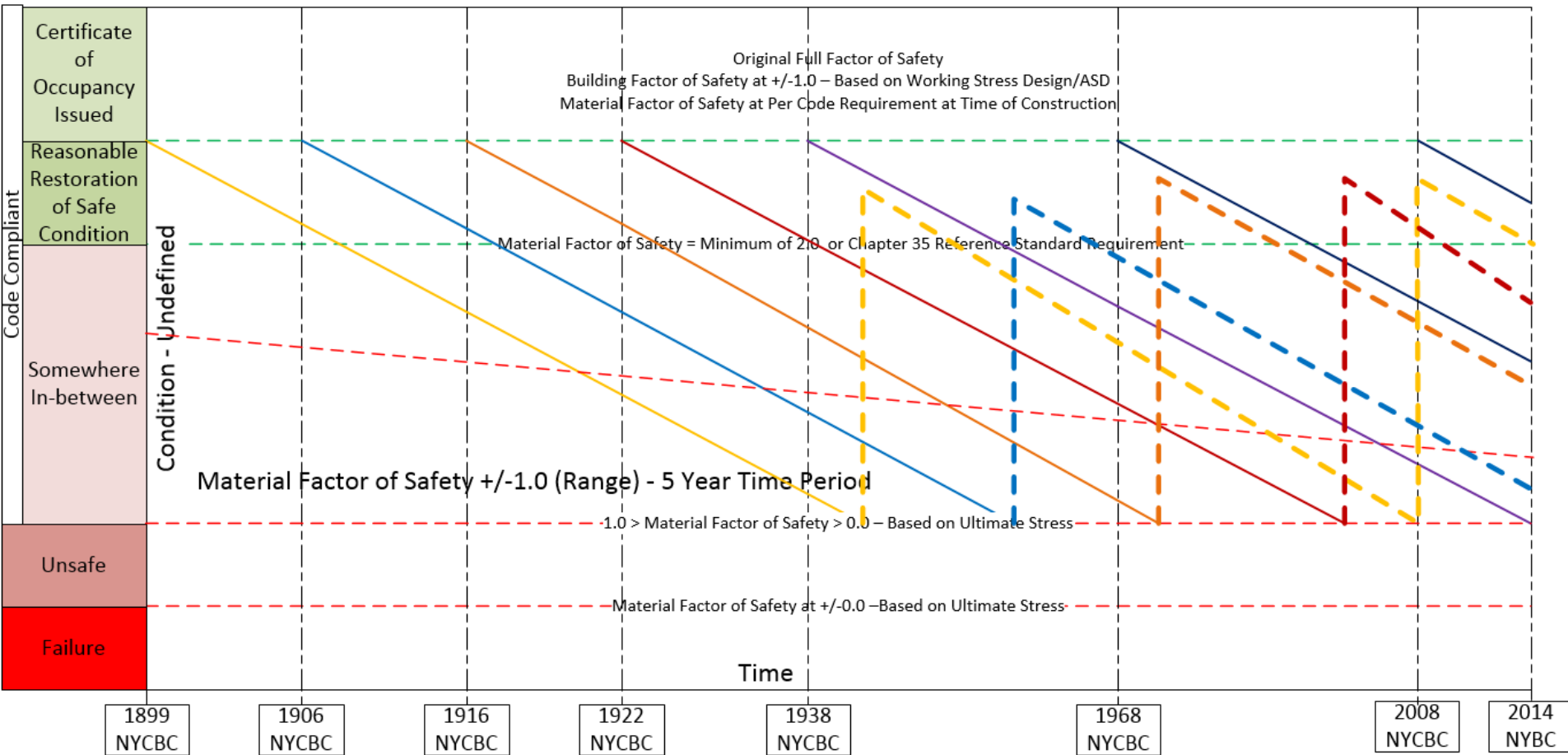
- Age → Code
- Projections
- Anchorage
- System Type
- Material Type and Integrity (brittle vs. ductile)
- Material Strength
- Load Requirements
- Site Observations



Condition vs. Time: For Consideration

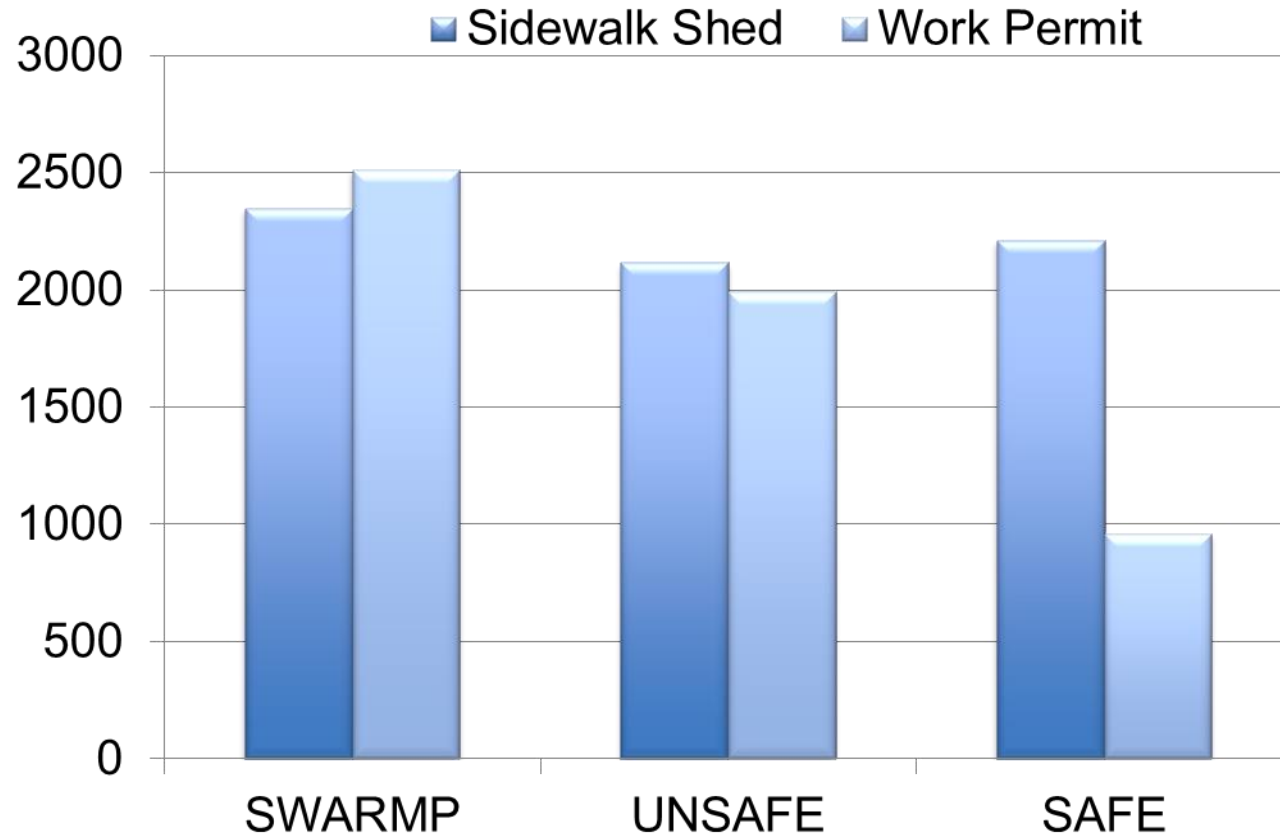


Condition vs. Time: For Consideration



Surprising Numbers Cycle 7

500 NRF's: (owners did not file reports)
update 6500 OK, 5000 SW, 900 UN



Example of unsafe condition filed SAFE



Broken and fallen t/c
patched with mortar
- hazardous



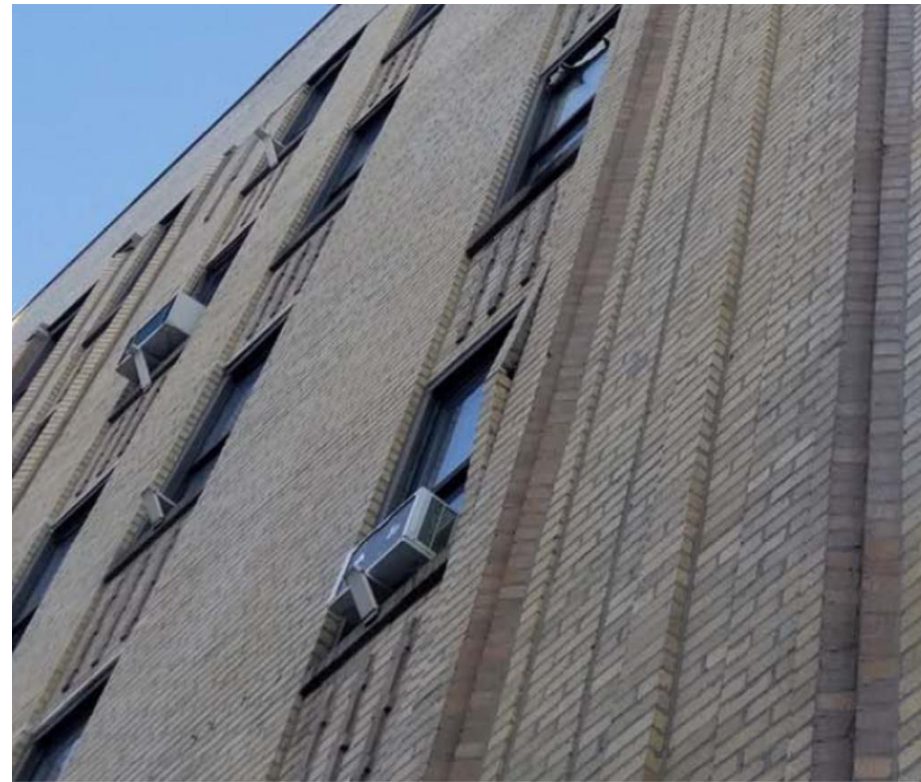
Unsafe. Not SAFE with repair



Filed SAFE: T/C sill fell - fatality



Stacked masonry



Filed SAFE: T/C dentil fell



Before T/C repairs
demanded by DOB.
Filed SAFE by QEWI



After T/C repairs
demanded by DOB.
Filed SAFE by QEWI again

5 months after
Amended filed
SAFE by QEWI



Filed SAFE: cast iron plate fell

1 month after FISP report filed SAFE by QEWI

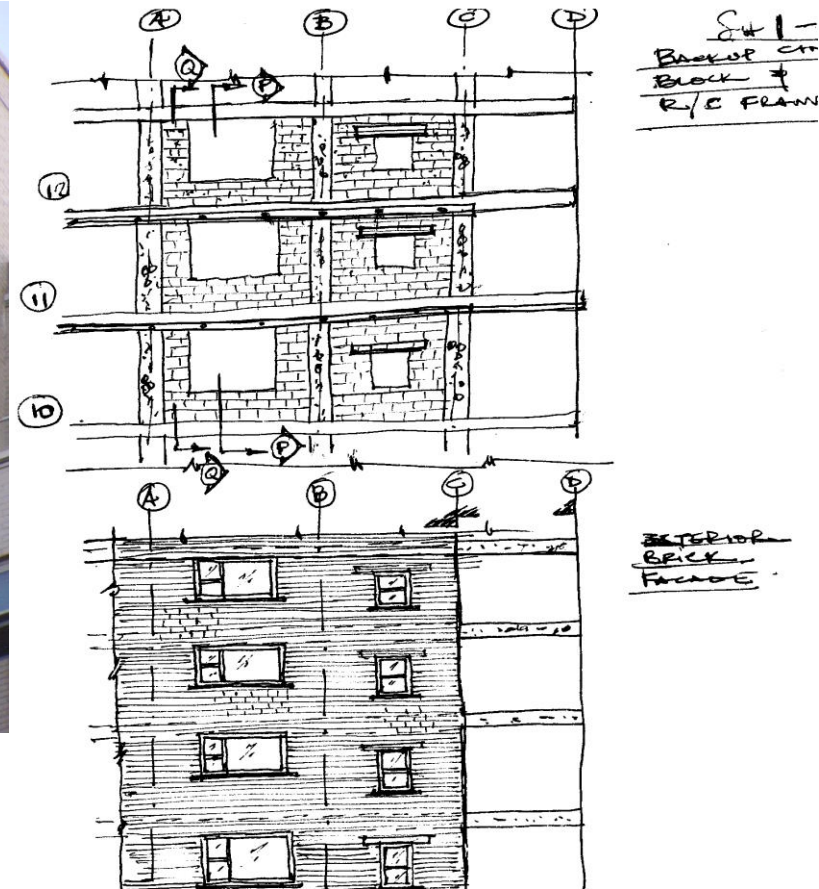


Problem jobs: cavity wall failures

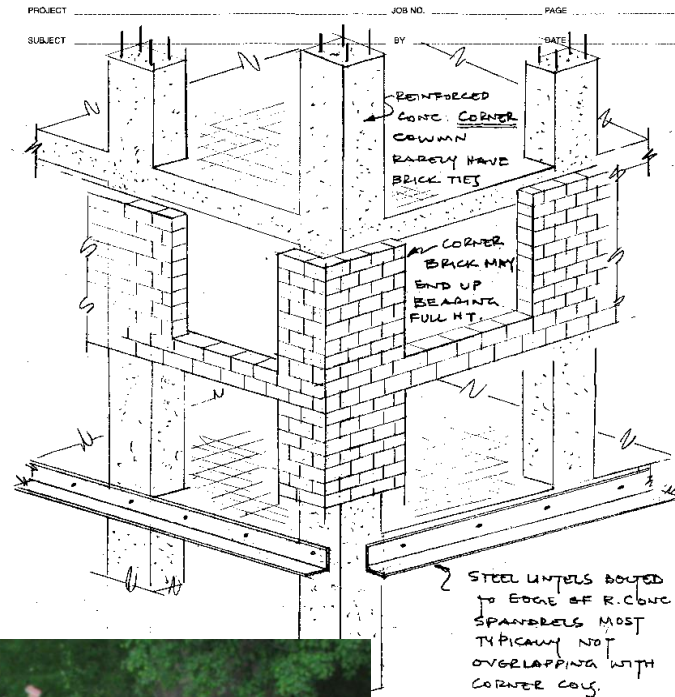
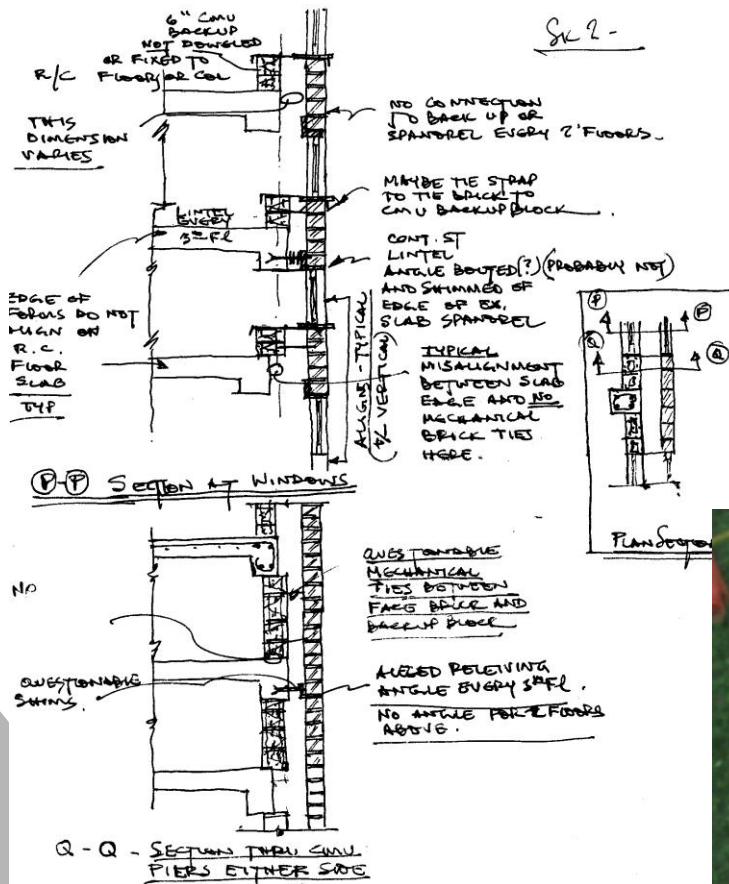


Problem jobs: Post war flat slab bldgs

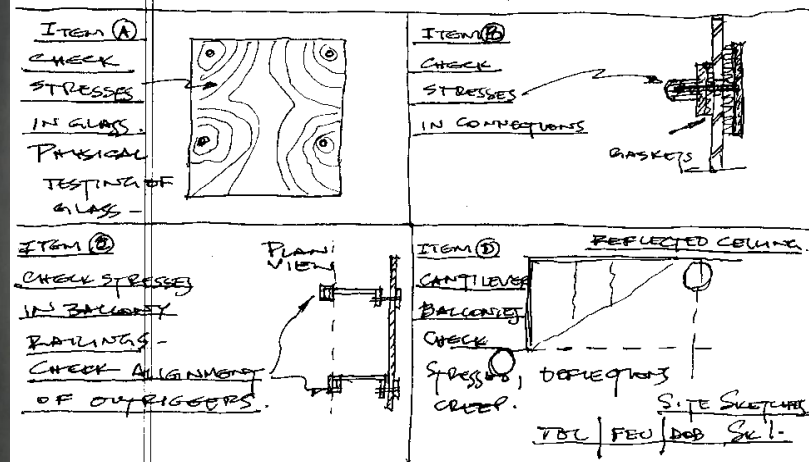
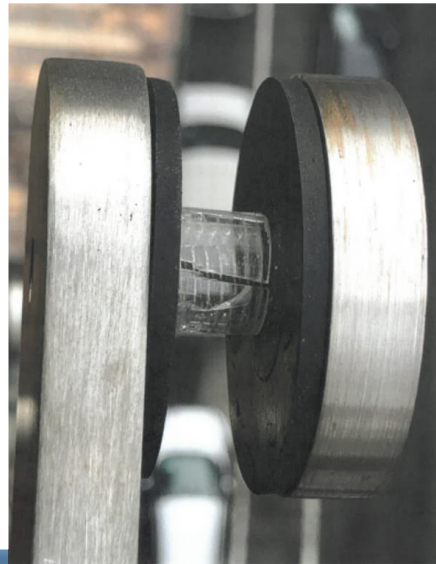
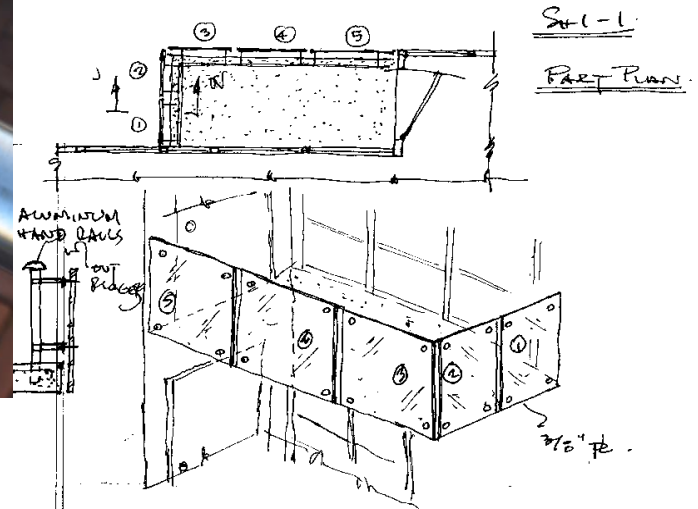
Delamination of exterior brick



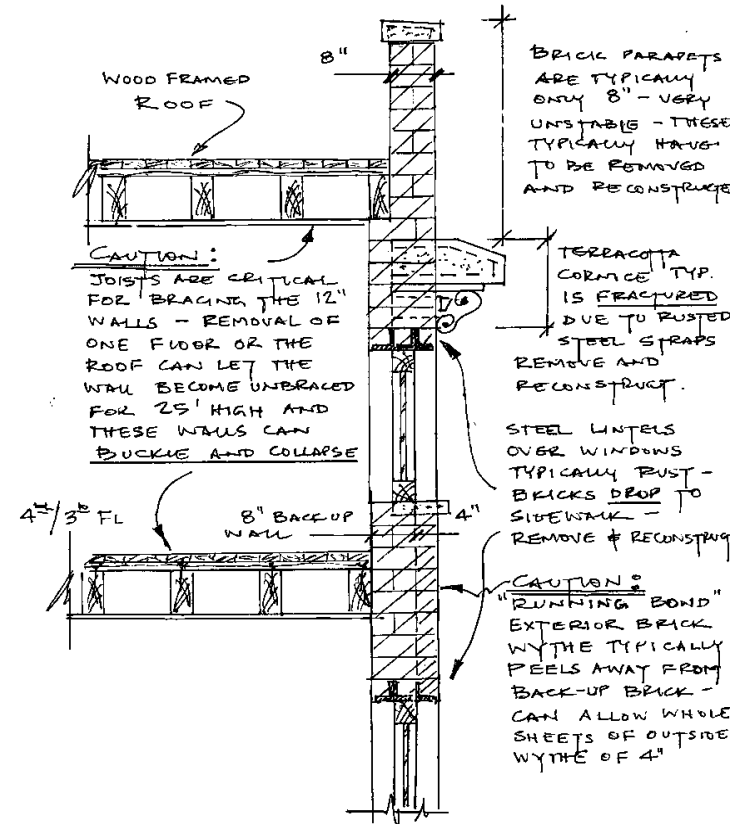
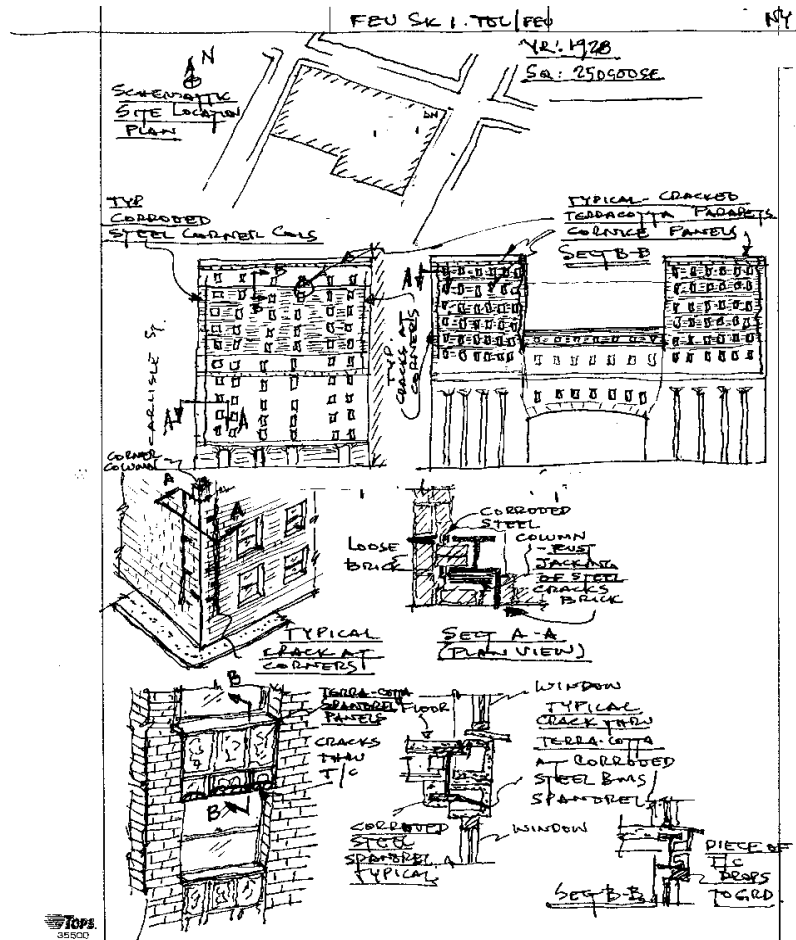
Analyzing the failure

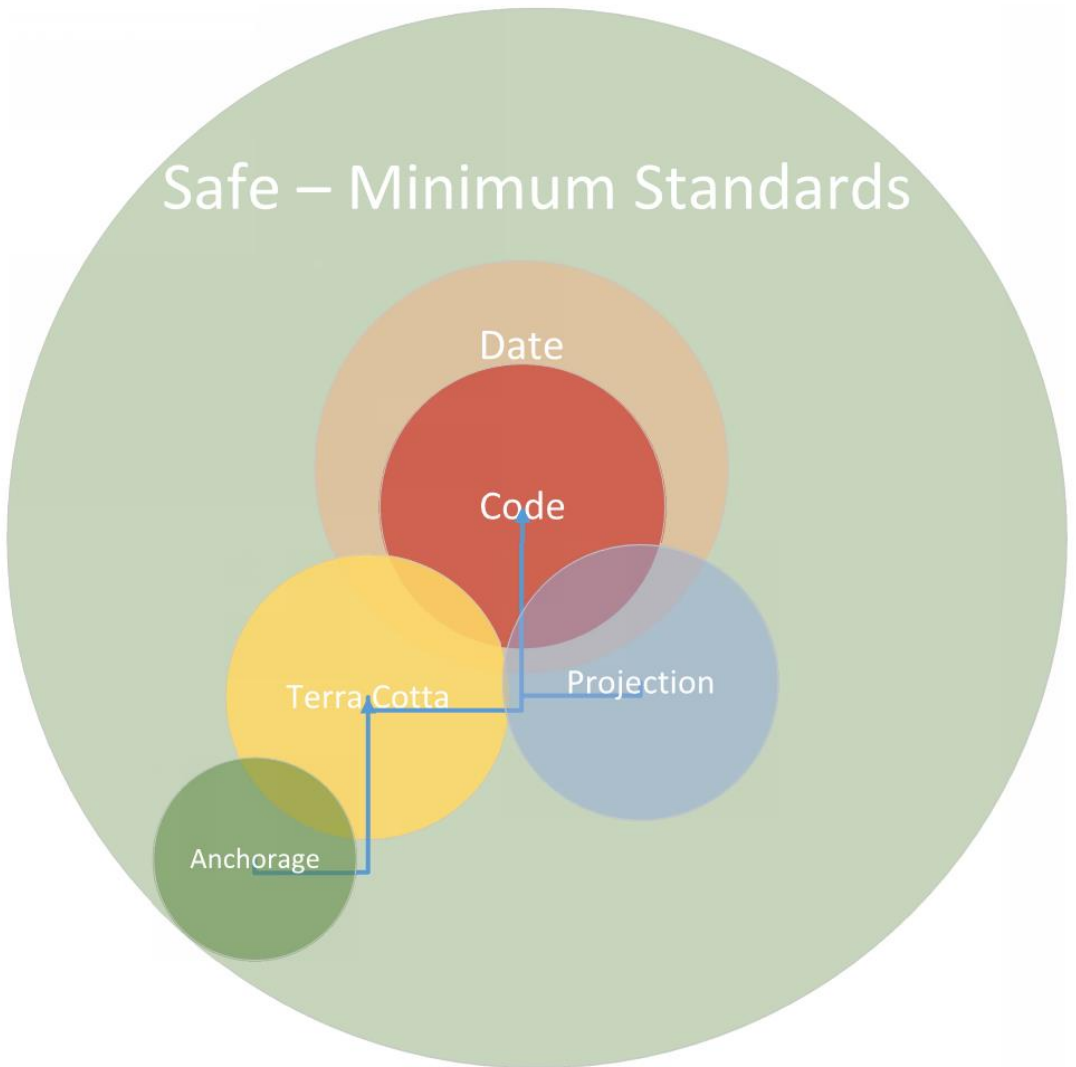
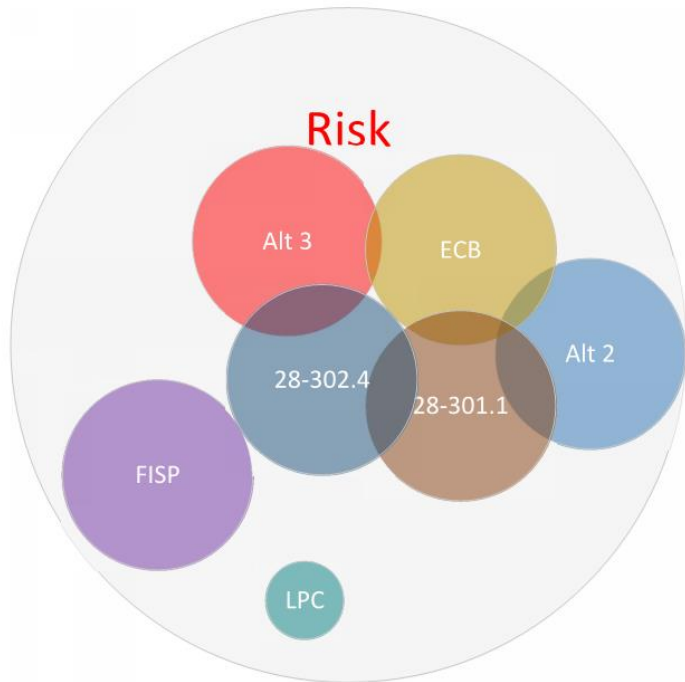


Analyzing the failure

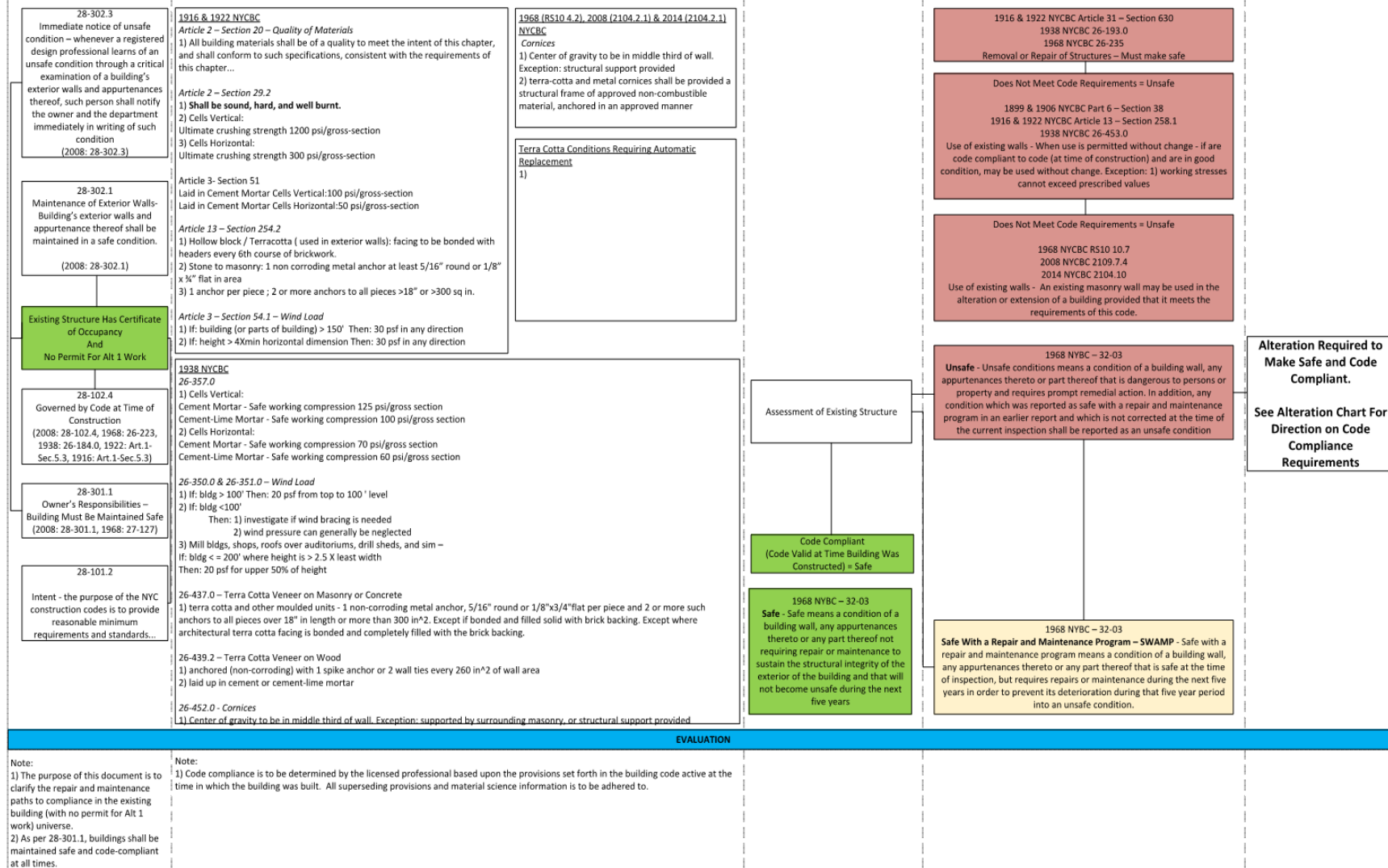


Analyzing the failure





Terra Cotta (Structural Clay Tile) Facades Buildings Over 6 Stories - Evaluation/Code Compliance











Support and Feedback

Send your *DOB NOW: Safety* questions to:
dobnowsupport@buildings.nyc.gov

Send any specific façade inquiries to:
facades@buildings.nyc.gov

Or call the Façade Unit general phone number at:
212-393-2551