

Cary Building  
105 Chambers Street Façade Restoration

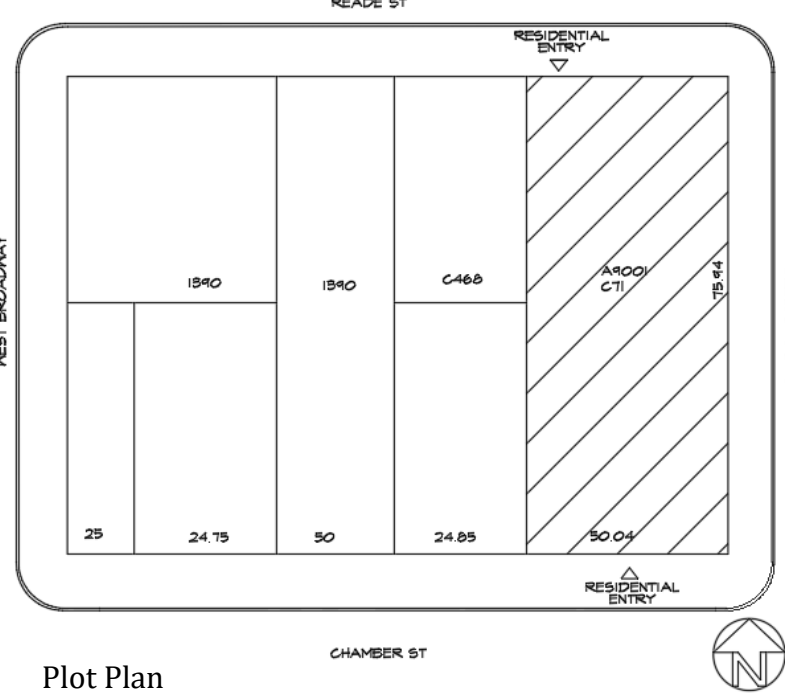
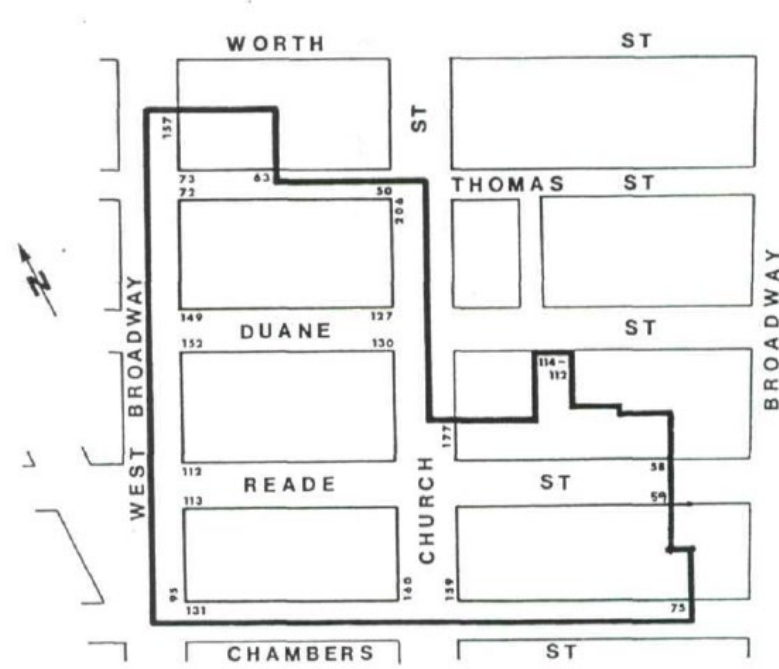
Localized Cast Iron Replacement

NYC Landmarks Preservation Commission Presentation

August 29<sup>th</sup>, 2023

Prepared by:

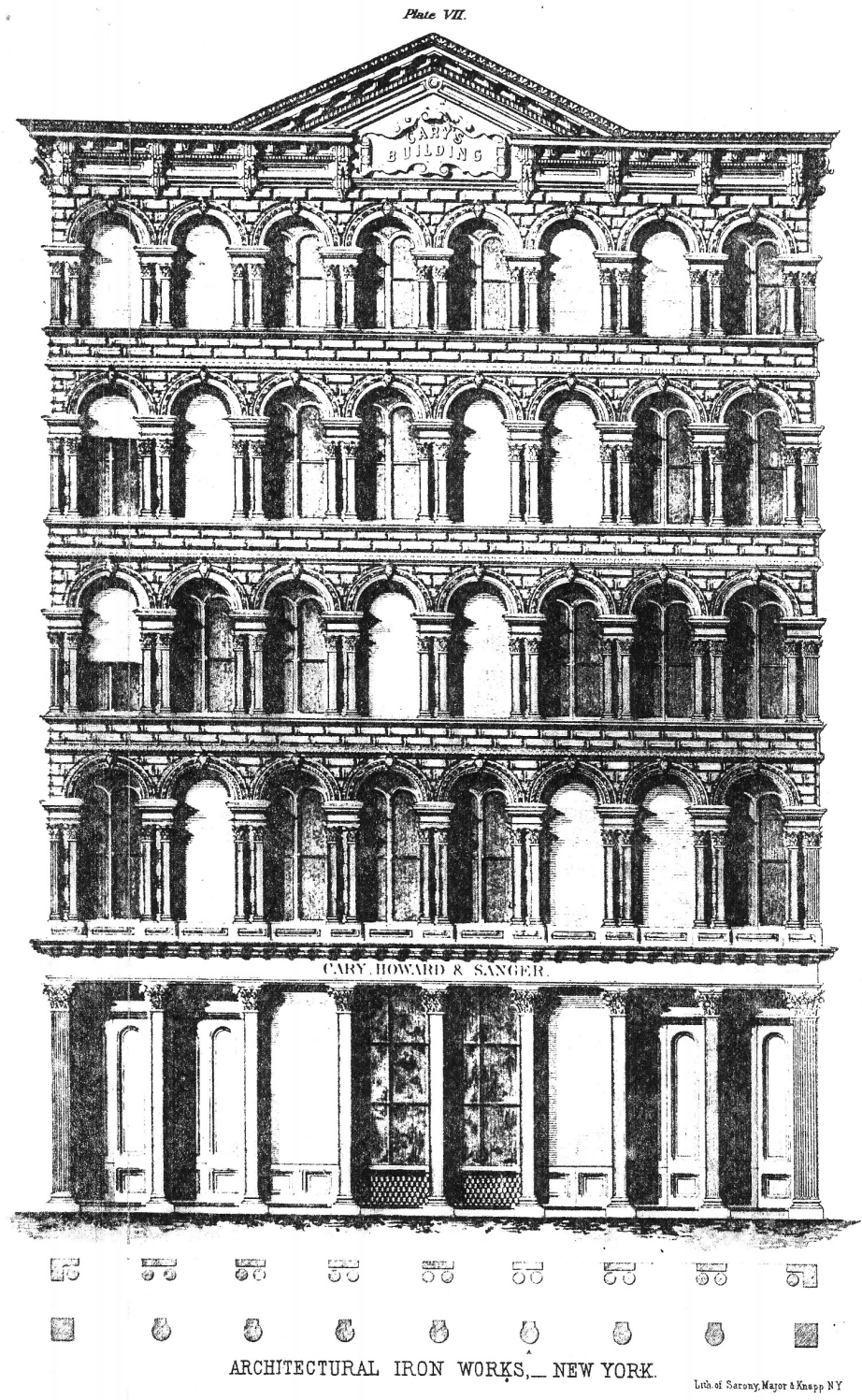




Block : 145  
 Lot: 7501  
 Zoning District: c6-3A  
 Zoning Map: 12B  
 Historic District: Tribeca South  
 Lot Area: 7,550 SF  
 Year Built: 1857

Plot Plan

Tribeca South Historic District  
 Designated Dec. 8, 1992.



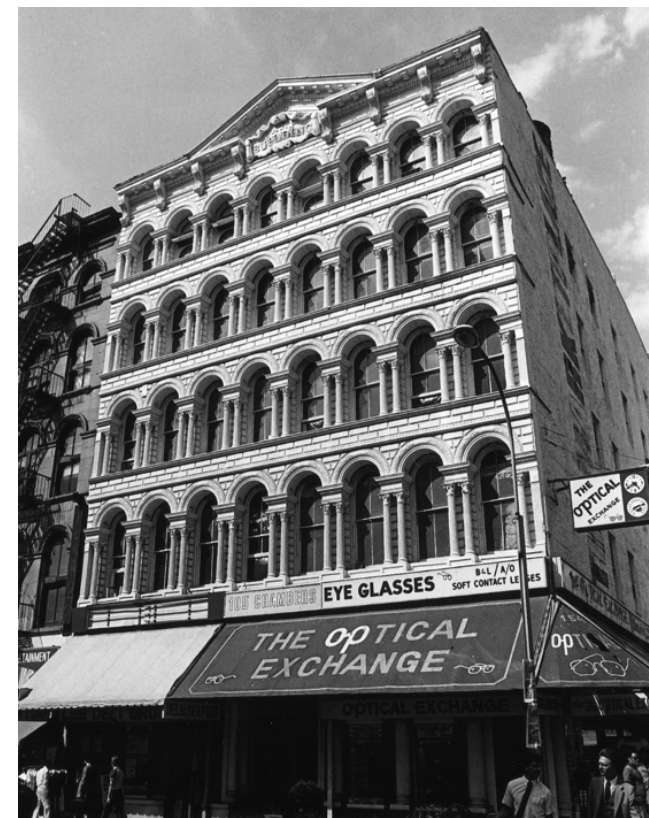
Cary Building Illustration (1865)  
 Badger's Illustrated Catalogue of Cast-Iron Architecture, 1981.



Tax Photo, 1940  
 Municipal Archives, NYC Department of Records.



Designation Photo Reade Street, 1982



Designation Photo Chambers Street, 1982



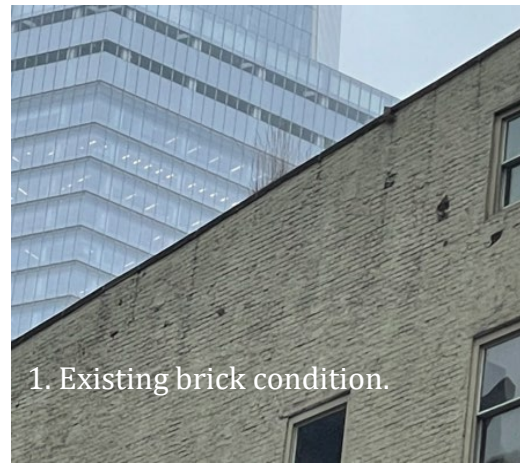
South Façade (Chambers St) - Existing Conditions



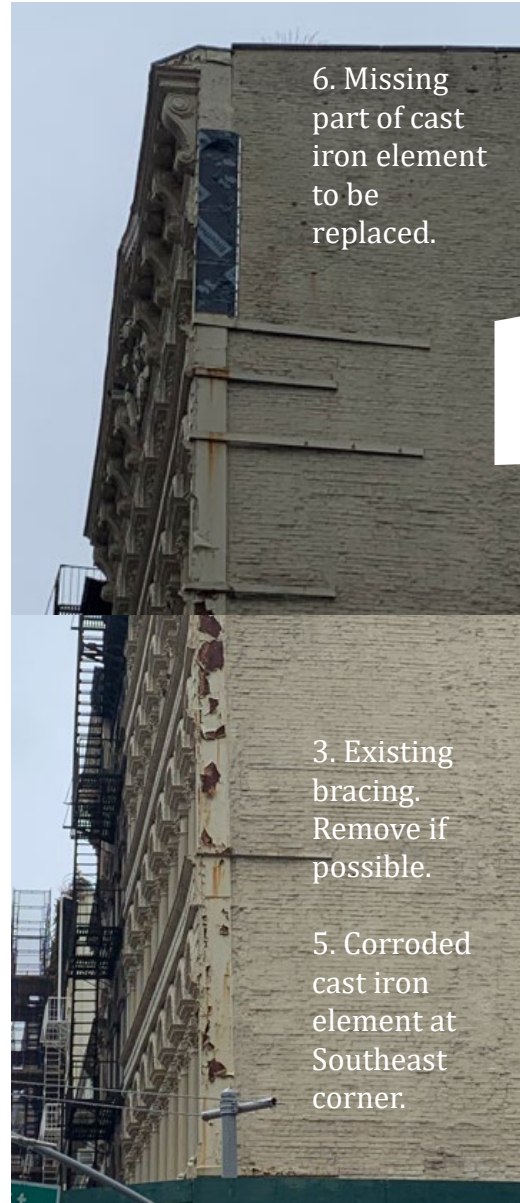
East Façade (Church St) - Existing Conditions



North Façade (Reade St) - Existing Conditions




1. Existing brick condition.




6. Missing part of cast iron element to be replaced.

3. Existing bracing. Remove if possible.

5. Corroded cast iron element at Southeast corner.

 Cast iron failure. Repair/Replace cast iron elements as needed.

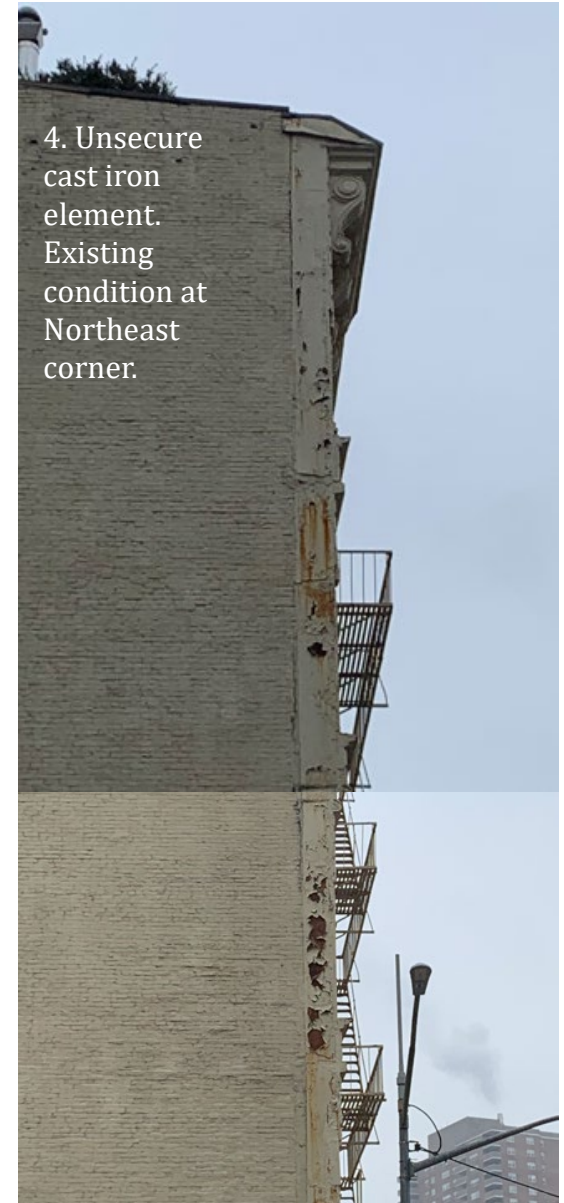
 Window lintel replacement.

 Brick replacement.

 Windowsill replacement.



2. Existing coating and brick condition.



4. Unsecure cast iron element. Existing condition at Northeast corner.



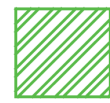
East Façade (Church St) - Existing Conditions



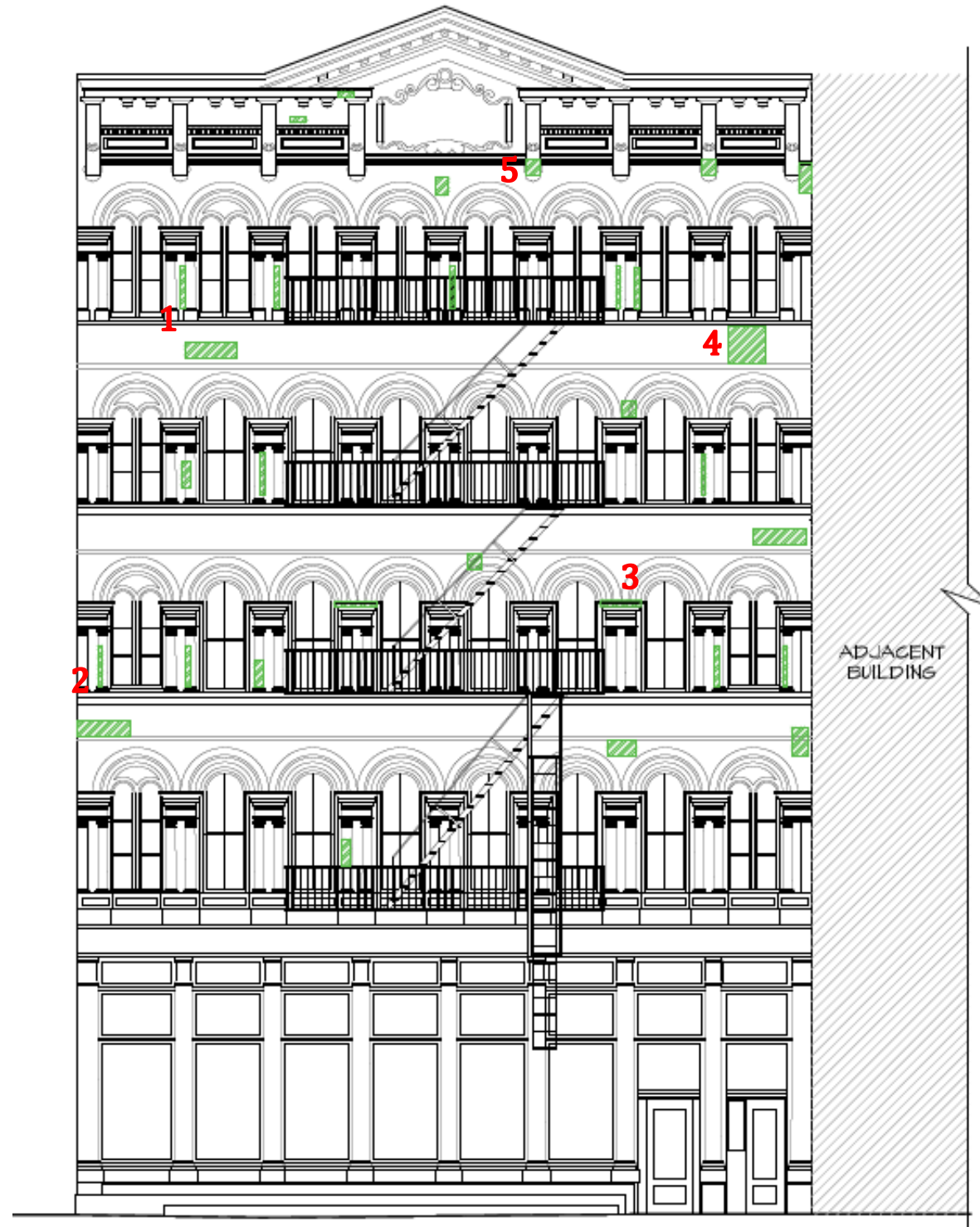
1. Corroded cast iron element. Open seam.



2. Bented and rusted cast iron element.



Cast iron failure. Repair/Replace cast iron elements as needed.



North Façade (Reade St) - Existing Conditions



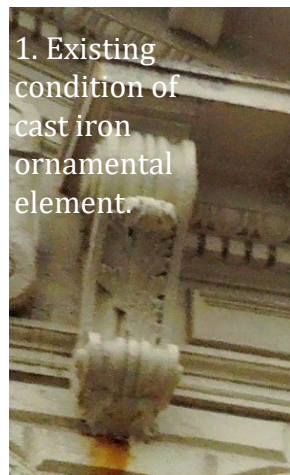
5. Damaged cast iron element.



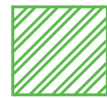
4. Rusted cast iron element.



3. Deteriorated cast iron element



1. Existing condition of cast iron ornamental element.



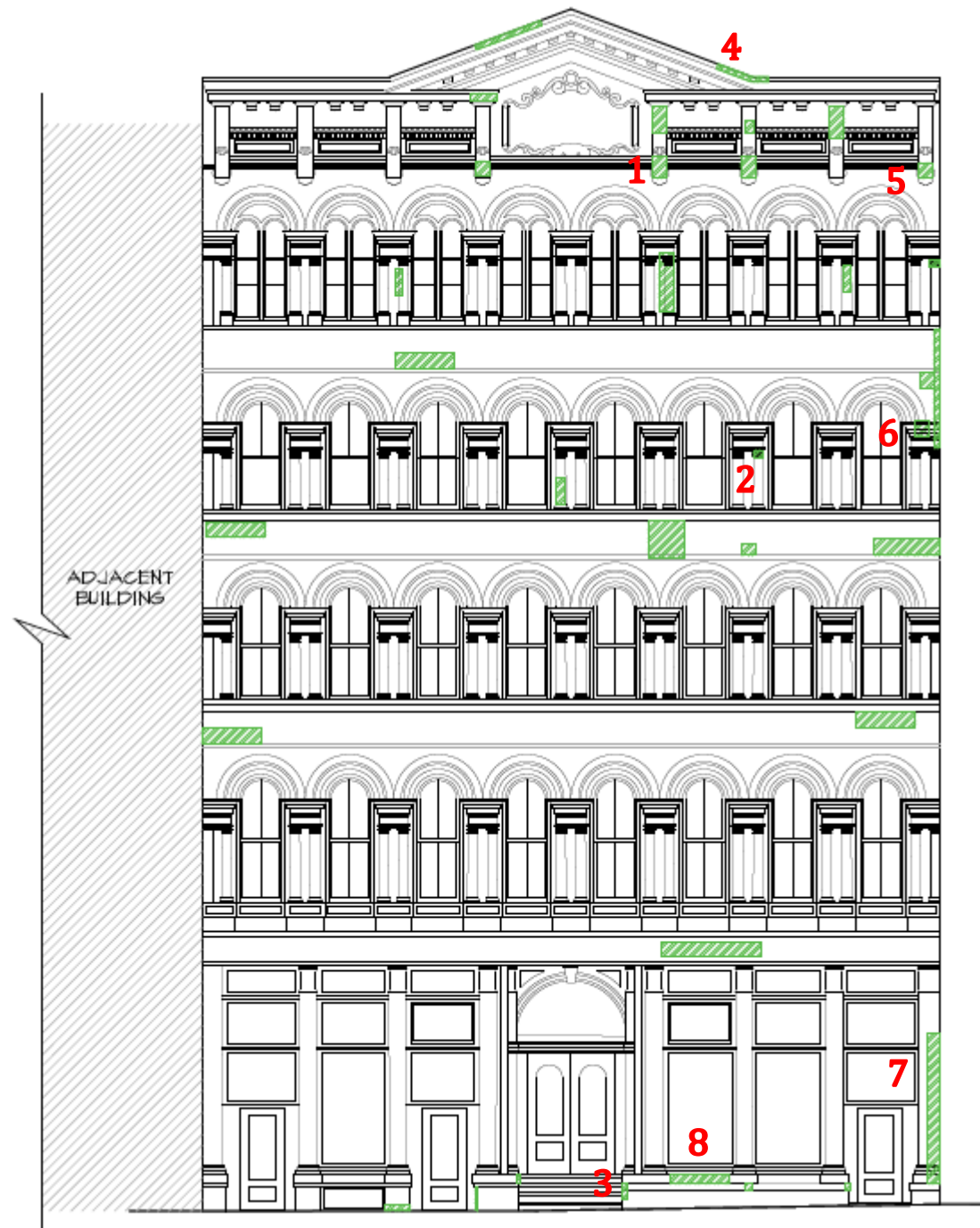
Cast iron failure. Repair/Replace cast iron elements as needed.



2. Missing cast iron element.



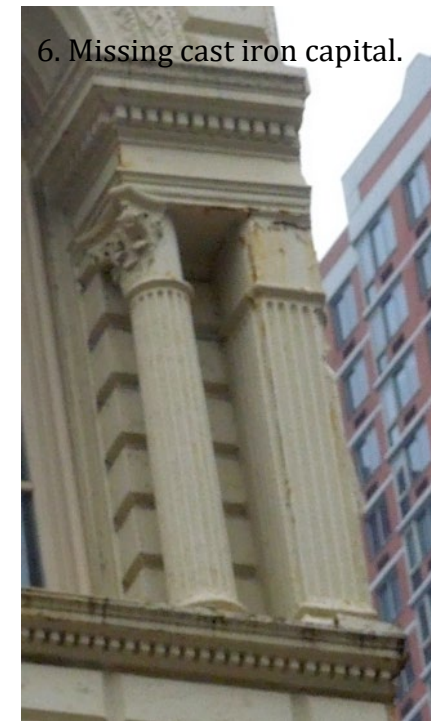
3. Corroded element at entrance stair.



South Façade (Chambers St) - Existing Conditions



4. Detached cast iron element.



6. Missing cast iron capital.



5. Rusted cast iron ornamental element.



7. Deteriorated cast iron column at façade.



8. Cracked cast iron element.

## What is fiberglass?

Fiberglass is a form of fiber-reinforced plastic where glass fiber is the reinforced plastic. The glass fiber is flattened into a sheet, woven into a fabric/glass cloth. Fiberglass is lightweight, stronger and less brittle than many metals and can be molded into complex shapes.

## Fiberglass properties

- High tensile and mechanical strength
- Non-combustible
- Thinner and stronger
- Allows flexibility in design
- Less vulnerable to weather effects
- Non rotting
- Corrosion resistant
- Completely water-proof
- Low thermal conductivity
- Dimensional stability
- Compatible with many synthetic resins and mineral matrices like cement
- Widely use in historical restorations because of its fine texture, allowing perfect replication of building ornaments

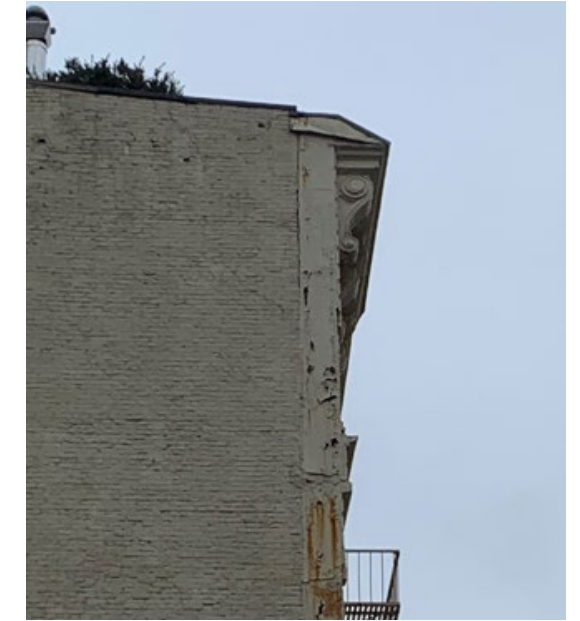
## Why fiberglass as alternative material?

- Over time cast iron elements develop surface imperfections and begin to rust and deteriorate due to weather effects.
- Often, cast iron elements are an uneconomic repair.

Proposed fiberglass to match existing cast iron elements in color, design and dimension.



Church St - Southeast corner missing cast iron element . Replacement to match Northeast corner design.



Church St - Northeast corner



Color: Buff

Current and proposed color is Benjamin Moore paints #957 PAPAAYA


Proposed sealant: MasterSeal NP 100, high performance hybrid sealant.

**Projects approved by LPC**



**565 Broadway, New York**

Marble replacement with fiberglass as alternative material.

 Location where fiberglass is to be installed.



Before: Deteriorated cast iron capitals.



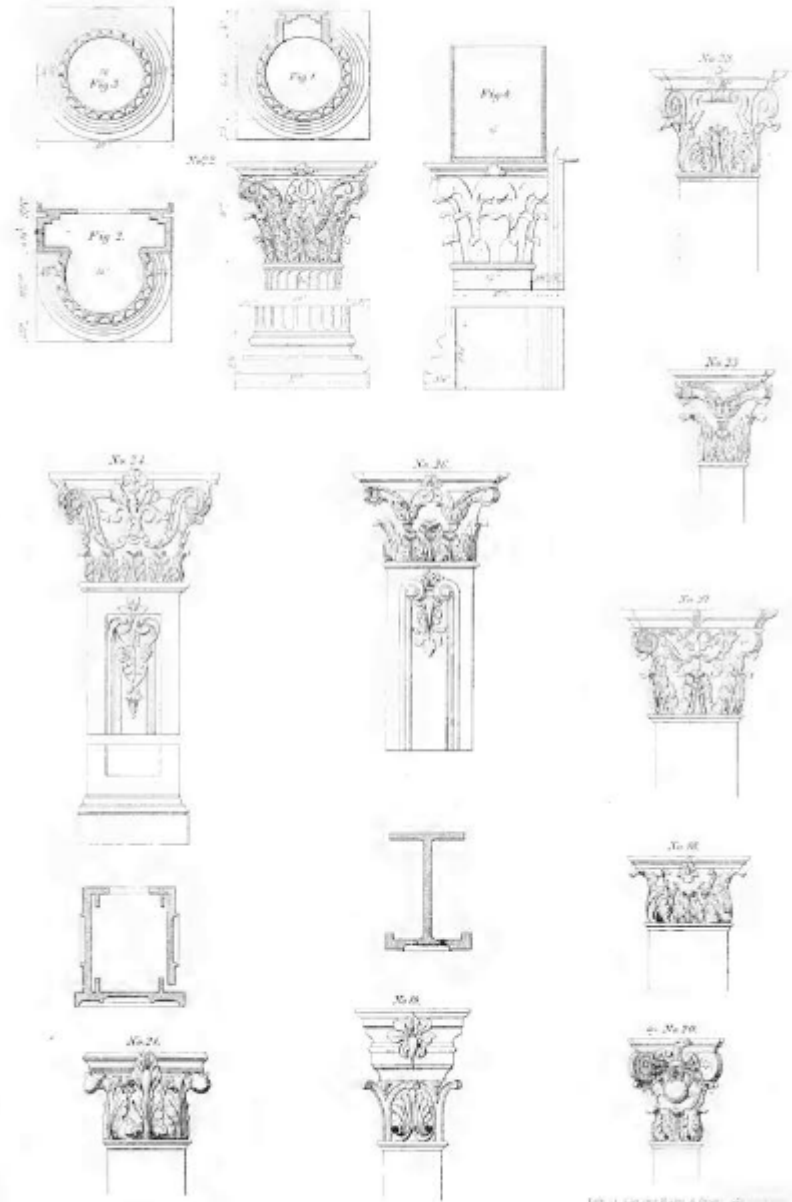
After: Fiberglass replacement capitals.

**93 Reade Street, New York**

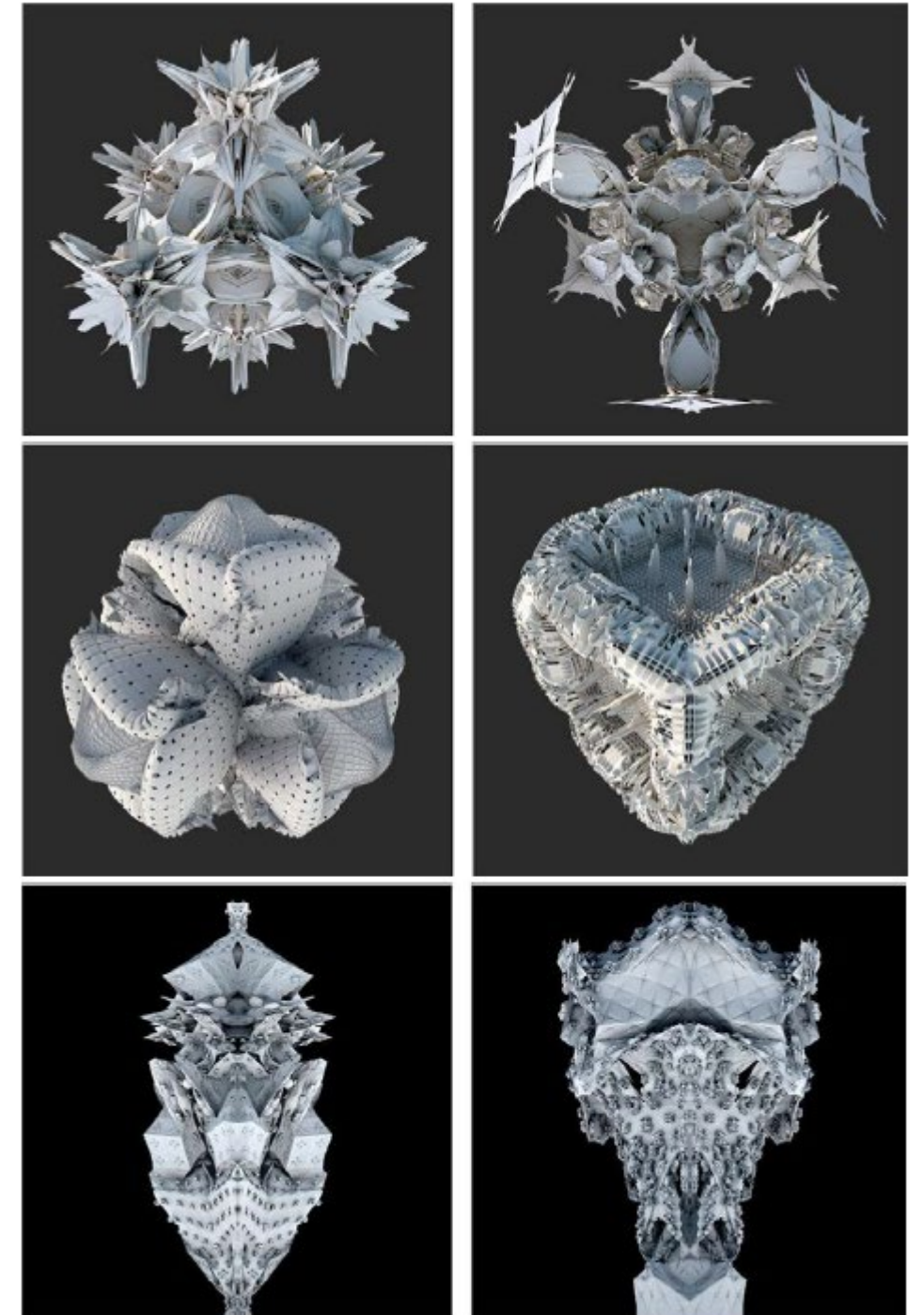
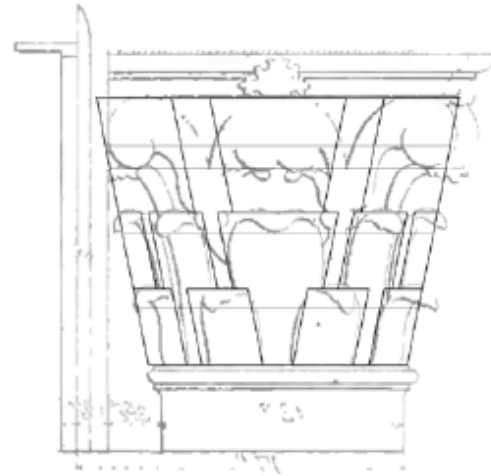
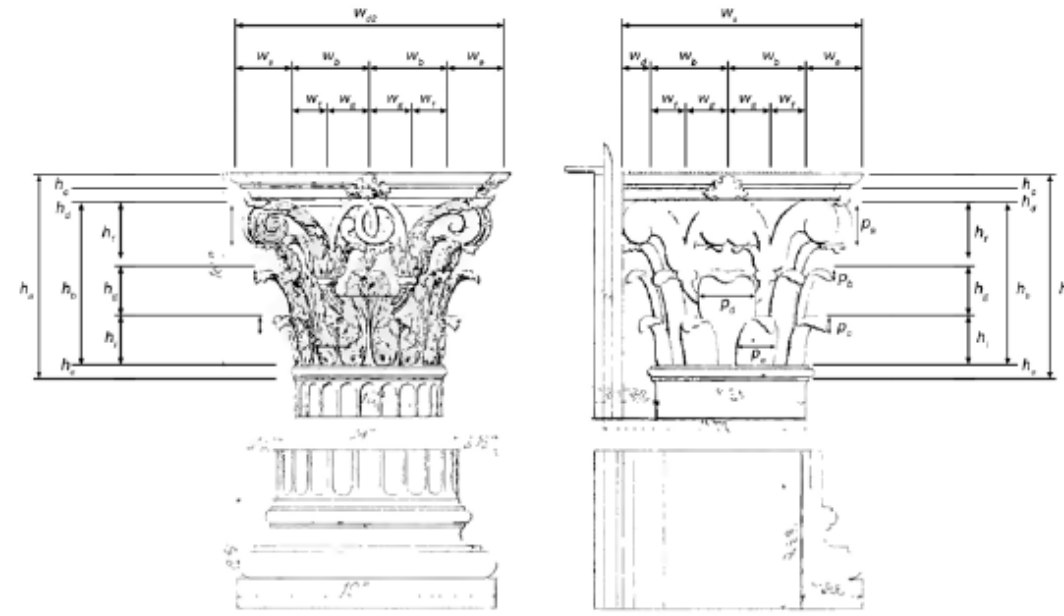
Cast iron replacement with fiberglass as alternative material.

Plate XLV.

Elevations and Sections of Columns and Capitals.

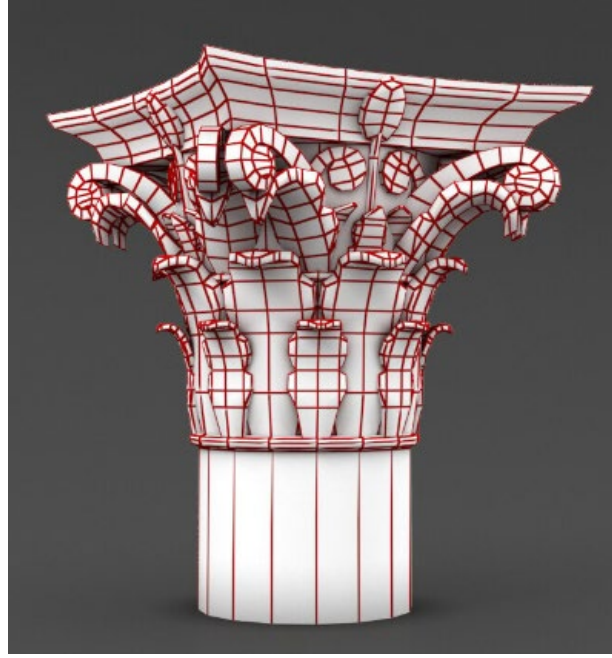


ARCHITECTURAL IRON WORKS, NEW-YORK.

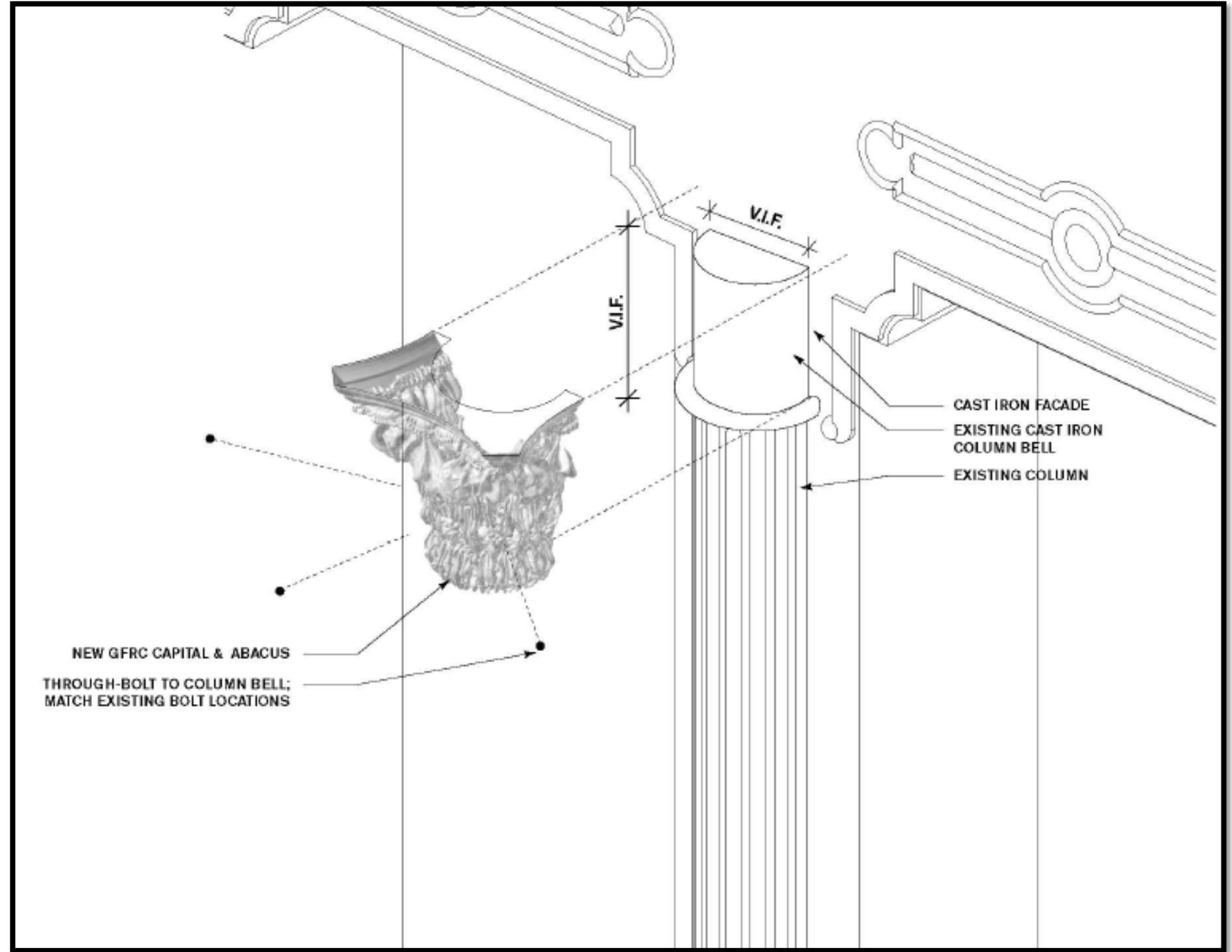


3D design model

Elevations and sections of columns and capitals



3D design model of capitals



Detail of alternative material installation to existing structure