



GRACE CHURCH

South Aisle Masonry Restoration

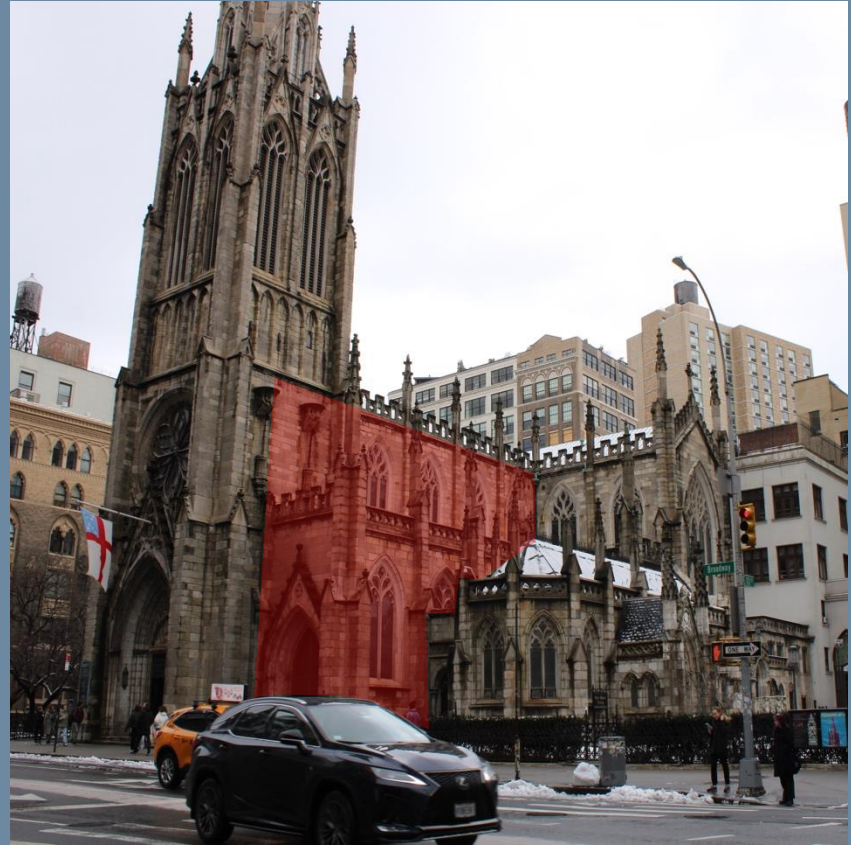
January 16, 2025

Presentation to
Manhattan CB2 Landmarks Committee/
NYC Landmarks Preservation Commission

BUILDING CONSERVATION ASSOCIATES INC

SOUTH AISLE PROJECT OVERVIEW

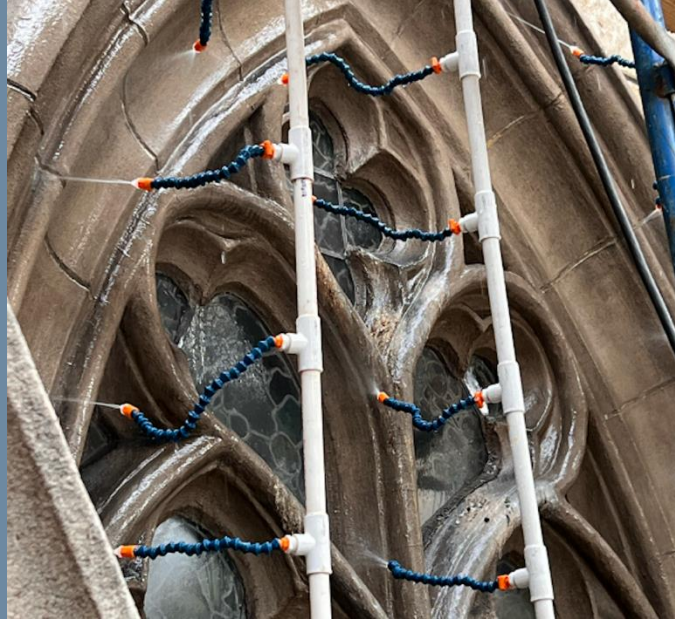
- Replacement of stone tracery assemblies with new cast stone units at four windows.
- Conservation of stained-glass windows and replacement of existing protective glazing.
- Replacement of isolated stone pinnacle units with new limestone units.
- Isolated masonry repairs using limestone dutchman.
- Isolated replacement of balustrade base units with new cast stone units.
- In-kind replacement of membrane roof.
- Isolated reinforcement of roof rafter ends.



IMPETUS FOR PROJECT: WATER INFILTRATION



Ongoing leaks.



Water testing.



Interior water infiltration.

EXISTING CONDITIONS: KEY FACTS



- BCA assessed the tracery and balustrade at the south aisle façade and clerestory in April 2024.
- The stone tracery and balustrade are deteriorated beyond useful service.
- The loss of original stone profiles significantly reduces the building's ability to properly shed water and has diminished its architectural integrity.

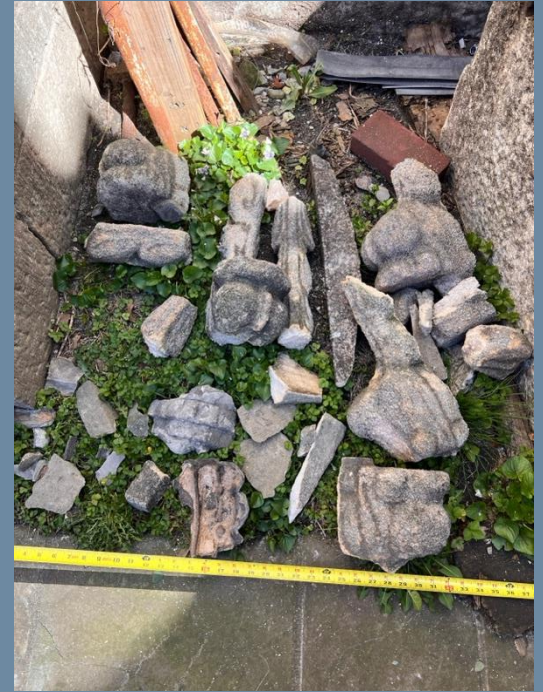
EXISTING CONDITIONS: KEY FACTS



Cracked and spalling decorative units.



Eroded and missing ashlar stone units.



Loose and spalled stone removed during previous surveys.

TREATMENT RECOMMENDATIONS

- Replace South Aisle Sing Sing marble tracery and pinnacles deteriorated beyond repair.

PROPOSED MATERIALS

- Indiana Limestone:
 - Flat replacement units and dutchman repairs.
 - Ornamental pinnacle and balustrade replacement units.
- Cast Stone:
 - Stone tracery replacement units.
 - Profiled balustrade base units.

PROJECT CONSTRAINTS

- A compressed construction schedule, with completion of all work required by December 2025, necessitates streamlined fabrication and delivery.
- It's not feasible to fabricate ornamental carved stone units in this timeframe.
- However, Indiana limestone can be used for flat ashlar units.

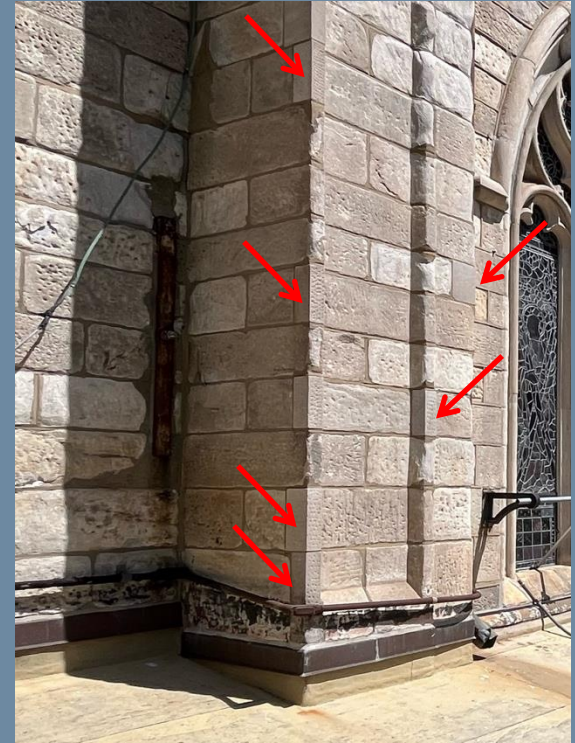
GRACE CHURCH: PREVIOUS LIMESTONE REPLACEMENT UNITS



Limestone replacement units at pinnacle and balustrade.



Limestone replacement units at stone tracery.



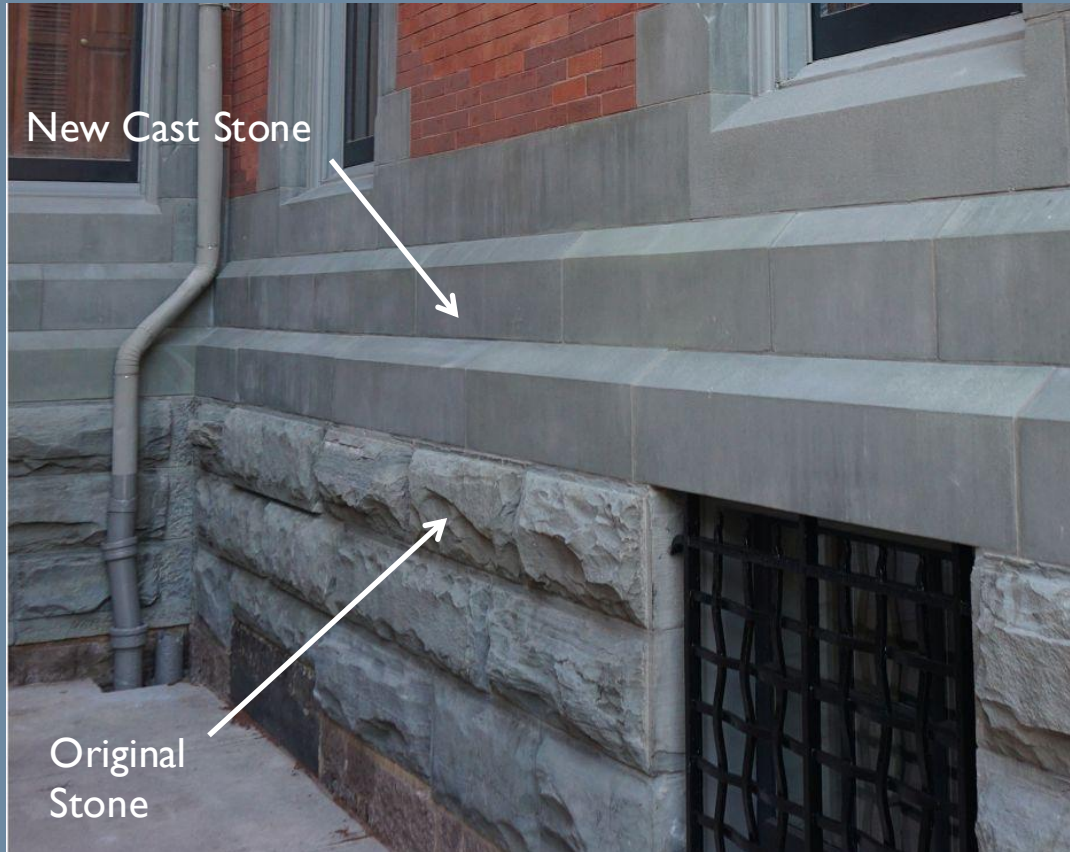
Limestone replacement units at flat ashlar.

BALLANTINE HOUSE: PRECEDENT FOR CAST STONE

Before:



After:



MARBLE COLLEGIATE CHURCH: NYC PRECEDENT



THE NEW YORK CITY LANDMARKS PRESERVATION COMMISSION
1 CENTRE STREET 9TH FLOOR NORTH NEW YORK NY 10007
TEL: 212 669-7700 FAX: 212 669-7780



PERMIT CERTIFICATE OF APPROPRIATENESS

ISSUE DATE: 03/27/24	EXPIRATION DATE: 2/13/2030	DOCKET #: LPC-23-10212	COFA COFA-23-10212
ADDRESS: 1 WEST 29TH STREET aka 270-272 Fifth Avenue		BOROUGH: MANHATTAN	BLOCK/LOT: 831 / 33
Marble Collegiate Reformed Church, Individual Landmark			
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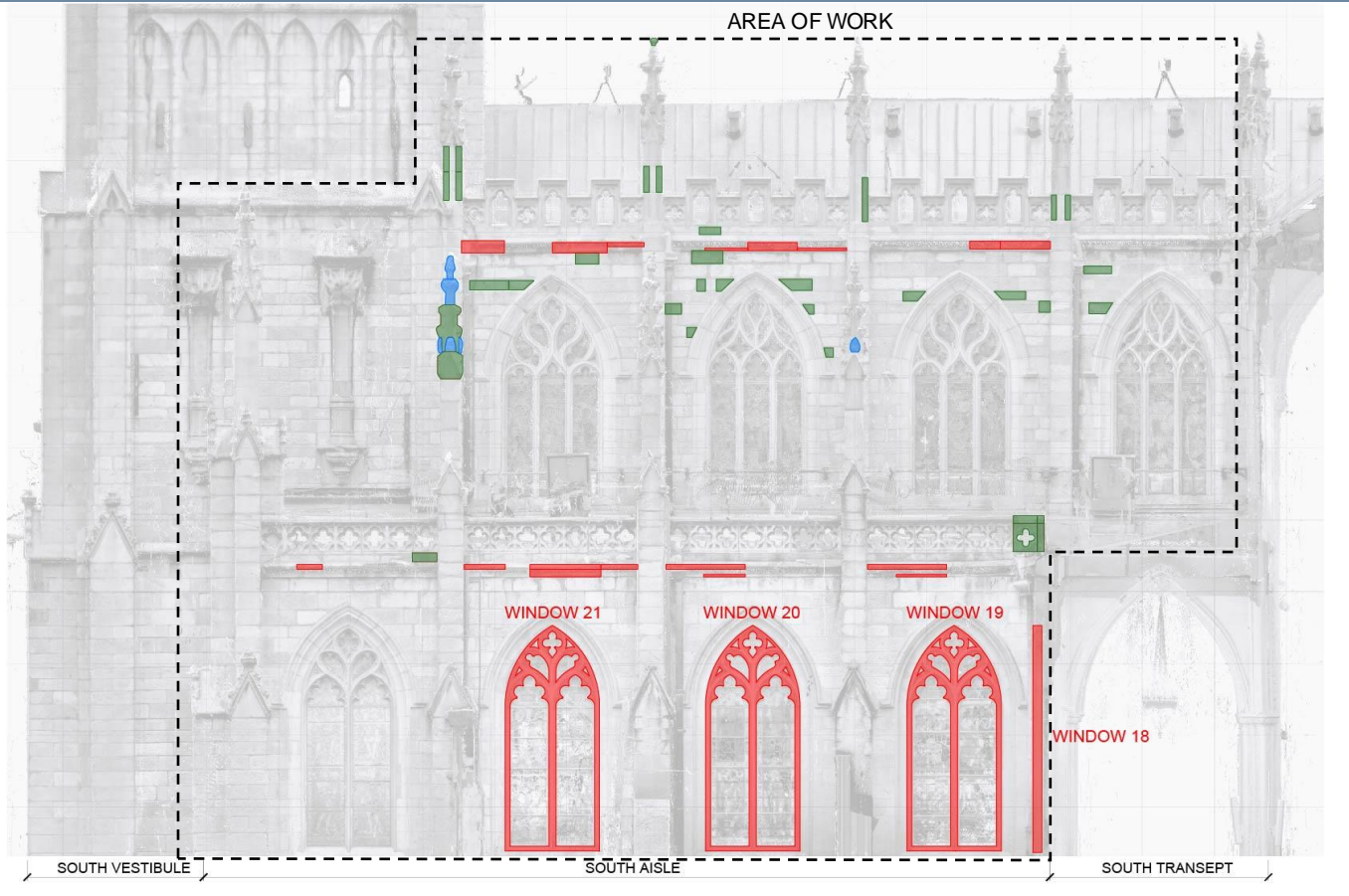
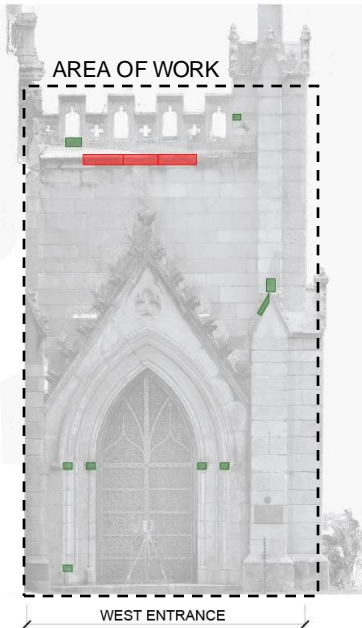
- Replacement of eight original windowsills and lintels with new brownstone-tinted cast-stone units.
- Replacement of copings with new buff-finished cast-stone parapet copings at the historic primary façade.



PROPOSED UNIT REPLACEMENT

KEY

- UNIT REPLACED WITH NEW CAST STONE UNIT
- UNIT REPLACED WITH NEW LIMESTONE UNIT
- UNIT SALVAGED FOR REINSTALLATION



NEW PROTECTIVE GLAZING

Existing Condition

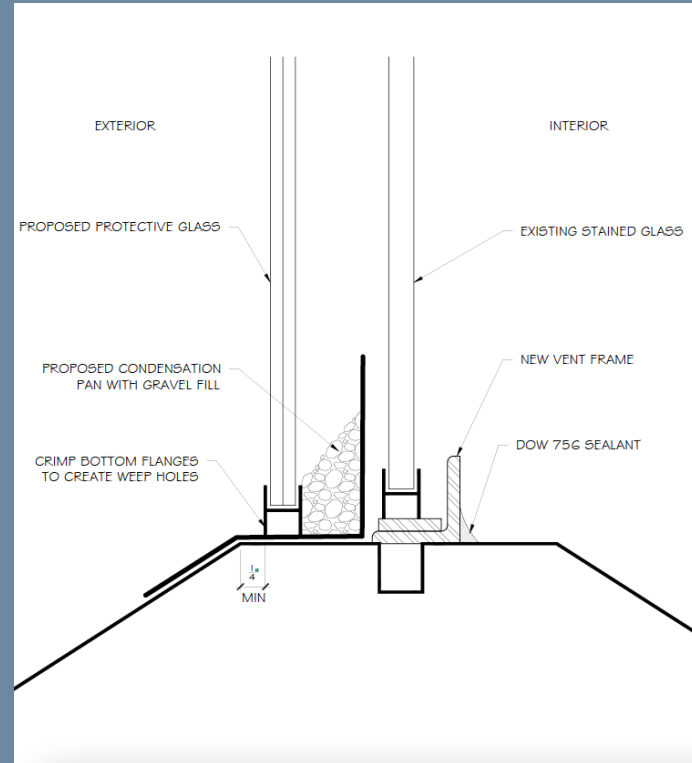


GRACE CHURCH

Previous Restoration

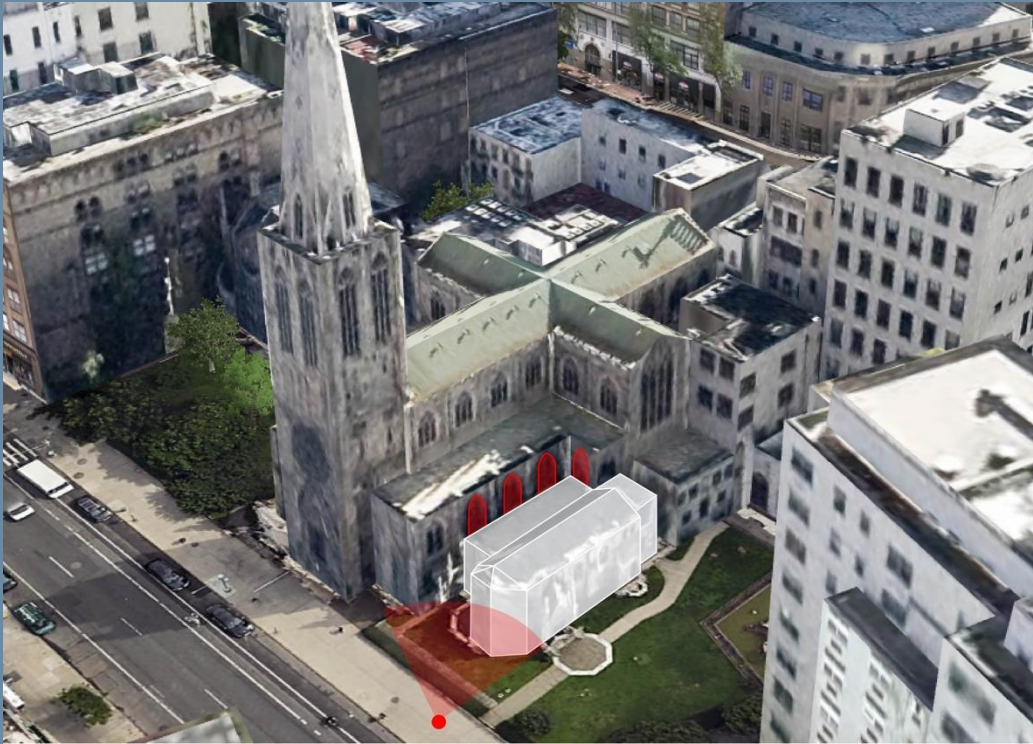


Proposed Detail

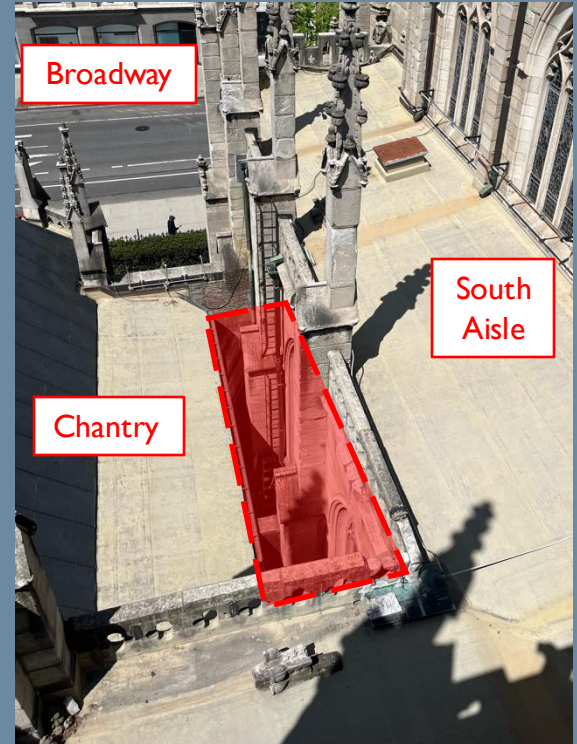


TRINITY CHURCH

VISIBILITY FROM STREET



Most views from the public thoroughfare are blocked by the Chantry (denoted in white).

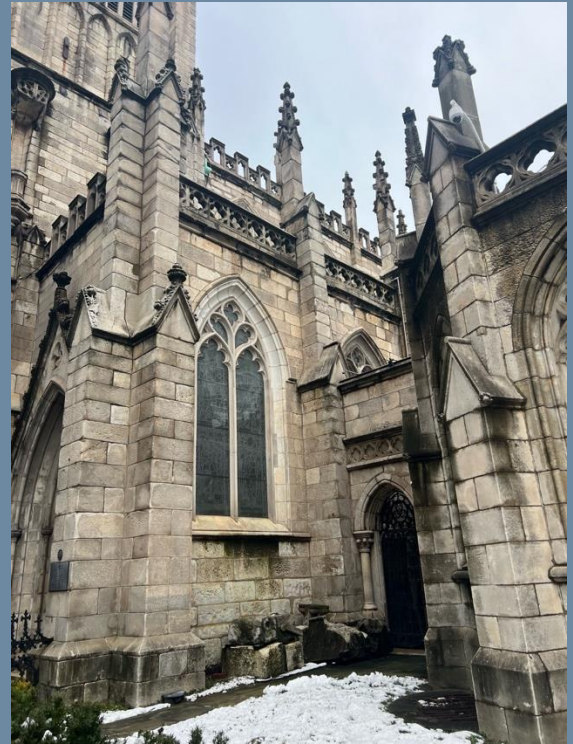


View showing the relationship between the Church and the Chantry.

VISIBILITY FROM STREET

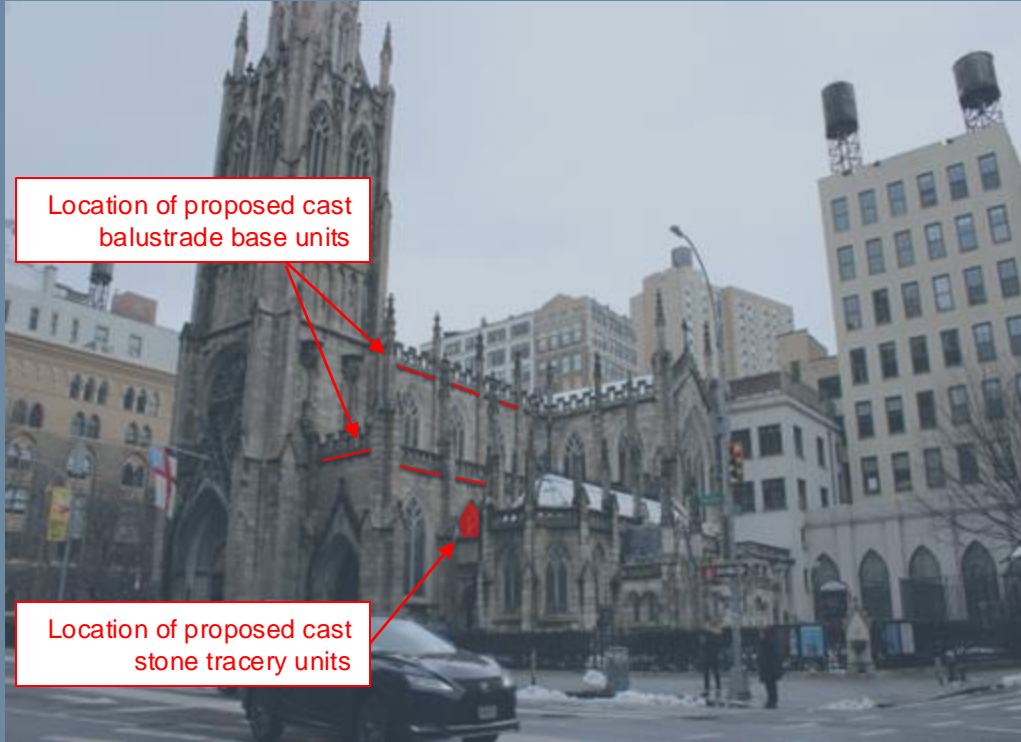


View from East 10th Street and Broadway.



View looking NE from the sidewalk.

VISIBILITY FROM STREET



View from East 10th Street and Broadway.



View looking NE from the sidewalk.

CAST STONE DURABILITY & QUALITY

- Cast stone:
 - Has antecedents in the late 19th c.
 - Is made according to strict industry standards.
 - Allows the accurate recreation of geometry, scale, profile, and ornament; molds are taken directly from the building or from measured drawings.
 - Performs well when exposed to the weather.
- BCA has direct experience using cast stone at landmarked buildings where natural stone is not available.
- We find that the color and texture of natural stone is readily matched by skilled cast stone fabricators.
- We are researching manufacturers engaged in fabricating cast stone units to match existing natural stone on historic buildings.

Our expectation is that cast stone will generate a good result.