

The current proposal is:

Preservation Department – Item 9, LPC-25-08773

1466 Broadway – Knickerbocker Hotel – Individual Landmark Borough of Manhattan

To testify virtually, please join Zoom

Webinar ID: 160 059 3679

Passcode: 131371

By Phone: 646-828-7666 (NY)

833-435-1820 (Toll-free)

833-568-8864 (Toll-free)

Note: If you want to testify virtually on an item, join the Zoom webinar at the agenda's "Be Here by" time (about an hour in advance). When the Chair indicates it's time to testify, "raise your hand" via the Zoom app if you want to speak (*9 on the phone). Those who signed up in advance will be called first.

Scope of Work Statement and Conditions Assessment for the Knickerbocker Hotel

Surface Design Group (SDG) is respectfully requesting replacement of existing terra cotta units at the building corners with cast stone as an alternate material.

The historic terra cotta at the building corners, i.e., "the cladding field" where replacement with alternate materials is recommended by SDG was noted to have the following typical conditions:

- Substantially cracked and unsound terra cotta units; vertical cracking through multiple sequential units for multiple floors.
- Cracked terra cotta units, previously patched in multiple repair campaigns, in which the patch or crack repair is in failure, separating, or spalled. Additional sequential vertical cracking noted at these previously repaired units.
- Open mortar joints at terra cotta, including skyward joints
- Displaced and/or unsound terra cotta units.
- Lack of expansion joints on historic buildings have caused vertical cracking of terra cotta due to thermal expansion of embedded steel structure.
- These conditions have led to continual moisture infiltration, causing further deterioration to the terra cotta, back-up masonry, ferrous anchors, and steel column behind over time. This in turn has caused further damage and cracking to the terra cotta due to rust jacking of the steel, causing a continual cycle of deterioration.



Request for Terra Cotta Unit Replacement in Cast Stone 3/25/2025

The
Knickerbocker
Hotel
1466 Broadway,
New York, NY 10036



1940's Tax Photo

The Knickerbocker Hotel

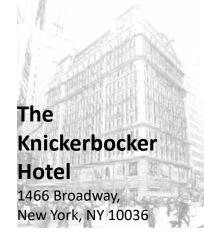
FINDINGS AND DESIGNATION

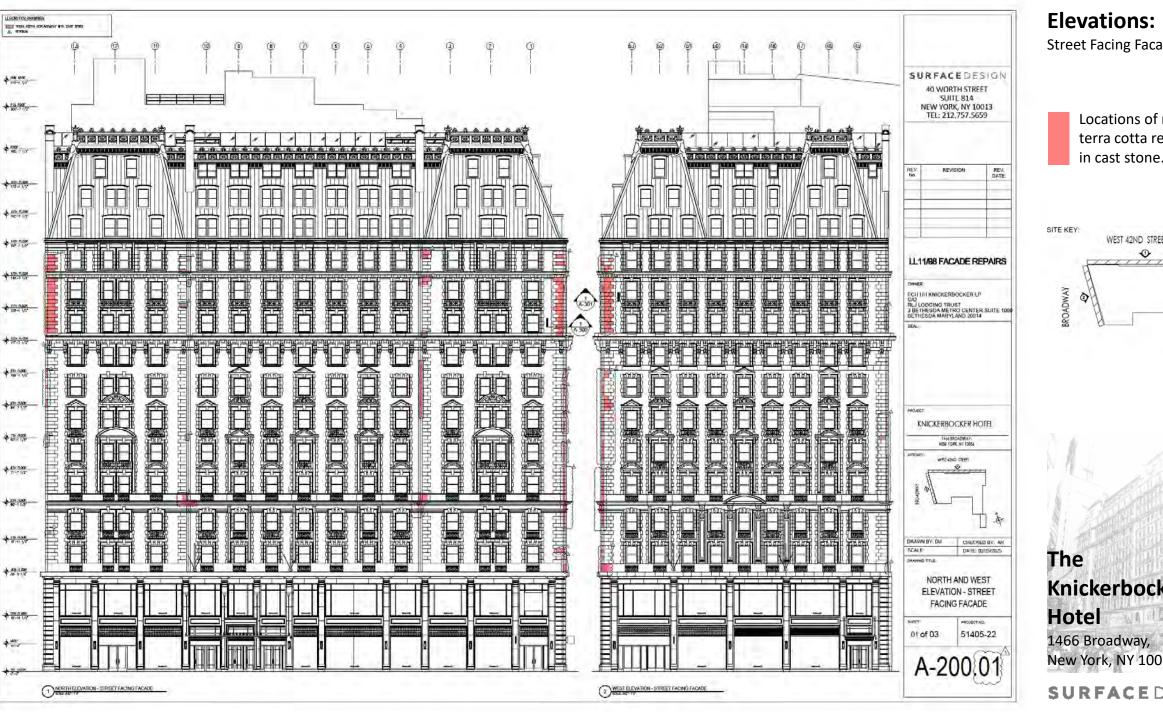
On the basis of careful consideration of the history, the architecture and other features of this building, the Landmarks Preservation Commission finds that the Knickerbocker Hotel has a special character, special historical and aesthetic interest and value as part of the development, heritage and cultural characteristics of New York City.

The Commission further finds that, among its important qualities, the Knickerbocker Hotel is one of the very few grand hotels in the Beaux-Arts style surviving in the Times Square area; that it is executed in red brick with exuberantly rich French Renaissance detail and is crowned by a prominent copper mansard roof with corner pavilions and cresting; that it was designed in 1901 by Marvin & Davis with the well-known Bruce Price as consulting architect; that the building was financed by John Jacob Astor, the fourth namesake of the patriarch of one of America's richest families; that it was one of several luxury hotels built by the Astor family in the nineteenth and early twentieth centuries; that it was located in Times Square in the heart of the new theater district and was advertised as a "Fifth Avenue Hotel at Broadway Prices"; that it was intended to attract not only guests in residence but also theater-goers and other visitors to its large and elaborately decorated public rooms, designed by Trowbridge & Livingston; and that it continues to reflect the architectural richness of the Times Square area at the turn of the century.

Accordingly, pursuant to the provisions of Chapter 31, Section 534, of the Charter of the City of New York and Chapter 3 of Title 25 of the Administrative Code of the City of New York, the Landmarks Preservation Commission designages as a Landmark the Knickerbocker Hotel, 1462-1470 Broadway, Borough of Manhattan, and designates Tax Map Block 994, Lot 54, Borough of Manhattan, as its Landmark Site.

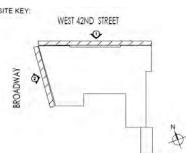
Architects: Marvin & Davis, Bruce Price, Trowbridge & Livingsto: Photo Credit: Kevin McHugh Historic 1940's tax photo and LPC Designation





Street Facing Facades

Locations of requested terra cotta replacement

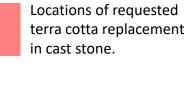


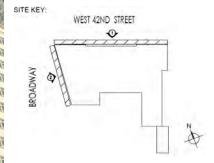
Knickerbocker

New York, NY 10036

Street Facing Facades

42nd Street and Broadway









1. North Elevation

42nd Street 6/21/2021

2. West Elevation

Broadway 6/21/2021





Why Cast Stone is the Requested Replacement for Terra Cotta:

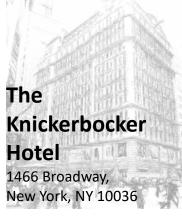
• Location of Replacement Units at the Corners

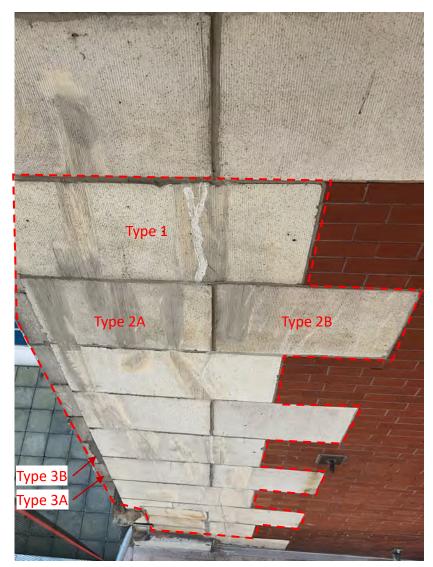
- The units are mainly flat, non-decorative, ashlar units at the corner, considered within the "cladding field". The units are primarily in plane with the adjacent brick masonry at the façade or recessed at the corner.
- The requested replacement units are not decorative or ornamental terra cotta, such as the historic terra cotta at the balconies and pediments to remain. If such decorative units were being replaced, we would advocate for terra cotta in order to replicate the detail.
- At the existing installation, the web/ voids in the existing terra cotta units were infilled with brick masonry and mortar, which allowed the units to better bear their own load. The proposed installation of cast stone as a solid material will allow the replacement units and existing infilled terra cotta units to remain to be a fully solid assembly and move and work together as a homogenous application, similar to the original assembly. This will reduce differential movement and cracking.
- The building has a precedent for replacement in alternate materials in the past, including fiberglass and GFRC over the last 30 years.

• Lifespan and Appropriateness of Cast Stone as a Material

- The life span of cast stone with modern fabrication techniques can last many decades, and based on material testing, is estimated to last 100 years or more.
- Similar to all fabricated products (even terra cotta), the significant factor is control of the fabrication, and using a quality fabricator and materials, to achieve controlled results for a high quality product. Therefore, the selected fabricator for the replacement cast stone material is providing:
 - Utilizing high quality pigments/ cement to prevent weathering
 - Utilizing stainless steel reinforcement and anchors
 - These are both specified by our office and comply with ASTM and all other governing standards.
- Specification and Testing Data
 - Both terra cotta and cast stone can be load bearing and are highly durable materials.
 - Specifications and testing data for compressive strength, absorption, resistance to freeze thaw
 cycles are comparable, and are slightly improved for cast stone.
 - Weathering over time- both are exposed to the elements
 - Terra cotta weathering includes crazing of the glaze or discoloration from the elements
 - Cast stone can have slight erosion or weathering/ fading of the finish.
 - Similar to all maintenance of materials on a building, this can be minimized such as by installing a clear sealer, However to mitigate effects, we are planning to utilize a strict fabrication procedures of high quality cement/ aggregate or pigments resistant to UV along with proper installation to prevent deterioration.
- **Get Shed Down Initiative:** The significantly shorter lead time for fabrication will enable the building to remove the sidewalk shed much quicker, as addressing the LL11 conditions will be shorter in duration.
- Cast Stone vs. GFRC: Typically GFRC, while light weight with its the thin outer wall construction and internal reinforcement, is not load bearing, and installation procedure would be difficult (similar to the issues with installing terra cotta). GFRC previously installed here has cracked at the corner, due to inability to support the terra cotta above.

Material Science for Cast Stone Replacement of Existing Terra Cotta Units.





North Elevation: 10/18/2024

Northeast Corner.

Overall view: Type 1, 2A, 2B, 3A, and 3B.

Replacement in Cast Stone.

Note: All photos show representative view of units, refer to scope of work drawing for locations.



Photo: 2

North Elevation: 2/26/2025

Northeast Corner.

Close-up view: Type 1, 2A, 2B, 3A, and 3B.

Replacement in Cast Stone.

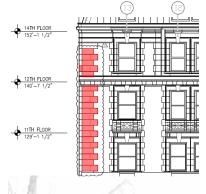
Photos:

Terra Cotta Unit Existing conditions Northeast Corner

Conditions:

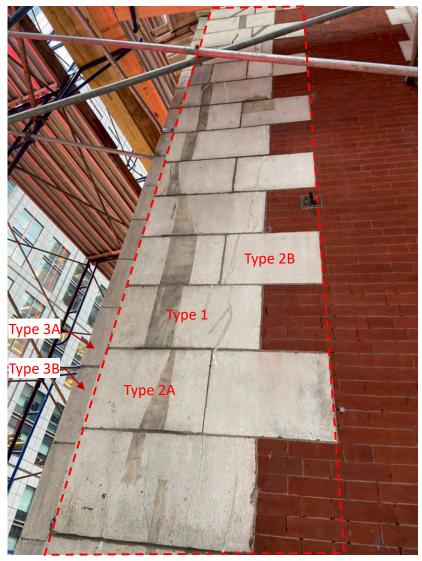
- Prior crack or patch repair failures
- New cracks at terra cotta
- Multiple repairs per unit
- Open mortar joints

Key Plan: North Elevation



The Knickerbocker Hotel

1466 Broadway, New York, NY 10036



West Elevation: 10/18/2024

Northwest Corner.

Overall view: Type 1, 2A, 2B, 3A, and 3B.

Replacement in Cast Stone.

Note: All photos show representative view of units, refer to scope of work drawing for locations.

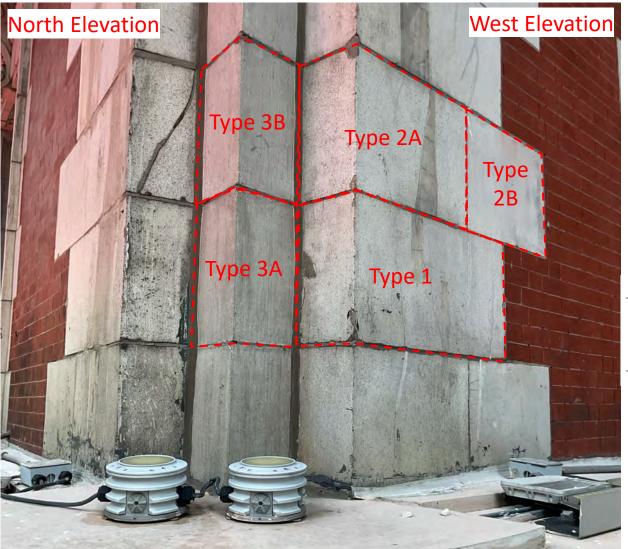


Photo: 4

West Elevation: 10/18/2024

Northwest Corner.

Close-up view: Type 1, 2A, 2B, 3A, and 3B.

Replacement in Cast Stone.

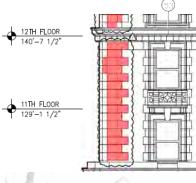
Photos:

Terra Cotta Unit Existing Conditions Northwest corner

Conditions:

- Prior crack or patch repair failures
- New cracks at terra cotta
- Multiple repairs per unit
- Open mortar joints

Key Plan: West Elevation



The Knickerbocker Hotel

1466 Broadway, New York, NY 10036



North Elevation: 2/26/2025

Northwest Corner.

Overall view: <u>Type 5 and 6.</u> Replacement in Cast Stone.

Note: All photos show representative view of units, refer to scope of work drawing for locations.

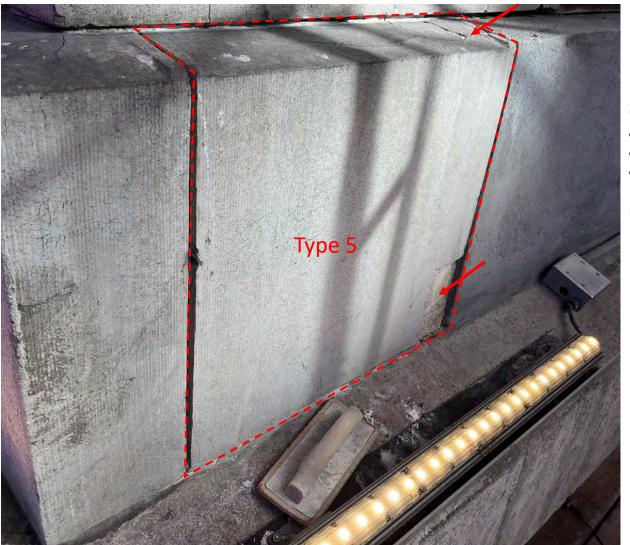


Photo: 6

North Elevation: 2/26/2025

Northwest Corner. Close-up view: <u>Type 5.</u> Replacement in Cast Stone.

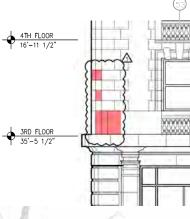
Photos:

Terra Cotta Unit Existing conditions Northwest Elevation

Conditions:

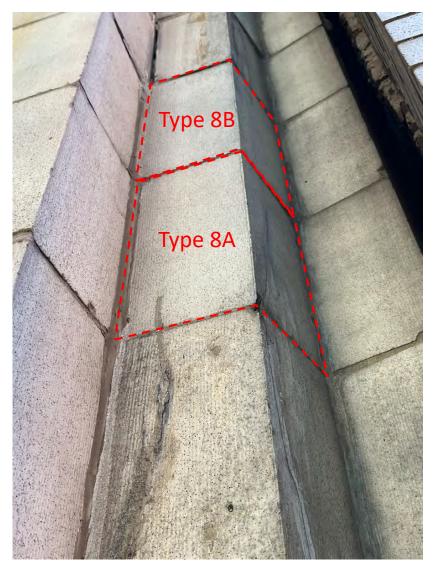
- Cracked terra cotta
- Spalled patch
- Unsound unit

Key Plan: West Elevation



The Knickerbocker Hotel

1466 Broadway, New York, NY 10036



West Elevation: 10/18/2024

Southwest Corner.

Overall view: <u>Type 8A and 8B.</u> Replacement in Cast Stone.

Note: All photos show representative view of units, refer to scope of work drawing for locations.

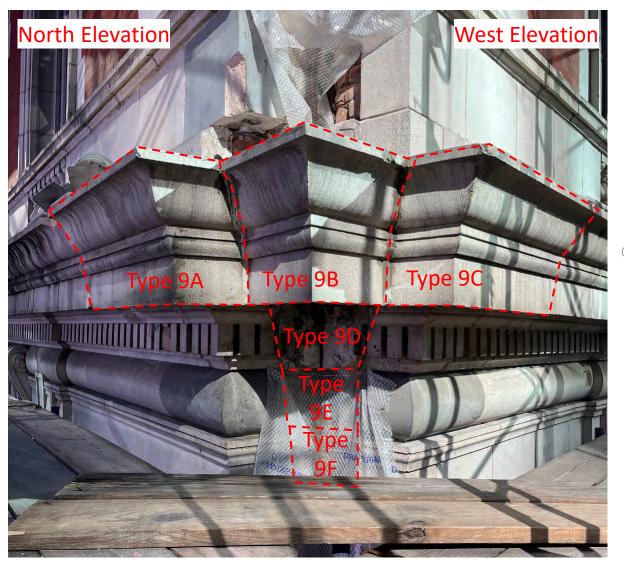


Photo: 8

North and West Elevation: 9/24/2024

Northwest Corner.

Overall view: Type 9A, 9B, 9C, 9D, and 9E.

Replacement in Cast Stone.

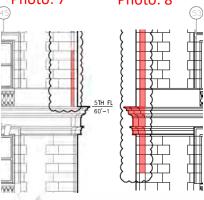
Photos:

Terra Cotta Unit Existing condition West Elevation

Conditions:

- Prior crack repair failures
- New cracks at terra cotta
- Separating vertical cracks

Key Plan: North & West Photo: 7 Photo: 8





New York, NY 10036



North Elevation: 10/21/2024

North Setback Corner.

Overall view: Type 9D, 9E, and 9F.

Replacement in Cast Stone.

Note: All photos show representative view of units, refer to scope of work drawing for locations.

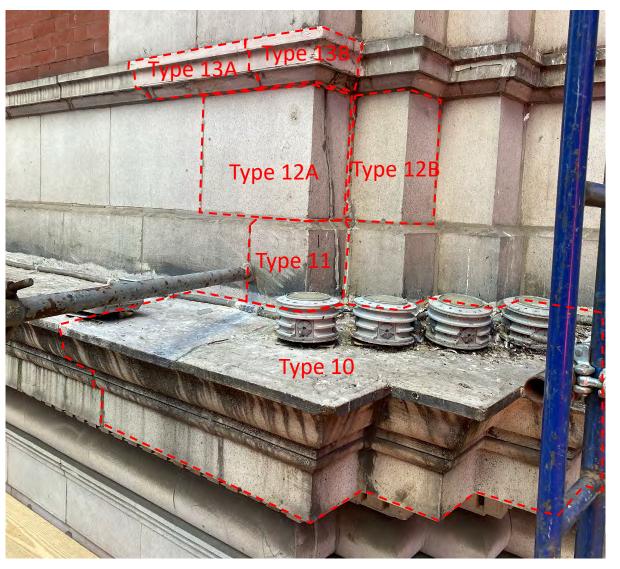


Photo: 10

North Elevation: 10/21/2024

North Setback Corner.

Overall view: **Type 10, 11, 12A, 12B, 13A, and 13B**.

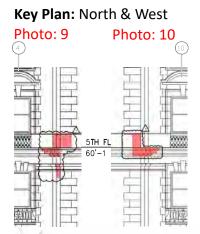
Replacement in Cast Stone.

Photos:

Terra Cotta Unit Existing condition West Elevation

Conditions:

- Prior crack repair failures
- New cracks at terra cotta
- Separating vertical cracks



The Knickerbocker Hotel 1466 Broadway, New York, NY 10036

The Knickerbocker Hotel - 1466 Broadway

Terra Cotta Replacement with Cast Stone Project No. 51405-22 February 2025

General Information:

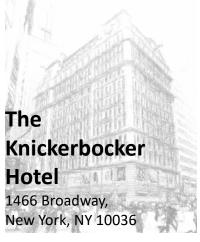
1. Refer to North Façade Scope of Work Drawing for locations.

Туре	Specifications	Material for Replacement	Quantity	Photo/ Reference
Type 1	Flat Ashlar Unit large: 31" x 15" V.I.F.	Cast Stone	26 Units	1-2
Type 2 (A)	Flat Ashlar Unit small: 21" x 15" V.I.F.	Cast Stone	20 Units	1-2
Type 2 (B)	Flat Ashlar Unit small: 21" x 15" V.I.F.	Cast Stone	14 Units	1-2
Type 3 (A)	Corner unit, toothed into adjacent unit. NW & NE corner. Approximate size 8" x 8" x 15"	Cast Stone	27 Units	1-2
Type 3 (B)	Corner unit, flush to adjacent unit. NW & NE corner. Approximate size 8" x 8" x 15"	Cast Stone	37 Units	1-2
Type 6	Corner unit, FL 3 and 5	Cast Stone	2 Unit	5
Type 9 (F)	North Corner Unit below Water-Table	Cast Stone	1	8
Type 10	North Water-Table Unit	Cast Stone	2	10
Type 11	North Corner Unit above Water-Table – Small.	Cast Stone	4	10
Type 12 (A)	North Corner Unit above Water-Table – Large.	Cast Stone	2	10
Type 12 (B)	North Corner Unit above Water-Table – Large.	Cast Stone	4	10
Type 13 (A)	North Corner Band Unit above Water-Table.	Cast Stone	1	10
Type 13 (B)	North Corner Band Unit above Water-Table.	Cast Stone	1	10

Refer to West Façade Scope of Work Drawing for locations.

Туре	Specifications	Material for Replacement	Quantity	Photo/ Reference
Type 1	Flat Ashlar Unit large: 31" x 15" V.I.F	Cast Stone	12 Units	3-4
Type 2 (A)	Flat Ashlar Unit small: 21" x 15" V.I.F	Cast Stone	12 Units	3-4
Type 2 (B)	Flat Ashlar Unit small: 21" x 15" V.I.F	Cast Stone	10 Units	3-4
Type 5	Large Unit, FL 3	Cast Stone	1 Unit	5-6
Type 6	Corner unit, FL 3 and 5	Cast Stone	2 Unit	5
Type 8 (A)	Corner unit, toothed into adjacent unit. SW corner. Approximate size: 8" x 8" x 15"	Cast Stone	10 Units	7
Type 8 (B)	Corner unit, toothed into adjacent unit. SW corner. Approximate size: 8" x 8" x 15"	Cast Stone	9 Units	7
Туре 9 (А)	Northwest Corner Water- Table Unit	Cast Stone	1	8
Type 9 (B)	Northwest Corner Water- Table Unit	Cast Stone	1	8
Type 9 (C)	Northwest Corner Water- Table Unit	Cast Stone	1	8
Туре 9 (D)	Northwest Corner Unit below Water-Table	Cast Stone	1	8
Туре 9 (Е)	Northwest Corner Unit below Water-Table	Cast Stone	1	8
Type 9 (F)	Northwest Corner Unit below Water-Table	Cast Stone	1	8
Type 11	West Corner Unit above Water-Table – Small.	Cast Stone	2	10
Type 12 (B)	West Corner Unit above Water-Table – Large.	Cast Stone	1	10

Quantity Chart: Terra Cotta Unit Types.





MASONRY INFILL AT THE WEB OF THE TERRA COTTA

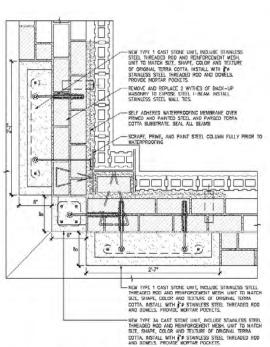
PROBE: EXISTING INSTALLATION OF TERRA COTTA AND STEEL CONDITION

Installation Procedure for Cast Stone

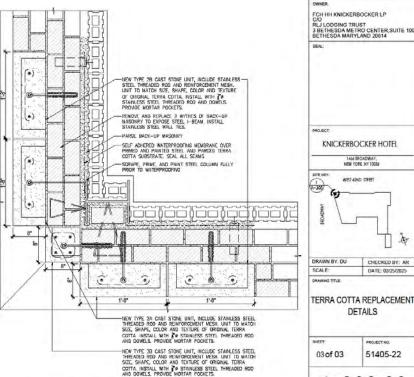
- The existing terra cotta installed at the building has masonry installed at the web, tying in with the back-up masonry to create a mass masonry solid corner assembly. The façade was built from ground up, with full access simultaneously at interior and exterior to be able to set the terra cotta units and key them in to the back-up wall.
- Access to the proposed replacement units will occur from the exterior only, at isolated locations or locations within a field of terra cotta only. If the replacement units were terra cotta, it would be impossible to install backup masonry within the cells of the terra cotta unit; tie in with the existing construction/back-up is not feasible with a terra cotta replacement unit due to access and sequencing of installation.
- Cast stone units, when designed to the existing building configurations, allows for specific embedment of stainless steel anchors in epoxy at the back of the new unit during fabrication and allows for installation of the units directly to the backup behind.

The use of hollow replacement terra cotta units, which would have to be installed within the existing solid assembly, disrupts the loading of the existing wall, making it non homogenous, subjecting the new hollow terra cotta units to differential forces that may lead to premature cracking and deterioration.

The use of terra cotta is also not the preferred method as the unit due to anchor design. The anchoring of new terra cotta requires the installation of blind anchors at the jamb or sides of the unit, from the exterior. It would also be difficult to verify proper installation per special inspection requirements. This requirement for access to install is critical when completing installation where the new units would be abutting existing facade elements to remain. Also, verifying anchorages is critical to comply with DOB requirements for post installed anchors.







TERRA COTTA REPLACEMENT- PLAN UNIT TYPE: 2A, 2B, AND 3B



Details:

SURFACEDESION

40 WORTH STREET SUITE 814

NEW YORK, NY 10013

TEL: 212.757.5659

LL11/98 FACADE REPAIRS

NEW YORK, NY 1003

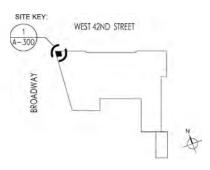
DETAILS.

CHECKED BY: AR

DATE: 02/25/2025

51405-22

Terra Cotta Unit Replacement at corner







Water-Table and **Window Head Units** North Elevation.

Previously replaced fiberglass units.

Existing historic terra cotta



Balustrade Units

North Elevation.

Previously replaced GFRC unit.

Existing historic terra cotta unit.

History of Alternative Material Replacement on **Building**

FL 10, 11, 12 street facing water tables and window heads fully replaced in fiberglass.



Water-Table Corner Units

North Elevation.

Previously replaced fiberglass unit.

Existing historic terra cotta unit.



Ashlar Cladded Units

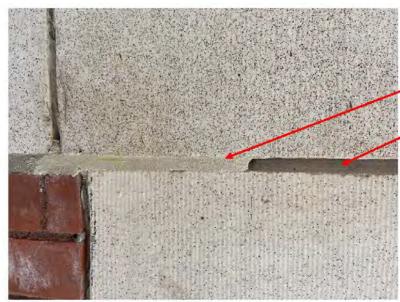
South Elevation.

Existing historic terra cotta unit.

Previously replaced cast stone unit.

The Knickerbocker Hotel 1466 Broadway,

New York, NY 10036

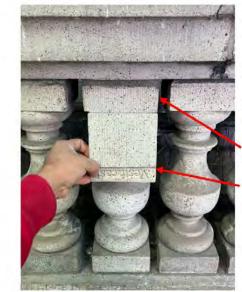


Photograph #1 West Façade

Proposed Terra Cotta Pointing Mortar: Cathedral Stone, Jahn M110 PPM 215.

Existing historic mortar joint.

Same color previously approved by LPC on 12/2/24.

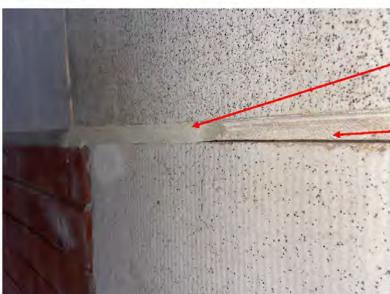


Photograph #3 North Façade Balustrades

Terra Cotta Replacement with Alternative Materials: Vestacast 2024-262-C

Existing historic terra cotta

Vestacast 2024-262-C sample previously approved by LPC on 4/9/25. Samples and Mock-ups Previously Approved by LPC



Photograph #2 West Façade

Proposed Terra Cotta Pointing Mortar: Cathedral Stone, Jahn M110 PPM 215.

Existing historic mortar joint.

Same color previously approved by LPC on 12/2/24.



Photograph #4 North Façade Modillions

Terra Cotta Replacement with Alternative Materials: Vestacast 2024-262-C

Existing historic terra cotta

Vestacast 2024-262-C sample previously approved by LPC on 4/9/25.





The current proposal is:

Preservation Department – Item 9, LPC-25-08773

1466 Broadway – Knickerbocker Hotel – Individual Landmark Borough of Manhattan

To testify virtually, please join Zoom

Webinar ID: 160 059 3679

Passcode: 131371

By Phone: 646-828-7666 (NY)

833-435-1820 (Toll-free)

833-568-8864 (Toll-free)

Note: If you want to testify virtually on an item, join the Zoom webinar at the agenda's "Be Here by" time (about an hour in advance). When the Chair indicates it's time to testify, "raise your hand" via the Zoom app if you want to speak (*9 on the phone). Those who signed up in advance will be called first.