

Kraemer Design Group, LLC  
Broadway Lofts  
Historic Building Façade Report

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This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 23038

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# 1 Executive Summary

This report presents a façade inspection of Historic Building Facades for 1322-1336 Broadway Street in Detroit Michigan. The following is a summary of the condition and work required to restore and repair the historic facades:

## 1322 Broadway Street Façade

The terra-cotta façade is in fair to good condition. The following minor repairs are required:

- Tuck and repointing of mortar joints.
- Repair Cracked and spalling terra-cotta.
- Reglaze delaminating terra-cotta at parapet wall and upper water table.
- Repair Coping stones joint repointing and backside waterproofing.

## 1326 Broadway Street Façade

The predominately brick façade is in moderate to fair condition.

- Tuck and repoint brick and limestone joints.
- Repair cracked limestone sills.
- Remove steel anchor embeds and repair/replace damaged brick.
- Replicate original water table with sheet metal or FRP molding.

## 1336 Broadway Street Façade

The predominately limestone clad façade with marble spandrel panels and decorative cast-iron elements is in poor condition. The main cause of deteriorated condition is corrosion of embedded steel lintels and masonry ties.

- Remove cast-iron florets clean, paint and re-install.
- Remove clean and paint and reinstall cast-iron posts with new steel lintels.
- Repair of steel lintels beams will require the removal of large areas of limestone, all the marble panels and most of the backup walls and structure to allow access for repair.
- All lateral ties connecting veneer elements to the backup wall need to be replaced. **To replace lateral ties all veneer elements, need to be removed, restored, and reset.**

**Due to the overall condition of the backups structure and need to remove all veneer elements for steel repair and installation of new lateral ties it is recommended at the 1336 Broadway façade is removed and re-constructed on new backup structure integrated into proposed new building.**

## 2 Building Name and Location

The assessment includes the historic building facades of three adjacent buildings located at 1322, 1326 and 1336 Broadway Street in Detroit, MI 48226.

The building is under development planning by BASCO Detroit.

### 2.1 Building Description

Each building has a unique façade reflecting the architecture and construction techniques found in Detroit at time of construction. The predominant façade materials for each building are:

- 1322 Broadway – Decorative glazed terra-cotta with detailed parapet wall, column corbels and entrance canopy. Punched window openings on the 2<sup>nd</sup> and 3<sup>rd</sup> floors with storefront glazing and recessed entrance on ground floor.
- 1326 Broadway – Red brick façade with basic detailing. Limestone sill below windows openings at 2<sup>nd</sup> and 3<sup>rd</sup> floors. Detailed metal panel water table below brick parapet wall with terra-cotta tile coping. Modern storefront at ground level with roller shutter door and metal panel covering façade and lintel beam over storefront.
- 1336 Broadway – Plain limestone façade with limited detailing. Streaked marble panel between 2<sup>nd</sup> and 3<sup>rd</sup> floor window openings with exposed cast-iron posts at window mullion locations. Cast-iron decorative florets attached to limestone and marble façade panel. The original stone water table has been removed with no remaining detailing. The storefront is boarded up and not accessible.

## 3 Project Team

Resurget Engineering is working with BASCO Detroit and contracted directly to Kraemer Design Group.

The qualified inspector who carried out field observations and drafted this report is Marc Steinhobel, PE (MI license no 6201051104).

## 4 Project Scope

Resurget Engineering's scope of work for this project includes the inspection and reporting on the current condition of the exterior façade and supporting structural framing. The assessment forms the basis of the facade restoration drawings that will be part of the overall building renovation and adaptive re-use project.

The basis of the façade inspection and report is ASTM E2270. The following components of ASTM E2270 were included in the scope:

- Review of project documents.
- Preparation of inspection drawings.
- Façade Inspection.
- Façade Report detailing the following conditions:
  - Unsafe conditions.
  - Façade areas beyond repair due to deterioration of structural support.
  - Required repair/stabilization.

## 5 Document Review Phase

Resurget Engineering, in discussions with BASCO Detroit and Kraemer Design Group, determined that no previous façade assessment reports were available to review and use as a baseline for the 2023 assessment.

No service history was provided.

## 6 Visual Inspection Phase

Visual inspection of the façade carried out from ground level using high-definition photography and binoculars.

The following techniques were used in performing the general inspections:

- Scanning horizontal and vertical surfaces for out-of-plane movement.
- Checking for signs of staining, spalling, water or moisture damage, weathering, or distress of façade components.
- Evaluation of high-definition footage for signs of damage or deterioration.

## 7 Façade Report

The findings of the general and detailed inspection are summarized in the Façade Report.

The primary intent of the report is determining the extent of repairs required for historic restoration. The secondary purposes of the report are:

- Identify specific structural issues that need to be address to restore overall structural integrity.
- Determine how the restored facades can be integrated into the proposed re-development of the overall site.
- Identify buildings/facades that are beyond repair and if replication of the façade is the only viable option

The inspection of each building's façade is discussed in the following sub-section. An elevation of the facades highlighting issued are provided in Appendix A.

## 7.1 1322 Broadway

The Broadway Street façade will be restored and integrated into the proposed re-development of the site.

Façade is the original decorative glazed terra-cotta with detailed parapet wall, column corbels and entrance canopy. Punched window openings on the 2<sup>nd</sup> and 3<sup>rd</sup> floors with storefront glazing and recessed entrance on ground floor.

In general, the façade is in fair to good condition and moderate restoration work is required.

### 7.1.1 Terra-Cotta Facade

Overall, the terra-cotta façade is in moderate condition. Mortar joints are deteriorated allowing water to infiltrate the facade (P-1).

Some minor surface cracking will be repaired at horizontal bands due to water infiltration (P-2).

Vertical cracks and minor spalling occurring at steel embed (P-3).

At the upper water tables and parapet, the glazed terra-cotta is showing signs of moderate to severe surface delamination and spalling(P-4).

Delamination occurs overtime as water infiltrating the wall and coping gets trapped behind the glazed surface expands and contracts during freeze/thaw cycles.

#### Restoration and repairs:

- Extensive tuck and re-pointing of mortar joints required.
- Limited face-shell repairs required at minor cracks and spalls.
- Cope joints repairs and back side waterproofing of parapet wall required to prevent water infiltration into parapet wall.
- Extensive repairs to glazing at parapet wall and water table.



*P-1 Mortar joints require tuck and re-pointing*



*P-2 Face cracking due to water infiltration*



*P-3 Spalling and cracking terra-cotta at steel embeds*



*P-4 Delamination of glazing at upper water table*

## 7.2 1326 Broadway

The Broadway Street façade will be restored and integrated into the proposed re-development of the site.

Broadway façade is red brick with basic detailing. Limestone sill below windows openings at 2<sup>nd</sup> and 3<sup>rd</sup> floors. Detailed metal panel water table below brick parapet wall with terra-cotta tile coping. Modern storefront at ground level with roller shutter door and metal panel covering façade and lintel beam over storefront.

In general, the façade is in moderate condition with the metal panel water panel in poor condition.

### 7.2.1 Red Brick and Limestone

Generally, the red brick is in moderate to good condition. There are areas in the brick that will require repair due to damage from steel anchors and embeds (P-5 and P-7).

Lintel steel above storefront and windows appear in moderate to good condition with no major cracking or spalling of the brick observed (P-5, P-6 and P-7).

Limestone sills show signs of minor cracking and movement that can be repaired in place (P-5 and P-6).

Surface staining and efflorescence visible below water table due to water infiltration through coping and back side of parapet (P-7)

#### Restoration and repairs:

- Tuck and repoint brick and limestone joints.
- Repair cracked limestone sills.
- Remove steel anchor embeds and repair/replace damaged brick.
- Stop water infiltration into parapet wall by waterproofing back side of wall and resetting/resealing coping tiles.



P-5 Red brick and limestone second floor and above



P-6 Metal panel above store front and second floor limestone sill



P-6 Red brick below water table

## 7.2.2 Water Table and Coping Tiles

The sheet metal panel water table is in very poor condition and beyond repair (P-8 and P-9).

The terra-cotta coping tiles are in good condition but may be loose with deteriorated mortar joints.

### Restoration and repairs:

- Remove and replicate water table with sheet metal or FRP molding. Replace supports with treated wood or galvanized steel support.
- Remove and reset coping tiles.



*P-8 Metal panel water table in poor condition*



*P-9 Metal panel water table in poor condition*



## 7.3 1336 Broadway

The Broadway street façade is in poor condition and a major concern is the lateral ties attaching the limestone to the back walls.

Façade consists of limestone façade with limited detailing. Streaked marble panel between 2<sup>nd</sup> and 3<sup>rd</sup> floor window openings with exposed cast-iron posts at window mullion locations. Cast-iron decorative florets attached to limestone and marble façade panel. The original stone water table has been removed with no remaining detailing. The storefront is boarded up and not accessible.

### 7.3.1 Cast-Iron Detailing

Several decorative cast-iron florets are attached to the limestone and marble panels. The florets are in good condition but require cleaning and painting.

The cast-iron decorative posts appear in good condition but require cleaning and painting. These posts provide support for the steel lintels supporting spandrel panels with marble or limestone.

#### Restoration and repairs:

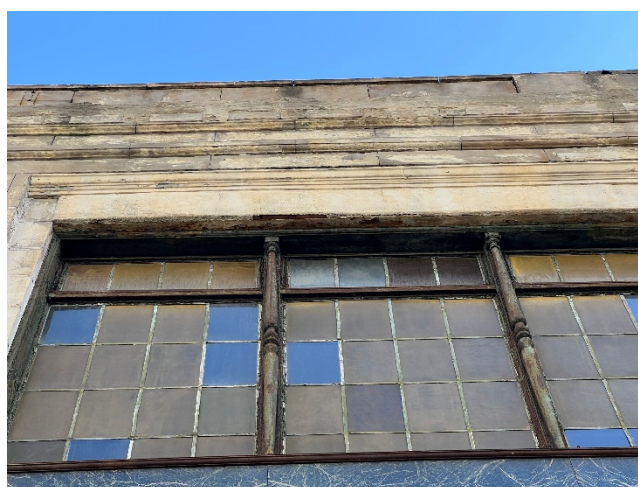
- Remove cast-iron florets clean, paint and re-install.
- Cast iron posts support corroding steel lintels. The steel lintels need to be replaced or completely exposed for repairs. Recommend removing the cast-iron posts for restoration (clean and paint) and reinstall with new steel lintels.



P-10 Cast-iron floret attached to stone



P-11 Cast-iron floret attached to marble. Cast-iron mullion posts



P-12 Cast-iron mullion posts between windows

## 7.3.2 Steel Lintels

The steel lintels above the storefront and window openings are in poor condition and moderately to severely corroded. Steel corrosion and resulting rust pack jacking forces is cracking and displacing the limestone and marble façade above and at ends (P-13)

### Restoration and repairs:

- To repair the steel lintels beams will require the removal of large areas of limestone, all the marble panels and most of the backup walls and structure, to allow access for repair.
- Access to steel lintel will require removal of most of the historic façade elements.

## 7.3.3 Limestone and Marble Veneer

### 7.3.4 Exposed Concrete Framing

Most of the Broadway façade consists of limestone and marble. The limestone is in poor condition and has been painted over with many cracks and holes due to various modifications in the past (P-14 and P-15).

The original water table below the parapet has been removed and patched with mortar.

There are significant open mortar joints and displaced stone pieces. It appears that most of the steel ties providing lateral support to the backup wall have corroded over time and have failed structurally.

### Restoration and repairs:

- All lateral ties connecting veneer elements to the backup wall need to be replaced.
- To replace lateral ties all veneer elements, need to be removed, restored, and reset.
- Due to the overall condition of the backups structure and need to remove all veneer elements for steel repair and installation of new lateral ties it is recommended at the building façade is removed and re-constructed on new backup structure integrated into proposed new building.



P-13 Damage to limestone and windows due to steel corrosion

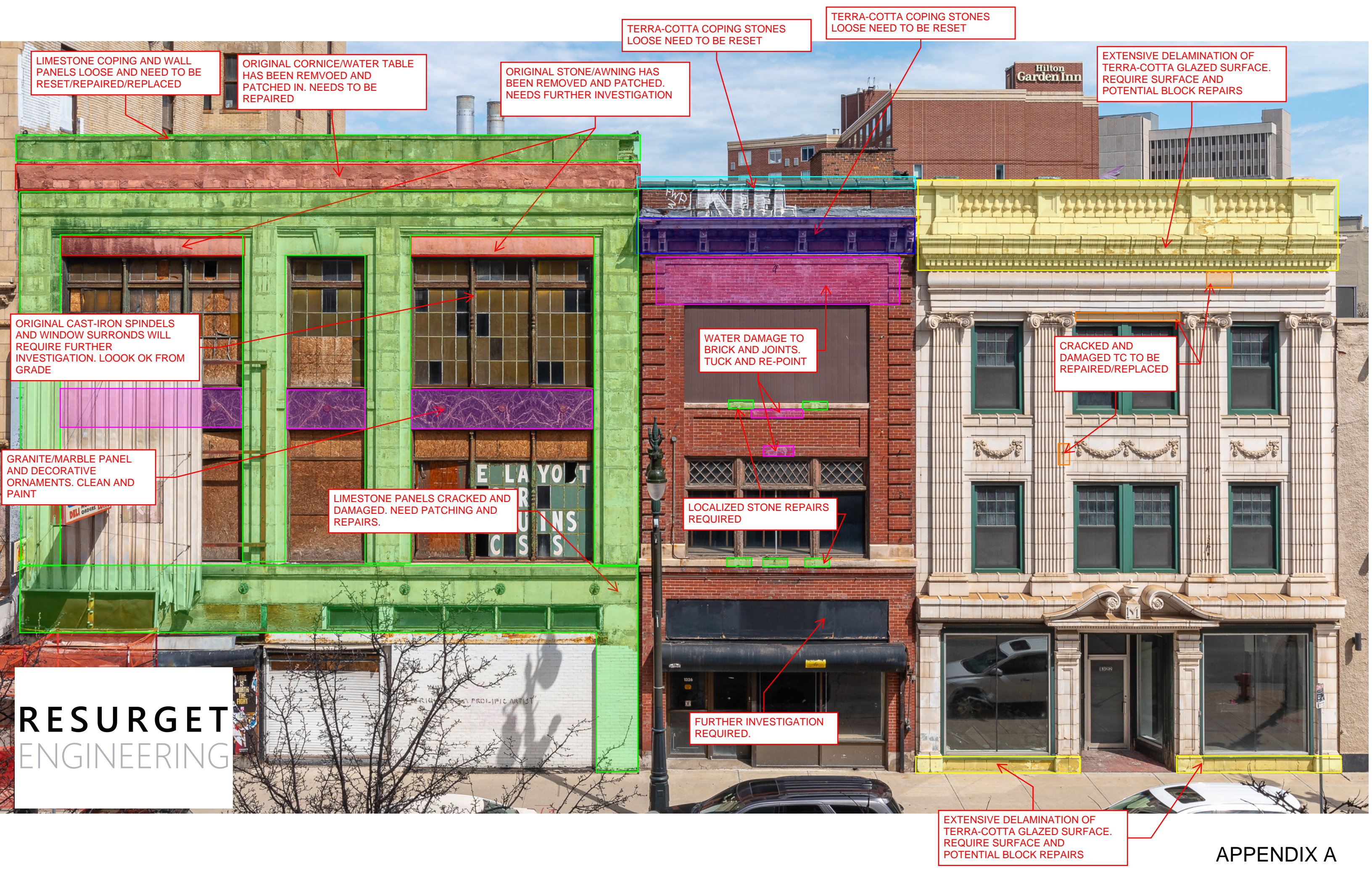


P-14 Loose limestone pieces above patched water table



P-15 Cracked and damaged limestone due to steel corrosion and lack of lateral ties

## Appendix A – Marked up Broadway Elevation



LIMESTONE COPING AND WALL PANELS LOOSE AND NEED TO BE RESET/REPAIRED/REPLACED

ORIGINAL CORNICE/WATER TABLE HAS BEEN REMOVED AND PATCHED IN. NEEDS TO BE REPAIRED

ORIGINAL STONE/AWNING HAS BEEN REMOVED AND PATCHED. NEEDS FURTHER INVESTIGATION

TERRA-COTTA COPING STONES LOOSE NEED TO BE RESET

TERRA-COTTA COPING STONES LOOSE NEED TO BE RESET

EXTENSIVE DELAMINATION OF TERRA-COTTA GLAZED SURFACE. REQUIRE SURFACE AND POTENTIAL BLOCK REPAIRS

ORIGINAL CAST-IRON SPINDELS AND WINDOW SURROUNDS WILL REQUIRE FURTHER INVESTIGATION. LOOK OK FROM GRADE

GRANITE/MARBLE PANEL AND DECORATIVE ORNAMENTS. CLEAN AND PAINT

LIMESTONE PANELS CRACKED AND DAMAGED. NEED PATCHING AND REPAIRS.

WATER DAMAGE TO BRICK AND JOINTS. TUCK AND RE-POINT

LOCALIZED STONE REPAIRS REQUIRED

CRACKED AND DAMAGED TC TO BE REPAIRED/REPLACED

FURTHER INVESTIGATION REQUIRED.

EXTENSIVE DELAMINATION OF TERRA-COTTA GLAZED SURFACE. REQUIRE SURFACE AND POTENTIAL BLOCK REPAIRS

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