
Richard Henry Behr Architect P. C.

Village of Irvington Town Hall Exterior Conditions Analysis
85 Main Street
Irvington, NY 10533

October 11, 2012

September 11, 2012

Village of Irvington
85 Main Street
Irvington, NY 10533
Attention: Lawrence Schopfer

Re: **Village of Irvington Town Hall Exterior Conditions Analysis**

Dear Mr. Lawrence Schopfer,

Please find the enclosed report **Village of Irvington Town Hall Exterior Conditions Analysis**. Our findings and recommendations are in the following report as well as the attached appendices from Israel Berger and Associates, ACS Environmental, and C & F Plumbing.

Please contact me if you have any questions or require any further clarification or supplemental information for this report.

Sincerely,

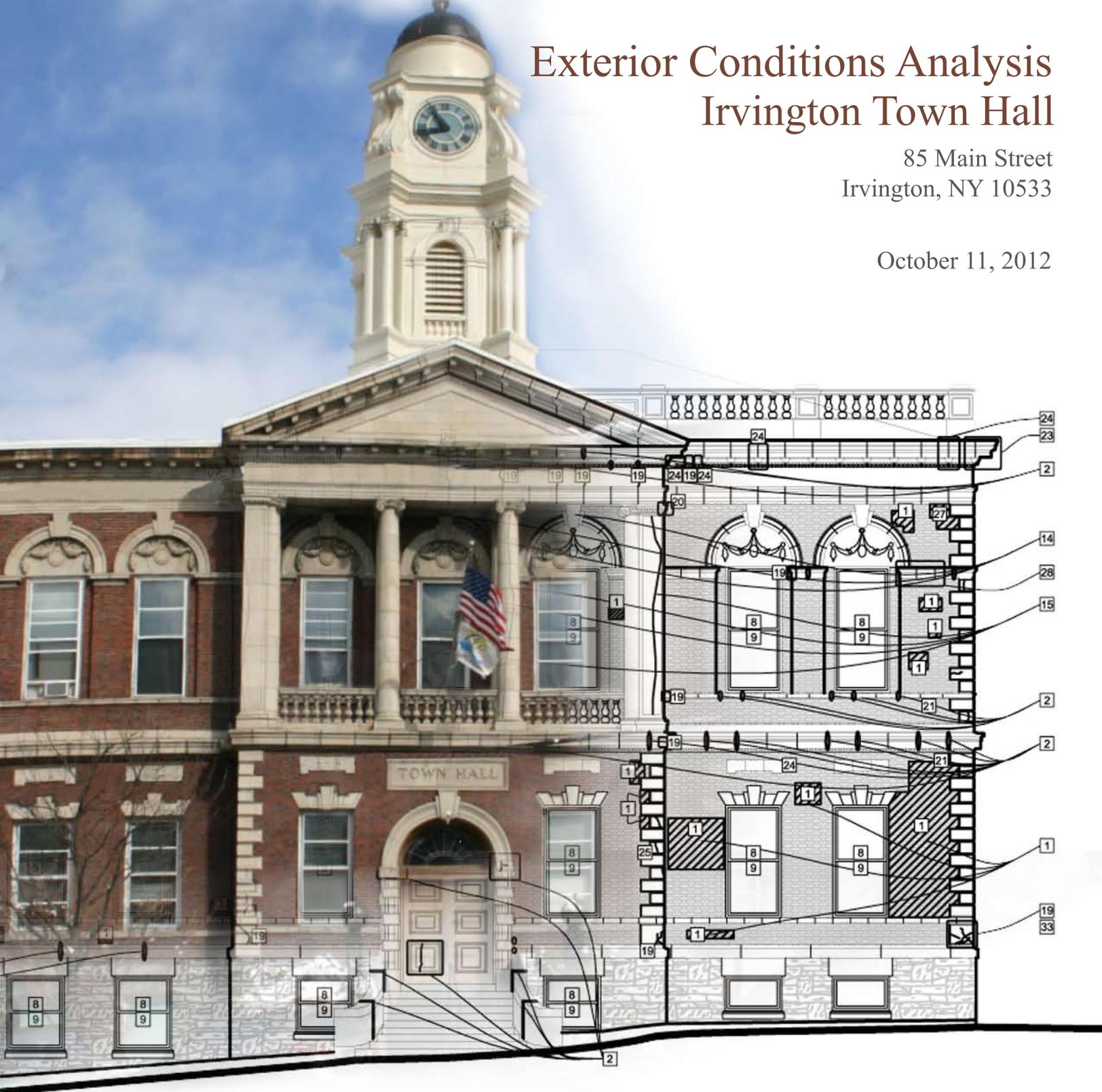


Mark C. Behr
Richard Henry Behr Architect P.C.

Exterior Conditions Analysis Irvington Town Hall

85 Main Street
Irvington, NY 10533

October 11, 2012



2 Weaver Street
Scarsdale, NY 10583
914.722.9020

Richard Henry Behr Architect P.C.

www.rhbpc.com

4066 Shelburne Road
Shelburne, VT 05482
802.864.2888

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Village of Irvington Town Hall Exterior Conditions Analysis

Introduction

Richard Henry Behr Architect P.C. (RHBPC) was retained by the Village of Irvington to provide exterior conditions analysis for the Village of Irvington's Town Hall, a 1902 historic structure designed by architect A.J. Manning. The building has been on the National Register of Historic Places since 1984.

Per the Village of Irvington Request for Proposal dated January 22, 2010 (Appendix 1) and subsequent follow up clarification memo dated August 2, 2011 (Appendix 2), our report will focus on the exterior envelope and is to include the 4 major elevations (North, South, East, and West) the roof, the drain leaders, both external as well as internal leaders, and the major components that make up the elevations and roof.

This report is compiled from a team of professional consultants retained by RHBPC along with consultants retained directly by the Village of Irvington. RHBPC collaborated with exterior envelope specialists Israel Berger and Associates (IBA) as our prime consultant. The Village of Irvington retained ACS Environmental Services (ACS) for Hazardous Materials Testing and C & F Plumbing (C & F) for existing drains assessment. RHBPC used the combined experience of these three consultants as a basis for the development of our exterior conditions analysis report.

RHBPC in conjunction with IBA performed field investigation and testing work on May 29, 30 & 31 of 2012. Observations, photographs and detailed notes were taken both from ground level and from a mechanical boom lift to access upper story elements.

Our report includes documentation of existing exterior elements including brick masonry, terra cotta masonry, window and roof systems and the conditions of each respectively. Vital structural elements were analyzed and recommendations for necessary maintenance and historic preservation measures are incorporated. The concluded results of this report are sufficient for the Village of Irvington's use in "Phase II" of this project, preparation of construction documents and specifications. For detailed information, refer to all three consultant's reports included in the appendices listed below.

Israel Berger and Associates (IBA) – Refer to Appendix 3
ACS Environmental Services (ACS) – Refer to Appendix 4
C & F Plumbing (C & F) – Refer to Appendix 5

Village of Irvington Town Hall Exterior Conditions Analysis

A. Observations & Recommendations Report

1. Window Systems

The majority of windows are wood double hung type with single paned glazing. The existing trim and paint are in poor condition, however the windows themselves are in fair condition (refer to Paint Condition Key below). It appears the original oak sash was previously retrofitted with bronze weather stripping. The paint around the sash is cracking and in most cases has deteriorated. (Refer to reference Photo 19)

Paint Condition Key:

Fair = minor chipping, peeling or cracks
Poor = major chipping, peeling or cracks

1A. Hazardous Material Findings Summary for Windows:

Based on ACS's Asbestos Containing Material (ACM) Inspection Report:

The exterior window frame caulking materials around all the windows throughout all facades showed a presence of ACM greater than allowable limits. The caulking will need to be abated properly during any renovation / rehab work.

Based on ACS's Lead Based Paint (LBP) Inspection Report:

All exterior wood window components including the window casings/frames, sashes, window wells and jambs at all elevations and all levels of the building are classified as containing LBP. The basement door, door casing and frame at the East elevation were also found to contain lead based paint (Refer to reference Photo 76).

Based on ACS's Polychlorinated Biphenyls (PCB) Inspection Report:

Review of sample areas tested from the exterior window frame caulking materials and the window glazing/putty materials from the window sashes indicates that no PCB's were detected above the regulatory level.

* Please note that there were no other hazardous materials findings for tested areas and materials other than those listed for the window systems and basement door. Refer to ACS's full report, Appendix 4 for further information on the presence of LBP, PCB, and ACM in window systems and doors.

1B. Window Systems - Restoration/Repair Recommendations:

Primary recommendation:

The existing windows have exceeded the anticipated lifespan without a complete restoration. Even after restoration, the windows will still be a single glazed system which is not energy efficient by today's standards. We recommend a full window replacement with a high performance wood window with aluminum clad exterior and natural finish interior. The glazing should be insulated with a low-e coating. Window perimeter trim should be replaced to match existing details.

Secondary recommendation:

Glass energy panels can be retrofitted to the interior of the existing windows for an additional layer of thermal glazing or new operable storm windows can be installed. Full window restoration is also recommended involving the scraping and painting of wood sash around exterior. Glazing putty to be painted and replaced as needed.

Hazardous Material Abatement:

Any work that is performed whether a new window replacement or a full restoration will have to involve abatement following all EPA and NYS HUD protocols for LBP, ACM and PCB contaminated materials.

2. Brick Masonry

The exterior walls are a true load bearing bricks three wythes thick laid in a Flemish Bond. The brick masonry in general is in fair condition. Areas of the façade with original mortar joints heavily eroded are identified on elevation drawings in Section B – Drawings. There have been multiple areas on the building where recent repointing work has been performed using various mortar mixes. Refer to IBA's report for further detailed analysis of the brick masonry conditions.

Efflorescence

Refer to Section B Drawings Elevation Note 21, "Presence of Efflorescence" for locations where efflorescence was identified on the elevations. According to the Masonry institute of America efflorescence is an indication of all of the following three conditions:

1. Presence of water soluble salts present somewhere in the wall.
2. Presence of sufficient moisture in the wall to render the salts into a soluble solution.
3. Presence of a viable path for the soluble salts to migrate through to the surface where the moisture can evaporate therefore depositing the salts. These salts then crystallize and cause efflorescence.

Refer to Section B Drawings - Elevation Note 21; “Presence of efflorescence”, (Reference Image 2, 22 & 23)

Mortar Joints

Roughly 1/3 of the mortar joints appear to be previously re-pointed by various contractors at varying times. This mortar appears to vary in condition. There are areas of original repointing that are heavily eroded and in need of repointing. This occurs on all elevations; reference should be made to those locations pointed out in Section B Elevations Note 1 & 2. Most notably the portion above the second floor window at the North-West corner of the West facade and the South-West corner of the South façade,

Refer to Section B Drawings Elevation Note 1, “Re-pointing/Extensive eroding of original pointing of masonry”.
(Reference Images 18, 56 & 57, 58, 59, 62, 68)

2A. Brick Masonry - Restoration/Repair Recommendations:

Re-pointing is recommended in areas where original re-pointing has deteriorated, eroded or brick is showing signs of efflorescence. Brick cleaning should involve hand washing with a mild detergent and a stiff bristle brush. Sandblasting is not recommended for cleaning of these areas. If sandblasting method is chosen, sandblasting should be used with caution and afterwards the masonry should be sealed with a waterproofing material. Regardless of what cleaning method is used, post cleaning the masonry should be sealed with a high quality waterproofing material or sealant. The efflorescence may reappear however because there still may be water inside the wall. The efflorescence already indicates that soluble alkali sulfates may exist in the wall and that the sulfates have found viable paths to the surface. The goal is to now prevent moisture from re-entering the masonry and rendering the sulfates into solution.

3. Terra Cotta Masonry

The town hall’s extensive ornamentation of terra cotta bands, arches, columns, and capitals are overall in fair condition. The four Ionic columns of the main tetra-style portico on the South façade are an exception and are in very poor condition. There are extensive large cracks at each of the columns. Many of these cracks appear to have been repaired at some point however many are still failing. The capitals are also in poor condition. One of the volutes was loose and detached during our field survey. The bases of each of the columns are also experiencing extensive cracking. This extensive terra cotta deterioration and cracking is often a result of significant

quantities of liquid moisture often found within the compromised terra cotta building wall systems. The primary reason for terra cotta failure is water penetration and freeze-thaw cycles and this will need to be addressed during a proper restoration project (Phase II).

Except for the front portico, the terra cotta elsewhere appears to be in fair condition with some minor repairs required. These repair locations are noted in Section B Drawings - Elevation Notes 10, 11 & 12 "Joints in poor/fair condition", "Joints in fair/good condition", "Joints in poor condition" These areas consist of terra cotta bands at the base and frieze of the building where the mortar joint between the terra cotta is either in poor or fair condition.

Refer to Section B Drawings for specific locations.

3A. Terra Cotta Masonry - Restoration/Repair Recommendations:

Primary recommendation:

Due to the severity of the cracking on the South face portico we recommend completely replacing all the individual pieces of each of the four columns and ornamental work in this area. The new should match existing in material, design and finish.

Secondary recommendation:

RHBPC recommends the use of Custom System 45 and Elastowall 351 or similar products for the extensive patching and repair of the damaged portico areas. (Refer to Appendix 6)

Terra Cotta spalling and cracking areas throughout the building we recommend the use of Custom System 45 and Elastowall 351, Elastomastic 352 or similar products for the miscellaneous patching and repair of the damaged areas. An allowance is also recommended for miscellaneous isolated areas requiring patching.

Terra Cotta Discoloration – Recommended cleaning and scrubbing, application of waterproof sealant, and polishing of discolored areas.

4. Concrete Masonry (CMU)

The North addition serving for the theater egress stair and elevator is constructed of standard 8"x16"x8" concrete masonry units (CMU) with cement parge coating. The Western portion of the addition is painted white. Here we observed extensive deteriorated masonry at the steel beam and at expansion joints.

Refer to Section B Drawings Elevation Notes 26, "Steel beam is exposed and

deteriorating.” These cracks are commonly caused by the daily and seasonal differential movement between the steel and the brick materials which expand and contract at different rates due to fluctuations in the temperature.

Refer to Section B Drawings Elevation Notes 22, “Deteriorating/Open control joint between structures.” The sealant at the control joints between substrates is in poor condition and in some cases is completely deteriorated to a point where daylight was visible from the interior of the building.

Refer to Section B Drawings Elevation Note 16; “Stepped cracks that run through the existing CMU joints”, (Reference Photo 8 & 65.) Settlement cracks in CMU walls are commonly known as “stair step cracks” or a crack that steps up as it moves horizontally across the wall. This is caused by unstable soil conditions under the buildings footings. These were primarily found along the North rear elevation. Building maintenance staff should be aware and expect additional movement if the settlement has not stopped.

4A. Concrete Masonry (CMU) - Restoration/Repair Recommendations:

Extensive deteriorated masonry at Steel:

We recommend that the masonry surrounding the steel beam should be pinned up and areas below removed. All steel should be scraped, primed, painted and waterproofed. New masonry should be installed and a waterproof coating applied at CMU surfaces. Where existing, sealant at the control joints between substrates should be removed and resealed at all control joint locations.

Deteriorating open control joints:

Remove any remaining portions of control joint and completely resealing all gaps.

Settlement Cracks:

Recommend patching and re-pointing of existing cracks to keep water, bugs etc from entering the building. After proper re-pointing of the stepped cracks we recommend applying a new weatherproof coating at all CMU surfaces.

5. Main Roof

IBA’s observations of the roof indicate that the roof was recently replaced with a black EPDM mechanically fastened system over Carlisle Insulation boards. They found this roof to be in acceptable condition with no need for any repairs at this time. The roof drains, scuppers and downspouts are also in clean working condition. Proper and routine maintenance should be carried out consistently.

6. Lower Roof Extension

Observations indicate that the roof was recently replaced with a black EPDM mechanically fastened system over Carlisle Insulation boards. This roof is in acceptable condition with no further repairs needed. The roof drains, scuppers and downspouts are also in clean working condition. Proper and routine maintenance should be carried out consistently.

7. South Balcony Roof

IBA's observations of the roof over the portico indicated that the roof is constructed of a modified Bitumen Membrane and is in poor condition. The through wall scupper drains are currently clogged with debris and pigeon guano. Trapped moisture was found to be contributing to both roof deterioration and leaks in the closet below.

7A. South Balcony Roof - Restoration/Repair Recommendations:

Replace the south balcony roof with a liquid applied membrane equivalent to Parapro 123, (Refer to Appendix 6) We recommend removing all roofing layers down to structural decking. The scuppers should also be cleaned and free of all debris as part of the roof replacement work. Once this roof is replaced we also recommend installing bird netting at the outer portico to prevent further damage from bird debris and guano.

8. Roof Skylight

Observations indicate the skylight to be in fair condition. The paint around the metal mullions however is cracking and the condition of the glass is poor in areas.

8A. Restoration/Repair Recommendations:

Recommend repainting of the metal mullions at the skylights. Also recommend the glass to be re-puttied and replaced with plexi-glass. These areas were not under current scope therefore were not tested for hazardous materials. LBP and ACM presence should be assumed and all caulking and paints should be abated following regulatory in ACS's Inspections report, Appendix 4.

9. Storm Water Drain Pipes

C & F Plumbing used a camera to check the conditions on two front internal roof drains. They set up machine and ran the camera down roughly 45' into the existing trap. Some pipe scale was found but overall pipes were found to generally be in good

condition. Proper and routine maintenance should be carried out consistently.

10. Clock Tower

The clock tower was recently renovated and existing condition analysis of such is not included in this report.

11. General Miscellaneous Recommendations

a) Restoration of Original Architecture:

Based on a historical photo of Irvington Town Hall there was presumably a terra cotta balustrade along the perimeter of the main roof just above the second floor cornice.

Refer to Building Photographs – Historical Photo of South Elevation Front Facade
Refer to Section B Drawings Elevation Note 35

b) North Elevation (Rear):

Refer to Section B Drawings - Elevation Notes 13 – Recommend: Detaching vent to be securely reinstalled with new perimeter weatherproofing/sealant joint.

c) East Elevation: Refer to Section B Drawings - Elevation Notes 18 –

Recommend: Open joint from removed fire escape to be in-filled with qualifying brick and mortar to match existing in color variation and texture.

d) Refer to Section B Drawings – Elevation Notes 23 – “Previously patched and pinned area in poor condition”

Recommend: Remove and reconstruct entire portion or Terra Cotta corner using Custom System 45 and Elastowall 351 or similar.

e) Refer to Section B Drawings – Elevation Notes 24 – “Loose masonry unit”

Refer to Section B Drawings – Elevation Notes 28 – “Masonry Unit that sounds and feels loose”

Refer to Section B Drawings – Elevation Notes 29 – “Displaced Brick”

Refer to Section B Drawings – Elevation Notes 31 – “Exposed pipe and associated loose brick”

Recommend: Removing the loose brick, lay new mortar bed and reinsert loose bricks. Reseal and repoint surrounding areas.

f) Refer to Section B Drawings – Elevation Notes 33 – “Wooden louver paint is peeling and chipping”

Recommend: Replacing wood louver with metal drainable louver with white finish.

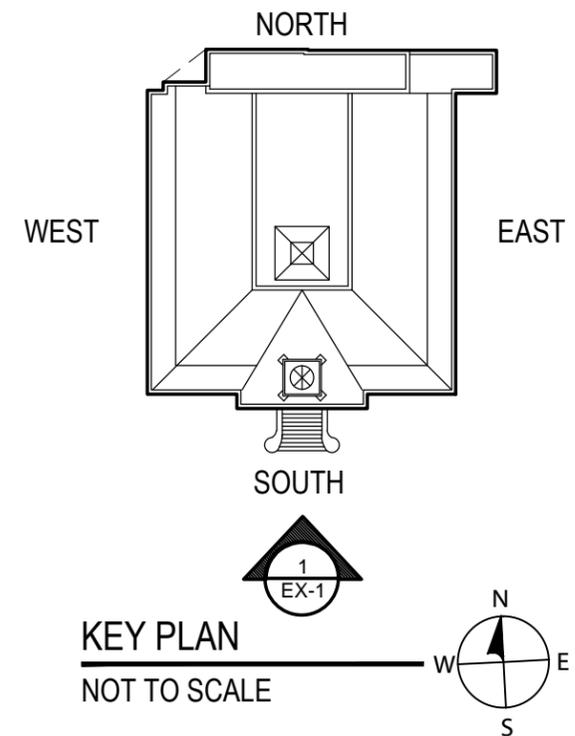
12. Summary Conclusion

In conclusion we found the 1902 Village of Irvington Town Hall historic building to be overall in fair condition. The building has had some localized restoration work performed in specific areas over the years, however, to maintain quality and efficiency of the entire exterior envelope a full restoration is appropriate to this 110 years old structure. Due to decreasing structural integrity of the four terra cotta columns, the repair/restoration work for the tetra-style terra cotta portico on the South Elevation – Front Façade should be of priority for “Phase II” work.

- This concludes Section A – Observations & Recommendations Report -

ELEVATION NOTES:
PHOTOS REFERENCE SECTION 6

1. REPOINTING/EXTENSIVE ERODING OF ORIGINAL POINTING OF MASONRY, (REFERENCE PHOTO 18, 56, 57, 58, 59, 62, 68)
2. DETERIORATED JOINT CONDITION
3. CHIPPED/CRACKED MASONRY
4. OFFSET TILE AND OR TILE DISCOLORATION
5. FAILING JOINTS
6. BROKEN OFF CAPITAL VOLUTE (REFERENCE PHOTO 24)
7. NOT USED
8. EXISTING TRIM AND PAINT IN POOR CONDITION, CONTAINS LEAD BASED PAINT (LBP) (REFERENCE PHOTO 19, 20)
9. EXISTING CAULK JOINT IN POOR CONDITION (REFERENCE PHOTO 19, 20, 25, 26)
10. JOINTS IN POOR/FAIR CONDITION
11. JOINTS IN FAIR/GOOD CONDITION
12. JOINTS IN POOR CONDITION (REFERENCE PHOTO 63, 64, 70)
13. DETACHING VENT
14. TERRA COTTA DISCOLORATION. IN GENERAL TERRA COTTA REVIEWED WAS IN FAIR CONDITION (EXCLUDING SOUTH COLUMNS) HOWEVER AN ALLOWANCE SHOULD BE KEPT FOR DISCOLORATION AND REPAIR OF PREVIOUSLY PATCHED AREAS. (REFERENCE PHOTO #12)
15. TERRA COTTA COLUMNS AND PILASTERS IN THE PORTICO ARE IN POOR CONDITION. THE BASE AND CAPITALS ARE ALSO IN POOR CONDITION WITH VISUAL SIGNS OF EXTENSIVE CRACKING. (REFERENCE PHOTO 1, 2, 9, 40, 41, 42, 61)
16. STEPPED CRACKS THAT RUN THROUGH THE EXISTING CMU MORTAR JOINTS. (REFERENCE PHOTO 8, 65)
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19. CRACKED TERRA COTTA (REFERENCE PHOTO 28, 29, 30, 31, 33, 34, 36, 37, 39, 45, 46, 47, 48, 49, 51, 74)
20. SPALLED TERRA COTTA (REFERENCE PHOTO 39, 55, 60)
21. PRESENCE OF EFFLORESCENCE (REFERENCE PHOTO 21, 22, 23)
22. DETERIORATING/OPEN CONTROL JOINT BETWEEN STRUCTURES
23. PREVIOUSLY PATCHED AND PINNED AREA. IN POOR CONDITION (REFERENCE PHOTO 10, 11)
24. LOOSE MASONRY UNIT (REFERENCE PHOTO 5, 12, 27, 28, 29, 30, 31, 32, 33, 35, 38, 43, 44, 52, 60, 67)
25. PREVIOUSLY PATCHED AREA (REFERENCE PHOTO 50, 57, 58, 59)
26. STEEL BEAM IS EXPOSED AND DETERIORATING (REFERENCE PHOTO 8)
27. PATCHED AREA THAT SOUNDS AND FEELS LOOSE (REFERENCE PHOTO 6, 7, 13, 14)
28. MASONRY UNITS THAT SOUND LOOSE (REFERENCE PHOTO 15, 16, 17, 19, 29, 30, 31)
29. DISPLACED BRICK (REFERENCE PHOTO 53, 54)
30. PREVIOUSLY PATCHED WINDOW HEAD (REFERENCE PHOTO 66)
31. EXPOSED PIPE AND ASSOCIATED LOOSE BRICK (REFERENCE PHOTO 69)
32. (REFERENCE PHOTO 71)
33. WOODEN LOUVER PAINT FINISH IS PEELING AND CHIPPING (REFERENCE PHOTO 75)
34. EXISTING WOOD DOOR AND TRIM PAINT CONTAINS LBP (REFERENCE PHOTO 76)
35. LOCATION OF ORIGINAL 1902 TERRA COTTA BALUSTRADE SINCE BEEN REMOVED, REFERENCE HISTORICAL PHOTO IN SECTION C



1 SOUTH ELEVATION (FRONT FACADE)
3/32" = 1'-0"

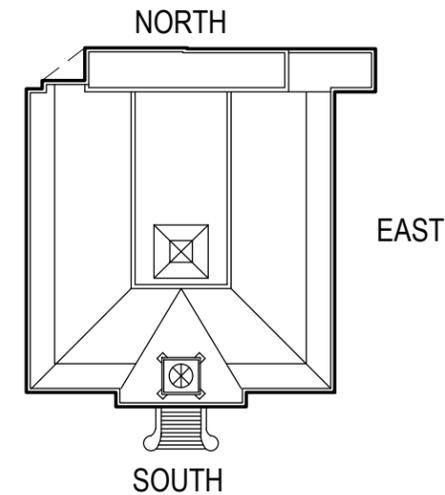
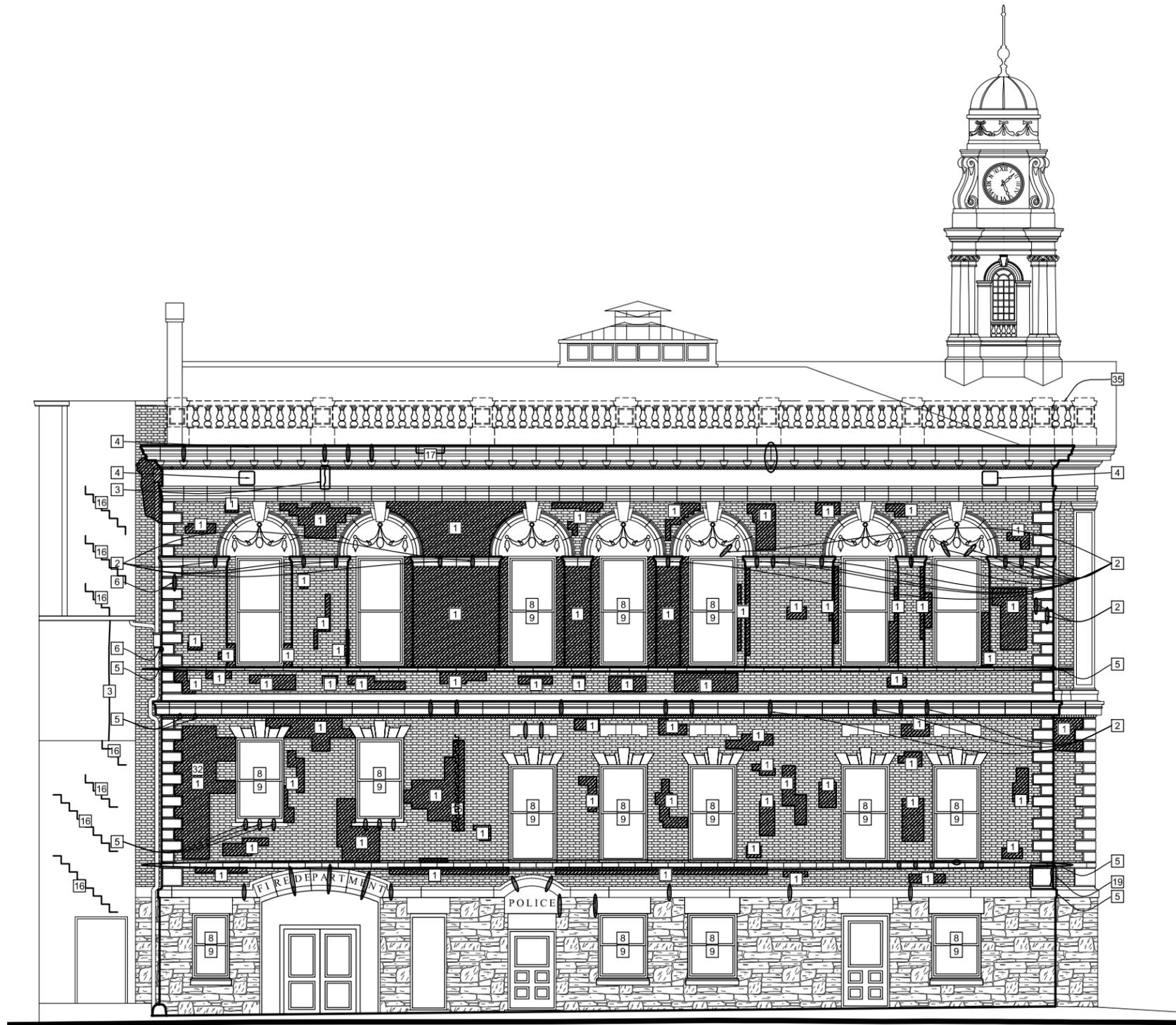
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CLIENT: Village of Irvington
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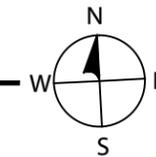
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Issue Date: October 11, 2012

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KEY PLAN
NOT TO SCALE



1 WEST ELEVATION (LEFT SIDE FACADE)
3/32" = 1'-0"

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CLIENT: Village of Irvington
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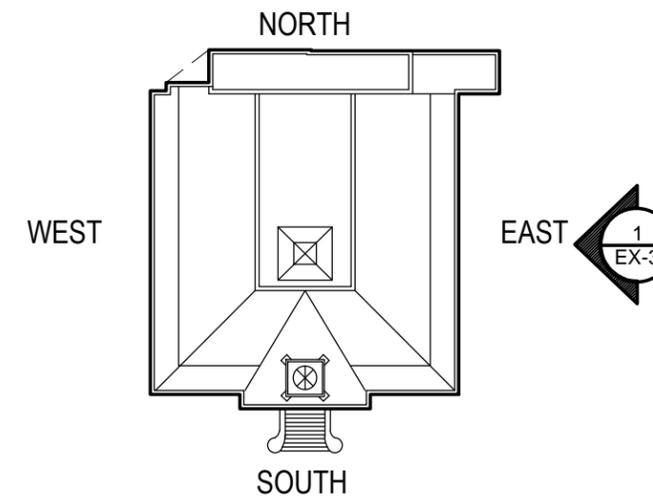
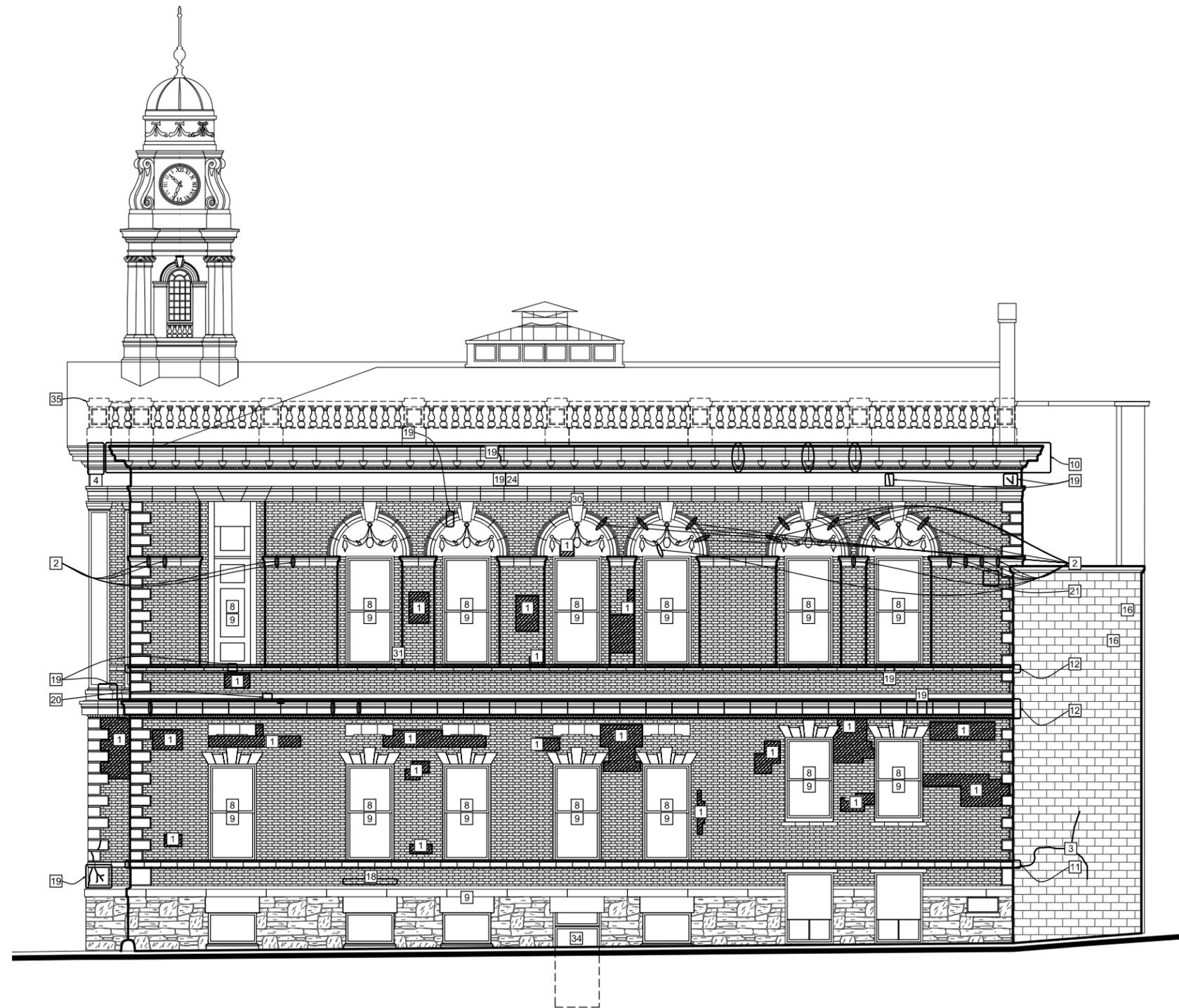
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EX-2

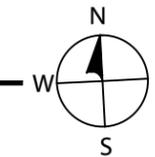
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| 10. JOINTS IN POOR/FAIR CONDITION | 22. DETERIORATING/OPEN CONTROL JOINT BETWEEN STRUCTURES |
| 11. JOINTS IN FAIR/GOOD CONDITION | 23. PREVIOUSLY PATCHED AND PINNED AREA. IN POOR CONDITION (REFERENCE PHOTO 10, 11) |
| 12. JOINTS IN POOR CONDITION (REFERENCE PHOTO 63, 64, 70) | 24. LOOSE MASONRY UNIT (REFERENCE PHOTO 5, 12, 27, 28, 29, 30, 31, 32, 33, 35, 38, 43, 44, 52, 60, 67) |
| | 25. PREVIOUSLY PATCHED AREA (REFERENCE PHOTO 50, 57, 58, 59) |
| | 26. STEEL BEAM IS EXPOSED AND DETERIORATING (REFERENCE PHOTO 8) |
| | 27. PATCHED AREA THAT SOUNDS AND FEELS LOOSE (REFERENCE PHOTO 6, 7, 13, 14) |
| | 28. MASONRY UNITS THAT SOUND LOOSE (REFERENCE PHOTO 15, 16, 17, 19, 29, 30, 31) |
| | 29. DISPLACED BRICK (REFERENCE PHOTO 53, 54) |
| | 30. PREVIOUSLY PATCHED WINDOW HEAD (REFERENCE PHOTO 66) |
| | 31. EXPOSED PIPE AND ASSOCIATED LOOSE BRICK (REFERENCE PHOTO 69) |
| | 32. (REFERENCE PHOTO 71) |
| | 33. WOODEN LOUVER PAINT FINISH IS PEELING AND CHIPPING (REFERENCE PHOTO 75) |
| | 34. EXISTING WOOD DOOR AND TRIM PAINT CONTAINS LBP (REFERENCE PHOTO 76) |
| | 35. LOCATION OF ORIGINAL 1902 TERRA COTTA BALUSTRADE SINCE BEEN REMOVED, REFERENCE HISTORICAL PHOTO IN SECTION C |



1 EAST ELEVATION (RIGHT SIDE FACADE)
3/32" = 1'-0"

KEY PLAN
NOT TO SCALE

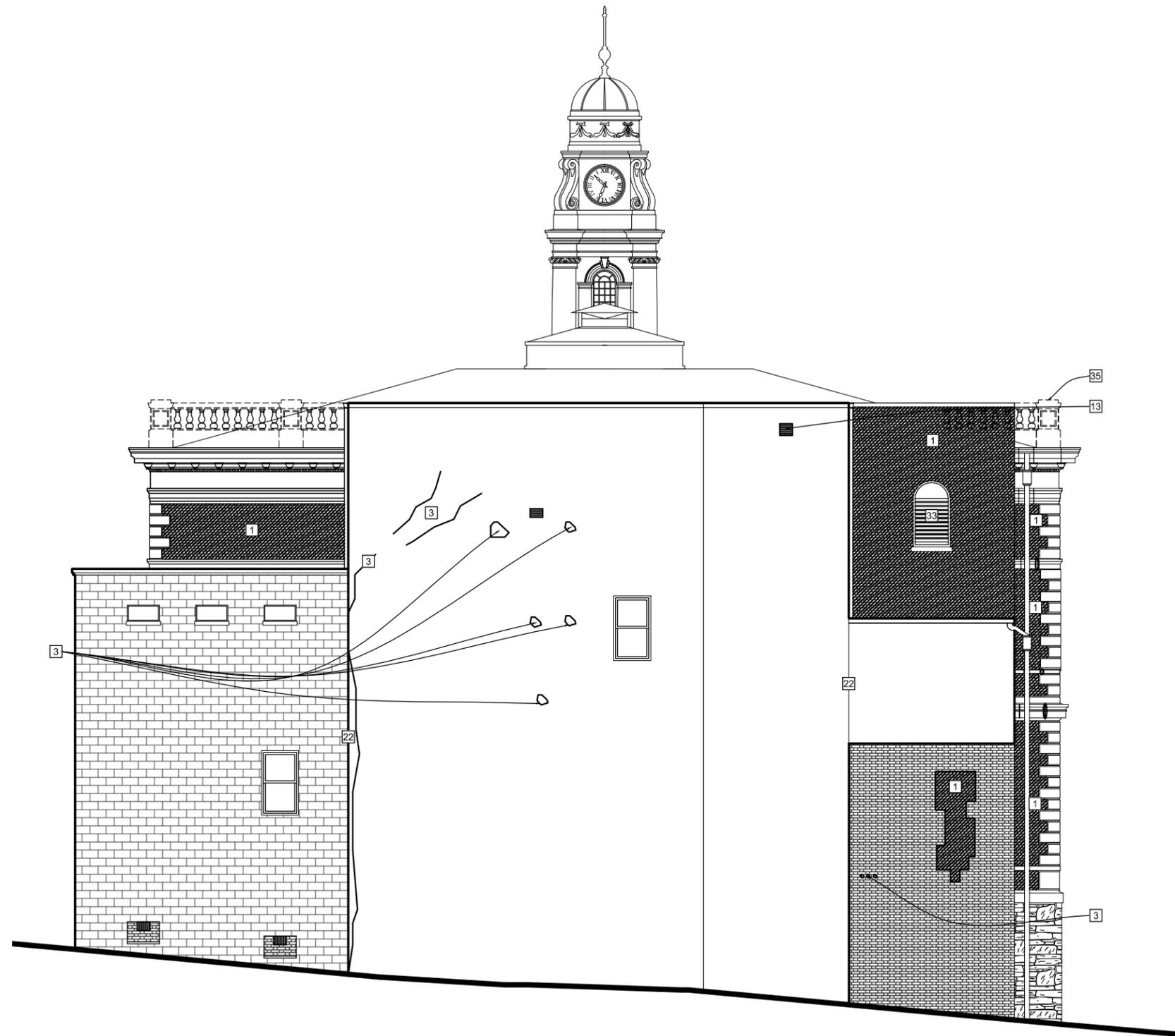


Village of Irvington Town Hall Exterior Conditions Analysis

CLIENT: Village of Irvington
85 Main Street
Irvington, NY 10533

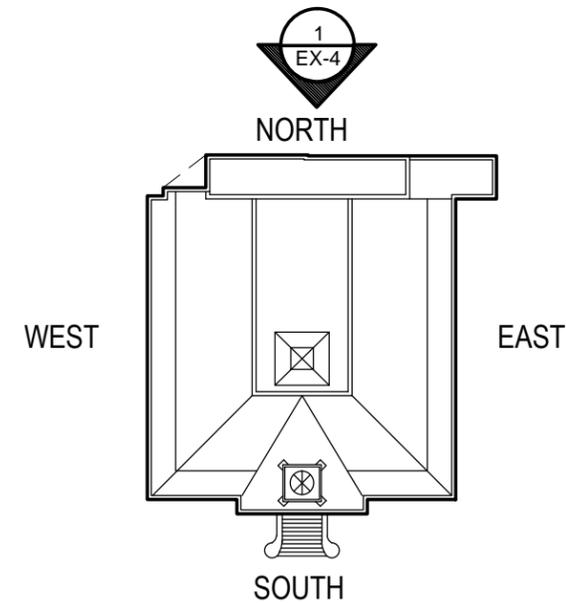
ARCHITECT: Richard Henry Behr Architect P.C.
2 Weaver Street
Scarsdale, NY

Issue Date: October 11, 2012

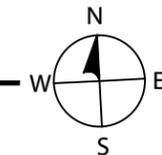


ELEVATION NOTES:
PHOTOS REFERENCE SECTION 6

1. REPOINTING/EXTENSIVE ERODING OF ORIGINAL POINTING OF MASONRY, (REFERENCE PHOTO 18, 56, 57, 58, 59, 62, 68)
2. DETERIORATED JOINT CONDITION
3. CHIPPED/CRACKED MASONRY
4. OFFSET TILE AND OR TILE DISCOLORATION
5. FAILING JOINTS
6. BROKEN OFF CAPITAL VOLUTE (REFERENCE PHOTO 24)
7. NOT USED
8. EXISTING TRIM AND PAINT IN POOR CONDITION, CONTAINS LEAD BASED PAINT (LBP) (REFERENCE PHOTO 19, 20)
9. EXISTING CAULK JOINT IN POOR CONDITION (REFERENCE PHOTO 19, 20, 25, 26)
10. JOINTS IN POOR/FAIR CONDITION
11. JOINTS IN FAIR/GOOD CONDITION
12. JOINTS IN POOR CONDITION (REFERENCE PHOTO 63, 64, 70)
13. DETACHING VENT
14. TERRA COTTA DISCOLORATION. IN GENERAL TERRA COTTA REVIEWED WAS IN FAIR CONDITION (EXCLUDING SOUTH COLUMNS) HOWEVER AN ALLOWANCE SHOULD BE KEPT FOR DISCOLORATION AND REPAIR OF PREVIOUSLY PATCHED AREAS. (REFERENCE PHOTO #12)
15. TERRA COTTA COLUMNS AND PILASTERS IN THE PORTICO ARE IN POOR CONDITION. THE BASE AND CAPITALS ARE ALSO IN POOR CONDITION WITH VISUAL SIGNS OF EXTENSIVE CRACKING. (REFERENCE PHOTO 1, 2, 9, 40, 41, 42, 61)
16. STEPPED CRACKS THAT RUN THROUGH THE EXISTING CMU MORTAR JOINTS, (REFERENCE PHOTO 8, 65)
17. PREVIOUSLY PATCHED AREA
18. OPEN JOINT FROM REMOVED FIRE ESCAPE
19. CRACKED TERRA COTTA (REFERENCE PHOTO 28, 29, 30, 31, 33, 34, 36, 37, 39, 45, 46, 47, 48, 49, 51, 74)
20. SPALLED TERRA COTTA (REFERENCE PHOTO 39, 55, 60)
21. PRESENCE OF EFFLORESCENCE (REFERENCE PHOTO 21, 22, 23)
22. DETERIORATING/OPEN CONTROL JOINT BETWEEN STRUCTURES
23. PREVIOUSLY PATCHED AND PINNED AREA. IN POOR CONDITION (REFERENCE PHOTO 10, 11)
24. LOOSE MASONRY UNIT (REFERENCE PHOTO 5, 12, 27, 28, 29, 30, 31, 32, 33, 35, 38, 43, 44, 52, 60, 67)
25. PREVIOUSLY PATCHED AREA (REFERENCE PHOTO 50, 57, 58, 59)
26. STEEL BEAM IS EXPOSED AND DETERIORATING (REFERENCE PHOTO 8)
27. PATCHED AREA THAT SOUNDS AND FEELS LOOSE (REFERENCE PHOTO 6, 7, 13, 14)
28. MASONRY UNITS THAT SOUND LOOSE (REFERENCE PHOTO 15, 16, 17, 19, 29, 30, 31)
29. DISPLACED BRICK (REFERENCE PHOTO 53, 54)
30. PREVIOUSLY PATCHED WINDOW HEAD (REFERENCE PHOTO 66)
31. EXPOSED PIPE AND ASSOCIATED LOOSE BRICK (REFERENCE PHOTO 69)
32. (REFERENCE PHOTO 71)
33. WOODEN LOUVER PAINT FINISH IS PEELING AND CHIPPING (REFERENCE PHOTO 75)
34. EXISTING WOOD DOOR AND TRIM PAINT CONTAINS LBP (REFERENCE PHOTO 76)
35. LOCATION OF ORIGINAL 1902 TERRA COTTA BALUSTRADE SINCE BEEN REMOVED, REFERENCE HISTORICAL PHOTO IN SECTION C



KEY PLAN
NOT TO SCALE



1 NORTH ELEVATION (REAR FACADE)
3/32" = 1'-0"

Village of Irvington Town Hall Exterior Conditions Analysis

CLIENT: Village of Irvington
85 Main Street
Irvington, NY 10533

ARCHITECT: Richard Henry Behr Architect P.C.
2 Weaver Street
Scarsdale, NY

Issue Date: October 11, 2012

Section C – Building Photographs



- Historical Photo of South Elevation - Front Facade -

Village of Irvington Town Hall Exterior Conditions Analysis
85 Main Street
Irvington, NY 10533

October 11, 2012



- South Elevation - Front Façade -

Village of Irvington Town Hall Exterior Conditions Analysis
85 Main Street
Irvington, NY 10533

October 11, 2012



- Terra Cotta Tetrastyle Portico and Ionic Columns - South Façade -

Village of Irvington Town Hall Exterior Conditions Analysis
85 Main Street
Irvington, NY 10533

October 11, 2012



- North Elevation – Rear Facade –

Village of Irvington Town Hall Exterior Conditions Analysis
85 Main Street
Irvington, NY 10533

October 11, 2012



- West Elevation – Left Facade –

Village of Irvington Town Hall Exterior Conditions Analysis
85 Main Street
Irvington, NY 10533

October 11, 2012



- East Elevation – Right Facade –

Village of Irvington Town Hall Exterior Conditions Analysis
85 Main Street
Irvington, NY 10533

October 11, 2012



- Clock Tower -



- Typical Wooden Double Hung Style Window – 2nd Floor –

Village of Irvington Town Hall Exterior Conditions Analysis
85 Main Street
Irvington, NY 10533

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- Typical Wooden Double Hung Style Window – 1st Floor –

Village of Irvington Town Hall Exterior Conditions Analysis
85 Main Street
Irvington, NY 10533

October 11, 2012



- Terra Cotta Ionic Columns South Facade -



- Volute at Capital -



- Volute at Capital showing acanthus leaves and egg and dart motif –



- Typical Terra Cotta Window Head -

Referenced Building Photograph

Photo 1

5. FAILING JOINT

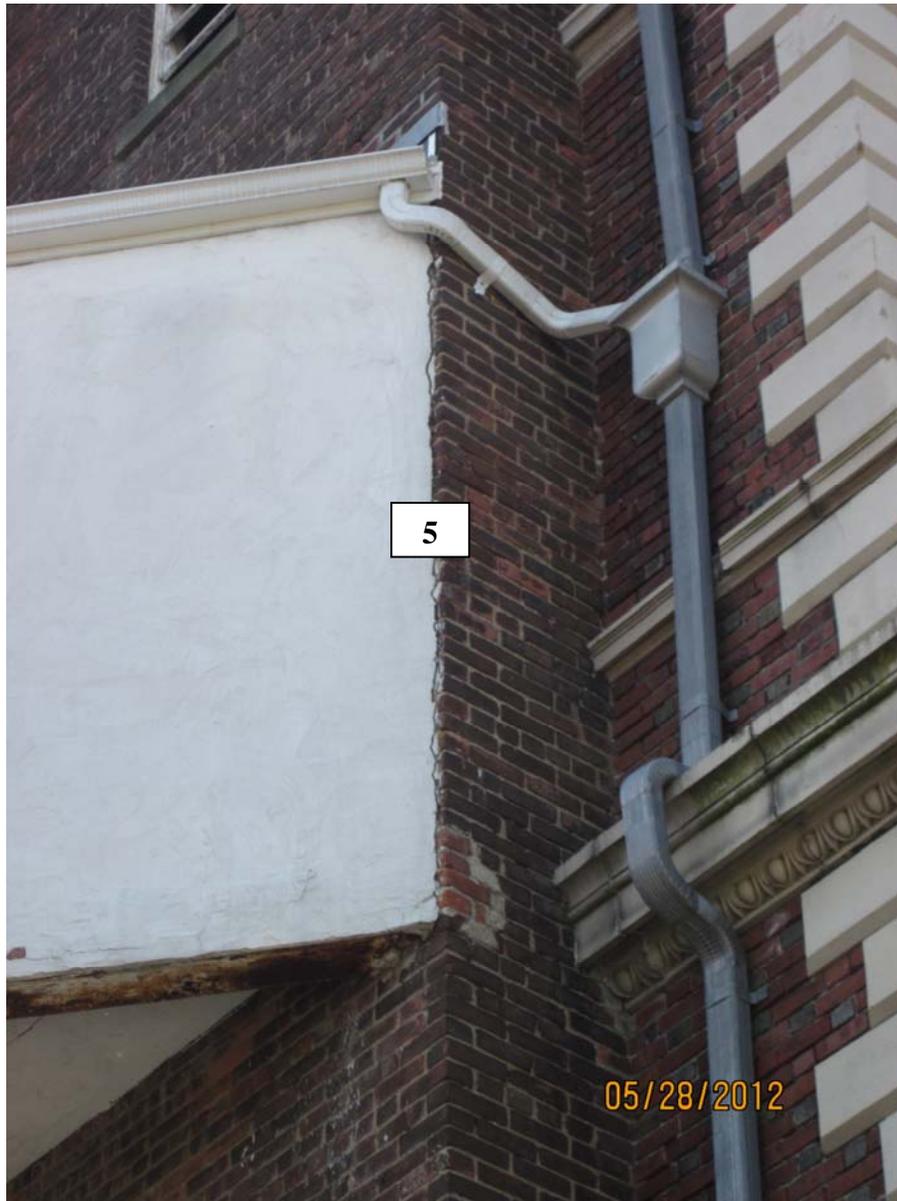


Photo 2

15. TERRA COTTA COLUMNS AND PILASTERS IN THE PORTICO ARE IN POOR CONDITION. THE BASE AND CAPITALS ARE ALSO IN POOR CONDITION WITH VISUAL SIGNS OF EXTENSIVE CRACKING.

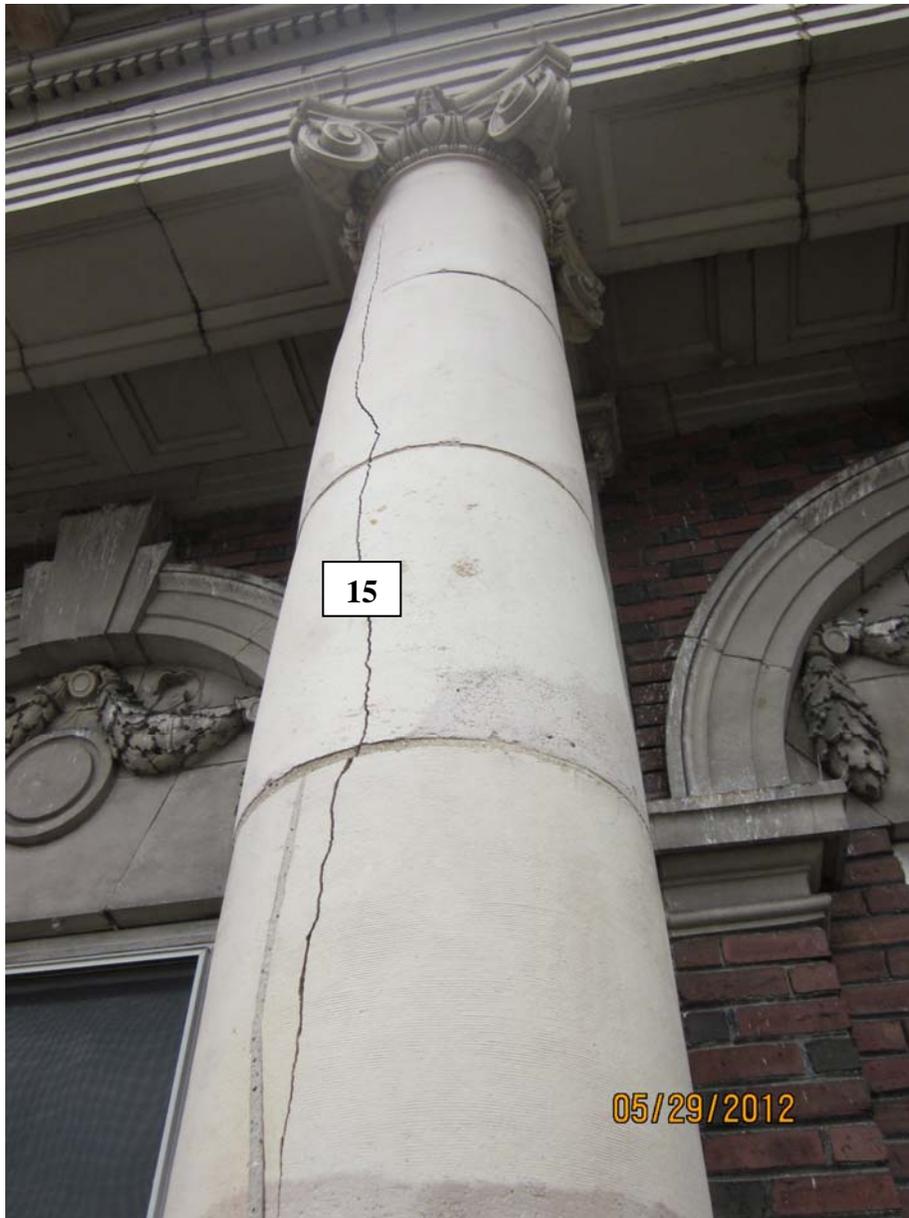


Photo 3

23. PREVIOUSLY PATCHED AND PINNED AREA IN POOR CONDITION.



Photo 4

23. PREVIOUSLY PATCHED AND PINNED AREA IN POOR CONDITION.



Photo 5

24. LOOSE MASONRY UNIT



Photo 6

27. PATCHED AREA THAT SOUNDS AND FEELS LOOSE

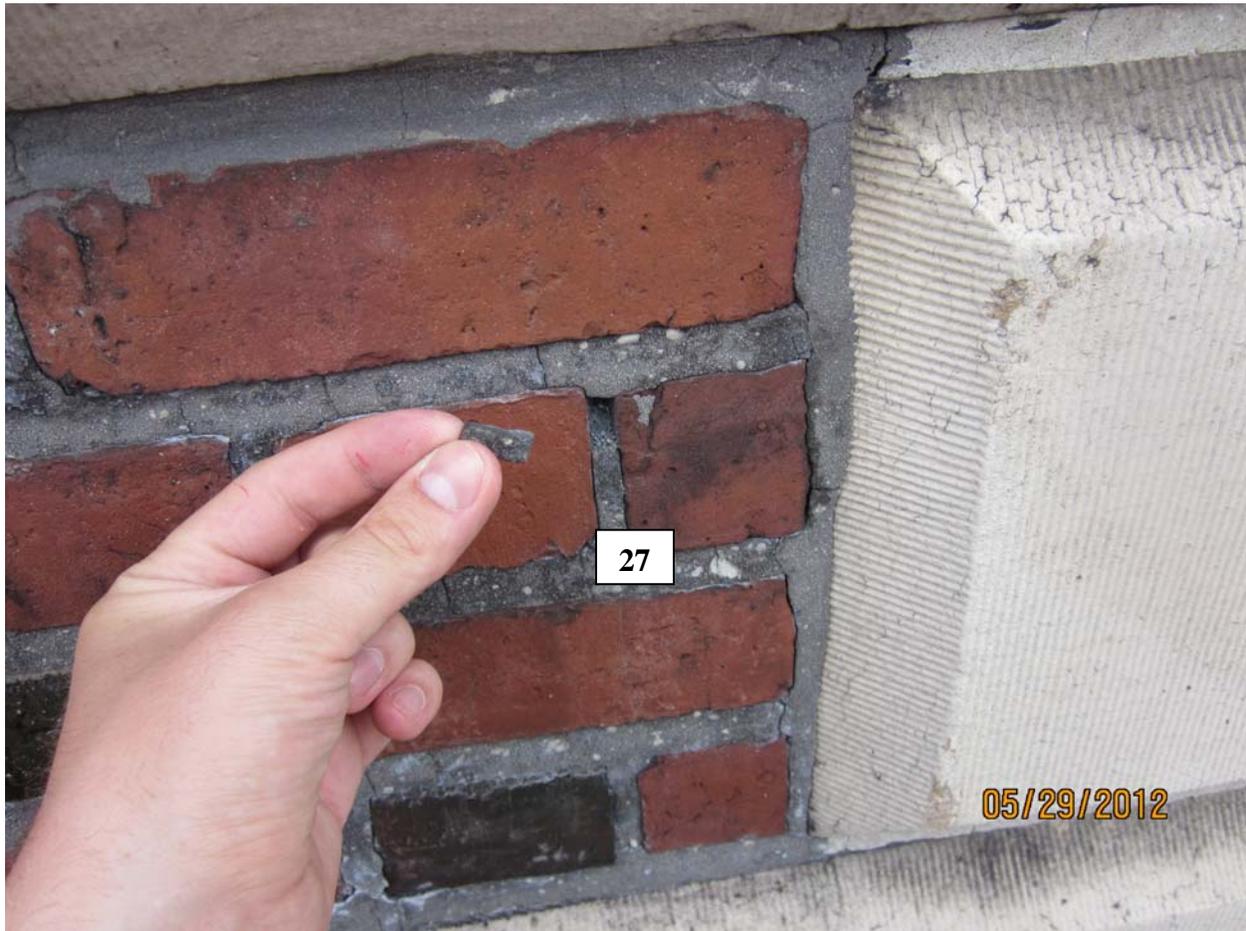


Photo 7

27. PATCHED AREA THAT SOUNDS AND FEELS LOOSE

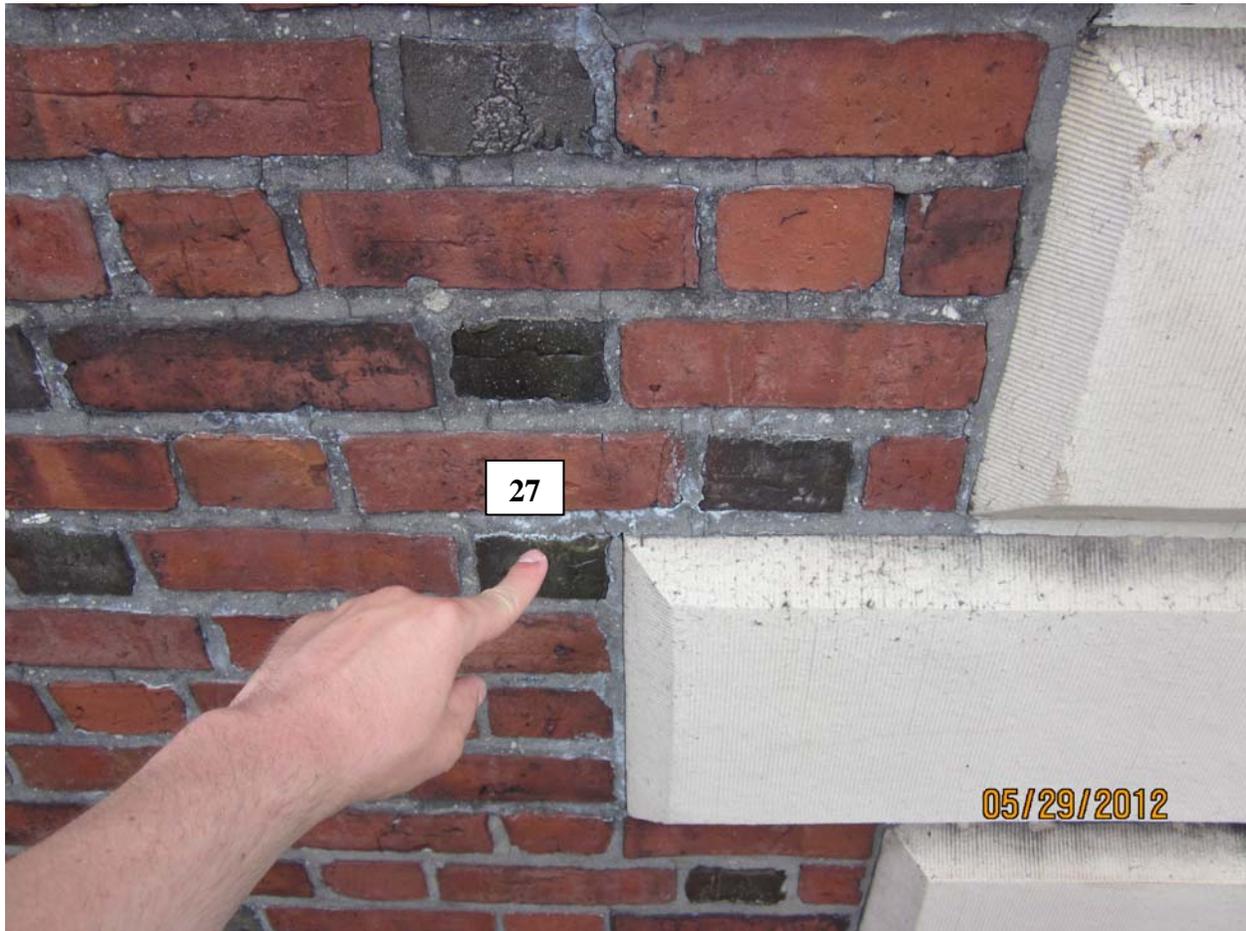


Photo 8

- 16. STEPPED CRACKS THAT RUN THROUGH THE EXISTING MASONRY COATING IN THE CMU
- 26. STEEL BEAM IS EXPOSED AND DETERIORATING

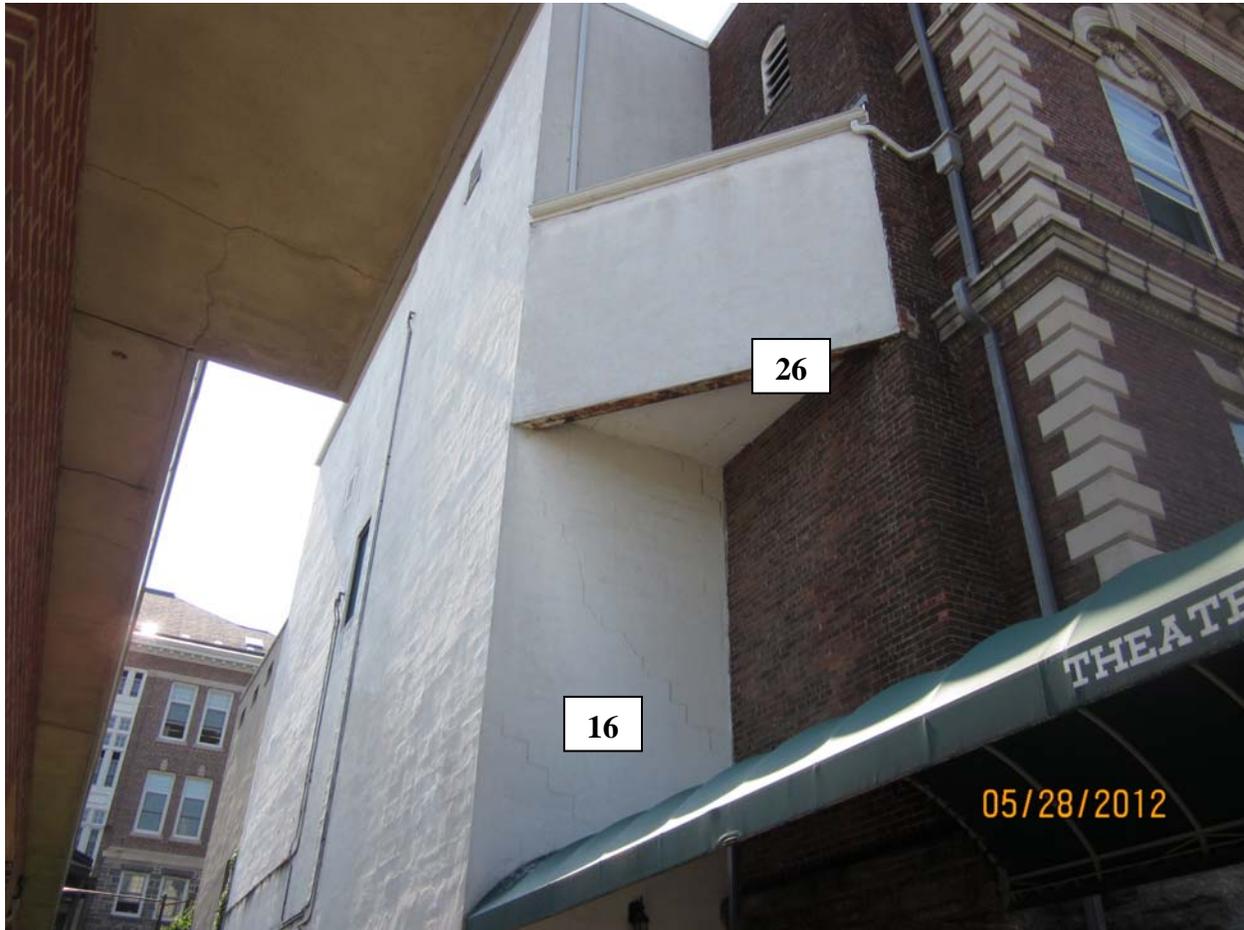


Photo 9

15. TERRA COTTA COLUMNS AND PILASTERS IN THE PORTICO ARE IN POOR CONDITION. THE BASE AND CAPITALS ARE ALSO IN POOR CONDITION WITH VISUAL SIGNS OF EXTENSIVE CRACKING



Photo 10

23. PREVIOUSLY PATCHED AND PINNED AREA. IN POOR CONDITION



Photo 11

23. PREVIOUSLY PATCHED AND PINNED AREA. IN POOR CONDITION



Photo 12

24. LOOSE MASONRY UNIT



Photo 13

27. PATCHED AREA THAT SOUNDS AND FEELS LOOSE



Photo 14

27. PATCHED AREA THAT SOUNDS AND FEELS LOOSE

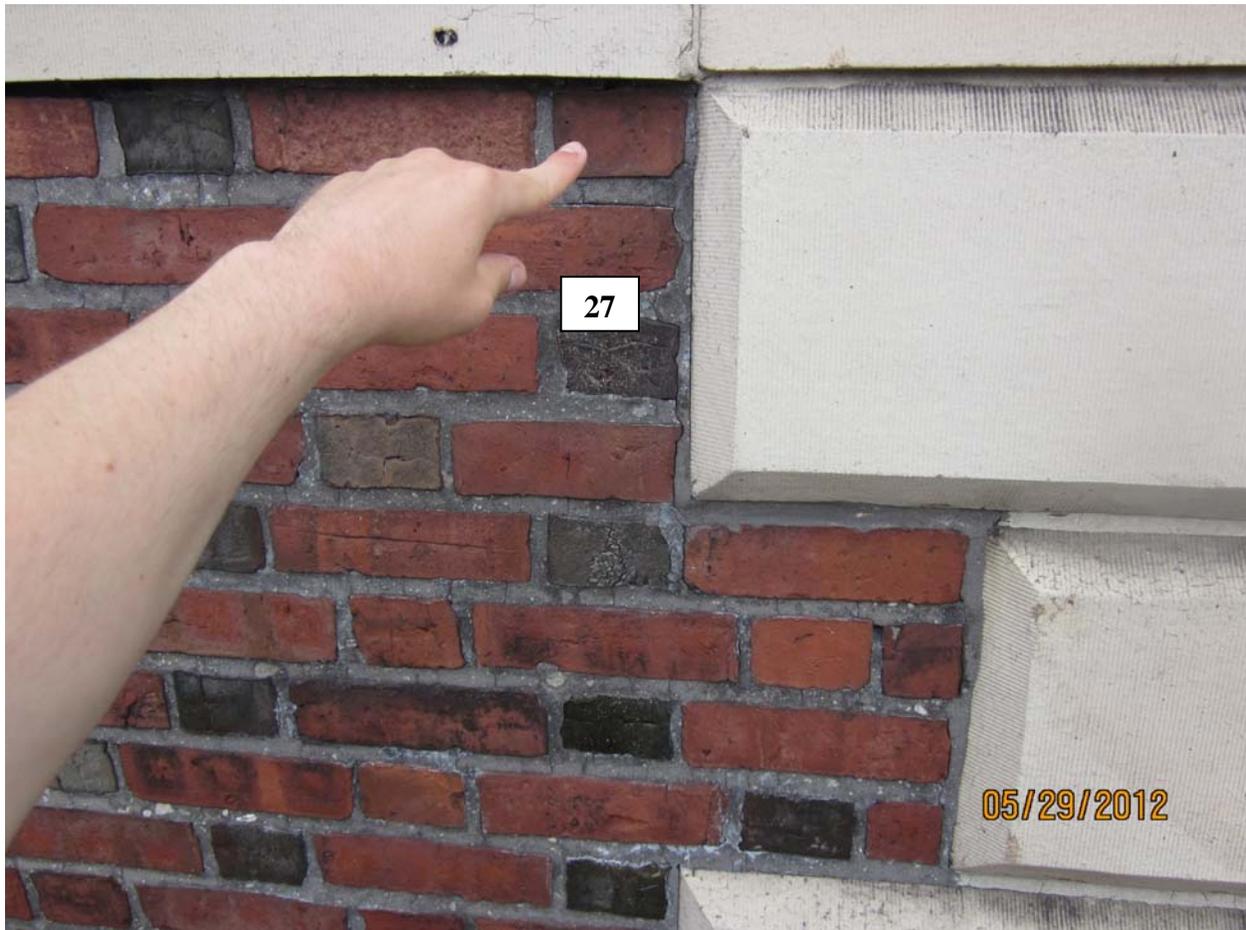


Photo 15

28. MASONRY UNITS THAT SOUND LOOSE



Photo 16

28. MASONRY UNITS THAT SOUND LOOSE

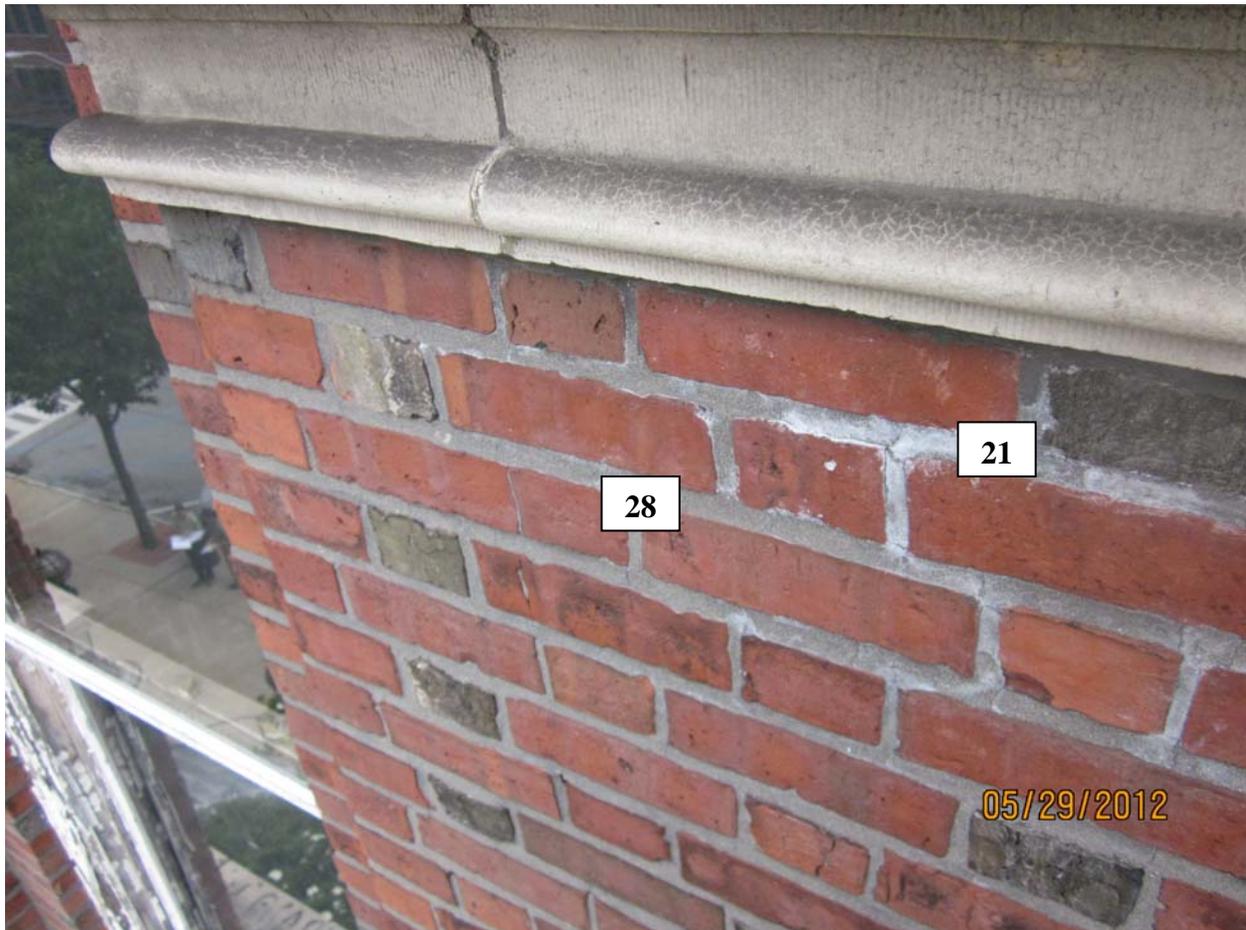


Photo 17

28. MASONRY UNITS THAT SOUND LOOSE



Photo 18

28. REPOINTING/EXTENSIVE ERODING OF ORIGINAL POINTING OF MASONRY



Photo 19

- 8. EXISTING TRIM AND PAINT IN POOR CONDITION
- 9. EXISTING CAULK JOINT IN POOR CONDITION



Photo 20

- 8. EXISTING TRIM AND PAINT IN POOR CONDITION
- 9. EXISTING CAULK JOINT IN POOR CONDITION



Photo 21

21. PRESENCE OF EFFLORESCENCE



Photo 22

21. PRESENCE OF EFFLORESCENCE

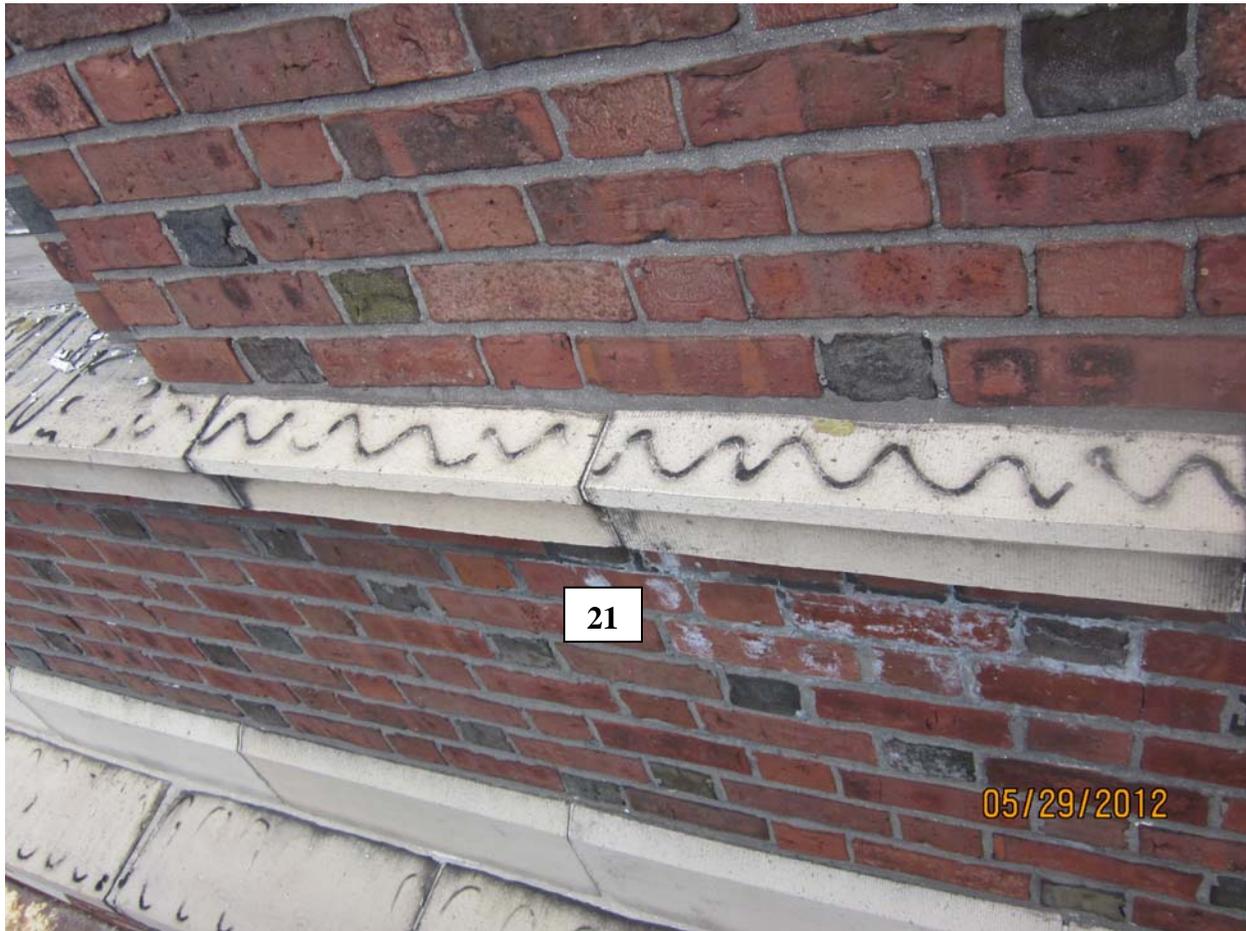


Photo 23

21. PRESENCE OF EFFLORESCENCE

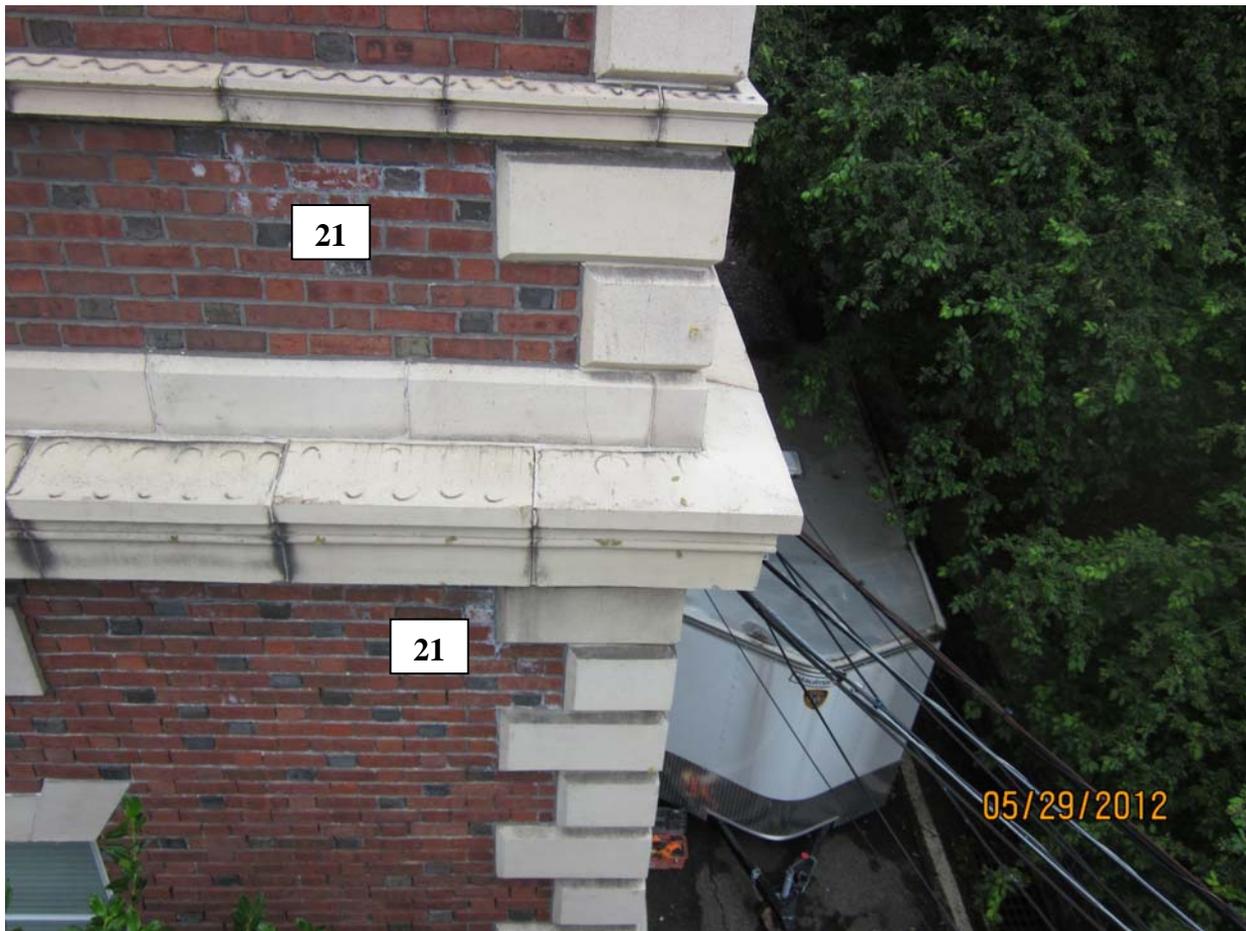


Photo 24

6. BROKEN OFF CAPITAL VOLUTE



Photo 25

9. EXISTING CAULK JOINT IN POOR CONDITION



Photo 26

9. EXISTING CAULK JOINT IN POOR CONDITION

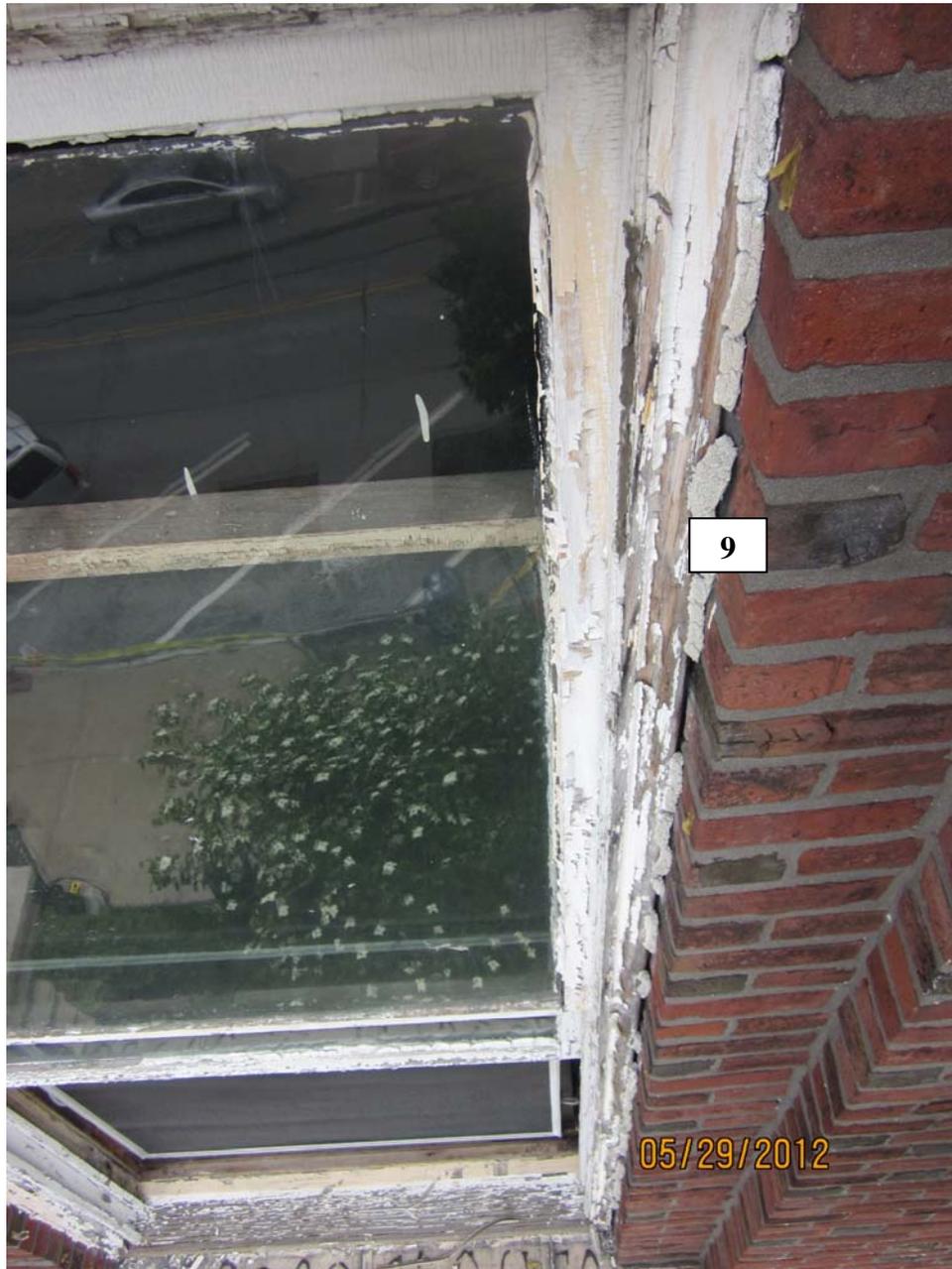


Photo 27

24. LOOSE MASONRY UNIT



Photo 28

19. CRACKED TERRA COTTA

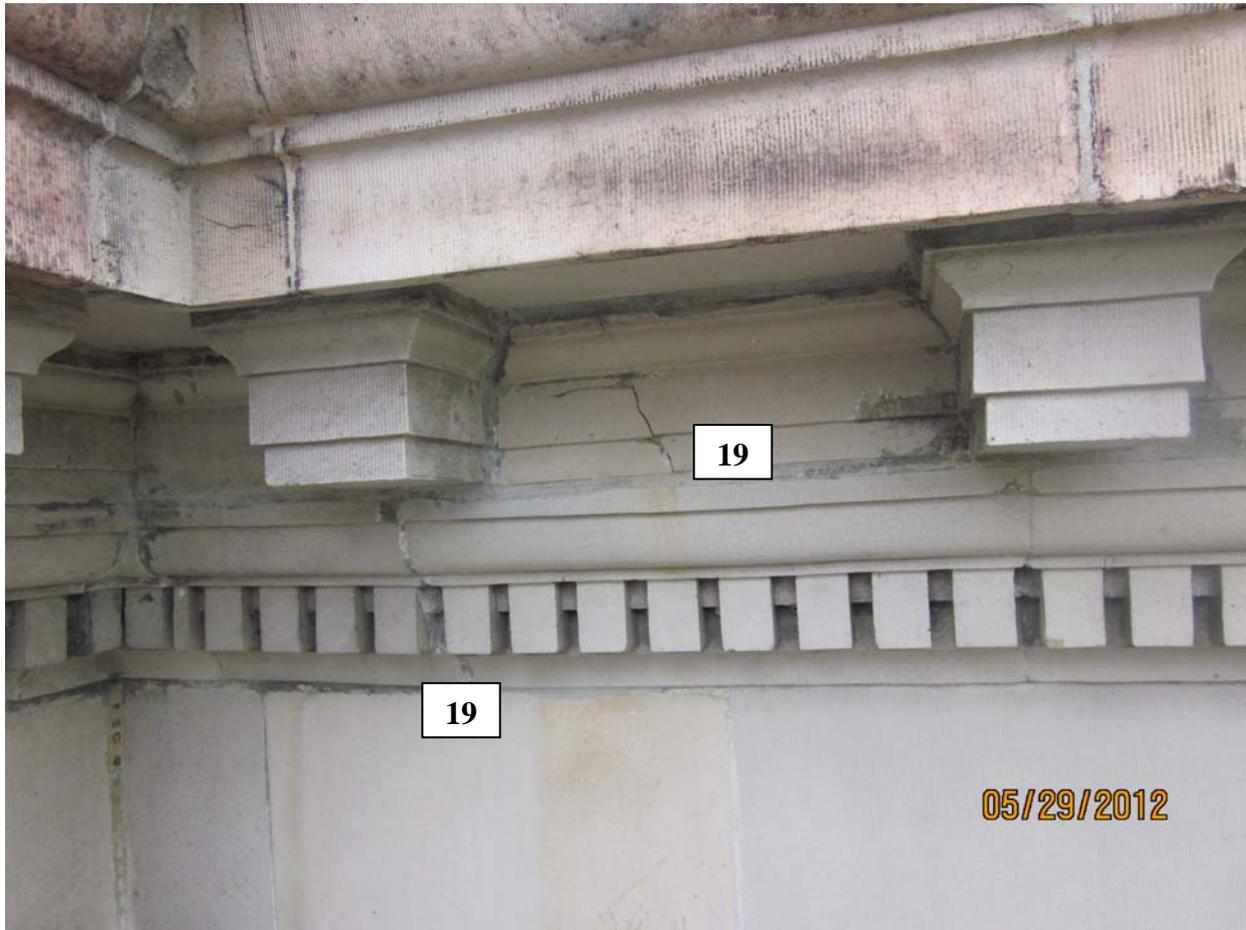


Photo 29

- 19. CRACKED TERRA COTTA
- 24. LOOSE MASONRY UNIT

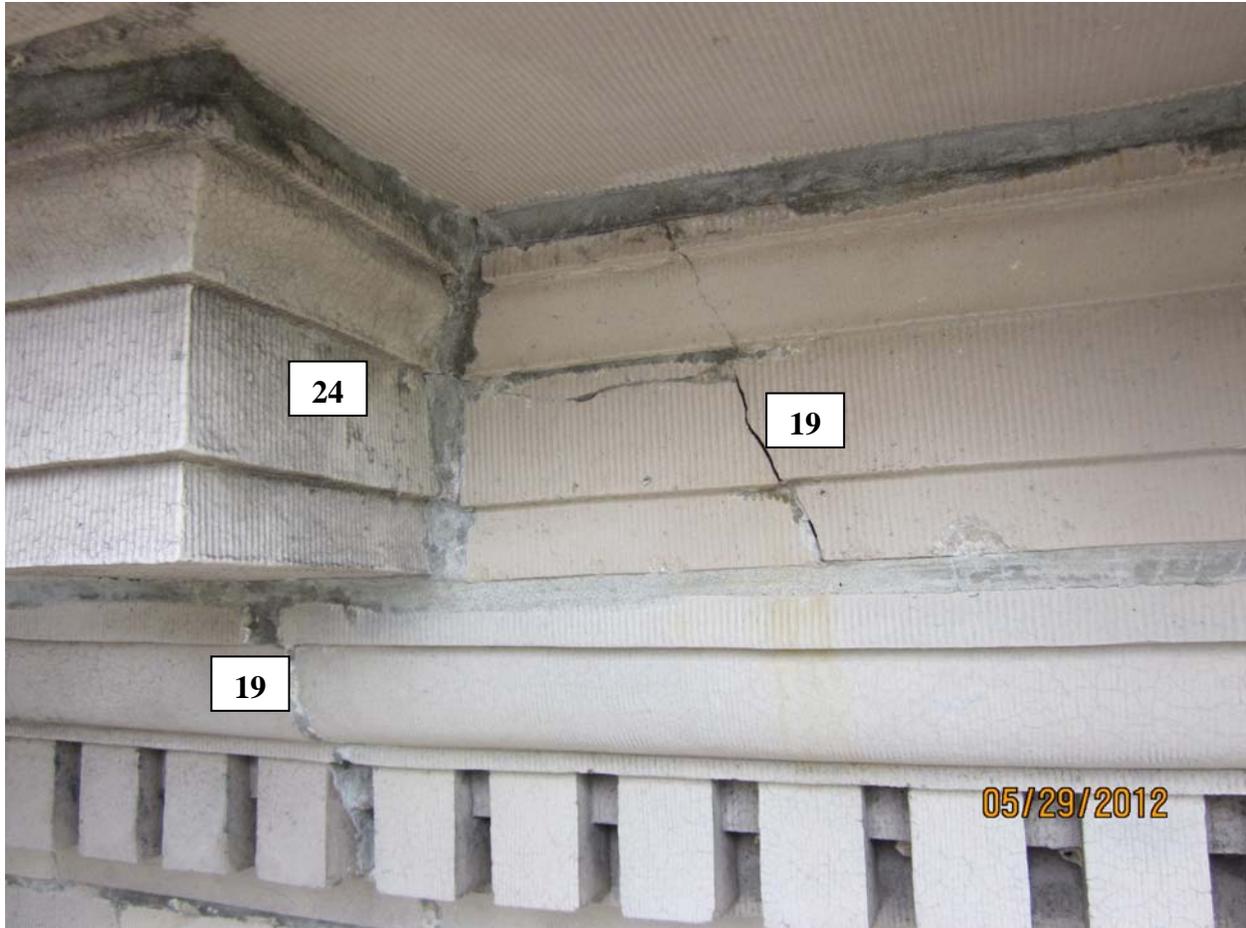


Photo 30

- 4. OFFSET TILE AND OR TILE DISCOLORATION
- 19. CRACKED TERRA COTTA
- 24. LOOSE MASONRY UNIT

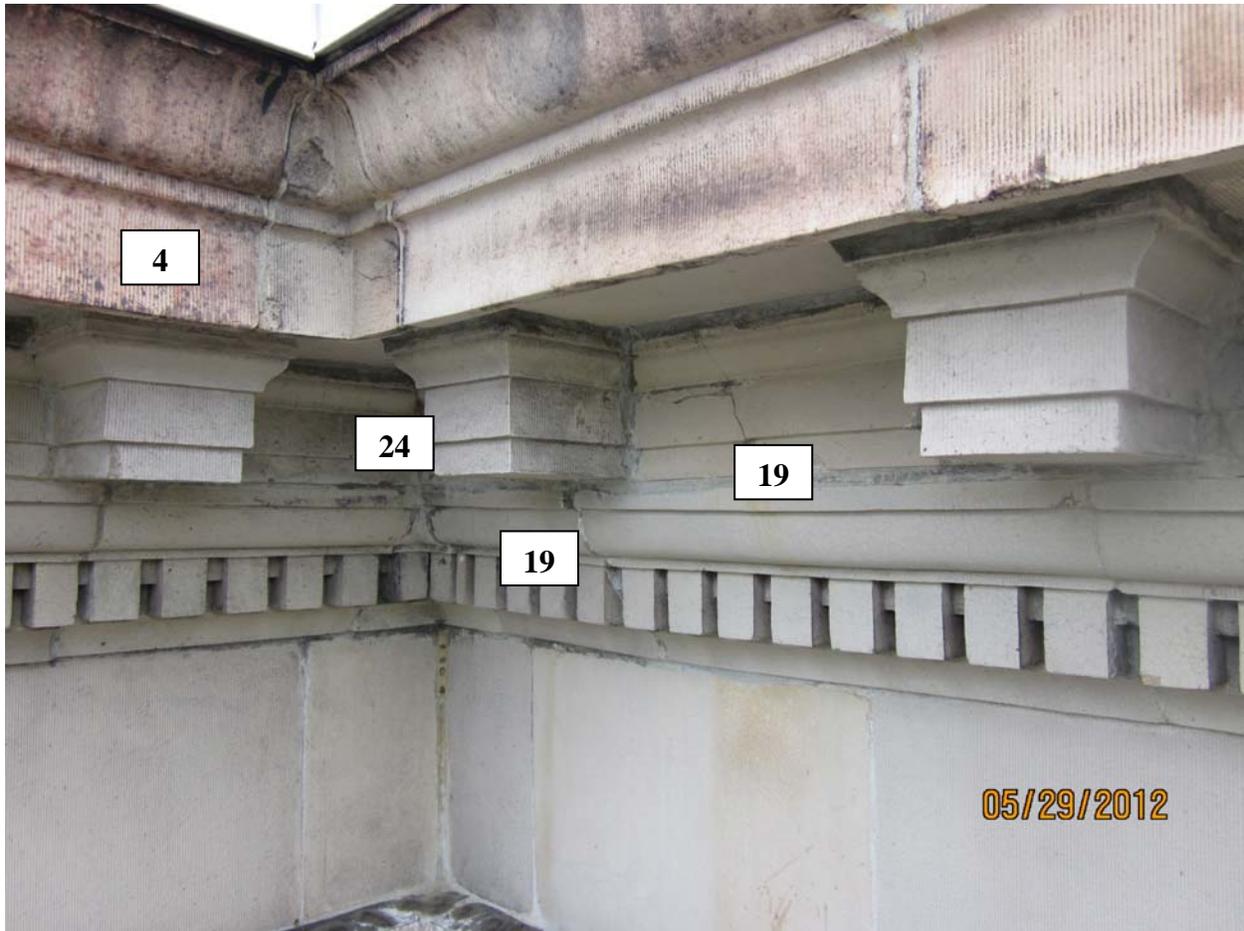


Photo 31

- 4. OFFSET TILE AND OR TILE DISCOLORATION
- 19. CRACKED TERRA COTTA
- 24. LOOSE MASONRY UNIT



Photo 32

24. LOOSE MASONRY UNIT



Photo 33

19. CRACKED TERRA COTTA



Photo 34

19. CRACKED TERRA COTTA



Photo 35

24. LOOSE MASONRY UNIT



Photo 36

19. CRACKED TERRA COTTA



Photo 37

19. CRACKED TERRA COTTA



Photo 38

24. LOOSE MASONRY UNIT



Photo 39

- 19. CRACKED TERRA COTTA
- 20. SPALLED TERRA COTTA



Photo 40

15. TERRA COTTA COLUMNS AND PILASTERS IN THE PORTICO ARE IN POOR CONDITION. THE BASE AND CAPITALS ARE ALSO IN POOR CONDITION WITH VISUAL SIGNS OF EXTENSIVE CRACKING

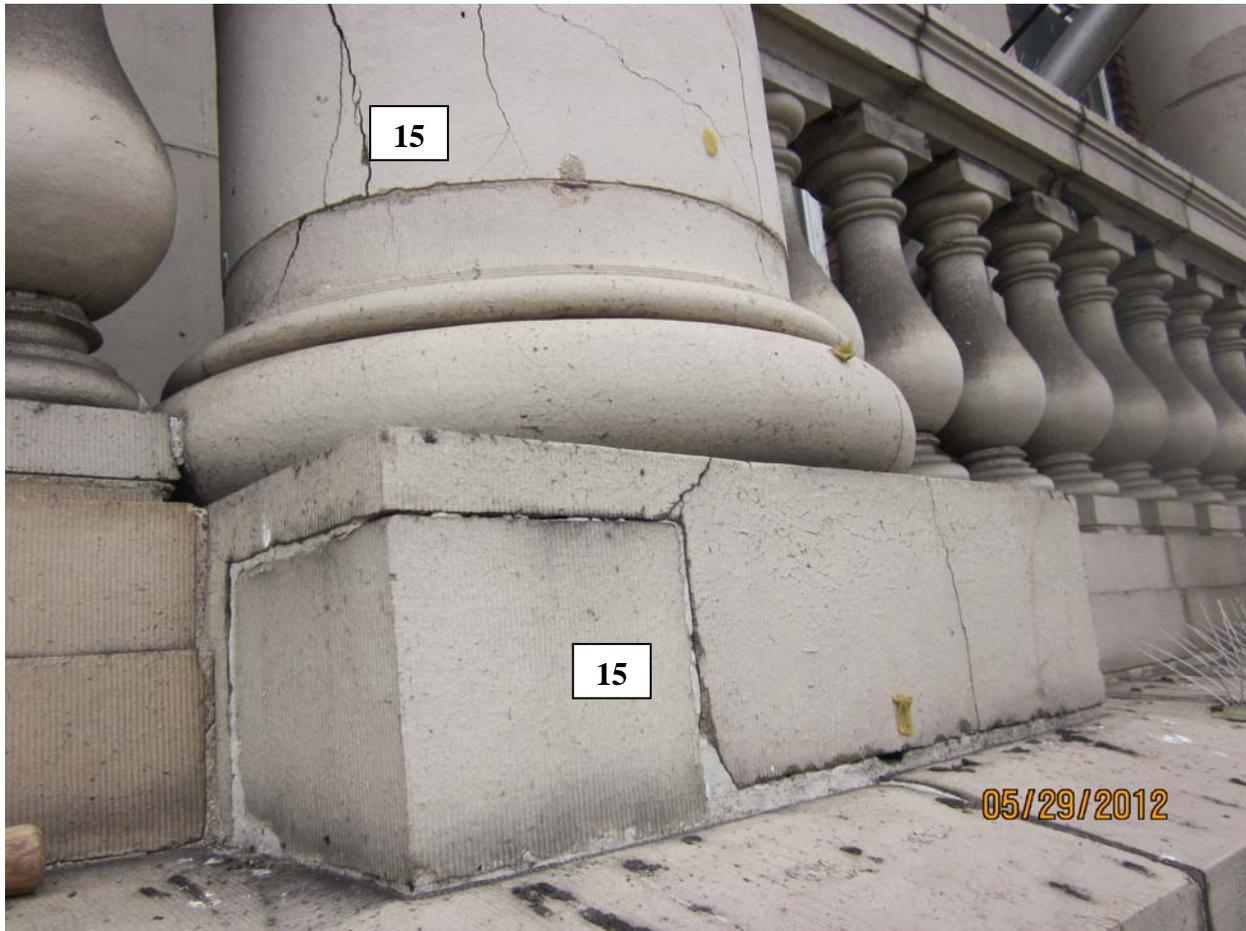


Photo 41

15. TERRA COTTA COLUMNS AND PILASTERS IN THE PORTICO ARE IN POOR CONDITION. THE BASE AND CAPITALS ARE ALSO IN POOR CONDITION WITH VISUAL SIGNS OF EXTENSIVE CRACKING

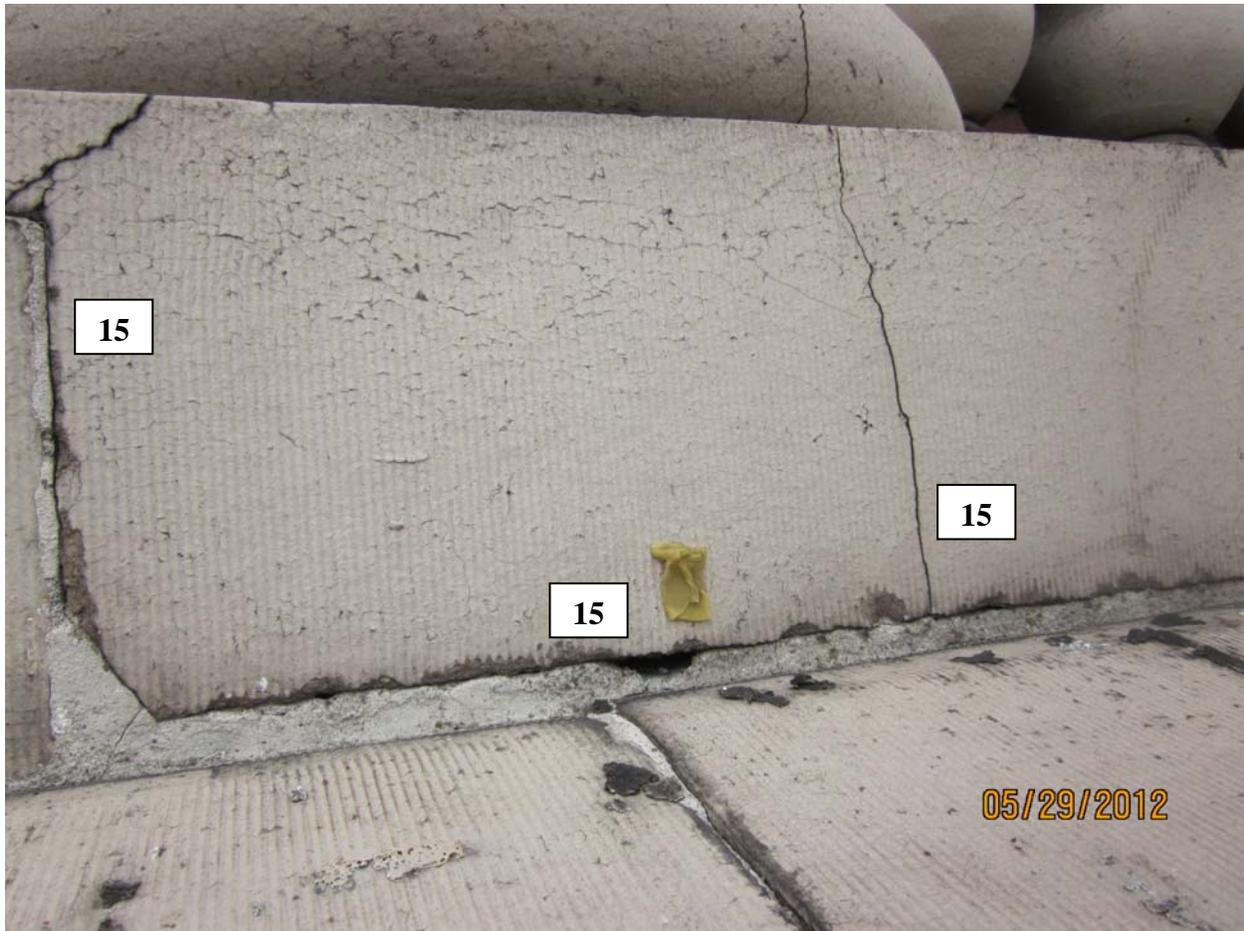


Photo 42

15. TERRA COTTA COLUMNS AND PILASTERS IN THE PORTICO ARE IN POOR CONDITION. THE BASE AND CAPITALS ARE ALSO IN POOR CONDITION WITH VISUAL SIGNS OF EXTENSIVE CRACKING

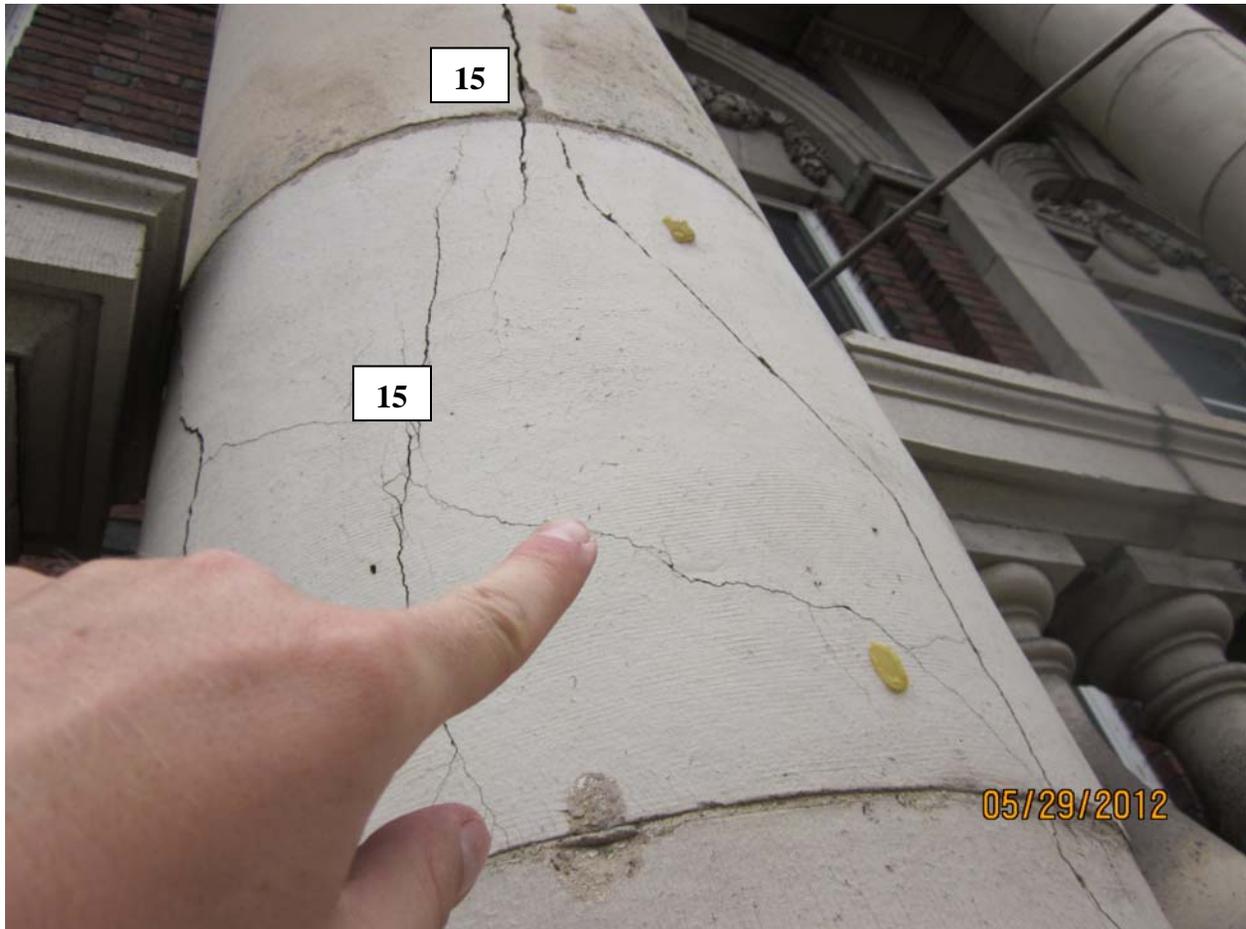


Photo 43

24. LOOSE MASONRY UNIT

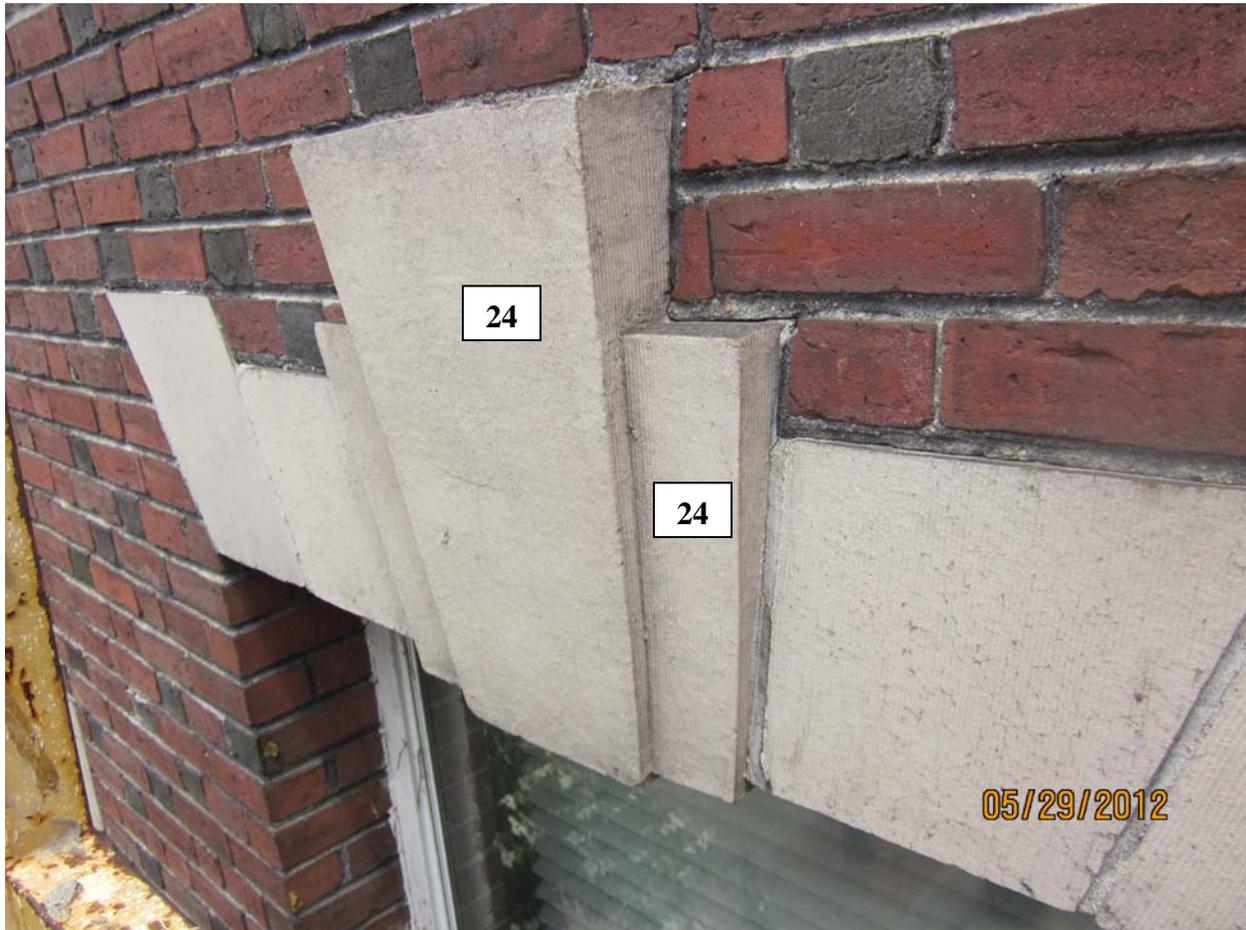


Photo 44

24. LOOSE MASONRY UNIT



Photo 45

19. CRACKED TERRA COTTA



Photo 46

19. CRACKED TERRA COTTA



Photo 47

19. CRACKED TERRA COTTA

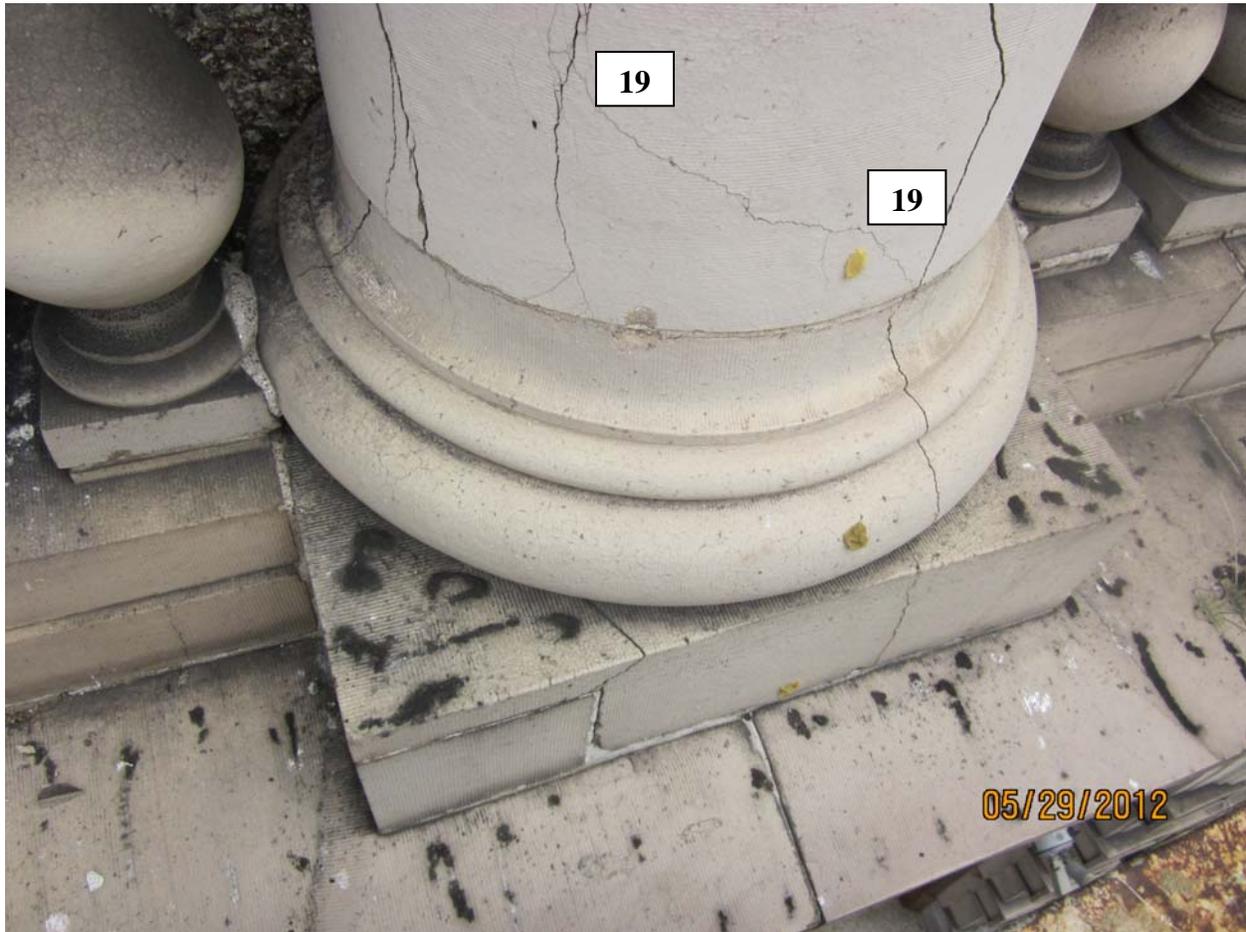


Photo 48

19. CRACKED TERRA COTTA



Photo 49

19. CRACKED TERRA COTTA



Photo 50

25. PREVIOUSLY PATCHED AREA

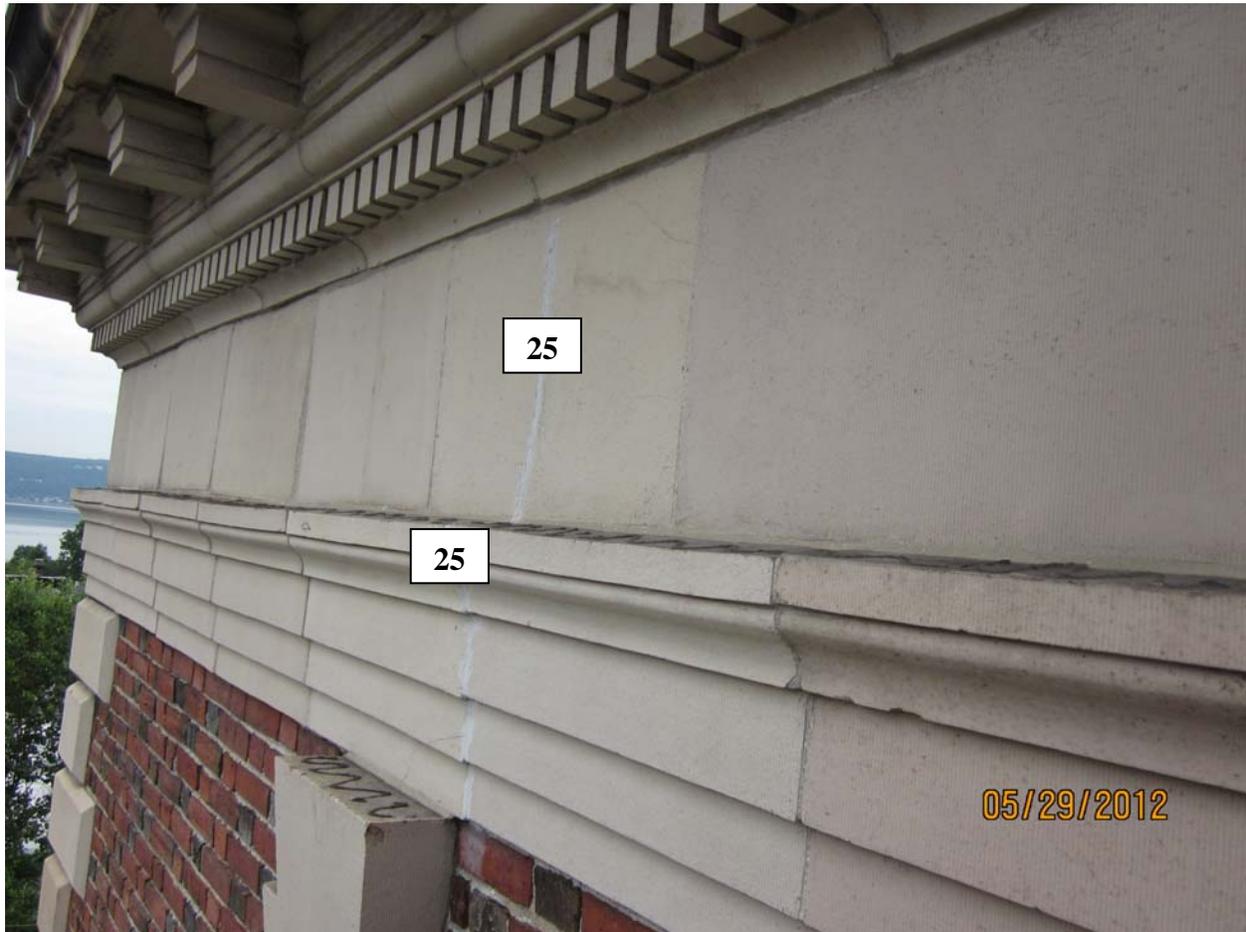


Photo 51

19. CRACKED TERRA COTTA



Photo 52

24. LOOSE MASONRY UNIT



Photo 53

29. DISPLACED BRICK



Photo 54

29. DISPLACED BRICK



Photo 55

20. SPALLED TERRA COTTA



Photo 56

1. REPOINTING/EXTENSIVE ERODING OF ORIGINAL POINTING OF MASONRY

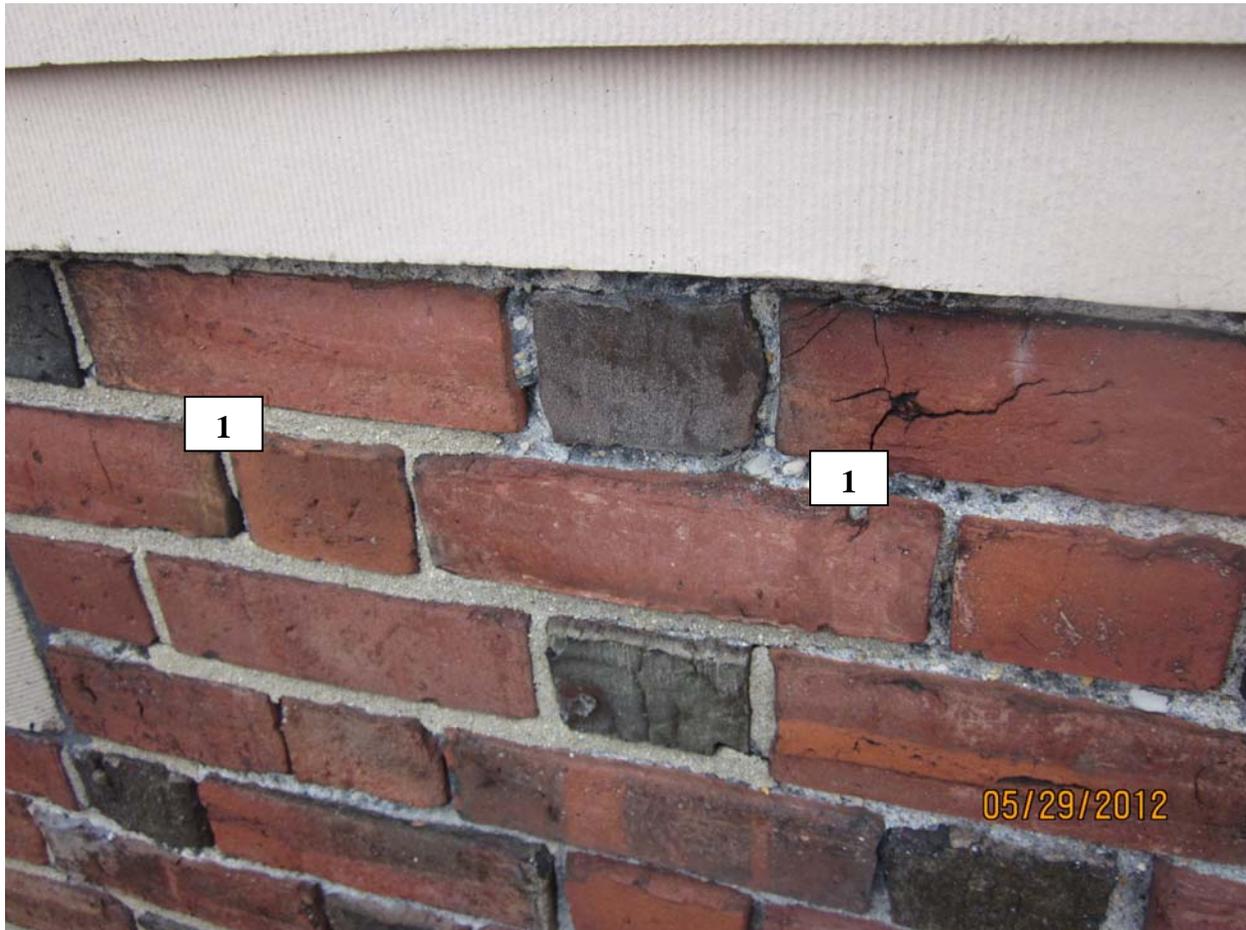


Photo 57

1. REPOINTING/EXTENSIVE ERODING OF ORIGINAL POINTING OF MASONRY
25. PREVIOUSLY PATCHED AREA

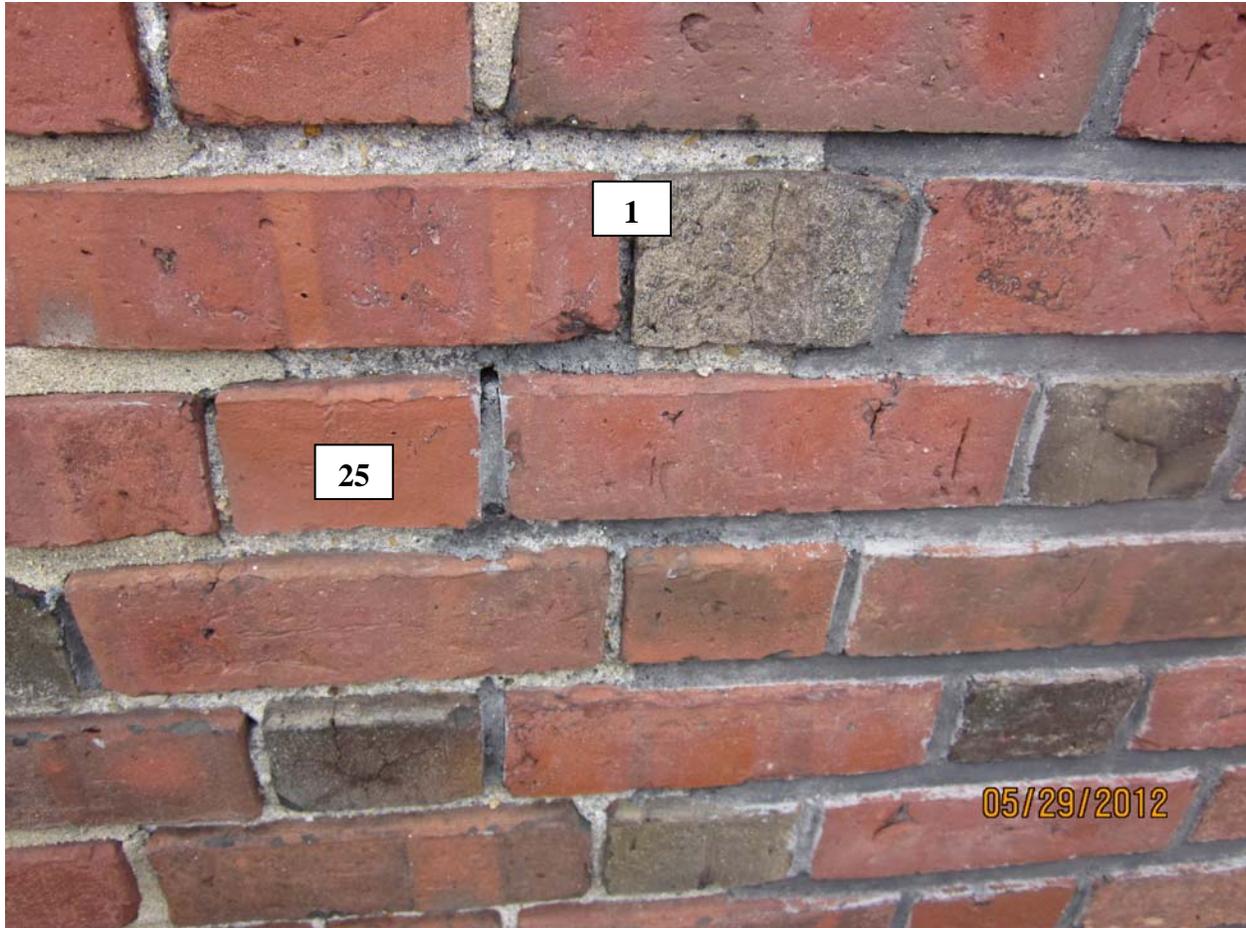


Photo 58

1. REPOINTING/EXTENSIVE ERODING OF ORIGINAL POINTING OF MASONRY
25. PREVIOUSLY PATCHED

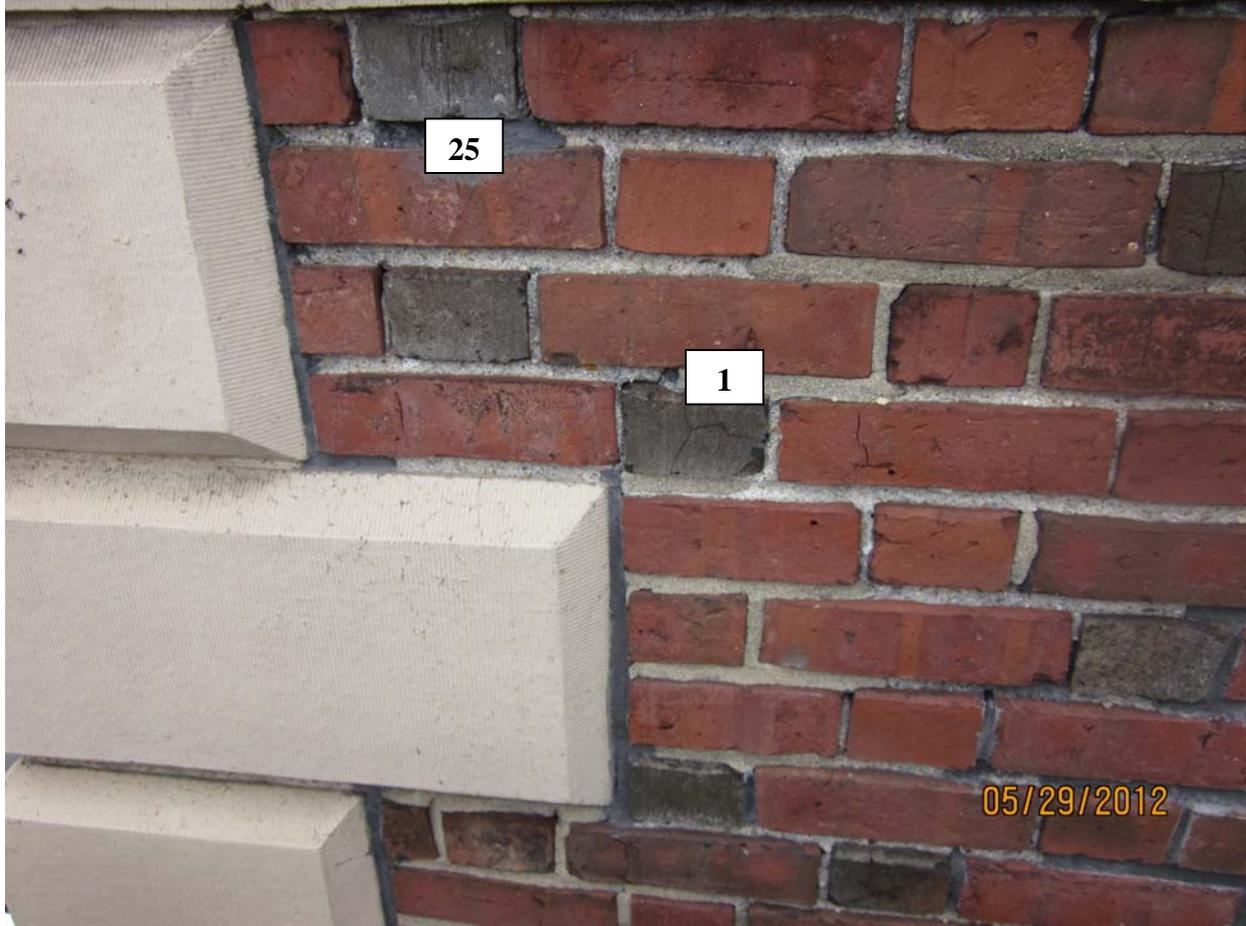


Photo 59

1. REPOINTING/EXTENSIVE ERODING OF ORIGINAL POINTING OF MASONRY
25. PREVIOUSLY PATCHED AREA

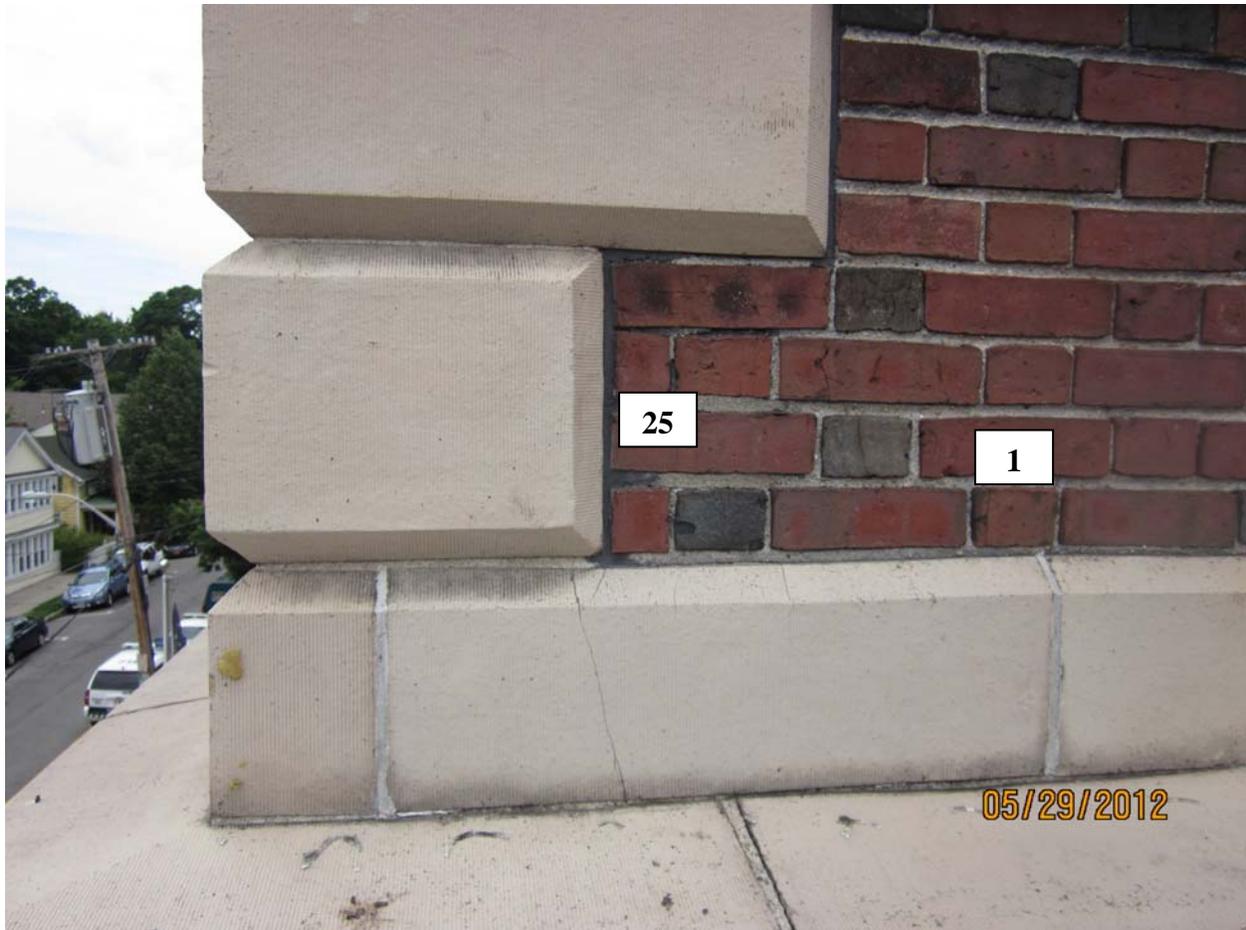


Photo 60

- 20. SPALLED TERRA COTTA
- 24. LOOSE MASONRY UNIT



Photo 61

15. TERRA COTTA COLUMNS AND PILASTERS IN THE PORTICO ARE IN POOR CONDITION. THE BASE AND CAPITALS ARE ALSO IN POOR CONDITION WITH VISUAL SIGNS OF EXTENSIVE CRACKING



Photo 62

1. REPOINTING/EXTENSIVE ERODING OF ORIGINAL POINTING OF MASONRY



Photo 63

12. JOINTS IN POOR CONDITION

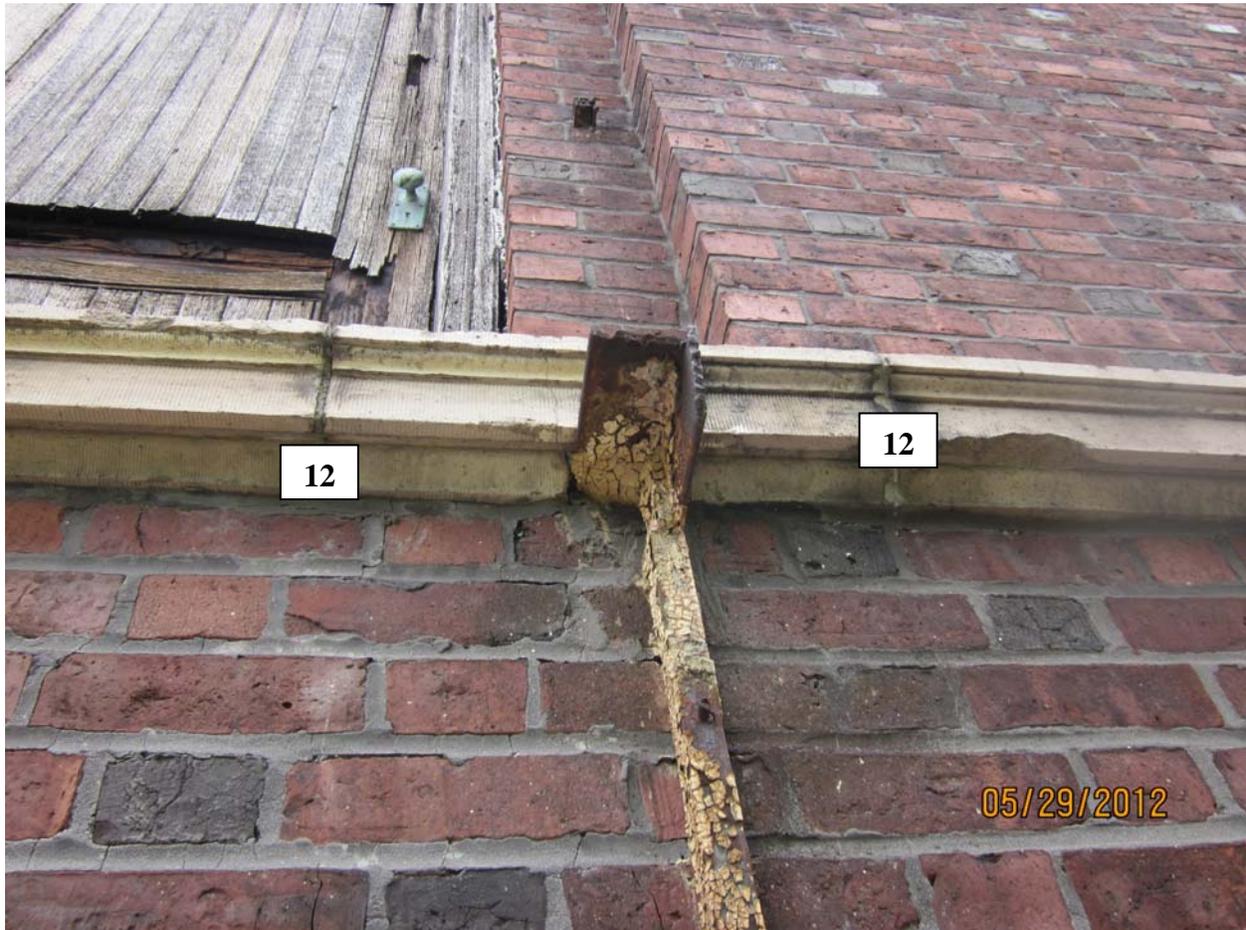


Photo 64

12. JOINTS IN POOR CONDITION



Photo 65

16. STEPPED CRACKS THAT RUN THROUGH THE EXISTING MASONRY COATING IN THE CMU

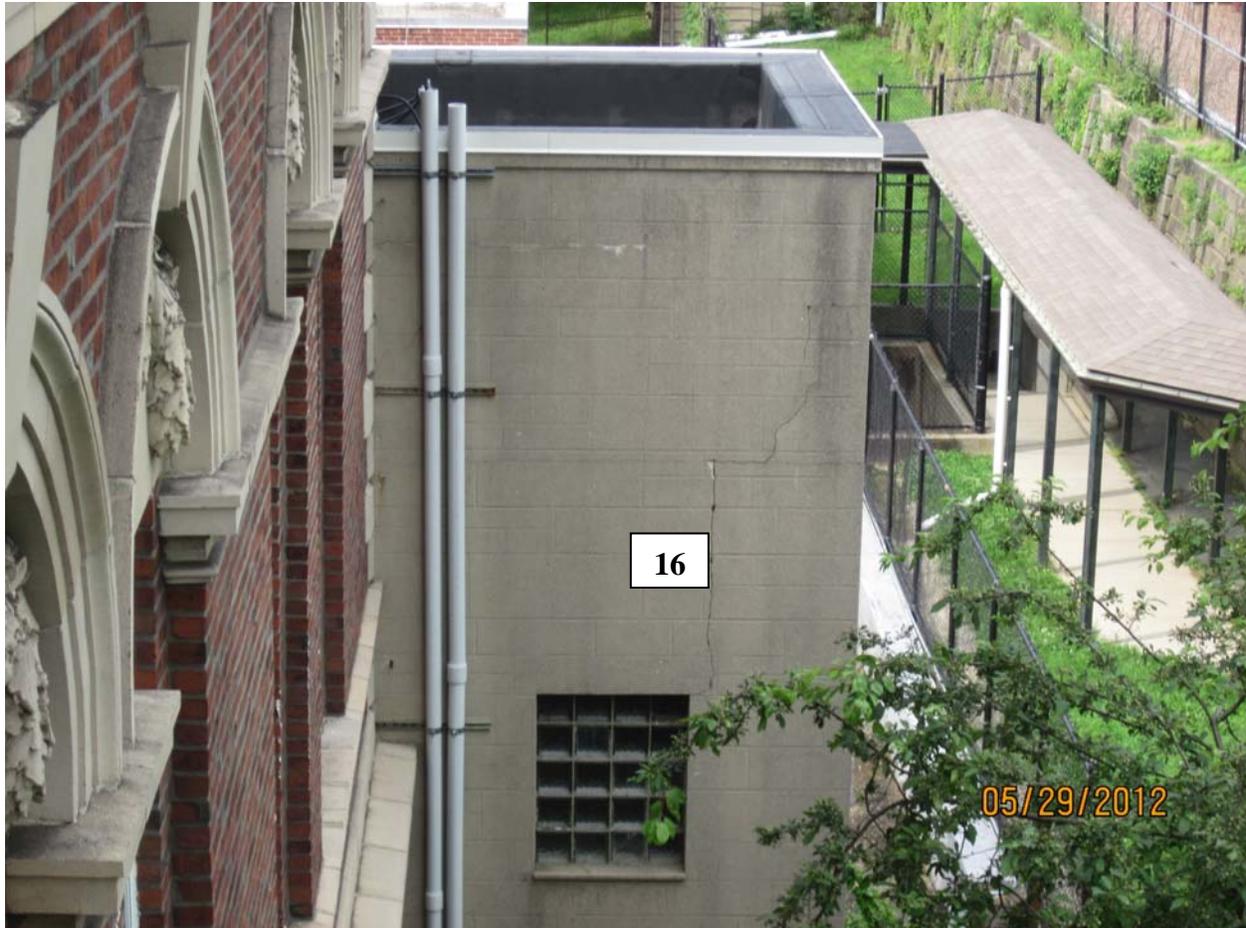


Photo 66

30. PREVIOUSLY PATCHED WINDOW HEAD



Photo 67

24. LOOSE MASONRY UNIT

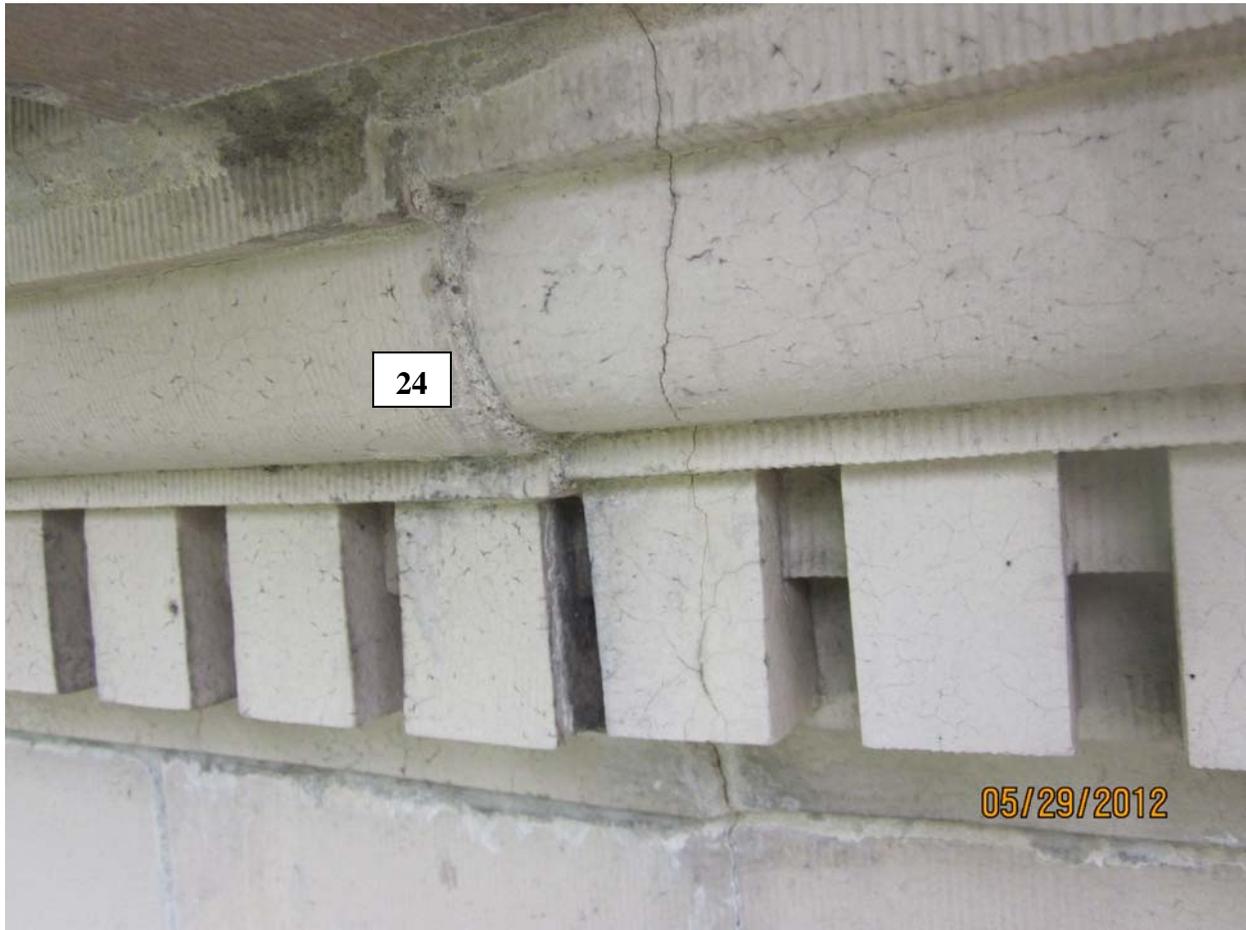


Photo 68

1. REPOINTING/EXTENSIVE ERODING OF ORIGINAL POINTING OF MASONRY

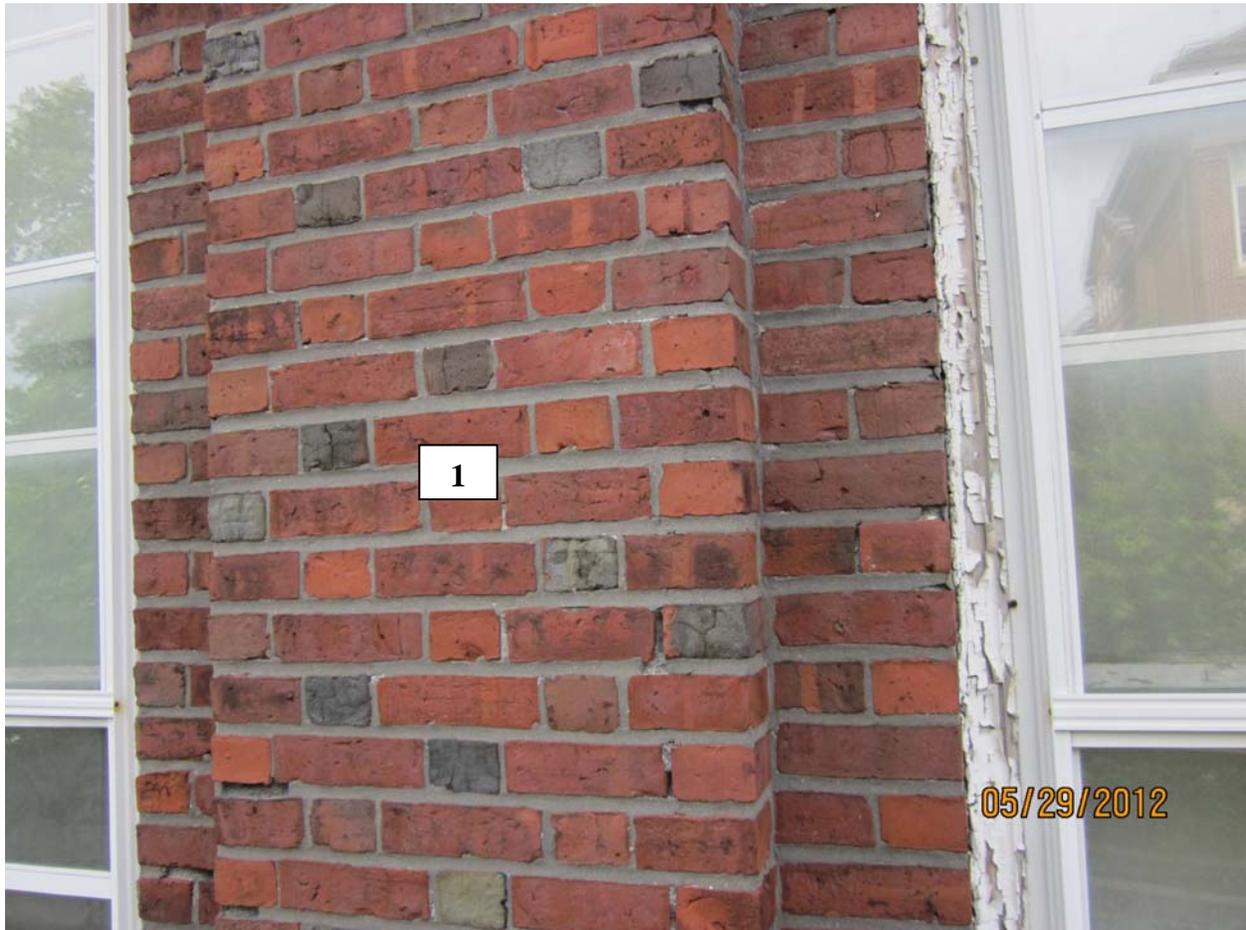


Photo 69

31. EXPOSED PIPE AND ASSOCIATED LOOSE BRICK



Photo 70

12. JOINTS IN POOR CONDITION



Photo 71

32. REPOINTING/EXTENSIVE ERODING OF ORIGINAL POINTING OF MASONRY

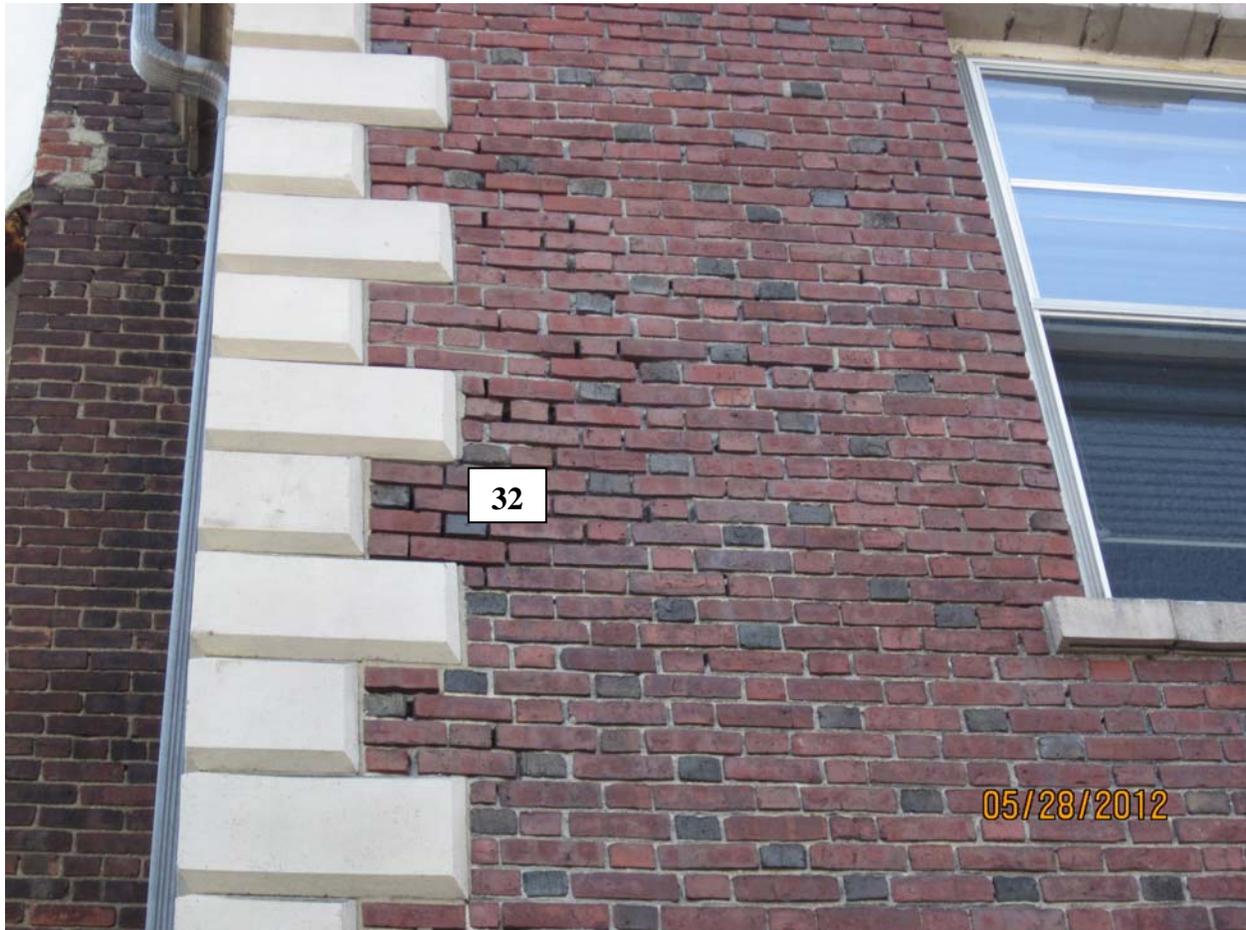


Photo 72

19. CRACKED TERRA COTTA

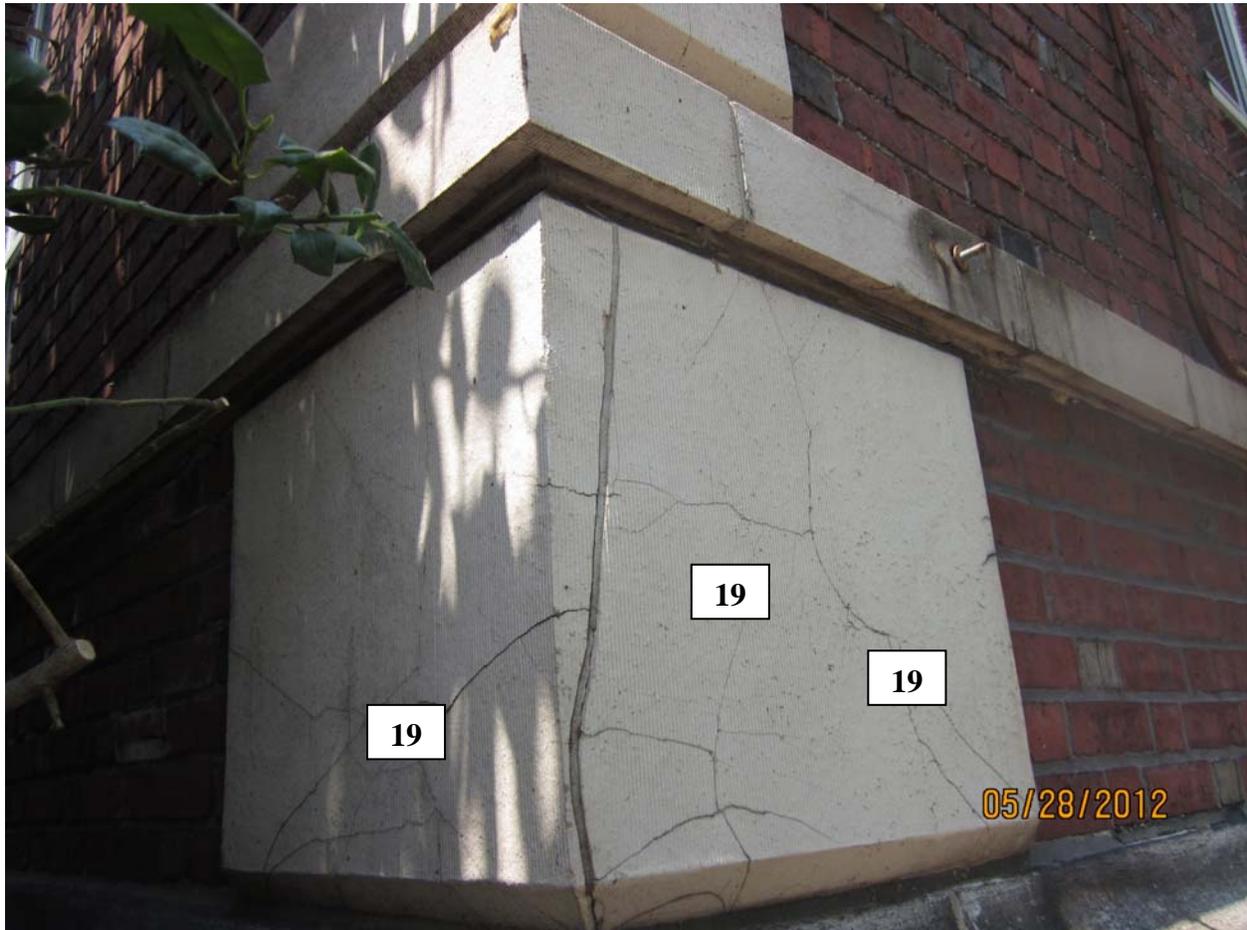


Photo 73

25. PREVIOUSLY PATCHED AREA

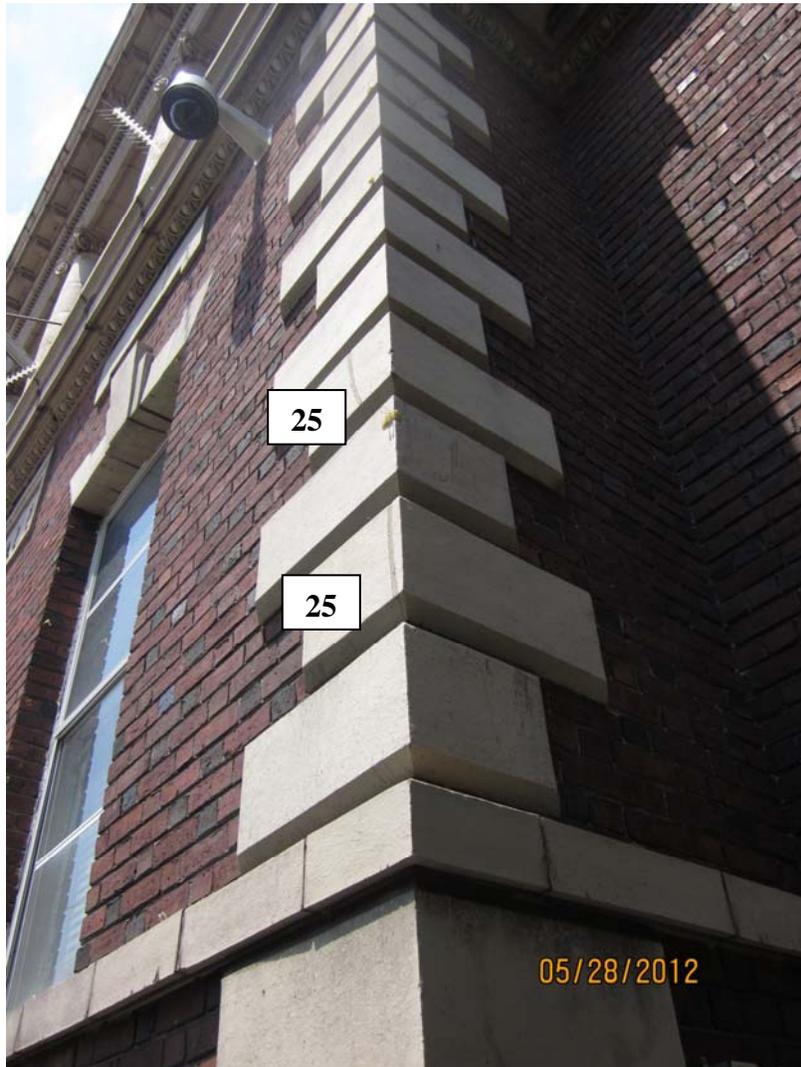


Photo 74

19. CRACKED TERRA COTTA

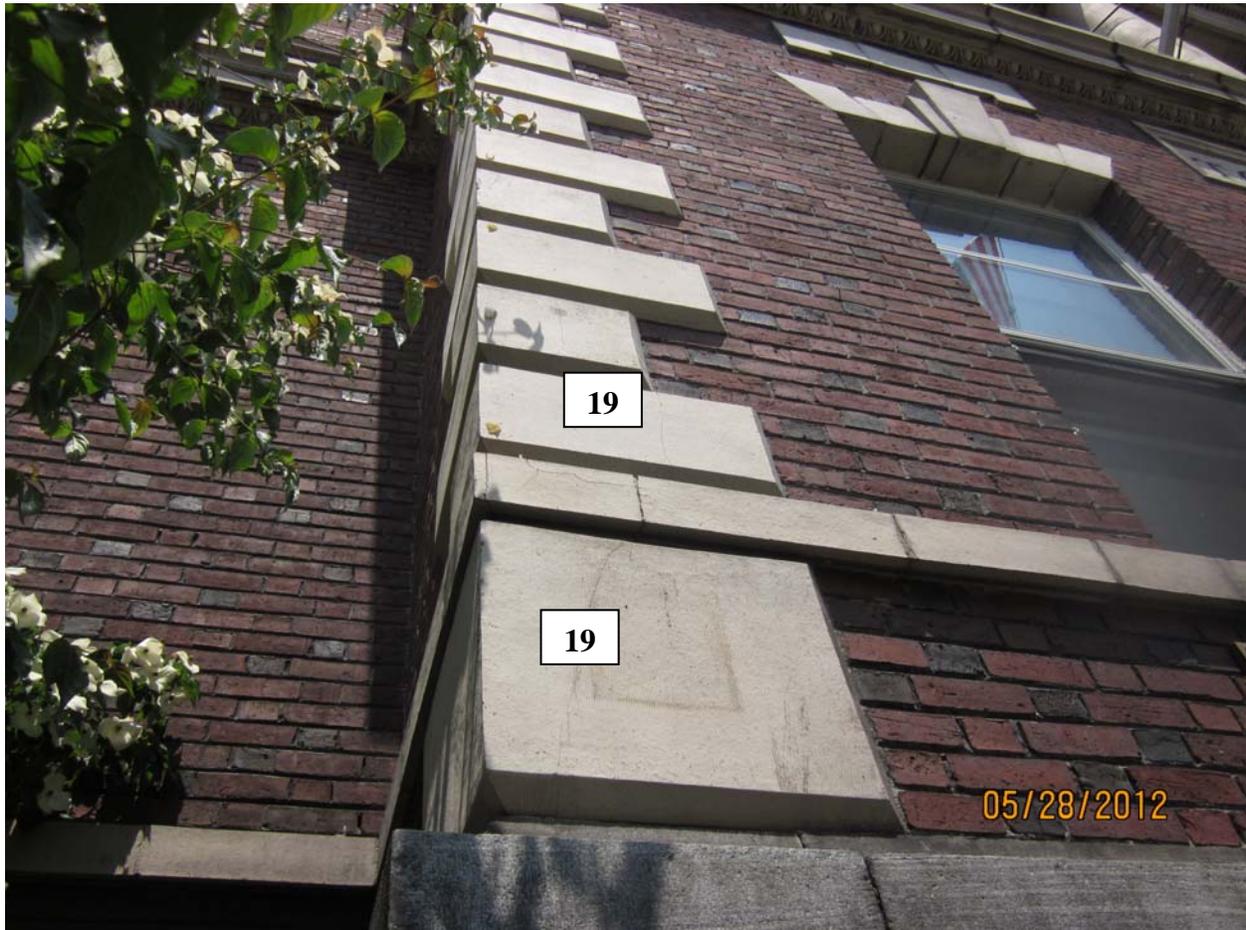


Photo 75

33. WOODEN LOUVER PAINT FINISH IS PEELING AND CHIPPING



Photo 76

34. EXISTING WOOD DOOR AND TRIM PAINT CONTAINS LBP



Request For Proposal for Exterior Conditions Study of the Irvington Town Hall (Phase I)

Village of Irvington

January 22, 2010

Introduction

The **Village of Irvington** is seeking the professional services of a qualified engineering/architectural firm to research and prepare an Exterior Conditions Study of the Irvington Town Hall. The building was built in 1902 and was designed by A. J. Manning. It has been on the National Register of Historic Places since 1984. The goal of this **Study** is to document the existing condition of the brick, terra cotta, façade, and other structural elements of the Irvington Town Hall. The **Study** is to be completed **6 months** from the time of contract signing.

Qualifications

A responding firm shall demonstrate a thorough knowledge of historic structures, including analysis, restoration, and repair. It is preferable that the firm has conducted similar studies for communities in and around **Westchester County** involving buildings of similar construction, vintage and historical significance. In the proposal, the firm shall submit their qualifications to perform the **Study** and will include the designation of individuals to be assigned to the **Study**.

In addition, three (3) references with project descriptions, names and contact information for clients where similar studies have been completed shall be included. Qualifications must be submitted for sub-consultant(s), in cases where they will be performing a significant portion of the scope of services.

Scope of Services

The firm shall be expected to undertake a study to document the existing condition of all exterior elements of the Irvington Town Hall, including its brick, terra cotta, façade, and other structural elements (“Phase I”). The **Study** will recommend specific repairs or restoration necessary to make the building safe and its appearance historically accurate. Within 2 months of undertaking the **Study**, the firm will be asked to provide an interim report on the exterior conditions, specifically in the vicinity of the Southwest corner of the building. The purpose of the interim report is to provide data to an ongoing restoration effort for an historically significant interior room. This does not imply a reduced focus for the remainder of the building.

Upon completion of the **Study**, the Village expects to solicit proposals from qualified engineering/architectural firms for the preparation of construction plans and specifications for competitive bidding (“Phase II”). The results of the **Study** must be detailed enough to provide necessary information to allow Phase II to be completed properly and with little duplication of effort.

In response to this RFP, include a lump sum proposal for the **Study** (Phase I only). Detailed breakdown of the components of the Phase I lump sum proposal are welcomed but not required.

Available Document

- Limited Exterior Façade Examination – Southwest Corner – Report by Jablonski Building Conservation, Inc. dated July 31, 2009.
Download at:
<http://www.irvingtonny.gov/DocumentView.aspx?DID=1108>

Site Visit

A responding firm is encouraged to visit the site to view the exterior conditions of the Irvington Town Hall at any time during regular business hours. No Village staff will be present at the site visit, however, a responding firm is requested to make an appointment with Mary Ruffler at (914) 591-4356 or MRUFFLER@IRVINGTONNY.GOV.

Proposals

Proposals (10 copies) for the **Study** are to be submitted to the Office of the **Village Administrator** by 3 p.m. on Friday, February 26, 2010. Any questions should be addressed in writing to Mr. Lawrence Schopfer, Village Administrator, Village Hall, 85 Main St., Irvington, New York 10533 or LSCHOPFER@IRVINGTONNY.GOV.

Request For Proposal for Exterior Conditions Study of the Irvington Town Hall (Phase I)

Clarification Memo

Village of Irvington

August 2, 2011

On January 22, 2010, the Village issued a Request for Proposals for an Exterior Conditions Study of the Irvington Town Hall (Phase I) with a response date of February 26, 2010. The list of proposers has been reduced down to a total of four. After meeting personally with all four firms, the Village is issuing this memo to clarify various points in the original Request for Proposals as follows:

- Include a provision for testing for asbestos, lead paint, and any other commonly known hazardous materials on affected areas of the exterior.
- While review of the exterior condition from the ground (binoculars, digital photography) may be appropriate at various points of the study, the scope of the study must include some form of up-close review of the exterior elements and temporary repair of any such probing. This can be accomplished through the use of a lift or other device or structure. Include the cost of this work along with a description of the assumptions used to arrive at the cost.
- Probes or other invasive testing will likely be necessary during the course of the Study. Because the exact amount of testing is unknown, include the cost of three (3) days' work to complete this type of work.
- Indicate whether your firm provides construction management services, your level of expertise in providing these services, and the labor rates for personnel associated with these services.
- Include a labor rate schedule for all personnel expected to be assigned to Phase I and Phase II (if awarded) of this project.
- Include a scoping of the vertical drains. The inlets to the drains were renovated as part of the roof renovation 5 years ago, but no analysis or repairs were done on the vertical drains from the roof down. There are a total of six vertical drains embedded in the cornerstones of the buildings.
- The original "interim" reporting requirement for the Southwest corner of the building is no longer applicable. During 2010, the Village undertook limited restoration work on that portion of the building. Detailed specifications are contained here:
<http://www.irvingtonny.gov/DocumentView.aspx?DID=1200>

Updated proposals must be submitted by 3 p.m. on Thursday, September 1, 2011. Any questions should be addressed in writing to Mr. Lawrence Schopfer, Village Administrator, Village Hall, 85 Main St., Irvington, New York 10533 or LSCHOPFER@IRVINGTONNY.GOV.



Israel Berger & Associates
Building Envelope Consultants

FACADE & ROOF ASSESSMENT REPORT

DATE OF REPORT: October 11, 2012

DATE OF VISIT(S): May 29, 2012, May 30, 2012, May 31, 2012

TO: Mark C. Behr, RA Richard Henry Behr Architect, P.C. mark@rhbpc.com
Joseph Plouffe, RA Richard Henry Behr Architect, P.C. joseph@rhbpc.com
Stanford Chan, RA Israel Berger and Associates, PLLC schan@ibany.com
Russell Newbold Israel Berger and Associates, PLLC rnewbold@ibany.com

PROJECT: IRVINGTON TOWN HALL

SUBJECT: Façade and Roof Assessment Report

PREPARED BY: Michael Greene

REVIEWED BY: Russell Newbold
Stanford Chan, RA

SUMMARY:

IBA has been retained to provide an evaluation of the existing building envelope conditions and roof systems at the historic Irvington Town Hall. This evaluation includes recommendations for repairs and maintenance to existing masonry, windows, and roofing systems.

Our evaluation included a review of conditions from a boom-truck on street façades, a visual survey from the street, and at various roof levels.

The following outlines our observations and recommendations for repairs to the building envelope of Irvington Town Hall. Please refer to the façade notes and photographs for additional information.

OBSERVATIONS & RECOMMENDATIONS:

A) BRICK MASONRY:

Observations:

1. The existing exterior walls are three wythes thick, consisting of bonded, load-bearing brick masonry. The face brick is laid in a Flemish Bond with burned brick headers, typical of the Beaux Arts style of the period, with a concave +/- ½ " wide mortar joint.
2. Approximately 30% of the mortar joints have been previously repointed by various contractors at various times, most recently in 2010. The mortar at the brick joints appears to vary in condition.
3. There are areas of original pointing that are heavily eroded and in need of repointing on all facades. Most notably, the portion above the second floor windows at the- north-west corner on the west façade and the south-west corner of the south façade. (Refer to photo #2, and field notes)
4. Recently re-pointed joints on the west façade, south end are showing signs of cracking. In addition, efflorescence was noted on the south elevation, west corner, suggesting that moisture continues to enter open mortar joints at the facades. (Refer to photos #3,4,5)
5. The bricks themselves are in fair condition and loose/cracked bricks were only found in a few isolated areas. (See attached field notes for specific location)
6. A brick-masonry probe was performed on the building. One brick was removed and confirmed that the exterior wall is a true Flemish Bond with real headers. No residual moisture was observed behind the first wythe. (Refer to photo #6)

Recommendations:

1. Repointing is recommended in areas where original pointing was observed to have eroded and in zones which were repointed recently, but have since shown signs of cracking.

B) TERRA COTTA MASONRY:**Observations:**

1. There are decorative terra-cotta bands, arches, columns, and capitals throughout Irvington Town Hall's facades. In general, the terra cotta reviewed is in fair condition, with the exception of the portico columns and pilasters at the south façade.
2. The terra cotta columns and pilasters at the portico, on the south façade, were found to be in poor condition. There are large, vertical cracks at each, many of which have been repaired in the past. The capitals appear to be in poor condition as well. While onsite, IBA removed one

of the volutes at the western most capital. In addition, the terra cotta units at the column bases of the portico area also experiencing cracking. (Refer to photos #7-11)

3. Terra cotta units, which had previously been patched, were checked and found to be in fair condition. However, an allowance for isolated patching is recommended. (Refer to photo #12)
4. Terra cotta mortar joints appeared to be in fair condition, except in the portico, which was previously mentioned to have experienced severe cracking.

Recommendations:

1. Due to the extent and severity of the cracking at the terra cotta columns and pilasters at the portico, on the south façade, it is recommended the terra cotta be replaced in these areas. In addition, it is recommended an allowance be made for terra cotta repointing.

C) CMU STAIR AND EGRESS EXTENSIONS:

Observations:

1. There are a number of step cracks noted at the CMU blocks in the north-west corner. These cracks go through the existing masonry coating into the CMU. (Refer to photos # 13,14)
2. The steel beam on in the center of the north-west extension façade is exposed and deteriorating. (Refer to photo #13)
3. The sealant at the control joints between substrates is in poor condition or is absent, in some locations. Daylight was visible from the interior, where sealant was found to be missing. (Refer to photo #15)

Recommendations:

1. Step-cracks should be repointed and a new weatherproof coating is to be applied at all surfaces. Masonry at the deteriorated steel beam should be removed and all steel scraped, primed, painted, and waterproofed. New masonry should be installed and waterproof coating installed at CMU. Sealant at the control joints, between substrates, is to be removed and re-sealed.

D) MAIN ROOF:**Observations:**

1. The main roof was recently replaced with a black EPDM mechanically fastened system over insulation board by Carlisle. The roof in this area was found to be in acceptable condition and does not need further maintenance. (Refer to photos #16,17)
2. The roof drains appear to be clear, with no deficiencies observed.

E) LOWER EXTENSION ROOF:**Observations:**

1. The lower extension roof, at the north-west corner was also recently replaced with a black EPDM mechanically fastened system over insulation board by Carlisle. The roof in this area was found to be in acceptable condition and does not need further maintenance. (Refer to photo #18)
2. The roof drains, scuppers, and downspouts appear to be clear, with no deficiencies observed.

F) SOUTH BALCONY ROOF:**Observations:**

1. The roof over the portico, at the south façade, appears to be a modified bitumen membrane and is in poor condition. Various debris and pigeon guano are clogging the through wall scuppers drains. Trapped moisture is contributing to both roof deterioration and leaks in the closet below. (Refer to photos #19,20,21)

Recommendations:

Replace the south balcony roof with a liquid applied membrane such as Parapro 123 or a similar system. Removal of all roofing layers down to structural decking is required in this area. Bird netting should be installed at the outer portico from bird debris and guano to prevent further damage. In addition, the debris in the scuppers should be cleaned out to allow for proper drainage.

G) ROOF SKYLIGHT

Observations:

1. The roof-skylight is in fair condition and retains much of its original material. The paint around the metal mullions is cracking and the condition of the glass is poor in some areas. (Refer to photos #22,23)

Recommendations:

1. The metal mullions at the skylight are in need of painting and the glass should be re-puttied and replaced with plexi.

H) WINDOWS:

Observations:

1. The windows appear to be in fair condition. The original oak sash had previously been retrofitted with bronze weather stripping. In addition, the paint around the sash is cracking and has deteriorated. (Refer to photos #24,25)

Recommendations:

1. New, low profile, operable storm windows should be installed. Full window restoration will also be needed. The wood sash around the windows should be scraped and painted. Glazing putty should be painted and replaced as needed.

END OF REPORT #1; ATTACHMENTS: ELEVATIONS (4) PHOTOS #1 to #25

Photo 1: IRVINGTON TOWN HALL: South Façade –Façade and Roof Assessment Report



PROJECT: IRVINGTON TOWN HALL
PROJECT #: 2100235.1
DESCRIPTION: FAÇADE AND ROOF ASSESSMENT

PREPARED BY: Michael Greene
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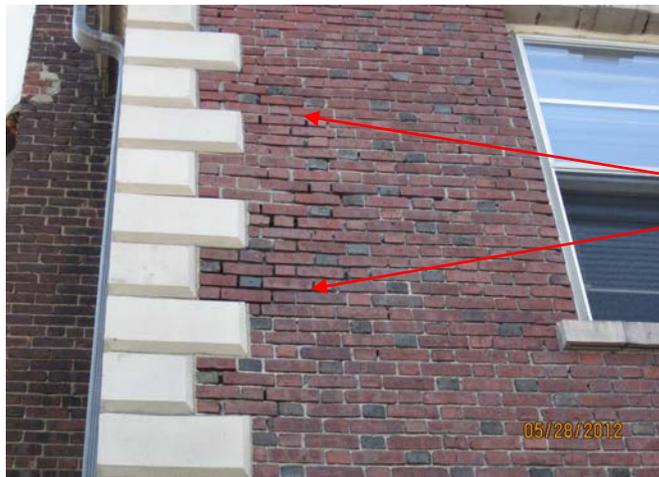


Photo 2:

- Ref Brick Masonry Observation #3
- North-west facade
- Cracking in original mortar joints.

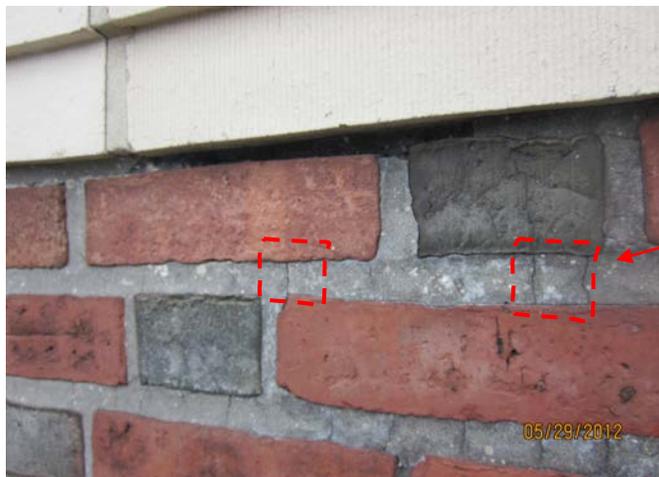


Photo 3:

- Ref Brick Observation #4
- South-west facade
- Cracking in re-pointed mortar joints.

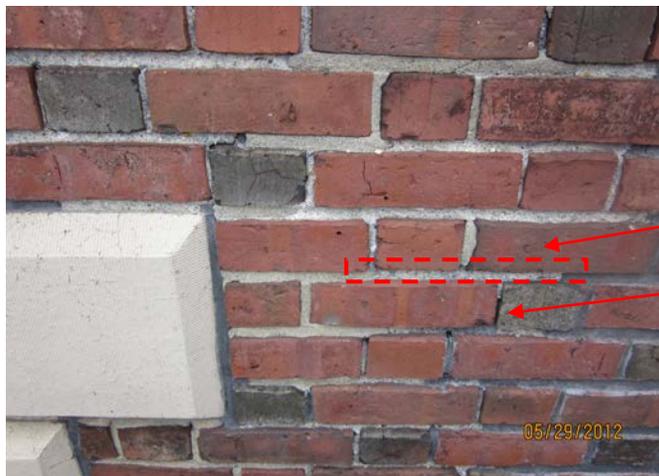


Photo 4:

- Ref Brick Observation #4
- South-west facade
- Repointing is deteriorating at intersection with old pointing.
- Open mortar joints

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**Photo 5:**

- Ref Brick Observation #4
- South-east facade
- Efflorescence observed at corner.

**Photo 6:**

- Ref Brick Observation #6
- Brick-Masonry Prob at west facade

**Photo 7:**

- Ref Terra Cotta Observation #2
- South façade column cracks

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Photo 8:

- Ref Terra Cotta Observation #2
- South façade column cracks
- Second column from the west
- Loose section of terra cotta unit



Photo 9:

- Ref Terra Cotta Observation #2
- South façade column cracks
- Eastern Pilaster
- Crack had been previously repaired with mortar, but has since opened



Photo 10:

- Ref Terra Cotta Observation #2
- South façade column cracks
- Second column from east

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Photo 11:

- Ref Terra Cotta Observation #2
- South façade column cracks
- Second column from east



Photo 12:

- Ref Terra Cotta Observation #3
- South-east corner
- Previously repaired terra cotta



Photo 13:

- Ref CMU Observation #1&2
- North-east corner
- Corroded beam
- CMU step cracks

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**Photo 14:**

- Ref CMU Observation #1
- North-east corner
- CMU step cracks

**Photo 15:**

- Ref CMU Observation #3
- North-east corner
- Damaged sealant at control joint

**Photo 16:**

- Ref Roof Observation #1
- Main Roof

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Photo 17:

- Ref Roof Observation #1
- Main Roof



Photo 18:

- Ref Roof Observation #2
- Lower Extension Roof



Photo 19:

- Ref South Balcony Roof Observation #1
- Deteriorations and Guano

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Photo 20:

- Ref South Balcony Roof Observation #1
- Deteriorations and Guano



Photo 21:

- Ref South Balcony Roof Observation #1
- Clogged and cracked scupper



Photo 22:

- Ref Roof Skylight Observation #1

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**Photo 23:**

- Ref Roof Skylight Observation #1
- Deteriorated paint at mullions

**Photo 24:**

- Ref Window Observation #1

**Photo 25:**

- Ref Window Observation #1
- Deteriorated paint at sash

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Key →

- (A) - re-pointing
- (B) - spalled terra-cotta
- (C) - crack (terra-cotta)
- (D) - loose unit
- (E) - piece removed
- (F) - displaced brick
- (G) - previously patched
- (H) - stepped crack (CMU/Brick)



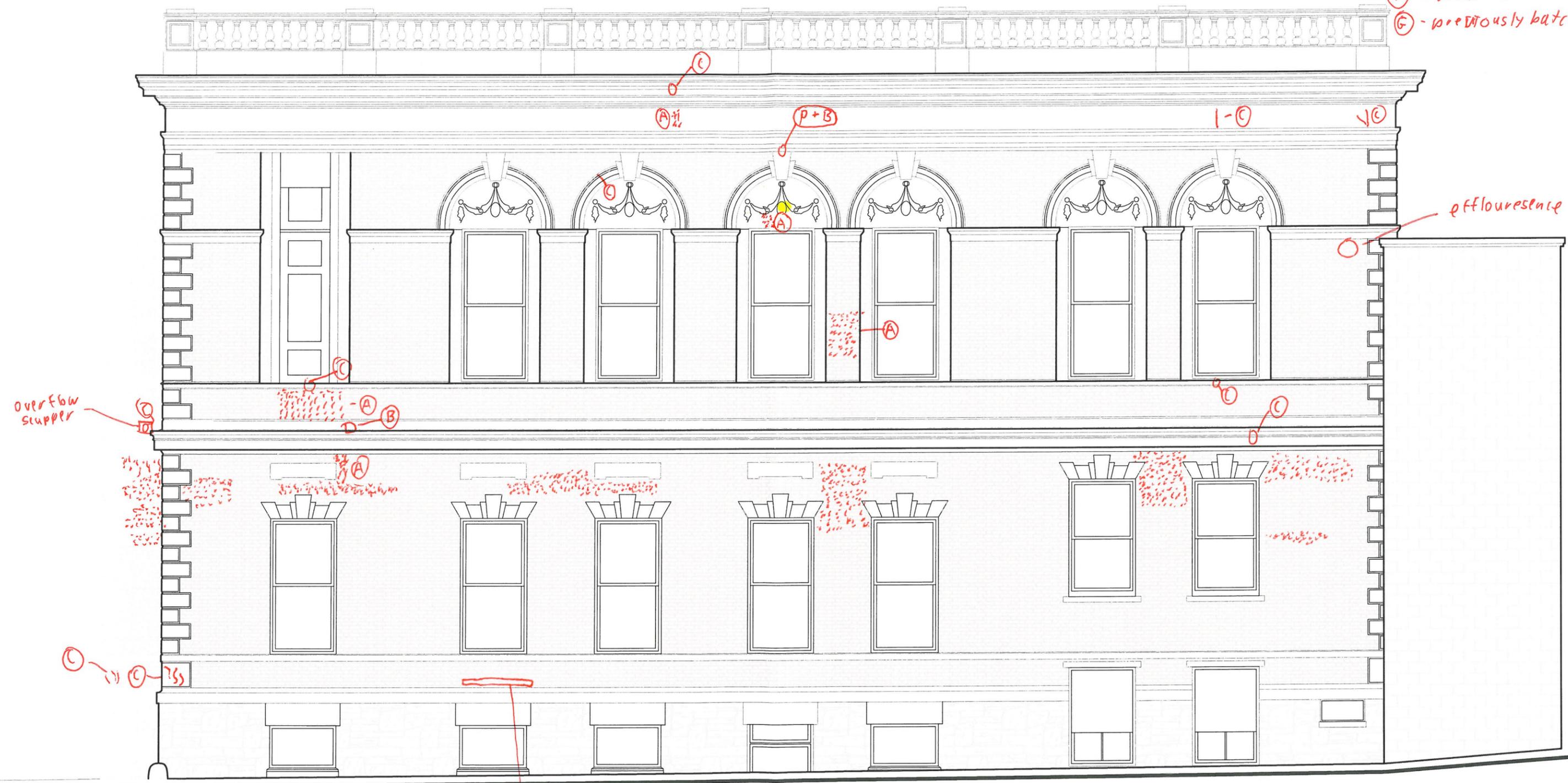
Beam →

Step cracks
 @ CMU
 1/4" max size

1 WEST ELEVATION
 3/16" = 1'-0"



- (A) - re-pointing
- (B) - spalled terra cotta
- (C) - crack (terra cotta)
- (d) - loose unit
- (E) - piece removed
- (F) - displaced brick
- (G) - previously batched



1 EAST ELEVATION
3/16" = 1'-0"



- (A) - repointing
- (B) - spalled terra cotta
- (C) - crack (terra cotta)
- (D) - loose unit
- (E) - piece removed
- (F) - displaced brick previously patched

← open joint between structures - open control-joint should be caulked

← open joint between structures - control joint should be caulked →

Bent vent



ASBESTOS REPORT

June 29, 2012
ACS Job No. 6969.01

CLIENT: Mr. Lawrence Schopfer, Village Administrator
Village Hall
85 Main Street
Irvington, NY 10533

PREMISES: 85 Main Street
Irvington, NY 10533
Exterior Restoration Project

DATE OF INSPECTION: May 29, 2012

INSPECTION PERSONNEL: Louis Illiano
NYS DOL Certified Asbestos Inspector, #89-07620

Aleksandr V. Skibenko
NYS DOL Certified Asbestos Inspector, #98-03883

INTRODUCTION

On May 29, 2012 personnel from ACS Environmental Services performed an asbestos inspection as the basis for compliance with the requirements of NYS Industrial Code Rule 56, regarding the filing of building plans for demolition, renovation, alteration or modification. Pursuant to said requirements, the presence of all visible Asbestos Containing Materials {ACM} which will or may reasonably be affected by said work must be cataloged along with a recommendation for an abatement plan for any such ACM which will be so affected. The scope of the inspection and the documents produced will commensurate with the representation of the work planned for the premises and will be limited only to the specific scope of work as described to us by the architect, owner or other responsible party. The inspection and the documents produced will be adequate for compliance with the filing requirements of the law, so long as the work is not changed or extended in any way. *ACS Environmental Services, Inc.*, shall have no liability arising from any deviation from the planned scope of work or any other damage, whether consequential, compensatory, punitive, or special, arising out of, incidental to, or as a result of, this survey and report and shall be limited solely to the cost of this inspection report.

SCOPE OF WORK

The planned scope of work as described to us is for miscellaneous facade repairs including repointing of brick, window caulking replacement, repairs to window sills / lintels, repair damaged terracotta cornices and possible roof and coping stone repairs. for exterior facade repairs including window repair/replacement.

SURVEY METHODS

The survey was conducted following the guidelines established by the U.S. Environmental Protection Agency (EPA 560/5-85-024), and the requirements of New York City Department of Environmental Protection, Title 15 (15RCNY) and the new amended New York State Industrial Code Rule 56 (ICR56). An inspector visually inspected all accessible building spaces and sampled materials which were suspected of containing asbestos. Sampling was performed according to OSHA and the Environmental Protection Agency {EPA} procedures.

ACS ENVIRONMENTAL SERVICES, INC.

2081 Homecrest Avenue
Suite 2B
Brooklyn, N.Y. 11229
(718) 339-1984
FAX: (718) 998-6373

ASBESTOS SURVEY REPORT
85 Main Street, Irvington, NY 10533
Exterior Restoration Project

The survey and this report are based on the following:

1. A visual inspection of all accessible areas of the building.
2. Bulk sampling and analyses by Polarized Light Microscopy for friable materials and Transmission Electron Microscopy for non-friable suspected ACM.
3. Information provided by the owner or other responsible party.
4. Federal, State and local guidelines on ACM in buildings.

SUMMARY OF BULK SAMPLES COLLECTED

During the inspection a total of twenty nine (29) bulk samples of suspected asbestos containing building materials were collected from the accessible visible suspected ACM that will be impacted by the planned work. Two (2) samples were collected from the concrete filler patch from the cornice at the south facade above the third floor windows by the project engineer. The samples collected were submitted under a chain of custody form to AmeriSci New York, a certified asbestos testing laboratory accredited by the NYS Department of Health Environmental Laboratory Approval Program (ELAP #11480). Samples collected were analyzed in accordance with the New York State ELAP protocols for analysis. These include the following;

1. In samples which obtain distinct layers, such as plaster with a white coat, and a brown coat, each layer is analyzed separately.
2. Samples, which are determined to be Non Friable Organically Bound (NOB) materials, must go through a process called gravimetric reduction first. The sample is then analyzed by Polarized Light Microscopy (PLM) like other bulk samples. However, due to the inability of PLM to detect some of the smaller fibers often found in NOB materials and in ceiling tiles with cellulose, if the PLM result is negative for asbestos, the samples are further analyzed by Transmission Electron Microscopy (TEM).

Asbestos Containing Materials (ACM) are classified as friable and non-friable materials. Friable materials are materials that can be crushed by hand pressure and release airborne fibers, such as thermal system insulation (pipe/boiler insulation) and sprayed-on fireproofing. Non-friable materials are materials that need mechanical equipment to be crushed such as floor coverings, roofing materials and transite materials and do not release airborne fibers unless these materials are sanded, scrapped or sand blasted, which increase the potential for fiber release. All friable samples were analyzed by Polarized Light Microscopy (PLM Analysis) following the EPA-600/M4-82-020/NYS-DOH 198.1 method. The New York State Department of Health has issued the following requirements "Polarized Light Microscopy is not consistently reliable in detecting asbestos in non-friable materials (i.e. floor tiles, roofing materials, mastics, caulking, adhesives) and with ceiling tile samples that contain cellulose. Before these materials can be considered or treated as non-asbestos-containing, analysis must be made by quantitative Transmission Electron Microscopy (TEM analysis) following the NYS-DOH 198.4 method." All non-friable bulk material samples and ceiling tiles with cellulose samples found to be negative for asbestos content under PLM analysis were analyzed by TEM analysis.

ASBESTOS SURVEY REPORT
85 Main Street, Irvington, NY 10533
Exterior Restoration Project

In accordance with the Asbestos Hazard Emergency Response Act (AHERA) guidelines a proper asbestos survey is to include the identification of different types of materials and sampling areas, and to determine the appropriate number of samples to be collected per homogeneous area. A homogeneous material is an application of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color, texture, and vintage of application. The samples collected when submitted to the lab are grouped into homogeneous areas (HA) and the laboratory is instructed to analyze each group of samples as one homogeneous area and directed to stop the analysis within that group when the first positive result occurs.

Bulk material samples were collected from the following materials;

HA #	Sampled Material Location	Material Description	# of Samples Collected	# of Samples Analyzed	Asbestos (> 1%) Yes / No
1	Exterior Facade Various Locations	Window Glazing/Putty	5	5	NO
2		Exterior Window Frame Caulking	7	1	YES
3	Exterior Facade Bsmt Level	Field Stone Mortar	3	3	NO
4	Exterior Facade Bsmt Level at Lower Cornice	Concrete Mortar	3	3	NO
5	Exterior Facade Various Locations	Brick Mortar	5	3	NO
6	Exterior Facade 1 st Fl at Middle Cornice	Concrete Mortar	3	3	NO
7	Exterior Facade 3 rd Fl at Middle Cornice	Concrete Mortar	3	3	NO
8	South Facade at Cornice Above 3 rd Floor Windows	Concrete Filler Patch	2	2	NO

According to all rules and regulations governing asbestos, building products that contain more than 1% asbestos by weight are considered asbestos containing materials (ACM). Products that contain less than 1% asbestos (trace amounts) are considered non-asbestos containing materials.

Laboratory analysis confirmed the presence of asbestos in the amount greater than 1% within the samples collected from the following;

- **Exterior Window Frame Caulking Materials**
Located at all windows throughout the building.

ASBESTOS SURVEY REPORT
 85 Main Street, Irvington, NY 10533
 Exterior Restoration Project

ACM INVENTORY

Location of ACM	Approximate Quantities	Material Description
Exterior Facade (throughout)	120 square feet	Exterior Window Frame Caulking Materials (60 Windows at approximately 1.5 - 2 sq.ft. each)

Above estimates are based upon quantities observed. Amounts and conditions prior to bidding, filing and abatement shall be verified by contractors and others.

GENERAL CONCLUSION AND RECOMMENDATIONS

Its our opinion, that pursuant to the provisions of all federal, state and local laws and after appropriate observation and bulk sample analysis of suspected asbestos containing building materials, that the proposed demolition project must be classified as **AN ASBESTOS PROJECT**.

As understood, the planned work will impact the ACM listed in this report. The removal of these non-friable asbestos-containing-materials must be performed in accordance with the NYS Industrial Code Rule 56. The ACM that will or may reasonably be affected by the planned work must be removed by a NYS licensed asbestos abatement contractor. As required by law, the owner and the contractor must conform to the requirements of all federal, state and local laws governing asbestos abatement, which includes retaining the services of an independent company to provide On-Site Third Party Project Monitoring Services. The air monitor must be an independent company not affiliated with, and separate from the abatement contractor. The air monitor may collect air samples during and after the abatement project to ensure that the airborne fiber concentrations are within the regulatory levels.

The ACM exterior window frame caulking materials are currently a non-friable material in their present state. In accordance with ICR 56: Section 56-11.6 the removal of the non-friable ACM exterior caulking materials must be removed by a NYS Licensed Asbestos Abatement Contractor. Air monitoring for the removal of exterior non-friable materials is not a requirement. The following is an insert from the law ;

*Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York
 (Cited as 12 NYCRR Part 56)*

56-11.6 Exterior Project Removal of Non-friable ACM Roofing, Siding, Caulking, Glazing Compound, Transite, Tars, Sealers, Coatings, and Other NOB ACMs. The following Phase II abatement procedures shall apply for exterior removal of non-friable asbestos-containing roofing, siding, caulking, glazing compound, transite, tars, sealers, coatings, and other NOB ACMs, currently in a non-friable intact condition, unless the ACM is rendered friable during removal or debris falls within the building/structure. The asbestos project shall then be completed in accordance with all requirements of this Part, except Special Projects Subpart 56-11.

(a) Air Sampling and Analysis. Air sampling and analysis on asbestos projects conducted under this Section is not required unless the ACM is rendered friable during removal or debris falls inside the building/structure. Air sampling and analysis shall then be conducted in accordance with the requirements of Subpart 56-4.

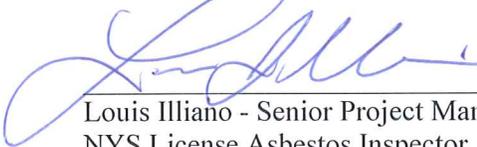
ASBESTOS SURVEY REPORT
85 Main Street, Irvington, NY 10533
Exterior Restoration Project

DISCLAIMER

This report is based solely upon a visual inspection and sampling of the premises at the time of the inspection and makes no determinations with respect to portions of the premises which were not inspected, tested or non-inclusive of the premises at the time of the inspection. The asbestos inspection conducted at the subject project site consisted of a visual assessment and bulk sampling of building materials to locate and identify any visible asbestos containing materials in only those specific project areas. No core drilling, probe penetrations or exploratory demolition was conducted to expose any non-specific ACM encapsulated by or otherwise enclosed within constructed building materials. Please be aware that there may be additional ACM behind, in and/or above finished surfaces. The Asbestos Survey performed for filing building permit applications are limited to the exposed surface areas of the building and may not include hidden pipe coverings, layered flooring materials, waterproofing materials and other enclosed spaces or similar materials within walls, floors and ceilings. In the event that ACM is discovered during the renovation project behind finished surfaces that were not visible or accessible at the time of this inspection, work in that area must cease and be closed off to all personnel. ACS Environmental Services, Inc. must be notified immediately. The contractor must coordinate with the investigator to identify the potential asbestos hazard and recommend the appropriate actions to be taken.

ACS Environmental Services, Inc., (ACS) assumes no responsibility for any and all liabilities arising from any deviation, misrepresentation, or any unforeseen complications within this report and will only be limited solely to the contractual monetary amount for the generation of this report, whether verbal and/or written. Any and all liability on the part of ACS shall be limited solely to the monetary cost of this survey report. ACS shall have no liability for any other damage, whether consequential, compensatory, punitive, or special, arising out of, incidental to, or as a result of, this survey and report. ACS assumes no liability for the use of this survey or report by any person or entity including the customer for whom it has been prepared.

Reported by,
ACS ENVIRONMENTAL SERVICES, INC.



Louis Illiano - Senior Project Manager
NYS License Asbestos Inspector
NYS DOL License #AH-89-07620

APPENDIX 1

Laboratory Analytical Reports

Table I
Summary of Bulk Asbestos Analysis Results

6969-01; Irvington Town Hall; 85 Main Street, Irvington, NY; Exterior Facade Restoration Project

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	A-6969-1	1	0.587	11.4	78.0	10.5	NAD	Anthophyllite Trace
Location: 1st Floor East - Window Glazing/Putty								
02	B-6969-2	1	0.230	18.7	60.9	20.4	NAD	NAD
Location: 1st Floor East - Window Glazing/Putty								
03	C-6969-13	1	0.238	18.1	65.1	16.8	NAD	NAD
Location: 1st Floor South - Window Glazing/Putty								
04	D-6969-14	1	0.301	21.9	50.5	27.6	NAD	NAD
Location: 1st Floor South - Window Glazing/Putty								
05	E-6969-21	1	0.302	11.6	84.4	4.0	NAD	NAD
Location: Basement West - Window Glazing/Putty								
06	F-6969-3	2	0.300	21.7	23.3	52.3	Chrysotile 2.8	NA
Location: 1st Floor East - Exterior Window Frame Caulking								
07	G-6969-4	2	0.335	24.8	22.4	52.8	NA/PS	NA
Location: 1st Floor East - Exterior Window Frame Caulking								
08	H-6969-15	2	0.262	22.1	19.8	58.0	NA/PS	NA
Location: 1st Floor South - Exterior Window Frame Caulking								
09	I-6969-16	2	0.225	24.9	70.2	4.9	NA/PS	NA
Location: Basement South - Exterior Window Frame Caulking								
10	J-6969-22	2	0.191	26.7	71.2	2.1	NA/PS	NA
Location: Basement West - Exterior Window Frame Caulking								
11	K-6969-23	2	0.233	14.6	72.1	13.3	NA/PS	NA
Location: 3rd Floor East - Exterior Window Frame Caulking								
12	L-6969-26	2	0.238	20.6	55.0	24.4	NA/PS	NA
Location: 3rd Floor West - Exterior Window Frame Caulking								
13	M-6969-5	3	---	---	---	---	NAD	NA
Location: Basement East - Field Stone Mortar								
14	N-6969-9	3	---	---	---	---	NAD	NA
Location: Basement South - Field Stone Mortar								
15	O-6969-17	3	---	---	---	---	NAD	NA
Location: Basement West - Field Stone Mortar								
16	P-6969-6	4	---	---	---	---	NAD	NA
Location: Basement East; Lower Cornice - Concrete Mortar								

Table I
Summary of Bulk Asbestos Analysis Results
 6969-01; Irvington Town Hall; 85 Main Street, Irvington, NY; Exterior Facade Restoration Project

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
17	Q-6969-10	4	----	----	----	----	NAD	NA
Location: Basement South; Lower Cornice - Concrete Mortar								
18	R-6969-18	4	----	----	----	----	NAD	NA
Location: Basement West; Lower Cornice - Concrete Mortar								
19	S-6969-7	5	----	----	----	----	NAD	NA
Location: 1st Floor East - Brick Mortar								
20	T-6969-11	5	----	----	----	----	NAD	NA
Location: 1st Floor South - Brick Mortar								
21	U-6969-19	5	----	----	----	----	NAD	NA
Location: 1st Floor West - Brick Mortar								
22	V-6969-24	5	----	----	----	----	NAD	NA
Location: 3rd Floor East - Brick Mortar								
23	W-6969-27	5	----	----	----	----	NAD	NA
Location: 3rd Floor West - Brick Mortar								
24	X-6969-8	6	----	----	----	----	NAD	NA
Location: 1st Floor East; Middle Cornice - Concrete Mortar								
25	Y-6969-12	6	----	----	----	----	NAD	NA
Location: 1st Floor South; Middle Cornice - Concrete Mortar								
26	Z-6969-20	6	----	----	----	----	NAD	NA
Location: 1st Floor West; Middle Cornice - Concrete Mortar								
27	AA-6969-25	7	----	----	----	----	NAD	NA
Location: 3rd Floor East; Upper Cornice - Concrete Mortar								
28	BB-6969-28	7	----	----	----	----	NAD	NA
Location: 3rd Floor East; Upper Cornice - Concrete Mortar								
29	CC-6969-29	7	----	----	----	----	NAD	NA
Location: 3rd Floor West; Upper Cornice - Concrete Mortar								

See Reporting notes on last page

AmeriSci Job #: 212061824

Client Name: ACS Environmental Services, Inc.

Table I

Summary of Bulk Asbestos Analysis Results

6969-01; Irvington Town Hall; 85 Main Street, Irvington, NY; Exterior Facade Restoration Project

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
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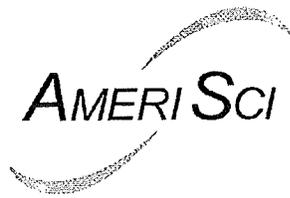
Analyzed by: Madell E. Collins, Date Analyzed 6/11/2012



**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by EPA 600/M4-82-020 per 40 CFR or ELAP 198.1 for New York friable samples or ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (not covered by NVLAP Bulk accreditation) or ELAP 198.4; for New York samples; NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses); AIHA Lab # 102843, NVLAP Lab Code 200546-0, NYSDOH ELAP Lab ID#11480.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogeneous materials).

Reviewed By: _____



AmeriSci New York

117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

ACS Environmental Services, Inc.
Attn: Louis Illiano
2081 Homecrest Avenue
Brooklyn, NY 11229

Date Received 06/06/12 **AmeriSci Job #** 212061824
Date Examined 06/09/12 **P.O. #**
ELAP # 11480 **Page** 1 of 6
RE: 6969-01; Irvington Town Hall; 85 Main Street, Irvington, NY;
Exterior Facade Restoration Project

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
A-6969-1 1 Location: 1st Floor East - Window Glazing/Putty	212061824-01	No	NAD (by NYS ELAP 198.6) by Ivan H. Reyes on 06/09/12
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Fibrous Talc Trace, Non-fibrous 10.6 %			
B-6969-2 1 Location: 1st Floor East - Window Glazing/Putty	212061824-02	No	NAD (by NYS ELAP 198.6) by Ivan H. Reyes on 06/09/12
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Fibrous Talc Trace, Non-fibrous 20.4 %			
C-6969-13 1 Location: 1st Floor South - Window Glazing/Putty	212061824-03	No	NAD (by NYS ELAP 198.6) by Ivan H. Reyes on 06/09/12
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 16.8 %			
D-6969-14 1 Location: 1st Floor South - Window Glazing/Putty	212061824-04	No	NAD (by NYS ELAP 198.6) by Ivan H. Reyes on 06/09/12
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 27.6 %			
E-6969-21 1 Location: Basement West - Window Glazing/Putty	212061824-05	No	NAD (by NYS ELAP 198.6) by Ivan H. Reyes on 06/09/12
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Bulk Material Asbestos Types: Other Material: Non-fibrous 4 %			

See Reporting notes on last page

Client Name: ACS Environmental Services, Inc.

PLM Bulk Asbestos Report

6969-01; Irvington Town Hall; 85 Main Street, Irvington, NY;
Exterior Facade Restoration Project

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
F-6969-3 2	212061824-06 Location: 1st Floor East - Exterior Window Frame Caulking	Yes	2.8 % (ELAP 198.6; 400pc) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Fibrous, Bulk Material Asbestos Types: Chrysotile 2.8 % Other Material: Fibrous Talc 1 %, Non-fibrous 51.2 %			
G-6969-4 2	212061824-07 Location: 1st Floor East - Exterior Window Frame Caulking		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			
H-6969-15 2	212061824-08 Location: 1st Floor South - Exterior Window Frame Caulking		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			
I-6969-16 2	212061824-09 Location: Basement South - Exterior Window Frame Caulking		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			
J-6969-22 2	212061824-10 Location: Basement West - Exterior Window Frame Caulking		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			
K-6969-23 2	212061824-11 Location: 3rd Floor East - Exterior Window Frame Caulking		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			

See Reporting notes on last page

Client Name: ACS Environmental Services, Inc.

PLM Bulk Asbestos Report6969-01; Irvington Town Hall; 85 Main Street, Irvington, NY;
Exterior Facade Restoration Project

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
L-6969-26 2	212061824-12 Location: 3rd Floor West - Exterior Window Frame Caulking		NA/PS
Analyst Description: Bulk Material Asbestos Types: Other Material:			
M-6969-5 3	212061824-13 Location: Basement East - Field Stone Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
N-6969-9 3	212061824-14 Location: Basement South - Field Stone Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
O-6969-17 3	212061824-15 Location: Basement West - Field Stone Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
P-6969-6 4	212061824-16 Location: Basement East; Lower Cornice - Concrete Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
Q-6969-10 4	212061824-17 Location: Basement South; Lower Cornice - Concrete Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

6969-01; Irvington Town Hall; 85 Main Street, Irvington, NY;
Exterior Facade Restoration Project

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
R-6969-18 4	212061824-18 Location: Basement West; Lower Cornice - Concrete Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
S-6969-7 5	212061824-19 Location: 1st Floor East - Brick Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Black, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
T-6969-11 5	212061824-20 Location: 1st Floor South - Brick Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
U-6969-19 5	212061824-21 Location: 1st Floor West - Brick Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
V-6969-24 5	212061824-22 Location: 3rd Floor East - Brick Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
W-6969-27 5	212061824-23 Location: 3rd Floor West - Brick Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			

See Reporting notes on last page

Client Name: ACS Environmental Services, Inc.

PLM Bulk Asbestos Report6969-01; Irvington Town Hall; 85 Main Street, Irvington, NY;
Exterior Facade Restoration Project

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
X-6969-8 6	212061824-24 Location: 1st Floor East; Middle Cornice - Concrete Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
Y-6969-12 6	212061824-25 Location: 1st Floor South; Middle Cornice - Concrete Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
Z-6969-20 6	212061824-26 Location: 1st Floor West; Middle Cornice - Concrete Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
AA-6969-25 7	212061824-27 Location: 3rd Floor East; Upper Cornice - Concrete Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
BB-6969-28 7	212061824-28 Location: 3rd Floor East; Upper Cornice - Concrete Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			
CC-6969-29 7	212061824-29 Location: 3rd Floor West; Upper Cornice - Concrete Mortar	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/09/12
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Non-fibrous 100 %			

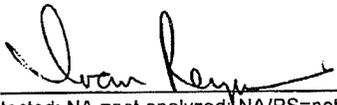
See Reporting notes on last page

Client Name: ACS Environmental Services, Inc.

PLM Bulk Asbestos Report

6969-01; Irvington Town Hall; 85 Main Street, Irvington, NY;
Exterior Facade Restoration Project

Reporting Notes:

Analyzed by: Ivan H. Reyes 

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab Code 200546-0), ELAP PLM Method 198.1 for NY friable samples or 198.6 for NOB samples (NY ELAP Lab ID11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab. This PLM report relates ONLY to the items tested. AIHA Lab # 102843, RI Cert#AAL-094, CT Cert#PH-0186, Mass Cert#AA000054.

Reviewed By: _____ END OF REPORT _____

BULK SAMPLING DATA FORM

21 206 1824

NUMBER OF SAMPLES 29

ACS Job No. 6969-01

ANALYTICAL METHOD: I

Date Collected: 5/29/12

Project Site: IRVINGTON TOWN HALL
85 MAIN STREET, IRVINGTON, NY
EXTERIOR FACADE RESTORATION PROJECT

PLM Analysis: Friable
NYS Department of Health ELAP Method 198.1

Collected By: LI/AS

PLM/TEM Analysis: Non-Friable Organically Bound
ELAP Protocol 198.6 / 198.4

Turnaround Time: 5 days

172hrs [] 148hrs [] 124hrs [] 112hrs [] Rush

SAMPLE ID #	HGA	SAMPLE LOCATION	SAMPLE DESCRIPTION	ANALYSIS	SAMPLE NOTES
A-6969-1	1	1 FL EAST	WINDOW GLAZING/PUTTY	PLM TEM	
B-6969-2	1	1 FL EAST			
C-6969-13	1	1 FL South			
D-6969-14	1	1 FL South			
E-6969-21	1	Bsmt West			
F-6969-3	2	1 FL EAST	EXTERIOR WINDOW FRAME CAULKING	PLM TEM	
G-6969-4	2	1 FL EAST			
H-6969-15	2	1 FL South			
I-6969-16	2	Bsmt South			

Sample Chain Of Custody

Relinquished By: Louis ILLINO
Signature: [Signature]
Date: 6/1/12 Time: 0610

Received By: [Signature]
Signature: [Signature]
Date: 1/4/14 Time: 1444

Laboratory Use Only

Lab Job #
Date Received
Date Analyzed
Signature

Comments: collected

BULK SAMPLING DATA FORM

Page 2 of 4
 NUMBER OF SAMPLES 29

ACS Job No. 6969-01
 Project Site: Irvington Town Hall
85 Main Street, Irvington, NY
Exterior Facade Restoration Project

212061824

Date Collected:

Collected By:

5/29/12

LI/AS

ANALYTICAL METHOD: X 1

PLM Analysis: Friable
 NYS Department of Health ELAP Method 198.1

PLM/TEM Analysis: Non-Friable Organically Bound
 ELAP Protocol 198.6 / 198.4

Turnaround Time:

10 days [] 72hrs [] 124hrs [] 112hrs [] Rush

SAMPLE ID #	HGA	SAMPLE LOCATION	SAMPLE DESCRIPTION	ANALYSIS	SAMPLE NOTES
J-6969-22	2	BSMT WEST	Exterior Window Frame Caulking	PLM / TEM	
K-6969-23	2	3 FL EAST		↓	
L-6969-26	2	3 FL West		↓	
M-6969-5	3	BSMT EAST	Field Stone Mortar	PLM	
N-6969-9	3	BSMT South		↓	
O-6969-17	3	BSMT west		↓	
P-6969-6	4	BSMT EAST - Lower Cornice	concrete mortar	PLM	
Q-6969-10	4	BSMT South		↓	
R-6969-18	4	BSMT west		↓	

Sample Chain Of Custody

Relinquished By: [Signature] Received By: [Signature]
 Signature: _____ Date: _____
 Date: _____ Time: 1444
 Time: _____
 Comments: _____

Laboratory Use Only

Lab Job # _____
 Date Received _____
 Date Analyzed _____
 Signature _____

BULK SAMPLING DATA FORM

212061824

ACS Job No. 6969-01

Project Site: IRVINGTON TOWN HALL
85 MAIN STREET, IRVINGTON, NY
EXTERIOR FACADE RESTORATION PROJECT

ANALYTICAL METHOD: [] PLM

PLM Analysis: Friable
 NYS Department of Health ELAP Method 198.1

PLM/TEM Analysis: Non-Friable Organically Bound
 ELAP Protocol 198.6 / 198.4

Date Collected: 5/29/12

Collected By: LI/AS

Turnaround Time: 3 days [] 72hrs [] 148hrs [] 12hrs [] Rush

SAMPLE ID #	HGA	SAMPLE LOCATION	SAMPLE DESCRIPTION	ANALYSIS	SAMPLE NOTES
S-6969-7	5	1 FC EAST	BRICK MORTAR	PLM	
T-6969-11	5	1 FC South			
Y-6969-12	6	1 FC South			
Z-6969-20	6	1 FC west			
U-6969-19	5	1 FC west			
V-6969-24	5	3 FC EAST			
W-6969-27	5	3 FC west			
X-6969-8	6	1 FC East - Middle Cornice	CONCRETE MORTAR	PLM	

Sample Chain Of Custody

Relinquished By: [Signature]
 Signature _____ Date 6/6/12
 Time _____
 Received By: [Signature]
 Signature _____ Date 6/6/12
 Time 1444

Laboratory Use Only

Lab Job # _____
 Date Received _____
 Date Analyzed _____
 Signature _____

Comments:



AmeriSci New York

117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

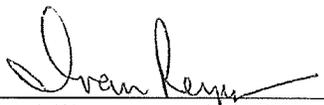
ACS Environmental Services, Inc.
Attn: Louis Illiano
2081 Homecrest Avenue

Brooklyn, NY 11229

Date Received 06/16/12 AmeriSci Job # 212063601
Date Examined 06/19/12 P.O. #
ELAP # 11480 Page 1 of 1
RE: 6969-01; Irvington Town Hall; 85 Main St. Irvington, NY

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
6969-30 8	212063601-01 Location: South Facade At Cornice Above 3fl. Windows - Concrete Filler Patch	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/19/12
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Cellulose Trace, Non-fibrous 100 %			
6969-31 8	212063601-02 Location: South Facade At Cornice Above 3fl. Windows - Concrete Filler Patch	No	NAD (by NYS ELAP 198.1) by Ivan H. Reyes on 06/19/12
Analyst Description: OffWhite, Homogeneous, Non-Fibrous, Cementitious, Bulk Material Asbestos Types: Other Material: Cellulose Trace, Non-fibrous 100 %			

Reporting Notes:

Analyzed by: Ivan H. Reyes 

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab Code 200546-0), ELAP PLM Method 198.1 for NY friable samples or 198.6 for NOB samples (NY ELAP Lab ID11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AIHA Lab # 102843, RI Cert#AAL-094, CT Cert#PH-0186, Mass Cert#AA000054.

Reviewed By: _____ END OF REPORT _____

Lead Based Paint Inspection Report
85 Main Street, Irvington, NY 10533
Exterior Restoration Project

Surfaces were tested using current state-of-the-art methods for inspecting lead-based paint, as described by the U.S. Department of Housing and Urban Development (HUD) in "Guidelines For The Evaluation and Control of Lead-Based Paint Hazards in Housing" (referred to as the HUD Guidelines). For the purpose of this inspection, lead-based paint is defined as paint or other surface coatings (stain, shellac or varnish) applied prior to 1978 and containing lead equal to or exceeding 1.0 milligrams(s) per square centimeter (mg/cm^2) or 0.5 percent lead by weight in a dried state. As necessary, the apartment was tested for lead-based paint using portions of the inspection protocol of Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (1997 Revision). A representative surface of each painted building component suspected to contain lead in the apartment was tested. Surfaces were selected for testing based upon their being deemed representative of building materials. The surface selection was made on the basis of the protocols described in the HUD Guidelines. This number was augmented on the basis of the inspector's experience and his field evaluation of building materials. Representative surfaces were tested accordingly by a "screen" analysis using an XRF Spectrum Analyzer. The following is the manufacturer and model of the XRF equipment used for this inspection; Make: Radiation Monitoring Devices, Model: LPA-1, Source: ^{57}Co (Calbolt 57).

If the readings were less than $1.0 \text{ mg}/\text{cm}^2$, the surface was recorded as not having a toxic concentration level of lead. If the readings were equal to or greater than $1.0 \text{ mg}/\text{cm}^2$, the surface was recorded as containing lead-based paint (LBP). The results of the XRF Analyzer can be considered accurate to within $\pm 0.10 \text{ mg}/\text{cm}^2$ on wood and drywall surfaces and within $\pm 0.15 \text{ mg}/\text{cm}^2$ on concrete and metal surfaces, as per the specifications of the RMD LPA-1 XRF Analyzer and the US EPA performance Characteristic Sheet.

In accordance with the specifications of the RMD LPA-1 XRF Analyzer, the Performance Characteristics Sheet published by the US EPA and the definition of lead-based paint in the context of this report is consistent with the following limits:

Positive:	> $1.1 \text{ mg}/\text{cm}^2$ (wood, drywall) > $1.15 \text{ mg}/\text{cm}^2$ (concrete, metal)	<i>Contains lead.</i>
Negative:	< $0.9 \text{ mg}/\text{cm}^2$ (wood, drywall) < $0.85 \text{ mg}/\text{cm}^2$ (concrete, metal)	<i>No lead at regulatory levels of concern.</i>
Inconclusive:	0.9 to $1.1 \text{ mg}/\text{cm}^2$ (wood, drywall) 0.85 to $1.15 \text{ mg}/\text{cm}^2$ (concrete, metal)	<i>Confirm presence or absence of lead or consider positive</i>

Interpretations of XRF Data

XRF reading results are provided on the attached tables and appendixes. As expected for this analytical methodology, XRF values tend to vary slightly for lead detected in the same surface. Surfaces which are reported as "inconclusive" thereby demonstrate some possible lead content based upon the statistical underpinnings of radiation-based analytical methodologies. The inspectors tested a total of fifty (50) surfaces via XRF analysis and thirteen (13) calibration readings. Forty-three (43) surfaces were found to contain lead at levels equal to or above the regulatory level of $1.0 \text{ mg}/\text{cm}^2$. No Inconclusive readings were encountered.

Lead Based Paint Inspection Report
85 Main Street, Irvington, NY 10533
Exterior Restoration Project

Summary of XRF Findings

Results of all XRF Readings for the testing performed can be found in the attached appendixes. The survey did identify levels of lead which were ***“Above Regulatory Levels”*** on surfaces tested within the project areas. The attached appendixes contain a Summary Report and a Sequential Report for all areas tested. The Sequential Report is a print-out of all XRF Readings in sequential order. The Summary Report is a print-out of only the positive and/or inconclusive readings.

All exterior wood window components including the windows’ casings/frames, sashes, window wells and jambs at all elevations and levels of the building are classified as containing lead based paint. The basement door, door casing and frame at the east elevation was also found to contain lead based paint.

General Conclusions & Recommendations

Based on XRF testing procedures surfaces tested were found to contain lead-based paint. The painted surfaces that are classified as lead-based paint, should not be disturbed in any manner that will generate dust, except by trained personnel working under controlled conditions. The removal, replacement or enclosure of the lead based painted components should be performed in accordance with the US EPA Repair, Renovating, Painting Rule, Title 40: Part 745. ACS has determined that there is lead-based paint that will be impacted by the proposed work and lead hazard reduction activities will be required. The remediation plan should be based upon any proposed renovation work at the project site.

In accordance with the US EPA Repair, Renovating, Painting Rule, Title 40: PART 745 - Lead Based Paint Poisoning Prevention in Certain Residential Structures “ Subpart “E” Residential Property Renovation”, the entire apartment was tested for lead-based paint. This subpart contains regulations developed under sections 402 and 406 of the Toxic Substances Control Act (15 U.S.C. 2682 and 2686) and applies to all renovations performed for compensation in target housing and child-occupied facilities.

The purpose of this subpart is to ensure the following:

- (a) Owners and occupants of target housing and child-occupied facilities receive information on lead-based paint hazards before these renovations begin; and
- (b) Individuals performing renovations regulated in accordance with §745.82 are properly trained; renovators and firms performing these renovations are certified; and the work practices in §745.85 are followed during these renovations. The rule applies to all renovations performed for compensation in target housing and child-occupied facilities, except for the following:

Renovations in target housing or child-occupied facilities in which a written determination has been made by an inspector or risk assessor (certified pursuant to either Federal regulations at §745.226 or a State or Tribal certification program authorized pursuant to §745.324) that the components affected by the renovation are free of paint or other surface coatings that contain lead equal to or in excess of 1.0 milligrams/per square centimeter (mg/cm²) or 0.5% by weight, where the firm performing the renovation has obtained a copy of the determination.

Description of Lead-Based Paint Abatement Procedures

The following are five major methods of lead-paint abatement:

1. Replacement - Replace old lead-painted component with new, lead-free component. This is the best method for window frames, doors, door frames and some wall coverings.

2. Enclosure - Cover lead-based painted surface with a material that is structurally affixed and deemed to last for a minimum of 20 years. Paint stabilization is not considered long-term (greater than 20 year) abatement.

The following materials may be used:

Walls:	<ul style="list-style-type: none"> • Formica • Paneling • Canvas-backed vinyl wall coverings • Sheetrock • Fiberglass mats • Tile 	Woodwork:	<ul style="list-style-type: none"> • Plastic • Metal • Wood
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Materials used to enclose should be firmly nailed or glued in place; seams must be well caulked and sealed. If enclosure is chosen as a method of abatement, it should be recognized that the lead-based paint shall still remain and may have to be dealt with later, perhaps at the time of building renovations or demolition.

3. Encapsulation - Apply a coating of material specifically designed to permanently bond to lead-based paint on a surface. Most encapsulants are applied like paint, though the consistency is generally thicker than paint. The surface to which the encapsulant is applied must be very carefully prepared according to the encapsulant manufacturer's directions, to ensure permanent adhesion. This method is particularly useful on building components that have architectural significance, aren't easily replaced, and are structurally sound.

4. Removal - Since all methods used to remove lead paint are extremely hazardous, paint removal should be considered only if replacement, enclosure, and encapsulation are not feasible. Off-site paint removal is preferred. The following methods may be used to remove lead paint:

- **Caustic Strippers (Peel Away):** This method involves applying a paste to the surface, placing a sheet of paper over the area and waiting 24 - 48 hours for the paste to dry. The paint peels off with the paper. The stripped surface must be rinsed and acidified to remove the residue, so that new paint will adhere to the surface. This method is considered to be extremely hazardous, and should be employed by personnel who have completed the appropriate training requirements.

- **Heat Guns:** Heat guns are useful for small areas needing touch-up. Heat guns can produce lead fumes, which are toxic if inhaled in concentrated amounts or small concentrations over a long period of time. Heat guns must not be operated above 1100 degrees Fahrenheit.

Lead Based Paint Inspection Report
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Exterior Restoration Project

- **Liquid Paint Removers:** This procedure involves removing all lead-based paint until bare surface is reached. These solvents evaporate readily, and, therefore, can be inhaled. Solvents and paint removers can also be absorbed through the skin. Chemical strippers containing methylene chloride should not be used for interior surfaces.
- **HEPA Sanders:** A HEPA sander has a special vacuum that filters out the very small lead particles that cause lead poisoning. HEPA sanders are the only types of sanders that may be used.
- **Vacuum Blasting:** Vacuum blasting is sandblasting with a vacuum attachment to collect the debris. Care must be taken to contain all debris in order to avoid contamination of soil or concrete, as well as to keep lead dust from entering the home.

The following methods are NOT acceptable for removing lead paint:

- Dry scraping (produces large amounts of lead dust).
- Sanding without attached High Efficiency Particulate Air (HEPA) filtered vacuum (releases large amounts of lead dust).
- Unconfined sand blasting (contaminates soil and concrete).
- Unconfined water blasting (contaminates water supply, soil and concrete).
- Open flame burning or heat guns operated above 1100 degrees Fahrenheit (produces fumes/fire hazard).
- Methylene chloride (extremely hazardous).

5. Interim Controls – A set of measures that are designed to temporarily reduce actual or potential exposure to lead-based paint hazards. Monitoring, conducted by professionals, are integral elements of interim controls. Interim controls include:

- **Dust Removal:** Using a wet mop and HEPA filtered vacuum.
- **Paint Film Stabilization:** The process of wet scraping, priming, and repainting surfaces, including cleanup and clearance.
- **Treatment of friction and impact surfaces**

Maintenance of Lead Painted Surfaces

It is our professional opinion and recommendation that the dwelling be made lead safe and to correct all "Lead Hazards". Lead hazards include;

- Any peeling lead-based paint.
- Deteriorated sub-surfaces (this includes broken wood frames or moldings or crumbling plaster).
- Friction surfaces (this includes doors & windows in which painted surfaces scrape against each other).
- Impact surfaces (this includes moldings and jambs which may be struck or hit by feet, toys, or opening and closing doors and windows).
- Chewable surfaces (this includes all intact window sills and any protruding surfaces which show evidence of being chewed by children).

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This section contains a condensed, generic discussion of current procedures dealing with maintenance of intact lead-painted surfaces. Government authorities now recognize that even intact lead painted surfaces could pose a health risk and should be abated (covered or removed). Accordingly, it is recommended that any lead painted surfaces (particularly mouthable surfaces such as window sills and door stops) which children are likely to come into contact with, should be properly abated.

The following program of inspecting and maintaining such intact painted surfaces can lower the risk of lead dust hazards from lead painted surfaces in a home;

1. Avoid any activities that disturbs lead-painted surfaces. Even chemical stripping of lead-based paint will generate lead dust.
2. Wet wipe surfaces with water containing a detergent, with a frequency sufficient to prevent accumulation of dust.
3. Frequently survey lead painted surfaces to assure they are intact. Problematic surfaces should be abated in conformance with all federal, state and local laws governing lead-based paint.
4. Avoid the use of regular vacuum cleaners on debris that may contain lead dust. Use of a high efficiency particulate air (HEPA) vacuums are recommended, with a frequency sufficient to prevent accumulation of dust. When changing HEPA filters special safety and health precautions should be followed.
5. Monitor activities of young children. Prevent them from coming into contact with lead painted surfaces as much as possible and regularly wash their hands (especially before they handle food).
6. Determine children's blood-lead levels, at a frequency prescribed by physician who specializes in lead poisoning. ACS Environmental Services, Inc. recommends routine blood lead testing of children under the age of seven.

Lead Based Paint Inspection Report
85 Main Street, Irvington, NY 10533
Exterior Restoration Project

Disclaimer

A copy of this summary must be provided to new lessees (tenants) and purchasers of this property under Federal Law (24CFR part 35 and 40 CFR part 745) before they become obligated under a lease or sales contract. The complete report must also be provided to new purchasers and it must be made available to all new tenants. Landlords (lessors) and sellers are required to distribute an educational pamphlet approved by the U.S. Environmental Protection Agency and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead based paint hazards. (See Section IV of Chapter 7 of the HUD Guidelines for further details). This report is for your exclusive use and is only to be used as a guide in determining the presence and condition of lead based paint (LBP) on only the components tested at the time of inspection. The report is based solely upon a visual inspection and sampling of the premises at the time of inspection and makes no determinations with respect to portions of the premises which were not tested. ACS, Inc., makes no representation of warranty with respect to your compliance with local, state or federal statutes, regulations, or rules. This report sets forth relevant excerpts from manuals published by HUD. ACS assumes no responsibility for the accuracy and adequacy of said excerpted material or future modifications of same. Any and all liability on the part of ACS Environmental Services, Inc. shall be limited solely to the cost of this survey report. ACS shall have no liability for any other damage, whether consequential, compensatory, punitive, or special, arising out of, incidental to, or as a result of, this survey and report.

The inspection was only of readily accessible areas. Generally, the following areas were considered inaccessible:

- Original walls or ceiling surfaces enclosed with wallboard, paneling or plaster skim coats.
- Locked areas.
- Space which would require destructive measures (i.e., cutting, hammering, removing, etc.) to gain access.
- Components to which access may create or disturb other potential environmental hazards (i.e., suspect asbestos containing building materials, mold/fungi growth, etc.).
- Components at heights greater than nine feet, unless an OSHA-compliant ladder is supplied by Client.
- Areas deemed by the inspector to be unsafe or hazardous due to site conditions at the time of evaluation.

Reported by,
ACS Environmental Services, Inc.



Louis Illiano
US EPA Certified Lead Inspector
Certificate # NY-I-5445-3

KEY TO XRF DATA REPORTS

Read No.:	=	Sequential Numbered Order Of XRF Readings
Room No.:	=	ACS's Room Numbering System
Room Name:	=	Name Of Room Corresponding To Drawings
Wall:	=	Wall Numbering System A = Wall of Entrance To Room B - C - D: Go In Clockwise Order From Wall A
Structure:	=	Component Tested
Location:	=	Location of Component Tested
Member:	=	Member Location of Component Tested
Paint Condition:	=	Intact: No chipping, peeling or cracks Fair: Minor chipping, peeling or cracks Poor: Major chipping, peeling or cracks
Substrate:	=	Make-up of Surface Tested (ie. wood, plaster, metal, etc)
Color:	=	Color of Surface Tested
Lead (mg/cm ²):	=	Result of XRF Reading (mg/cm ² = milligrams per squared centimeters)
Mode:	=	Testing Mode of XRF Analyzer STD = Standard Mode (used for calibrations) QM = Quick Mode (used for testing procedures)

APPENDIX #1

XRF DATA

Summary Reports

(Positive and Inconclusive Readings Only)

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Village of Irvington

Inspection Date:	05/29/12	Irvington Town Hall
Report Date:	6/28/2012	85 Main Street, Irvington, NY
Abatement Level:	1.0	Exterior Restoration Project
Report No.	05/29/12 11:51	
Total Readings:	63 Actionable: 43	
Job Started:	05/29/12 11:51	
Job Finished:	05/29/12 14:06	

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
Exterior Room 001 East Bsmt									
016	A	Window	Lft	Rgt casing	P	Wood	White	>9.9	QM
017	A	Window	Lft	Sill	P	Wood	White	>9.9	QM
018	A	Window	Lft	Lft casing	P	Wood	White	>9.9	QM
019	A	Window	Lft	Lft casing	P	Wood	White	>9.9	QM
008	A	Window	Rgt	Rgt casing	P	Wood	White	>9.9	QM
009	A	Window	Rgt	Sash	P	Wood	White	1.6	QM
012	A	Window	Rgt	Sash	P	Wood	White	>9.9	QM
007	A	Window	Rgt	Sill	P	Wood	White	2.3	QM
010	A	Window	Rgt	Sill	P	Wood	White	6.0	QM
011	A	Window	Rgt	Lft casing	P	Wood	White	>9.9	QM
015	A	Door	Ctr	Header	P	Wood	White	>9.9	QM
014	A	Door	Ctr	Lft casing	P	Wood	Yellow	>9.9	QM
013	A	Door	Ctr	U Ctr	P	Wood	Yellow	>9.9	QM
Exterior Room 002 East 1Fl									
021	A	Window	Lft	Rgt casing	P	Wood	White	4.7	QM
022	A	Window	Lft	Sash	P	Wood	White	>9.9	QM
020	A	Window	Lft	Lft casing	P	Wood	White	>9.9	QM
023	A	Window	Ctr	Rgt casing	P	Wood	White	>9.9	QM
024	A	Window	Ctr	Sash	P	Wood	White	>9.9	QM
025	A	Window	Ctr	Well	P	Wood	White	>9.9	QM
Exterior Room 003 South Bsmt									
029	A	Window	Lft	Rgt casing	P	Wood	White	2.7	QM
031	A	Window	Lft	Sill	P	Wood	White	2.2	QM
028	A	Window	Lft	Lft casing	P	Wood	White	2.0	QM
026	A	Window	Rgt	Rgt casing	P	Wood	White	>9.9	QM
027	A	Window	Rgt	Lft casing	P	Wood	White	>9.9	QM
Exterior Room 004 South 1Fl									
032	A	Window	Rgt	Rgt casing	P	Wood	White	>9.9	QM
033	A	Window	Rgt	Sash	P	Wood	White	>9.9	QM
034	A	Window	Rgt	Well	P	Wood	White	2.0	QM
035	A	Window	Rgt	Lft jamb	P	Wood	White	>9.9	QM
Exterior Room 005 West Bsmt									
046	A	Window	Lft	Rgt jamb	P	Wood	White	>9.9	QM
044	A	Window	Lft	Sash	P	Wood	White	>9.9	QM
045	A	Window	Lft	Well	P	Wood	White	>9.9	QM
043	A	Window	Lft	Lft casing	P	Wood	White	2.4	QM
038	A	Window	Ctr	Lft casing	P	Wood	White	3.8	QM
036	A	Window	Rgt	Lft casing	P	Wood	White	9.4	QM
Exterior Room 007 West 1Fl									
048	A	Window	Ctr	Lft casing	P	Wood	White	>9.9	QM
Exterior Room 008 West 2Fl									
052	A	Window	Rgt	Rgt jamb	P	Wood	White	>9.9	QM
051	A	Window	Rgt	Well	P	Wood	White	5.2	QM

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Village of Irvington

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
053	A	Window	Rgt	Well	P	Wood	White	1.5	QM
049	A	Window	Rgt	Lft casing	P	Wood	White	>9.9	QM
050	A	Window	Rgt	Lft jamb	P	Wood	White	>9.9	QM
Exterior Room 009 East 2Fl									
056	A	Window	Lft	Well	P	Wood	White	>9.9	QM
054	A	Window	Lft	Lft casing	P	Wood	White	>9.9	QM
055	A	Window	Lft	Lft jamb	P	Wood	White	>9.9	QM
----- End of Readings -----									

APPENDIX #2

XRF DATA

Sequential Reports

(All Readings in Sequential Order)

SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Village of Irvington

Inspection Date: 05/29/12
 Report Date: 6/28/2012
 Abatement Level: 1.0
 Report No. 05/29/12 11:51
 Total Readings: 63
 Job Started: 05/29/12 11:51
 Job Finished: 05/29/12 14:06

Irvington Town Hall
 85 Main Street, Irvington, NY
 Exterior Restoration Project

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint			Lead (mg/cm ²)	Mode
							Cond	Substrate	Color		
1		CALIBRATION								0.9	Std
2		CALIBRATION								0.9	Std
3		CALIBRATION								0.9	Std
4		CALIBRATION								-0.1	Std
5		CALIBRATION								-0.1	Std
6		CALIBRATION								-0.1	Std
7	001	East Bsmt	A	Window		Rgt Sill	P	Wood	White	2.3	QM
8	001	East Bsmt	A	Window		Rgt Rgt casing	P	Wood	White	>9.9	QM
9	001	East Bsmt	A	Window		Rgt Sash	P	Wood	White	1.6	QM
10	001	East Bsmt	A	Window		Rgt Sill	P	Wood	White	6.0	QM
11	001	East Bsmt	A	Window		Rgt Lft casing	P	Wood	White	>9.9	QM
12	001	East Bsmt	A	Window		Rgt Sash	P	Wood	White	>9.9	QM
13	001	East Bsmt	A	Door		Ctr U Ctr	P	Wood	Yellow	>9.9	QM
14	001	East Bsmt	A	Door		Ctr Lft casing	P	Wood	Yellow	>9.9	QM
15	001	East Bsmt	A	Door		Ctr Header	P	Wood	White	>9.9	QM
16	001	East Bsmt	A	Window		Lft Rgt casing	P	Wood	White	>9.9	QM
17	001	East Bsmt	A	Window		Lft Sill	P	Wood	White	>9.9	QM
18	001	East Bsmt	A	Window		Lft Lft casing	P	Wood	White	>9.9	QM
19	001	East Bsmt	A	Window		Lft Lft casing	P	Wood	White	>9.9	QM
20	002	East 1Fl	A	Window		Lft Lft casing	P	Wood	White	>9.9	QM
21	002	East 1Fl	A	Window		Lft Rgt casing	P	Wood	White	4.7	QM
22	002	East 1Fl	A	Window		Lft Sash	P	Wood	White	>9.9	QM
23	002	East 1Fl	A	Window		Ctr Rgt casing	P	Wood	White	>9.9	QM
24	002	East 1Fl	A	Window		Ctr Sash	P	Wood	White	>9.9	QM
25	002	East 1Fl	A	Window		Ctr Well	P	Wood	White	>9.9	QM
26	003	South Bsmt	A	Window		Rgt Rgt casing	P	Wood	White	>9.9	QM
27	003	South Bsmt	A	Window		Rgt Lft casing	P	Wood	White	>9.9	QM
28	003	South Bsmt	A	Window		Lft Lft casing	P	Wood	White	2.0	QM
29	003	South Bsmt	A	Window		Lft Rgt casing	P	Wood	White	2.7	QM
30	003	South Bsmt	A	Window		Lft Lft casing	P	Wood	White	0.0	QM
31	003	South Bsmt	A	Window		Lft Sill	P	Wood	White	2.2	QM
32	004	South 1Fl	A	Window		Rgt Rgt casing	P	Wood	White	>9.9	QM
33	004	South 1Fl	A	Window		Rgt Sash	P	Wood	White	>9.9	QM
34	004	South 1Fl	A	Window		Rgt Well	P	Wood	White	2.0	QM
35	004	South 1Fl	A	Window		Rgt Lft jamb	P	Wood	White	>9.9	QM
36	005	West Bsmt	A	Window		Rgt Lft casing	P	Wood	White	9.4	QM
37	005	West Bsmt	A	Window		Ctr Sill	P	Wood	White	0.1	QM
38	005	West Bsmt	A	Window		Ctr Lft casing	P	Wood	White	3.8	QM
39	005	West Bsmt	A	Door		Ctr U Ctr	P	Wood	Gray	-0.2	QM
40	005	West Bsmt	A	Door		Ctr Lft casing	P	Wood	Gray	-0.2	QM
41	005	West Bsmt	A	Door		Ctr U Ctr	P	Wood	Brown	0.1	QM
42	005	West Bsmt	A	Door		Ctr Rgt casing	P	Wood	Brown	0.0	QM
43	005	West Bsmt	A	Window		Lft Lft casing	P	Wood	White	2.4	QM
44	005	West Bsmt	A	Window		Lft Sash	P	Wood	White	>9.9	QM
45	005	West Bsmt	A	Window		Lft Well	P	Wood	White	>9.9	QM
46	005	West Bsmt	A	Window		Lft Rgt jamb	P	Wood	White	>9.9	QM
47	006	North Bsmt	A	Wall		L Rgt	I	Concrete	White	0.3	QM

SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: Village of Irvington

Read No.	Rm No.	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm ²)	Mode
48	007	West 1Fl	A	Window		Ctr Lft casing	P	Wood	White	>9.9	QM
49	008	West 2Fl	A	Window		Rgt Lft casing	P	Wood	White	>9.9	QM
50	008	West 2Fl	A	Window		Rgt Lft jamb	P	Wood	White	>9.9	QM
51	008	West 2Fl	A	Window		Rgt Well	P	Wood	White	5.2	QM
52	008	West 2Fl	A	Window		Rgt Rgt jamb	P	Wood	White	>9.9	QM
53	008	West 2Fl	A	Window		Rgt Well	P	Wood	White	1.5	QM
54	009	East 2Fl	A	Window		Lft Lft casing	P	Wood	White	>9.9	QM
55	009	East 2Fl	A	Window		Lft Lft jamb	P	Wood	White	>9.9	QM
56	009	East 2Fl	A	Window		Lft Well	P	Wood	White	>9.9	QM
57		CALIBRATION								0.8	Std
58		CALIBRATION								0.8	Std
59		CALIBRATION								0.9	Std
60		CALIBRATION								0.8	Std
61		CALIBRATION								-0.1	Std
62		CALIBRATION								-0.1	Std
63		CALIBRATION								-0.1	Std
---- End of Readings ----											



June 29, 2012

Mr. Lawrence Schopfer, Village Administrator
Village Hall
85 Main Street
Irvington, NY 10533

**Re: ACS Job No. 6969.01
Irvington Town Hall
85 Main Street, Irvington, NY 10533
Exterior Restoration Project**

Dear Mr. Schopfer,

Enclosed please find the laboratory analytical results for the Polychlorinated Biphenyls (PCB) sampling conducted by ACS Environmental Services on May 29, 2012 at Village Hall, 85 Main Street, Irvington, NY 10533. Samples were collected from the exterior window frame caulking materials and from the window glazing/putty materials from the window sashes. A total of four (4) samples were collected and analyzed in order to determine the presence (or absence) of PCBs within these caulking and putty materials.

PCB SAMPLING RESULTS

Polychlorinated biphenyls (PCBs) are a class of organic compounds with 1 to 10 chlorine atoms attached to biphenyl, which is a molecule composed of two benzene rings. There are no known natural sources of PCBs. PCBs are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor in air. PCBs have no known smell or taste. Many commercial PCB mixtures are known in the U.S. by trade name Aroclor.

Samples collected were evaluated for Aroclor levels. The Aroclor PCB mixture was produced from approximately 1930 to 1979 and is the most commonly known trade name. The specific Aroclor products screened for in the samples were Aroclor 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1262 and 1268. The first two digits generally refer to the number of carbon atoms in the phenyl rings and last two digits in the name indicate the percentage of chlorine present in the material, for example, Aroclor 1016 means the product contains 10 carbon atoms and approximately 16% chlorine by weight.

The US EPA regulatory guidelines classify materials with levels equal to or greater than 50 ppm (≥ 50 ppm) of PCB content to be a controlled hazardous waste material under the Toxic Substance Control Act (TSCA)

CONCLUSIONS

Review of sample results indicates that **no PCB's were detected above the regulatory level.** The laboratory analytical reports and sampling chain of custody forms are attached.

Should you have any questions or require any additional information, please do not hesitate to contact the undersigned.

Reported by,
ACS ENVIRONMENTAL SERVICES, INC.

A handwritten signature in blue ink, appearing to read "Louis Illiano", is written over a faint, larger version of the signature.

Louis Illiano
Certified Environmental Inspector
Environmental Assessment Association, #15061

**ACS ENVIRONMENTAL
SERVICES, INC.**

2081 Homecrest Avenue
Suite 2B
Brooklyn, N.Y. 11229
(718) 339-1984
FAX: (718) 998-6373



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: jsmith@emsl.com

Attn:

Louis Illiano
ACS Environmental Services, Inc.
2081 Homecrest Ave. Suite 2B
Brooklyn, NY 11229

6/12/2012

Phone: (718) 339-1984
Fax: (718) 998-6373

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 6/5/2012. The results are tabulated on the attached data pages for the following client designated project:

6969-01 Irvington Town Hall - 85 Main St. Irvington NY

The reference number for these samples is EMSL Order #011202489. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Reviewed and Approved By:

Julie Smith - Laboratory Director



The test results contained within this report meet the requirements of NELAC and/or the specific certification program that is applicable, unless otherwise noted.
NELAP Certifications: NJ 03036, NY 10896, PA 68-00367

The PCB samples were received in plastic containers and outside the temperature requirement.

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856) 303-2500 / (856) 858-4571
<http://www.emsl.com> jsmith@emsl.com

EMSL Order: 011202489
 CustomerID: ASBE79
 CustomerPO:
 ProjectID:

Attn: **Louis Illiano**
ACS Environmental Services, Inc.
2081 Homecrest Ave. Suite 2B
Brooklyn, NY 11229

Phone: (718) 339-1984
 Fax: (718) 998-6373
 Received: 06/05/12 10:00 AM
 Collected: 5/29/2012

Project: 6969-01 Irvington Town Hall - 85 Main St. Irvington NY

Analytical Results

Client Sample Description B-6969-2P **Collected:** 5/29/2012 **Lab ID:** 0001
 1st Floor East, Exterior window glazing/putty

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
3540C/8082A	Aroclor-1016	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1221	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1232	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1242	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1248	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1254	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1260	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1262	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1268	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH

Client Sample Description E-6969-21P **Collected:** 5/29/2012 **Lab ID:** 0002
 Bsmt West, Exterior window glazing/putty

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
3540C/8082A	Aroclor-1016	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1221	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1232	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1242	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1248	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1254	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1260	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1262	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1268	ND	0.75	mg/Kg	6/7/2012	MB	6/8/2012	EH

Client Sample Description I-6969-16P **Collected:** 5/29/2012 **Lab ID:** 0003
 Bsmt South, Exterior window frame caulking

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
3540C/8082A	Aroclor-1016	ND	0.63	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1221	ND	0.63	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1232	ND	0.63	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1242	ND	0.63	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1248	ND	0.63	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1254	ND	0.63	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1260	ND	0.63	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1262	ND	0.63	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1268	ND	0.63	mg/Kg	6/7/2012	MB	6/8/2012	EH

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856) 303-2500 / (856) 858-4571
<http://www.emsl.com> jsmith@emsl.com

EMSL Order: 011202489
 CustomerID: ASBE79
 CustomerPO:
 ProjectID:

Attn: **Louis Illiano**
ACS Environmental Services, Inc.
2081 Homecrest Ave. Suite 2B
Brooklyn, NY 11229

Phone: (718) 339-1984
 Fax: (718) 998-6373
 Received: 06/05/12 10:00 AM
 Collected: 5/29/2012

Project: 6969-01 Irvington Town Hall - 85 Main St. Irvington NY

Analytical Results

Client Sample Description K-6969-23P **Collected:** 5/29/2012 **Lab ID:** 0004
 3rd Floor East, Exterior window frame
 caulking

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
3540C/8082A	Aroclor-1016	ND	0.50	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1221	ND	0.50	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1232	ND	0.50	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1242	ND	0.50	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1248	ND	0.50	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1254	0.59	0.50	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1260	ND	0.50	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1262	ND	0.50	mg/Kg	6/7/2012	MB	6/8/2012	EH
3540C/8082A	Aroclor-1268	ND	0.50	mg/Kg	6/7/2012	MB	6/8/2012	EH

Definitions:

ND - indicates that the analyte was not detected at the reporting limit
 RL - Reporting Limit



Environmental Chemistry Chain of Custody

EMSL Order Number (Lab Use Only):

01202489

Corporate - Cinnaminson, NJ
200 Route 130 North
Cinnaminson, NJ 08077
PHONE: 1-800-220-3675
FAX: (856) 786-5974

Report To Contact Name: Louis Iliano
Company Name: ACS Environmental Services, Inc.
Address 1: 2081 Homcrest Avenue, Suite 2B
Address 2: Brooklyn, NY 11229
Phone: 718-339-1984 Fax: 718-998-6373
Email Results To: Louis@acsenvironmentalinc.com

Bill To Company: ACS Environmental Services, Inc.
Attention To: Louis Iliano
Address 1: 2081 Homcrest Avenue, Suite 2B
Address 2: Brooklyn, NY 11229
Phone: 718-339-1984 Fax: 718-998-6373
Project Name: 6969-01 IRVINGTON TOWN HALL - 85 MAIN ST, IRVINGTON, NJ

Sampled By (Signature):
Number of Samples In Shipment:
Date of Shipment:
U.S. State where Samples Collected: NY
Purchase Order:

Standard Turnaround Time: 2 Weeks 1 Week 4 Days 3 Days 2 Days 1 Day

Failure to complete will hinder processing of samples

Client Sample ID	Comp	Grab	Date/Time	Matrix	Preservative	Test(s) Needed		Comments
						W=Water S=Soil A=Air SL=Sludge O=Other	1=HCL 2=HNO3 3=H2SO4 4=ICE 5=Other	
B-6969-2P	X		5/29/12	O	N/A			PCB's
E-6969-21P	X							
I-6969-16P	X							
K-6969-23P	X							

Released By (Signature): *[Signature]* Date & Time: 6/4/12 - 1705
Received By: *[Signature]* Date & Time: 6/5/12 10:00AA

Please indicate reporting requirements: Results Only Results and QC Reduced Deliverables Disk Deliverable Other _____

Comments/Special Instructions:

SAMPLE DESCRIPTIONS
 # B-6969-2P - 1 FL EAST } WINDOW GLAZING/PUTTY (EXTERIOR)
 # E-6969-21P - BSMT WEST }
 # I-6969-16P - BSMT SOUTH } EXTERIOR WINDOW FRAME CRACKING
 # K-6969-23P - 3 FL EAST }

EMSL Analytical Inc.

PESTICIDE/PCB ORGANICS ANALYSIS DATA SHEET

Customer Sample#:		MB 1 4389 CU	
Lab Name:	EMSL Analytical	Project:	
EMSL Sample ID:		Sample Matrix:	Solid/Soil
Lab File ID:	X19904.D	Sampling Date:	12:00:00 AM
Instrument ID:	ECD-X	Date Extracted:	6/7/2012
Analyst:	EH	Analysis Date:	6/8/2012 11:36:00 AM
GC Column:	CLPest I (0.25 mm)	Sample wt/vol:	10 G
GC Column 2:	CLPest II (0.25 mm)	Dilution Factor:	1
% Moisture:	0	Concentrated Extract Vol:	10 (mL)
PH:	0	Injection Volume:	1 (ul)
GPC Cleanup(Y/N):	N	Sulfur Cleanup:	N
Extraction Type:	3540C		
Method:	SW846 8081/8082		

CAS NO	COMPOUND	Report Limit (mg/Kg)	CONC. (mg/Kg)	Q
12674-11-2	Aroclor 1016	0.050		U
11104-28-2	Aroclor 1221	0.050		U
11141-16-5	Aroclor 1232	0.050		U
53469-21-9	Aroclor 1242	0.050		U
12672-29-6	Aroclor 1248	0.050		U
11097-69-1	Aroclor 1254	0.050		U
11096-82-5	Aroclor 1260	0.050		U
37324-23-5	Aroclor 1262	0.050		U
11100-14-4	Aroclor 1268	0.050		U

Qualifier Definitions
 U = Undetected
 B = Compound detected in method blank
 E = Estimated value
 D = Dilution
 P = Results between the two columns differ >40%

EMSL Analytical Inc.

SOLID/SOIL PESTICIDE/PCB LCS/QCS/ LFB RECOVERY

Lab Name: EMSL Analytical		Original	LCS 1 4389				
		File ID:	X19904.D/X19905.D				
* : Values outside of							
	COMPOUND	CAS NO	LOW LIMIT	HIGH LIMIT	SPIKE ADDED mg/Kg	LCS CONC. mg/Kg	LCS REC%
1	Aroclor 1016	12674-11-2	31	122	1.50	1.41	94
2	Aroclor 1260	11096-82-5	33	130	1.50	1.41	94
Total Out							0 of 2

EMSL Analytical Inc.

SOLID / SOIL PESTICIDE/PCB MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:		EMSL Analytical		Original		2525-7 PCB MS 10X		X19914.D\X19906.D\X19907.D				
		File ID:										
* : Values outside of												
COMPOUND	CAS NO	LOW LIMIT	HIGH LIMIT	RPD LIMIT	SAMPLE CONC.	MS SPIKE ADDED mg/Kg	MS CONC. mg/Kg	MS REC%	MSD SPIKE ADDED mg/Kg	MSD CONC. mg/Kg	MSD REC%	RPD %
1	Aroclor 1016	12	164	25	0.00	1.76	1.78	101	2.22	2.27	102	1
2	Aroclor 1260	43	167	25	0.00	1.76	1.75	99	2.22	2.08	94	5
Total Out								0 of 2			0 of 2	0 of 2

C & F Plumbing and Heating Corp.
809 Scarsdale Ave.
Scarsdale, NY 10583
Westchester County License # 397
(914) 725-1608
Fax (914) 725-0094

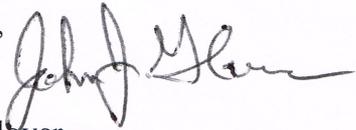
July 25, 2012

Richard Behr Architects, PC
Joe
2 Weaver Street
Scarsdale, NY 10583

Re: Village of Irvington
Irvington Town Hall
85 Main Street
Irvington, NY 10533

6/19/12: Used camera to check condition of two front internal roof drains. Set up machine and ran camera down about 45' into the existing trap. Found some pipe scale but pipes are in generally good condition.

Sincerely,



John J. Glover
President

GUIDE TO THE REPAIR OF ARCHITECTURAL TERRA COTTA

Once considered unreliable and temporary in nature, repair systems for terra cotta have become a mainstream component in Historic Restoration work. This evolution can be attributed to the development of effective, high quality specialty materials designed specifically for long-term compatibility with terra cotta substrates.

With a record of more than 20 years of successful performance on thousands of architectural Terra Cotta Restoration projects, Edison Coatings offers the most complete, time-proven, compatible terra cotta restoration systems available today. Edison's custom color and formulation capabilities provide the highest levels of aesthetic match and finish as well.

A completely integrated system, Edison's products include the following specialty materials designed specifically for use in terra cotta restoration:

- ▶ COMPOSITE PATCHING MORTARS
- ▶ CASTING MORTARS
- ▶ RE-PROFILING MORTARS
- ▶ BONDING ADHESIVES
- ▶ CRACK REPAIR RESINS & GROUTS
- ▶ REPOINTING & REBUILDING MORTARS
- ▶ COATINGS FOR GLAZE REPLICATION
- ▶ COATINGS FOR GLAZE DETAIL REPLICATION

The following is a brief guide to terra cotta repair system options and preliminary selection criteria. It should be noted that proper investigation and correction of the causes underlying the observed deterioration is prerequisite to undertaking repairs,



and repair plans and sequencing must include consideration of the significant quantities of liquid moisture often found within compromised terra cotta building wall systems.

STEP 1: DEEP REPAIR

After proper surface preparation, repairs to spalls greater than 1/8" (3 mm) in depth are best achieved using *Custom System 45 TC* grade. A two component cementitious system, *Custom System 45* provides higher bond strength, lower shrinkage and more efficient stress relief than competitive systems. This allows installation of large and deep repairs without cracking, special curing regimens or distress to historic substrates. Low coefficient of thermal expansion ($<4 \times 10^{-6}$ in/in/ $^{\circ}$ F) assures long term thermal compatibility with fired clay substrates, even in areas subject to rapid, wide swings in ambient temperatures.



Figure 1: Replacement finial (right) was cast with custom color-matched *Custom System 45* using *Restoration Latex RL-2*.

The standard liquid component is **Restoration Latex RL-1** which allows non-sag application for vertical and overhanging repairs. In cases involving very large and deep areas of loss, **Restoration Latex RL-2** (Superplasticized) may be used with **Custom System 45 TC** to form and pour repairs in place or to cast replacement elements. **Restoration Latex RL-3** (Marine Grade) may be used for repairs subject to high constant moisture exposure, such as fountains and planters. In cases requiring exceptional levels of moisture and vapor permeability, **Restoration Latex RL-4** (Air Entraining) may be used. For hot weather work at temperatures up to 120⁰F, **Restoration Latex RL-5** may be used to extend working times.

GRADE	DESCRIPTION	RECOMMENDED USES
RL-1	Non-Sag Grade	General Use: Vertical, Horizontal and Overhanging Repairs
RL-2	Superplasticized	Castings and Poured Repairs
RL-3	Marine/Immersion	Fountains, Planters, High Constant Moisture
RL-4	High Permeability	Retaining walls, Ruined Masonry, for Highest Permeability Repairs
RL-5	High Temperature	For Repairs under Hot Weather Conditions up to 120 ⁰ F (50 ⁰ C)

STEP 2: THIN SECTION REPAIR

It is common for terra cotta subjected to bulk moisture infiltration to develop thin glaze spalls, in which a section of terra cotta glaze and bisque surface delaminate from an otherwise sound terra cotta element. Typically, section thickness is no more than 1/16” (1.5 mm).

After repairing the sources of leakage, unobtrusive repairs in depths up to 1/4” (6 mm) are achieved by using **Thin-Fill 55** Reprofilling Mortar. There is no **minimum** depth and the mortar is designed for easy sanding and/or polishing to achieve perfectly smooth surfaces, when required to replicate existing glazed terra cotta profiles. The product is also easily filed

after initial set to produce fluted profiles, when required to match existing terra cotta.



Figure 2: Thin-Section glaze spalls are common in terra cotta subjected to bulk moisture infiltration.

A cementitious mortar with low coefficient of thermal expansion, high bond strength, low Modulus for efficient stress relief and positive moisture and moisture vapor permeability, **Thin Fill 55** facilitates achievement of excellent aesthetic finishes for repairs to architectural terra cotta. It is fully compatible with **Custom System 45**, and may be applied over deeper patches to achieve special surface finishes when required.

Thin Fill 55 is frequently matched to the color of the existing terra cotta glaze, to facilitate subsequent glaze replication. For translucent glazes, **Thin Fill** is matched to the bisque color.

STEP 3: CRACK REPAIR

A variety of potential causes of cracking in terra cotta mandates that a variety of repair alternatives be made available. Ideally, crack repair details and material selections are specified by a design professional experienced in the specific properties, assembly details and deterioration mechanisms of terra cotta. Crack width monitoring can assist in determining the movement capacity required, if any, for the repair system.

The following systems are used in the repair of cracks in terra cotta:

► **Custom System 45** is often used to repair cracks determined to be stationary, or non-working. The crack is typically grooved out to approximately 1/4" width x 1/2" depth, and is then filled with a matching **Custom 45 TC** repair mortar.

► **Flexi-Fill 530**, a 2-component flexibilized acrylate epoxy paste filler allows less invasive repairs with higher tensile strength and elongation, for cracks exhibiting some limited movement. A Dremel tool may be used to slightly open the face of the crack to a nominal 1/16" x 1/4" depth, and the narrow opening is then filled with the color-matched **Flexi-Fill 530** paste grade filler. At initial cure stage (typically 30 – 90 minutes) the product cures to a soft rubber which is easily trimmed with a razor or utility knife.

► **Pump-X53-Series** cement and lime-based injection mortars are also used in certain repair situations. Although injection of cracks in hollow masonry units is impractical when using epoxy injection resins, cement and lime-based compositions are more compatible and can be used to fill voids and cracks without distress to the terra cotta. A variety of grades is available, including **Pump-X53 Masonry Grout** for filling of large voids and cracks (>1/4"), **Pump-X53i Microinjection Grout** for fine cracks down to 1/16" (1.5 mm), **Pump-X53iE Expanding Microinjection Grout** for filling of cracks where slight expansion of the grout is desired (+2%) and **Pump-X53iL Hydraulic Lime Injection Grout** where softer, self-healing performance is desired.

STEP 4: REBONDING MASONRY UNITS

Fractured terra cotta elements can often be salvaged and repaired rather than replaced. The use of **Flexi-Weld 520T** masonry adhesive permits cleanly broken pieces to be quickly and cleanly rebonded, without creating a gap between the broken surfaces. When a narrow gap between the pieces must be filled by the adhesive, color-matched **Flexi-Fill 530** is used.

Both two-component, 100% solids acrylate-epoxy adhesives can be used under a wide range of temperatures to quickly grab and re-bond all types of broken masonry elements. Variable mix ratio allows users to adjust working times and consistencies under varying working conditions.



*Figure 3 (left): **Pump-X53** was used to fill voids between terra cotta band courses and rubble masonry backup on this project in New York City. Figure 4 (right): Injection points are marked on an interior wall surface; **Pump-X53i** was injected through the back-up wall into the masonry exterior veneer to fill cracks and voids in the stonework.*



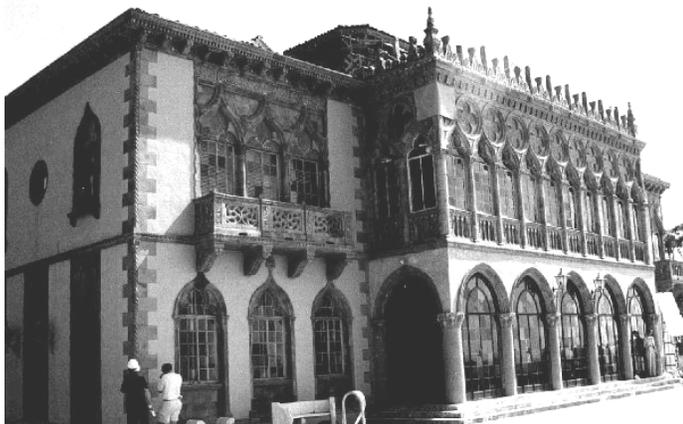
*Figure 5: Stone column base, before and after rebonding with **Flexi-Weld 520T**.*



STEP 5: GLAZE REPLICATION

Once the appropriate repairs have been made and the correct surface profiles restored, specialty coatings are used to replicate the color, reflectance and density of the original glaze. Two systems may be used:

► ***Aquathane UA210 Type NCL*** is used to achieve the finest finishes, as it allows tight control of gloss level (from Flat to High Gloss) and translucence (from Opaque to Clear). It is a highly durable waterborne aliphatic polyurethane capable of withstanding decades of weathering with minimal effect. Clear coats may also be used to provide higher gloss and depth of finish. It is generally combined with ***Type G Bonding Additive*** to assure tenacious adhesion to smooth, non-porous existing glaze surfaces.



*Figure 6: More than 30 colors of ***Aquathane*** and ***Elastowall*** coatings were custom-matched to the polychrome terra cotta at this elaborate oceanfront museum building in Florida.*

► ***Elastowall 351*** is an internally plasticized 100% acrylic coating which has been used for decades to both provide an aesthetic matte finish and to aid in exclusion of water from terra cotta exhibiting small working cracks. It is favored by some Conservators for its high rate of moisture vapor transmission, its ability to bond to less aggressively prepared surfaces and to a wide variety of existing materials, and its ability to be removed/reversed if so desired at some later date. Luster can be imparted to ***Elastowall 351*** coatings by applying a clear top coat of ***Aquathane UA210 Type E***.

Both products are available in over 900 standard colors, which can be prepared in-house by Edison Dealers who participate in the Edison Coatings Tint Base program. Custom color matching service is also available from Edison Coatings, Inc.



*Figure 7: Terra Cotta gargoyle, before and after repair with ***Custom System 45*** and coating with ***Elastowall 351***.*

STEP 6: GLAZE DETAIL REPLICATION

A particular challenge in terra cotta restoration work is the replication of special details frequently found in original glazes. These may include speckles, smears, mottling or even multiple layers of glaze of different colors.

These special finishes can often be recreated using multiple applications of ***Aquathane UA210 Type NCL*** and/or ***Type E***, employing various faux finishing techniques.

In addition, ***AquaSpex 220*** may be used to provide speckles of specific size, concentration and color. ***AquaSpex 220*** incorporates color-matched flakes in a clear binder, permitting close control of speckle color, density and size.



*Figure 8: Terra Cotta fragment sits atop a precast concrete panel which has been base-coated with light grey ***Aquathane UA210 NCL*** and top-coated with ***AquaSpex 220***, incorporating 1500 micron Charcoal Grey flakes. The combination provides a final finish which closely matches the original material.*

Parapro 123 Flashing and Roof Membrane Systems



Liquid Efficiency. Siplast Standards.



▲ Parapro Roof Membrane products offer the efficiency of liquid application with the performance standards of Siplast.

Liquid-applied Parapro Roof Membrane is an efficient solution for low clearance situations, like the area under this HVAC unit on a Jacksonville, Florida office tower.



Innovation

One of the most successful commercial product innovations of the last century occurred in the 1930s when polymethyl methacrylate resins, commonly known as PMMA, were first synthesized. Practical applications for the new resin, which included everything from aircraft windshields to dentures, soon followed. The material proved to be exceptionally durable, and the use of PMMA grew rapidly. But in spite of its outstanding performance, the material was too rigid for use in waterproofing applications – until the 1970s.

That's when a PMMA formulation was developed that, once cured, was resilient rather than rigid. Today, Parapro Roof Membrane and Flashing Systems offer all the benefits of PMMA technology and liquid application in products that meet the performance standards of Siplast.

Advantages

Jobs with difficult access, tight clearances, odd-shaped penetrations, and exposure to certain substances can be a challenge for even the best traditional roofing plies. In such cases, a liquid-applied Parapro System is an excellent option. Parapro Roof Membrane can be used in conjunction with Siplast Paradiene roof membranes or as a stand-alone alternative to roofing sheets. Parapro is ideal for areas where flame-free application is required, water doesn't drain quickly or completely, or areas requiring resistance to many conditions and substances that can negatively affect more traditional roofing products, including:

- Vegetable oils.
- Animal fats.
- Environmental contaminants.
- Foot traffic.
- UV.

In addition to performance advantages, the science of PMMA gives Parapro numerous advantages over other flame-free systems, including dramatically faster cure times than liquid-applied polyester and polyurethane products. Parapro resins are VOC compliant, and unlike many polyurethane materials are solvent-free, and isocyanate-free. The Parapro waterproofing layer is rainproof in 30 minutes and is ready for foot traffic in two hours. And Parapro offers greater inter-layer bond strength and improved durability against dynamic/static load versus polyester and polyurethane products.

Quality

Siplast Parapro resins are manufactured at our state-of-the-art North American liquid resin manufacturing facility. In the Resin Laboratory, stringent quality control tests are performed on every batch of material we produce to ensure that all Parapro products meet key performance criteria. In addition, Siplast Research and Development continually studies issues related to application quality control, and long-term performance.

Siplast is committed to placing the same emphasis on quality, long-term liquid-applied roofing and flashing systems that has built our strong reputation as an industry leader and innovator in advanced SBS-modified bitumen roofing and waterproofing systems.



Application

We recognize that providing quality products does not guarantee a successful job. So Siplast provides a network of trained contractors and field technical support. Parapro Systems are installed exclusively by Siplast Select Contractors. These independent professionals have met the qualifications of the toughest contractor certification program in the industry – ours. Their proven skill and dedication have demonstrated time and again that they regard themselves as members of a team dedicated to installing great roofing and waterproofing systems.

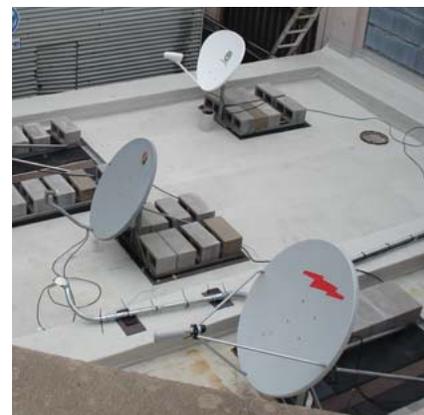
Guarantee

Siplast offers a written guarantee covering workmanship and materials on all approved Parapro projects when Siplast materials are applied by a Siplast Select Contractor, provided all pre- and post-job procedures have been followed. Contact your Siplast Representative for a full explanation of the Siplast Parapro Guarantee.



▲ As demonstrated by these before-and-after photographs, the liquid-applied Parapro 123 Flashing System is an ideal solution for flashing conditions that would be difficult to treat with conventional sheet materials.

▲ Parapro 123 Flashing and Parapro Roof Membrane protect this Federal building in New Orleans.



▲ Parapro Roof Membrane was an efficient choice for this Houston hotel's crowded roof.



Siplast

1000 E. Rochelle Blvd.
Irving, Texas 75062
469-995-2200
Facsimile: 469-995-2205

In Canada:
201 Bewicke Ave., Suite 210
North Vancouver, BC, Canada V7M 3M7
604-929-7687

Customer Service in North America:
Toll Free 1-800-922-8800

www.siplast.com
www.siplastgreen.com



An Icopal Group Company

Cover Photo:

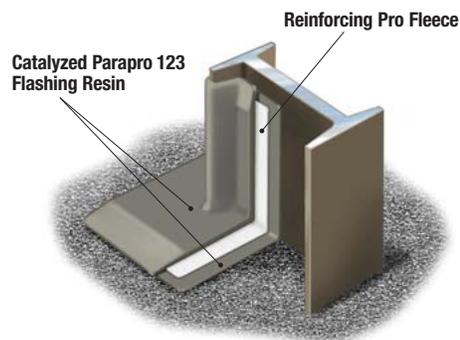
Parapro Roof Membrane provides an aesthetically pleasing roof view from the windows of this Little Rock hotel.

Products

Parapro resins are each formulated to meet the demands of specific applications, from flashing and roofing to green roof waterproofing.

Parapro 123 Flashing

Parapro 123 Flashing is an ideal solution for difficult flashing situations, including equipment supports, I-beams, H-beams, stanchions, conduit, and unusual penetrations. It is a layered application consisting of two coats of catalyzed, thixotropic PMMA resin encapsulating a layer of polyester fleece. Parapro 123 Flashing can be installed between the plies of Siplast SBS-modified bitumen roof systems, or on top of the Siplast Paradiene 30 finish ply. In addition, Parapro adheres to many common construction materials, including plastics, concrete, and steel. The finished application is fully reinforced and seamless.

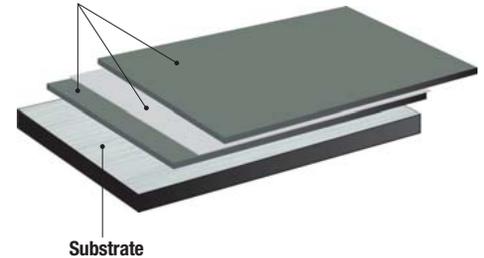


Parapro Roof Membrane

The Parapro Roof Membrane System is a seamless, fully reinforced, layered application consisting of one coat of primer (if required) and a waterproofing membrane comprised of two resin waterproofing coats and polyester fleece fabric. The completed high-mil thickness application provides a durable, resilient waterproofing membrane.

Parapro Roof Membrane

**Waterproofing Layer
(two waterproofing coats and Pro Fleece)**



The Parapro Roof Membrane System can be surfaced with aggregate, and is available in light gray and white. White Parapro Roof Membrane is California Title 24 Part 6 compliant, and qualifies for LEED-NC (Version 2.2) certification points as defined by the United States Green Building Council. Optional color finishes can be applied to the finished Parapro Roof Membrane, simplifying the application and maintenance of rooftop markings.

Parapro Roof Membrane Systems can be specified for green roofing applications. The built-in root-resistant capabilities of Parapro make it an excellent option for both extensive and intensive green assemblies.