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July 27, 2022

Rick LaJoy
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Director
Division of Buildings and Regulatory Compliance
200 Henry Johnson Blvd., Suite # 1
Albany, New York 12210

Re: Emergency Structural Condition Assessment Central Warehouse Building 143 Montgomery Street, Albany, New York.

Dear Rick:

On July 26th , 2022 at approximately 2:00 pm, Engineering Technician Barbara Tozzi and I arrived at 143 Montgomery Street (The former Central Warehouse Building) where we met with you and Code Enforcement Officers Vince Giovannone, Josh Gold and Ted Pearce . The purpose of this site visit was to evaluate the interior and exterior portions of the structure as it relates to public safety.

Photograph 1

Photographs 1 and 2 show the Easterly and Northerly elevation views of the building respectively. The building has been exposed to the elements for an estimated 25 year duration. On Friday October 23, 2010 the structure had been the subject of a multiple alarm fire that fully

involved the majority of the contents of the building at various floor levels over a three day period. The fire was fueled by a combination of gasoline, oxyacetylene and propane.

Photograph 2 (Northerly Elevation)

Photograph 3 (Northerly Elevation)

General Description of the Building:

The eleven story building (twelve stories which includes the parapet roof) was constructed in 1927 as a food storage- freezer warehouse. The structure consists of reinforced concrete floor slabs supported by 4' diameter reinforced concrete columns with flaired end sections that support a dropped panel section cast at the top of each flaired column section in order to eliminate the possibility of punching shear through the floor slabs. There are reinforced concrete spandrel / fascia columns / pilasters that can be seen about the entire exterior perimeter of the building.

There is an internal cavity that separates the exterior fascia wall from the interior concrete wall and was filled entirely with granulated cork insulation. Over the years, the granulated cork had consolidated and left voided areas in the cavity. In several instances, the granulated cork had spilled out of the cavity due to failures in the wall system envelope that contained the insulation.

Description of the Exterior of the Building:

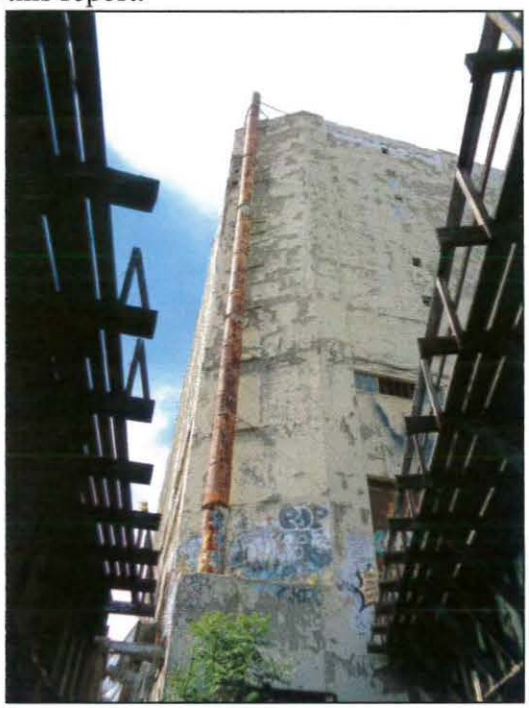
Gross deterioration and spalling of perimeter concrete specifically at the larger window openings can be seen throughout the building. Loose concrete debris has fallen from the structure which represents a substantial public safety hazard. The majority of the interior reinforced columns and floor slabs are in satisfactory structural condition. Portions of the perimeter exterior walls however exhibit gross deterioration, section loss and in some instances are on the verge of collapse. Of specific concern is the proximity of the Amtrak railroad facility along the Southerly side of the building which is in close proximity to the deteriorated and failing wall structure. A collapse of portions of the exterior Southerly wall, roof parapet wall and spandrel beam sections under the larger window openings is also considered imminent at this time.

Photograph 4 (Northeasterly Corner)

Photograph 3 shows a typical view along the Northwesterly portion of the building at the 4th and 5th floor level. In this instance, there are spalled masonry spandrel beams that exhibit gross deterioration with portions of the concrete on the verge of failure. This can be more specifically seen in Photograph 3. During the course of the evaluation, we found substantial fracture cracking through the upper Northeasterly corner pilaster. Over the years, water has saturated existing fractures and fissures within the concrete wall section and has frozen and expanded thus dislocating sections of concrete from reinforcing steel and has degraded the concrete to the point where some of the concrete has ruptured thus creating a major public safety hazard. This condition is typical at all four corners of the building.

Photographs 5 and 6 show the Southeasterly corner of the structure and a close-up view of a failed concrete wall section at this location respectively. It shall be noted that a further collapse of the fascia concrete wall at this location is considered imminent at this time and will likely

adversely affect the Amtrak rail tracks and locomotive safety. It is recommended that the owner contact Amtrak as soon as practicable and make them aware of this hazardous condition. Corrective action will need to be taken to avoid compromising public safety. A recommendation on this will be made later in this report.



Photograph 5 (Southeasterly Corner)

Photograph 6

Photograph 7 shows the Southerly elevation view of the building. It is noted that fracture cracks have occurred in the entire Southerly exterior fascia wall between the fascia columns / pilasters at every floor location. This can be more specifically seen in Photograph 8.

Photograph 7 (Southerly Elevation)

Photograph 8

Photograph 9 (Westerly Elevation)

Photograph 10 (Northwesterly Corner)

Photograph 9 shows the Westerly elevation view of the building. The Westerly stair tower can be seen in the foreground of the photograph (the stair tower extends above the roof line). Extensive deterioration and fracture cracking can be seen through the Northwesterly and Southwesterly fascia columns / pilasters (refer to Photographs 10 and 11 repsectively) and is

depicted by an X delineation. This condition is typical about each corner section around the perimeter of the building. These fracture cracks have also lead to the localized collapse of a portion of fascia wall along the Southeasterly side of the structure (refer to Photograph 6).

Photograph 11 (Southwesterly Corner)

Photograph 12

Description of the Interior of the Building:

Photograph 12 shows a typical view of the 4' diameter reinforced concrete columns with the flaired capitals and drop panel sections that have been provided so as to distribute column point loads thus avoiding the aforementioned punching shear through the slab. The railroad spur entrance located at the second floor level can be seen in the background of Photograph 12. The train gallery is located at this second floor level. It shall be noted that there is no fall protection to prevent personnel from accidently falling or tripping into the track area which is approximately 4' below the top of slab elevation. The owner shall install a protective barricade as soon as practical.

Photograph 13

Photograph 14

There is a substantial amount of debris that can be seen throughout the building at each floor level. A typical view of the debris and overhead hazards is shown in Photographs 13 and 14. These photographs have been taken at the first floor level. Loose masonry, piping and

equipment should be safely removed so as to avoid a hazardous overhead condition for Fire Department and Code Enforcement personnel who are entering the structure in the event of an emergency or for an inspection.. The owner shall be made aware of this o that corrective action can be taken to insure OSHA and DOL compliance.

Photograph 15

Photograph 16

Photograph 15 shows reinforced concrete -deep beam sections with reinforced concrete column supports that are situated at the first floor level and support the locomotive gallery that is located directly above this area on the second floor level. This is provided for informational purposes and for context when entering the first floor level of the building.

Extreme caution shall be exercised when entering the building and specifically the stair towers. Reinforced concrete beam sections and staircases exhibit excessive deterioration, corrosion, section loss and fracture cracking as can be seen in Photographs 16 and 17. Further spalling of concrete is likely. A partial collapse of some of the reinforced concrete beam sections and staircases are considered imminent as can be seen in Photograph 18. This condition is prominent at the upper floor levels.

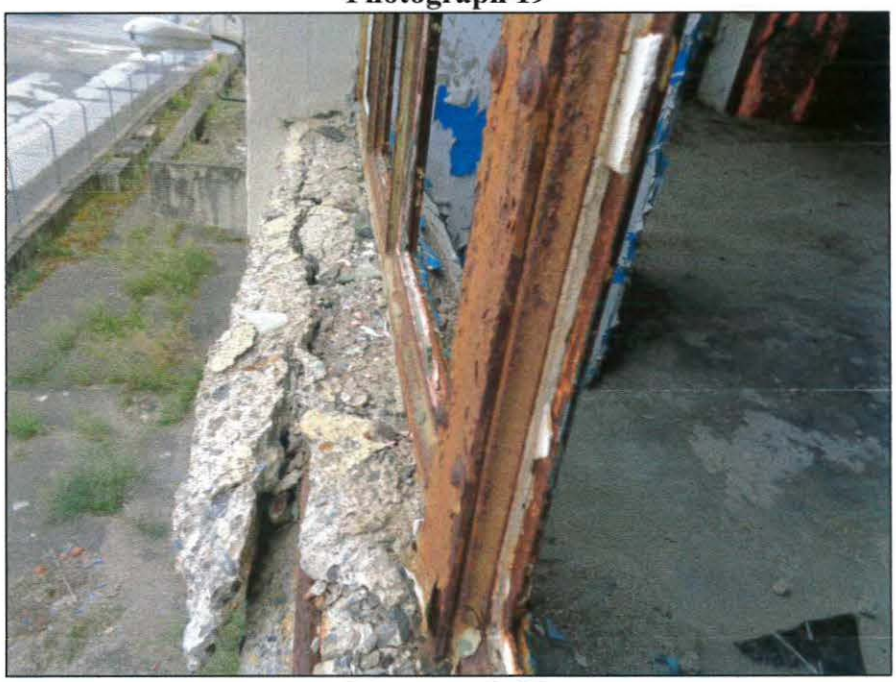
Photograph 17

Photograph 18

Fracture cracking through various wall sections in the Westerly stair tower can be seen in the upper floor levels. Extreme caution shall be exercised when accessing the upper level staircases due to the extent of fracture cracks and deterioration that have been encountered in the staircase assemblies and the reinforced concrete support beams.

In addition, there are extensive debris piles at various upper levels of the building as a result of the fire. A typical view of this condition can be seen in Photograph 19. It is recommended that no personnel access floor levels where debris piles cover the floor areas due to the possible presence of floor penetrations that have not been properly covered but are concealed by the presence of debris piles.

Photograph 19

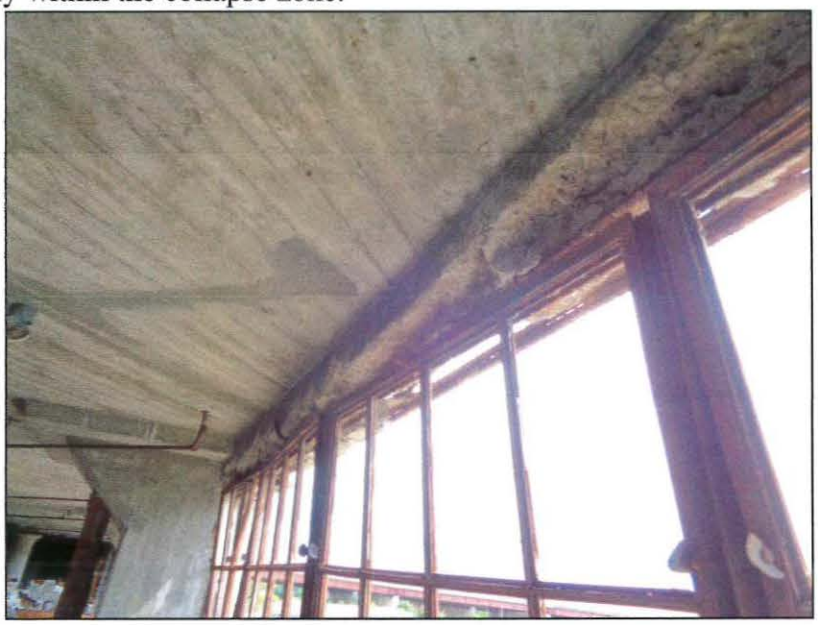


Photograph 20

Photograph 20 shows a typical area of spalling and deterioration of the concrete spandrel beams along the Northerly side of the building. A collapse of the top portions of the spandrel beams at these locations are considered imminent at this time.

Photographs 21 and 22 show typical views of the interior and exterior spandrel beam sections above the larger window openings along the Southerly side of the building. The deterioratd nature of the concrete and spalling is typical at the second, third, fourth and fifth levels of the building. A localized collapse of these deteriorated spandrel beam sections is also considered imminent at this time. Deteriorated upper pilaster fascia columns and fascia wall sections is problematic along the Southerly side of the building. The Amtrak railroad tracks lie within the collapse zone of the building. This condition is specifically a concern from the upper floor levels

where the vertical height at the failing concrete exceeds the horizontal distance from the Southerly face of the building to the centerline of the rail tracks, thus making the dual track system lie entirely within the collapse zone.



Photograph 21

Photograph 22

Photograph 23

Photograph 24

Photograph 23 shows deterioration and spalling of the top portion of the Southerly spandrel beam at the fifth floor level and fracture cracks through the concrete pilaster fascia column. Failure in portions of these components are considered imminent.

Photograph 24 shows remains of concrete debris that had fallen adjacent to the tracks when the Southeasterly corner section of the building had previously collapsed (refer to Photograph 6 above).

Photograph 25

Photograph 26

Photograph 25 shows the upper spandrel beam and a portion of the exterior wall section deflecting outward and on the verge of collapse. The issue of the deteriorated exterior masonry concrete will need to be addressed as soon as practicable due to its implication to public safety and the integrity of the Amtrak system along the Southerly side of the building. It is recommended that the Southerly exterior fascia wall be anchored into the interior reinforced

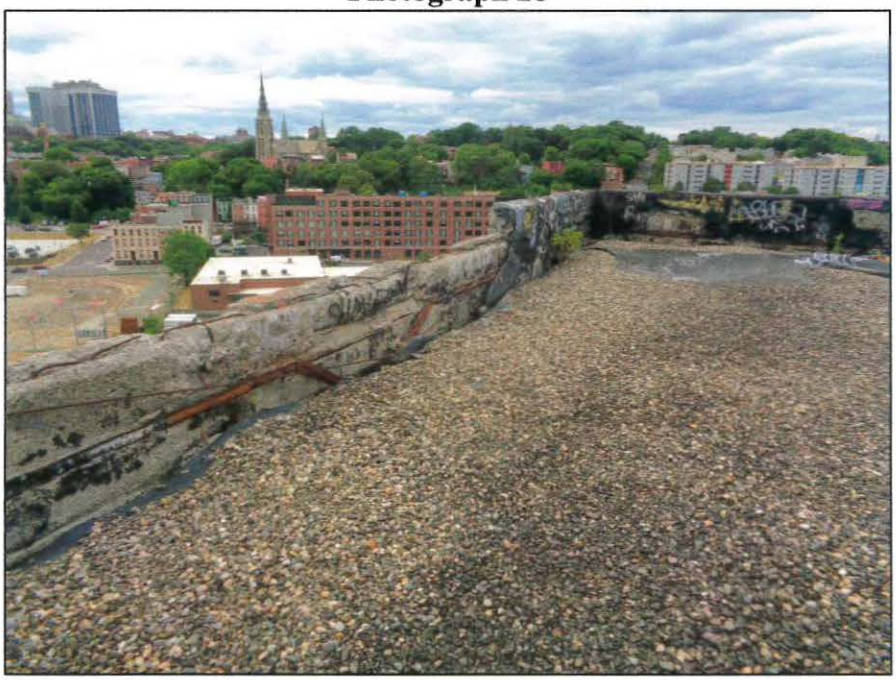
floor system at every floor level using ¾" diameter A-304 stainless steel threaded rod and 12" x 12" x ¼" A-36 steel plates that will restrain the exterior fascia wall. The stainless steel threaded rods shall extend through the fascia wall, through the interior cavity and through the interior wall section and be connected to a ¾" x 2" diameter Crosby Eyelet. A 7/16" diameter 6 x 19 class IWRC (Independent Wire Rope Core) cable with turn buckle shall be anchored into the reinforced concrete floor using a WT section with four 5/8" diameter A-304 stainless steel threaded rods having a 4" embedment into the existing concrete slab and epoxy grouted with Hilti Epoxy hit-re 500 V-3. The spacing and location of each wall anchorage will be established as part of the final design for the exterior wall stabilization. Please note that all cable connections will be made with three A-304 stainless steel cable clamps per connection. All steel plate shall be shop painted using DTM Alkyd Enamel paint. Once the exterior wall has been stabilized and anchored into the floor system at every floor level, braced scaffolding can be erected that will afford the safe removal of the deteriorated and failing reinforced concrete spandrel beams. Deteriorated and failing steel window frames shall also be carefully removed so they do not collapse in this removal and stabilization process. The braced scaffolding will need to be laterally restrained into competent concrete at each floor level with the existing concrete floor slab being the primary means of restraint. The owner's engineer shall provide the necessary stabilization drawings, procedures and material specifications to the City of Albany for review and approval.

Photograph 27

Lastly we accessed the roof area in which we found substantial deterioration and failure in the perimeter parapet wall and failure at the interface of the roof slab and the exterior fascial wall. Photograph 26 shows deterioration and failure at the Southerly parapet wall. This parapet wall is highly unstable. Movement in the parapet wall was detected while on- site. Heavy vibration and movement of the wall was noted especially when Amtrak trains passed the building. Photographs 27 and 28 show a typical view of the failed section of roof and deteriorated tie rods that connect the exterior wall section with the interior wall section. Photograph 29 shows the

roof failure along the majority of the length of the Southerly parapet wall. A localized collapse of portions of the parapet wall is considered imminent and will affect the Amtrak rail system which lies within the collapse zone of the parapet wall and Southerly exterior fascia wall.

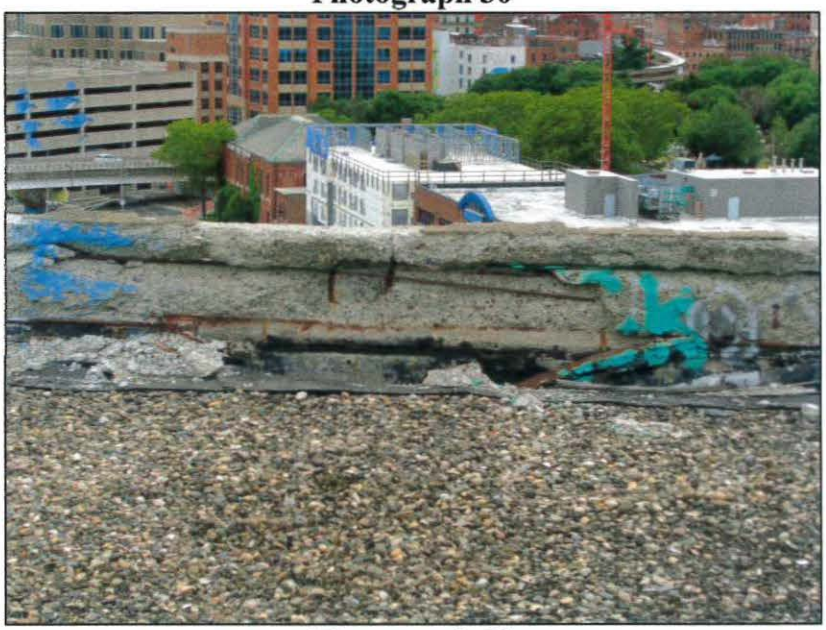
Photograph 28



Photograph 29

Photograph 30 shows a portion of the Southerly parapet wall that has already failed. Photograph 31 shows horizontal fractures through the parapet wall which is highly unstable and a collapse of this portion of the wall is considered imminent at this time. The remaining perimeter parapet wall shall be considered unstable due to the extent of deterioration observed in the parapet wall section.

Photograph 30



Photograph 31

The present condition of the building is considered a high hazard to the Amtrak facility and public safety. It is recommended that the owner be made aware of the structural deficiencies associated with the building so that implementation of a stabilization plan can occur as soon as practicable. The owner shall contact Amtrak to apprise them of the condition of this building as it relates to their track safety and shall obtain a permit from the City of Albany to implement a Professional Engineer designed remediation plan.

Only a qualified, fully insured contractor shall be selected for this purpose. The contractor is wholly responsible for workers' safety, DOL and OSHA compliance. Access of personnel is restricted due to the hazard classification. All utilities with confirmation

shall be terminated at the curb line (water/ sewer), natural gas and the electrical service, terminated at the power pole

If you have any questions please do not hesitate to call.

Very truly yours,

Russ Reeves pe

R. Russell Reeves, CEng., P.E.
Charter Member Structural Engineering Institute &
The American Society of Civil Engineers (40 years)
The American Institute of Steel Construction

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