Structural Condition Report

City of Meriden

Former Meriden Hospital
1 King Place
Meriden, CT 01040

May 23, 2016

146 Hartford Road
Manchester, CT 06040

Project No. 20120232.C50

FUSS & O'NEILL

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Structural Condition Assessment
1 King Place, Meriden, CT

1 Executive Summary

Fuss & O'Neill, Inc. (F&O) prepared this Structural Condition Report (SCR) for the City of Meriden for the former Meriden Hospital building and adjacent parking structure located at 1 King Place in Meriden, CT. The purpose of this SCR is to assess the structure and building envelope for conditions that present immediate concern of risk, hazard, or safety to the City of Meriden and the building's future occupants. F&O performed the Structural Condition Assessment (SCA) on April 29, May 2 and May 3, 2016.

The SCA included a visual walk-though survey in which the following building components and building systems were reviewed where possible: basement walls, floor structures, roof structures, exterior and interior load bearing walls and the building envelope. Existing roofs have been presumed at or beyond the end of their useful life and were excluded from the SCA scope, but limited observations of roofing conditions were made nonetheless and are reported herein.

It is our understanding that the buildings have been vacant since the late 1990's, and have fallen into a state of disrepair due to neglect over a long period of time. Overall however, the main structural systems of the buildings are generally in good condition and have so far withstood the ravages of neglect, including water infiltration, vandalism and exposure to temperature extremes, remarkably well. With the buildings' ages ranging from 30 to over 90 years old, the following immediate and short-term recommendations are made based on the SCA in order to prepare the building for marketing for renovation and reuse.

- Remove all damaged interior finishes to permit full visual inspection of structures.
- Replace damaged deck and beams. Based on the SCA, only floor and roof structures in portions of the Nurses Home and the boiler room are known to require full scale structural repairs, but more damaged areas are likely to be discovered as finishes are removed.
- Restore the building envelope to prevent infiltration of water that can cause further damage to structures. This includes broken and damaged windows and window frames and all roofing and flashing.
- Cover damaged skylights.
- Wire brush all steel framed platforms in mechanical rooms, rooftop equipment dunnage, stairs and handrails in order to assess the extent of material loss.
- Repair or replace miscellaneous steel structures as appropriate.
- Repair damaged exterior brick at the southwest corner of the building.
- Repair or replace damaged lintels, exterior brick and associated flashing where rust jacking has been identified.
- Repoint exposed exterior brick as needed.
- Repair damaged concrete surfaces at parking garage.
- Replace expansion joints and control joints between precast elements at all levels of the parking garage.
- Repair or replace all damaged steel elements at parking garage.

It is important to note the limitations of this SCA. The building has no electricity and contains hazardous materials. Consequently, the team performing the SCA was equipped with personal protection gear, including respirators and protective clothing. Most of the buildings' structural systems were concealed by finishes, including hung ceilings and plaster walls, many of which contain hazardous

materials. No finishes were removed in conjunction with the SCA; consequently, many structural elements could not be directly observed.

Additional limiting conditions for this SCR are described in Section 4.

1.1 General Property Description

The existing building at 1 King Place fills entire city block bordered by King Place to the west, Orange Street to the north, Cook Avenue to the east and Bronson Avenue to the south. The parcel is 5.64 acres and slopes from north to south. The parking garage is just to the west of the building, on the opposite side of King Place. The entire site is zoned as part of the Hanover Transit Oriented District (TOD).

The hospital building is a single contiguous structure, but consists of multiple buildings that were once separated, now connected by additions that were constructed many years later. The hospital was founded on the site in 1885. Construction documents indicate that portions of the current building date back as far as 1923, with elements constructed in 1928, 1952, 1958, 1962, 1966 and the early 1980's.

An aerial photo is provided in the appendix, with the following sections of the building annotated:

A. Bradley Memorial Nurses Home – 4 stories, Northeast corner of site - Cook Ave & Orange St
B. 1966 Addition – 3 stories, Northwest corner of site – King St & Orange St
C. 1923 Building (Original Hospital) – 6 stories, Center of site, south of 1966 addition
D. 1952 Addition – 7 stories, T-shaped addition at front entrance facing Cook Ave
E. 1958 Addition – 7 stories, Square addition north of 1952 addition along Cook Ave
F. North Addition – 6 stories, 1980's infill just west of 1958 addition – forms south end of courtyard at Orange St
G. South Addition – 2 stories, 1980's expansion replacing a portion of demolished hospital, across full width of site
H. Laundry/storage Addition – 2-stories, 1980's extension of south addition, includes new mechanical rooms
I. Power plant and loading dock – South end of building along Bronson Ave, includes original 1923 elements and 1966 addition
J. Several vertical circulation additions built at various times to service original buildings and 1952 addition
K. The Parking Garage to the west side of King Place is also included in the SCA. The garage is three stories, with the lowest level accessible from Bronson Avenue and the upper level accessible from a parking lot off King Place near the hospital entrance at the center of the block. The middle level is also accessible from King Place near the center of the garage. All entrances to the garage have been temporarily barricaded to prevent vehicle entry. The structure of the parking decks consists of precast concrete double tees supported on precast columns, girders and spandrels.

1.2 General Physical Condition

Based on F&O's field observations, it is F&O's opinion that the subject property has fallen into a blighted condition, but the structures are generally in fair to good condition. Detailed descriptions of the structures observed in each of the building areas and the parking garage are located in Section 3 of this report.

2 Purpose and Scope of Services

2.1 Purpose

The purpose of the SCA was to evaluate the structural aspects of the subject property's condition as it relates to potential future use by the City of Meriden and any future occupants. This SCR is based upon those apparent conditions observed at the time the SCA was performed and from facility-related documentation obtained and made available for review. This SCR is not a guarantee of the overall condition of the functional suitability of the real estate asset.

The SCA was performed at the client's request using methods and procedures consistent with good commercial real estate practice. Limiting conditions for this SCR are described in Section 4.

2.2 Scope

The SCA included the following: site reconnaissance, review of available existing building documentation and visual observations. The SCA was limited to the following components and building systems:

- Structural Frame
- Building Envelope

This SCR is intended for use as a complete document; therefore interpretations and conclusions drawn from the review of individual sections are the sole responsibility of the user.

Most areas of the property were available for observation during the SCA, however some rooms and areas were locked or otherwise inaccessible. Furthermore, the majority of the building structure was concealed by finishes and could therefore not be directly observed. Secondary evidence of structural conditions, such as rust staining, floor deflections and irregularities, and cracks in finishes, were observed where possible to assess structural behavior and performance.

3 System Descriptions and Observations

3.1 General Description

3.1.1 Property Location

The existing building at 1 King Place fills an entire city block bordered by King Place to the west, Orange Street to the north, Cook Avenue to the east and Bronson Avenue to the south. The parcel is 5.64 acres and slopes from north to south. The parking garage is just to the west of the building, on the opposite side of King Place.

3.1.2 Construction History

The hospital building is a single contiguous structure, but consists of multiple buildings that were once separated, now connected by additions that were constructed many years later. The hospital was founded on the site in 1885. Construction documents indicate that portions of the current building date back as far as 1923, with elements constructed in 1928, 1952, 1958, 1962, 1966 and the early 1980's. The construction date of the parking garage is unknown, but based on the character and condition of the structure, it appears to be between 20 and 30 years old with no indication of any additions or modifications.

3.1.3 Visual Survey

The walk-through survey conducted during the field observers' site visit of the property consisted of non-intrusive visual observations and a survey of readily accessible, easily visible components and systems of the property. Concealed physical deficiencies are excluded from this SCR. The survey should not be considered technically exhaustive. The survey was conducted to the extent it could be completed without the aid of lifts, ladders, scaffolding, etc. The assessment of the condition of the exterior wall systems and finishes is based upon observations made from the ground surface, low roofs and through windows or adjacent building areas, however, close observation of wall systems and finishes above ground level was beyond the scope of the SCA.

Readily accessible areas of the property are defined as areas that were promptly made available for observation by the field observers at the time of the walk-through survey and did not require moving materials. The field observers did not enter spaces they deemed unsafe or impassable for any reason.

The survey included representative observations, that is, a reasonable number of samples of repetitive systems, components, and areas conducted by the field observers during the walk-through survey. The concept of representative observations extends to all conditions, areas, equipment, components, systems, and buildings to the extent that they are similar and representative of one another. F&O may reasonably extrapolate representative observations and findings to all typical areas or systems of the subject property for the purposes of describing such conditions within the report and suggesting remedy of material and physical deficiencies.

The survey of the parking garage included limited acoustic emissions testing at the top surface of decks. This effort was impeded by areas containing large amounts of debris.

F&O conducted the visual walk through survey on April 29, May 2 and May 3, 2016. The weather was overcast and rainy for much of that time, and active water infiltration was observed throughout all areas of the building.

3.2 Building System Evaluations

3.2.1 Structural Frame and Building Envelope

A. The Nurses Home is one of the older structures on the site, constructed in 1928, apparently as a stand-alone nurses' residence adjacent to and in conjunction with the original hospital constructed in 1923, and possibly also older buildings no longer present on the site. The structure consists of concrete fill on steel-tex floors supported by closely spaced, small, narrow junior I-beams carried by brick and terra cotta bearing walls (see photo A-1). From exterior observation it appears that the fourth floor may have been an addition to the original building, based on a cornice above the third floor and slight differences in the character of the brick at the upper level.

The following observations were made at this building:

1. At the rear of the wing along Orange Street, a wood framed addition has been added facing an interior courtyard. The roof of this addition is collapsing and the floors have experienced severe water damage (see photo A-2).
2. At the ground floor of the wood framed addition, a concrete patio runs under the building and projects beyond to a stair, with brick walls below. The brick below the stair platform is severely damaged, with cracks and displaced blocks all along the upper edge (see photo A-3).
3. Significant water damage was found along the courtyard walls, with resulting damage to the junior steel I-beams where they frame into the exterior wall as well as the slab and wire in the Steel-tex (see photo A-4). Similar deterioration was found sporadically at exposed structures throughout the building.
4. There is noticeable fire damage at wood framing in one remote area of the top floor towards the section of the build that abuts the 1958 addition (see photo A-5). In the area of the fire damage the exposed roof revealed a steel beam that appeared to be an addition to the existing building.
5. The roof scuppers are full of debris, which has resulted in water draining on the masonry wall. In these areas, the masonry is in poor condition and will require removal of vegetation and repointing (see photo A-6).

Recommendations at this building include the following:

1. Remove all damaged interior finishes to permit full visual inspection of floor and roof structures.
2. Replace damaged deck and beams, including the entire addition at the courtyard and adjacent steel-tex floor and framing.
3. Restore the building envelope (walls, windows, roofing and flashing) to prevent infiltration of water that can cause further damage to structures.
4. Wire brush all steel framed stairs and handrails in order to assess the extent of material loss.
5. Repair or replace miscellaneous steel structures as appropriate.
6. Repoint exposed exterior brick as needed.
7. Replace all existing roofs and flashing.

B. The 1966 addition includes the north and northwestern sections of the hospital. The boundaries of the addition encapsulated the atrium and courtyard, and expanded the existing hospital entrance to King Street. The structure consists of concrete slabs supported by concrete encased wide flange (WF) beams that rest on masonry and concrete encased WF steel columns. The roof is a built-up roofing system with gravel.

The following observations were made at this building:

1. The roofing system has ponding water and some vegetation, especially adjacent to drains and along the perimeter (see photo B-1). Flashings are consistently failed throughout (see photo B-2).
2. There are many areas where rain water has penetrated, and exterior walls have efflorescence throughout. Some rust jacking was also noted at steel lintels.
3. The visible structure appears to be in very good condition despite the infiltration of water (see photo B-3).
4. Many miscellaneous steel elements (stair railings, support lintels, etc.) are corroded and will need to be replaced (see photo B-4).

Recommendations at this building include the following:

1. Remove all damaged interior finishes to permit full visual inspection of floor and roof structures.
2. Restore the building envelope to prevent infiltration of water that can cause further damage to structures.
3. Wire brush all rooftop equipment dunnage, stairs and handrails in order to assess the extent of material loss.
4. Repair or replace miscellaneous steel structures as appropriate.
5. Repair or replace damaged lintels, exterior brick and associated flashing where rust jacking has been identified.
6. Repoint exposed exterior brick as needed.
7. Replace all existing roofs and flashing.

C. The 1923 section is the original hospital building and has been constructed as a cast in place structure with exterior brick and terra cotta walls, with a brick wythe at the exterior and plaster on the interior. Portions of this section utilize a Republic slab system, with terra cotta floor infill between concrete joists. The roofing system is a ballasted roof that appears to be in fair condition, but flashing and roof penetrations, combined with clogged roof drains, are permitting significant infiltration of water.

The following observations were made at this building:

1. The majority of the floor and roof structures are concealed by plaster walls and ceilings and cannot be directly observed, but generally floor structures appear to be sound.
2. An atrium that had previous been an exterior courtyard when the 1966 addition was constructed has a series of skylights above that are severely damaged, allowing water to enter the building and cause damage to finishes and structures (see photos B-1 and C-1).
3. A portion of the elevator penthouse of this section was added on top of the original building, with an expansion joint extending through at the interface with the south addition. The expansion joint has failed, permitting infiltration of water (see photo C-2).

Recommendations at this building include the following:

1. Remove all damaged interior finishes to permit full visual inspection of floor and roof structures.
2. Restore the building envelope (including windows, roofing, expansion joints and flashing) to prevent infiltration of water that can cause further damage to structures.
3. Cover damaged skylights at atrium.
4. Wire brush all steel framed platforms in mechanical rooms, rooftop equipment dunnage, stairs and handrails in order to assess the extent of material loss.
5. Repair or replace miscellaneous steel structures as appropriate.
6. Repair or replace damaged lintels, exterior brick and associated flashing where rust jacking has been identified.
7. Repoint exposed exterior brick as needed.
8. Replace all existing roofs and flashing.

D. The 1952 addition has steel framed construction encased in concrete supporting cast in place reinforced concrete floor joists. The roof is ballasted. There is a prefabricated metal mechanical penthouse on the roof that appears to be installed post 1952.

The following observations were made at this building:

1. The prefab penthouse has failed roofing, which has caused the metal framing to begin to corrode (see photo D-1).
2. On the fourth floor there is a significant drain blockage. Resulting standing water has entered the building, destroyed the finished ceiling and left significant ponding on the floors during the time of visit (see photo D-2).

3. The majority of the structural system is concealed by interior finishes and cannot be directly observed, but generally floor structures appear to be sound. Areas that are exposed generally appear to be in good condition (see photo D-3).

Recommendations at this building include the following:

1. Remove all damaged interior finishes to permit full visual inspection of floor and roof structures.
2. Restore the building envelope to prevent infiltration of water that can cause further damage to structures.
3. Wire brush all steel framed platforms in mechanical rooms, rooftop equipment dunnage, stairs and handrails in order to assess the extent of material loss.
4. Repair or replace miscellaneous steel structures as appropriate.
5. Repoint exposed exterior brick as needed.
6. Replace all existing roofs and flashing.

E. The 1958 addition has steel framed construction encased in concrete supporting cast in place reinforced concrete floor joists. The roof is ballasted.

The following observations were made at this building:

1. Rust and rust jacking of exterior brick was observed at the north wall of the addition (see photo E-1). This likely resulted from roof failure and infiltration of water along the interior of the wall, causing perimeter steel floor beams to rust.
2. The majority if the structural system is concealed by interior finishes and cannot be directly observed, but generally floor structures appear to be sound.

Recommendations at this building include the following:

1. Remove all damaged interior finishes to permit full visual inspection of floor and roof structures.
2. Restore the building envelope to prevent infiltration of water that can cause further damage to structures.
3. Wire brush all steel framed platforms in mechanical rooms, rooftop equipment dunnage, stairs and handrails in order to assess the extent of material loss.
4. Repair or replace miscellaneous steel structures as appropriate.
5. Repair or replace damaged lintels, exterior brick and associated flashing where rust jacking has been identified.
6. Repoint exposed exterior brick as needed.
7. Replace all existing roofs and flashing.

F. During the time of the inspection and report there were no drawings available for the North Addition. The structural systems in this addition are generally concealed by finishes, but the nature of the construction appears to be similar to the south addition, which was also built at the same time (in the early 1980's). The roofing consists of a ballasted system, presumably over a single ply membrane.

The following observations were made at this building:

1. Most of the structural systems are concealed by interior finishes and cannot be directly observed. Water infiltration is evident throughout, but generally floor structures appear to be sound.
2. There is a large amount of mature vegetation growth over many areas of the roof, indicating long term roof failure (see photo F-1).
3. There is a canopy connected to the North Addition at a loading dock facing the courtyard shared by the rear of the Nurses Home. The built up roofing and flashings have failed at the canopy, causing water damage below (see photo F-2).

Recommendations at this building include the following:

1. Remove all damaged interior finishes to permit full visual inspection of floor and roof structures.
2. Restore the building envelope to prevent infiltration of water that can cause further damage to structures.
3. Repoint exposed exterior brick as needed.
4. Replace all existing roofs and flashing.

G. The South Addition is the largest expansion to the hospital in terms of the building footprint. The building perimeter ranges from the drive up access on King Place to the storefront section located on Cook Avenue. It is steel framed construction with concrete floor slabs on metal deck. The roof is ballasted.

The following observations were made at this building:

1. Vegetative growth was observed throughout the roof of the South Addition (see photo G-1), exacerbating roof failure and water infiltration.
2. The canopy structure on King Place is in poor condition. The roof has failed, which has caused corrosion on the framing beams and connections (see photo G-2).
3. On the first floor on the King Place side, ponding water was found on the floor, indicating clogged roof drains and water infiltration at walls. Early stages of corrosion were noted at the structural steel and roof deck. Generally, the corrosion has not progressed to the point where the structure is compromised.

Recommendations at this building include the following:

1. Remove all damaged interior finishes to permit full visual inspection of floor and roof structures.
2. Restore the building envelope to prevent infiltration of water that can cause further damage to structures.
3. Repair or replace damaged elements at canopy.
4. Wire brush all steel framed platforms in mechanical rooms, rooftop equipment dunnage, stairs and handrails in order to assess the extent of material loss.

5. Repair or replace miscellaneous steel structures as appropriate.
6. Repair or replace damaged lintels, exterior brick and associated flashing where rust jacking has been identified.
7. Repoint exposed exterior brick as needed.
8. Replace all existing roofs and flashing.

H. The Laundry and Storage Addition is a large addition that encompasses the corner of Bronson Ave. and King St. It consists of a steel framed structure with concrete floor slabs on metal deck and masonry exterior walls. It abuts the new and existing boiler buildings.

The following observations were made at this building:

1. On the first floor on the King Place side, there are drainage issues that are likely a result of clogged roof drains. It has left areas ponding and some vegetation.
2. The exterior brick has a large crack at the corner where the walls intersect at the southwest corner at the intersection of King Place and Bronson Avenue (see photo H-1). The cracks extend diagonally from the top of the walls along each side and meet at the corner. They do not progress far below the roof. This is likely due to water infiltration and freeze-thaw action, possibly combined with rust jacking at the perimeter framing.

Recommendations at this building include the following:

1. Remove all damaged interior finishes to permit full visual inspection of floor and roof structures.
2. Restore the building envelope to prevent infiltration of water that can cause further damage to structures.
3. Wire brush all steel framed platforms in mechanical rooms, rooftop equipment dunnage, stairs and handrails in order to assess the extent of material loss.
4. Repair or replace miscellaneous steel structures as appropriate.
5. Repair damaged exterior brick at the southwest corner of the building.
6. Repoint exposed exterior brick as needed.
7. Replace all existing roofs and flashing.

I. The Power plant and loading dock is a set of buildings that were built at different times and consist of a variety of different types of structures. The section that abuts the East Laundry/Storage section was built in 1968 and the section that abuts South Addition & Laundry/Storage is of older construction, likely built at the same time as the 1923 building, with some portions even older. The 1968 construction is a steel framed structure with metal roof deck and CMU block walls. The exterior is brick on CMU backup and ballasted roof. The older boiler room is steel framed with brick walls and concrete roof deck. The roofing is a built up roof with rooftop pavers between equipment dunnage.

The following observations were made at this building:

1. The joint that connects the roof of the Laundry/Storage to the 1968 section of the Boiler room has completely failed. The infiltrating rainwater in the building has caused surface rust and pitting in the steel beams (see photo I-1).
2. In the 1968 section there is a large amount of ponding water that is likely the result of failed roofing and flashing and clogged roof drains.
3. In the 1968 section the roof has significant vegetation growth and is in poor condition (see photo I-2).
4. In the 1968 section multiple columns have severe corrosion and failed base plates (see photo I-3).
5. In the older section there is a pipe crawl space that is filled with approximately 5 inches of standing water, indicating severe water infiltration and drainage issues (see photo I-4). All of the miscellaneous steel in this section has been exposed to standing water over a long period of time, and consequently is corroded and in need of replacement.
6. In the 1968 section, masonry is failing above a wall vent on the east wall (see photo I-5). There does not appear to be a lintel at this location.
7. In the older section of the boiler room, the eastern masonry wall has a failed lintel, and the exterior brick has started to bow (see photo I-6). This occurs at a point where the wall openings have been modified several times, likely resulting in failure of the flashing. This has led to water infiltration, causing mortar failure, rust jacking and freeze thaw damage.
8. The brick construction of the stack near the southeast corner of the boiler room appears to match the 1923 building, and likely dates back to that time. The condition of the stack appears generally good, but some dislodged brick and missing mortar was noted in the upper portions of the stack (see photos I-7 and I-8). This should be addressed or the stack removed in conjunction with any building renovations.
9. A skylight in the 1923 portion of the boiler room has been removed from the roof, leaving the area open to the elements (see photo I-9). Significant water damage was found at the roof structure and interior space in this area.
10. At several locations, interior steel grating stairs terminate in standing water (see photo I-10). Many of the treads and stringers of these stairs are severely corroded.

Recommendations at this building include the following:

1. Remove all damaged interior finishes to permit full visual inspection of floor and roof structures.
2. Replace damaged deck and beams.
3. Restore the building envelope to prevent infiltration of water that can cause further damage to structures.
4. Cover damaged skylights.
5. Wire brush all steel framed platforms in mechanical rooms, rooftop equipment dunnage, stairs and handrails in order to assess the extent of material loss.
6. Repair or replace miscellaneous steel structures as appropriate.
7. Repair or replace damaged lintels, exterior brick and associated flashing where rust jacking has been identified.
8. Repoint exposed exterior brick as needed.
9. Replace all existing roofs and flashing.

J. The added stair towers are generally steel framed structures enclosing steel pan stairs with concrete fill on treads and platforms.

The following observations were made at these areas:

1. Water infiltration was commonly noted at stair towers, resulting from failure of roofing and flashing. Building structures and stairs at the newer towers were generally not significantly damaged.
2. Some efflorescence and rust jacking was noted at lintels at the stair towers (see photo J-1).

Recommendations at this building include the following:

1. Remove all damaged interior finishes to permit full visual inspection of floor and roof structures.
2. Restore the building envelope to prevent infiltration of water that can cause further damage to structures.
3. Wire brush all stairs and handrails in order to assess the extent of material loss.
4. Repair or replace miscellaneous steel structures as appropriate.
5. Repair or replace damaged lintels, exterior brick and associated flashing where rust jacking has been identified.
6. Repoint exposed exterior brick as needed.
7. Replace all existing roofs and flashing.

K. The Parking Garage is a 3 level precast concrete structure with slabs on grade at the lowest level, which extends from the entrance at the south side at Bronson Avenue into a basement on the north end. The top levels are supported by precast concrete double tees which rest on concrete interior inverted tee girders and L-spandrels (see photo K-1).

The following observations were made at this building:

1. Many of the miscellaneous steel elements show evidence of corrosion and some are in poor condition. These items include connection angles, door frames, railings and support frames at drains (see photo K-2).
2. The north stairwell concrete at the platforms is in poor condition. There is exposed rebar at the platform adjacent to the east exit (see photo K-3). The concrete is spalled and delaminated in multiple areas heading to the top floor and second floor.
3. Many of horizontal joints have completely failed. About 40% of Vertical Joints on the top floor between the columns and exterior wall have failed (see photo K-4).
4. All of the top floor drains are filled with debris and are nonoperational (see photo K-5). The resulting flooding has caused damage to the concrete reinforcement on most areas between joints. The water has also corroded and degraded the drain support framing and precast tee bearing plates at the interior girders above the ground floor (see photo K-6).

5. There is a single expansion joint across the center of the structure. The joint has failed, allowing infiltration and water and associated damage below (see photo K-7).
6. A limited acoustic emissions test was performed at the top surfaces of the garage slabs. The test consisted of movement of a steel chain apparatus across the top surfaces to identify delamination of the concrete by sound. Only limited areas of delamination were identified, typically at stair tower platforms and near entrances to the garage.

Recommendations at this building include the following:

1. Wire brush all steel elements in order to assess the extent of material loss.
2. Repair or replace steel angles and stair elements as appropriate.
3. Perform thorough evaluation of concrete surfaces following removal of all debris to assess the need for rehabilitation.
   Repair concrete surfaces that have spalled or demonstrate evidence of delamination. Some rebar replacement is anticipated in conjunction with this work.
4. Replace expansion joints and control joints between precast elements at all levels as required.

4 Limiting Conditions

F&O's SCA cannot wholly eliminate the uncertainty regarding the presence of physical deficiencies and the performance of a subject property's building systems. Preparation of a Structural Condition Report (SCR) is intended to reduce – but not eliminate – the uncertainty regarding the potential for component or system failure and to reduce the potential that such component or system may not be initially observed.

This SCR was prepared recognizing the inherent subjective nature of F&O's opinions as to such issues as workmanship, quality of original installation, and estimating the remaining useful life of an given component or system. It should be understood that F&O's suggested remedy may be one of several possible alternatives or methods to rectify the physical deficiency. F&O's opinions are generally formed without detailed knowledge from individuals familiar with the component's or system's performance.

The opinions of F&O consultants expressed in this report were formed utilizing the degree of skill and care ordinarily exercised by any prudent architect or engineer in the same community under similar circumstances. F&O assumes no responsibility or liability for the accuracy of information contained in this report that was obtained from the client or the client's representatives, from other interested parties, or from the public domain. The conclusions presented represent F&O's professional judgment based on information obtained during the course of this assignment. F&O's evaluations, analyses, and opinions are not representations regarding the design integrity, structural soundness, or actual value of the property. Factual information regarding operations, conditions, and test data provided by the client or their representatives is assumed correct and complete. The conclusions presented are based on the information provided, observations made, and conditions that existed specifically on the date of the assessment.

Appendix A

Structural Frame & Building Envelope Photographs

Aerial Photograph of Site

Photo A-1 - Junior Beams and Steel-Tex Floor Slab at Nurses Home

Photo A-2 – Damaged Wood Structure at Nurses Home

Photo A-3 – Damaged Brick at Wood Structure at Nurses Home

Photo A-4 – Water Damage at Nurses Home

Photo A-5 – Fire Damage at Roof of Nurses Home

Photo A-6 – Roof Scuppers at Nurses Home

Photo B-1 – Roof of 1966 Addition and Skylights at Atrium

Photo B-2 – Failed flashing at 1966 Addition

Photo B-3 – Exposed Structure at 1966 Addition

Photo B-4 – Damaged Miscellaneous Steel

Photo C-1 – Water Damage at Atrium

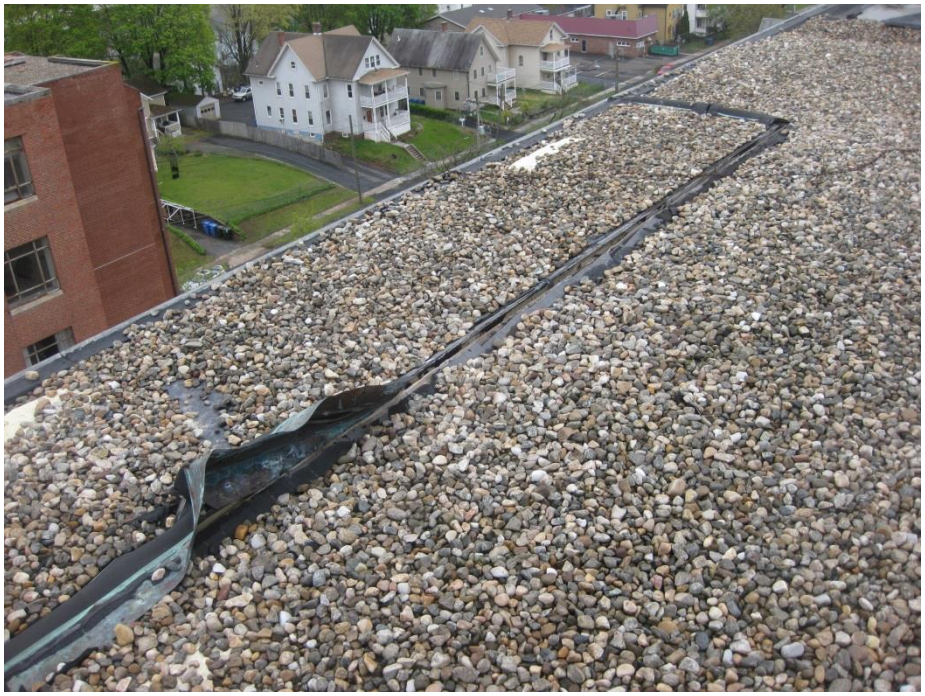

Photo C-2 – Expansion Joint at Penthouse Roof

Photo D-1 – Water Infiltration at Penthouse at 1952 Addition

Photo D-2 – Water Damage at 1952 Addition

Photo D-3 – Exposed Structure at 1952 Addition

Photo E-1 – Rust Jacking at North Wall of 1958 Addition

Photo F-1 – Roofing at North Addition

Photo F-2 – Roofing at Loading Dock Canopy

Photo G-1 – Roofing at South Addition

Photo G-2 – Canopy at King Place Entrance

Photo H-1 – Cracked Brick at Corner of Laundry/Storage Addition

Photo I-1 – Water Infiltration at Expansion Joint

Photo I-2 – Roofing Failure at Boiler Plant

Photo I-3 – Corrosion at Steel Columns and Baseplates

Photo I-4 – Standing Water at Pipe Tunnel

Photo I-5 – Failed Masonry at Vent Opening

Photo I-6 – Bowed Masonry at Modified Door Opening

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Photo I-7 – Stack

Photo I-8 – Top of Stack

Photo I-9 – Open Skylight at Boiler Room

Photo I-10 – Damaged Stairs at Boiler Room

Photo J-1 – Water Infiltration and Rust Jacking at Stair Tower

Photo K-1 – Parking Garage Structure

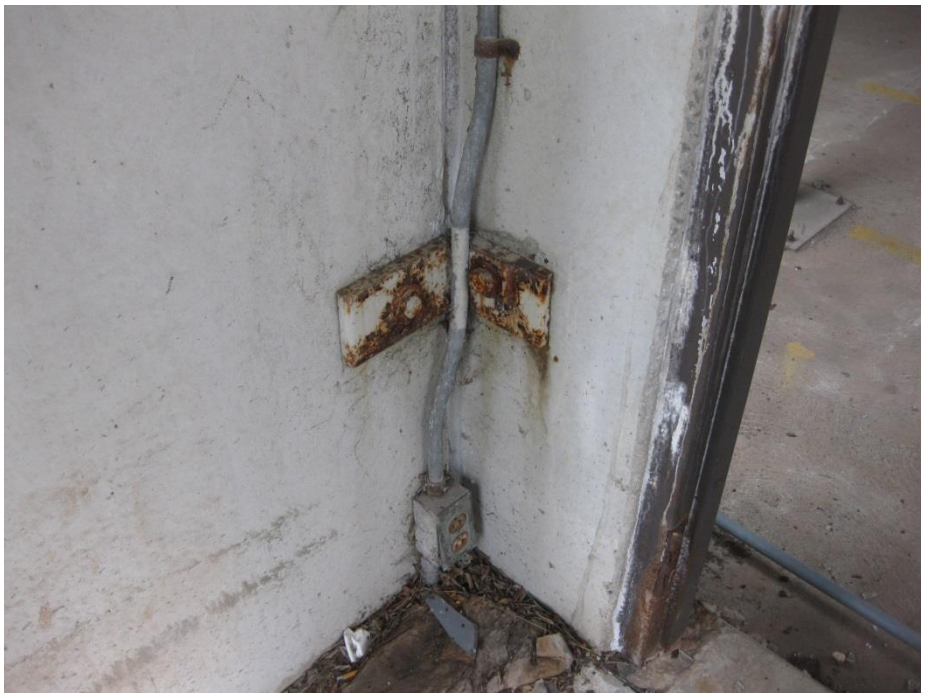

Photo K-2 – Corroded Steel at Stairwells

Photo K-3 – Damaged Concrete at Stair Platform

Photo K-4 – Failed Joints Between Precast Elements

Photo K-5 – Clogged Roof Drains

Photo K-6 – Rust at Bearing Plates

Photo K-7 – Failed Expansion Joint