Building Condition Report

Project:

Mechanical Condition Assessment
88 Elm Street
Rochester, New York 14604

Prepared for:

City of Rochester
Department of Neighborhood and Business Development
City Hall, Room 005A
30 Church Street
Rochester, New York 14614

LaBella Project No. 210261.03

April 2011

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1.0 SUMMARY

1.1 Executive Summary

The 88 Elm Street building is a commercial high rise office building located in downtown Rochester, NY. It consists of one twelve story building of approximately 83,200 square feet. The building has a basement and penthouse mechanical floor (13th floor).

The building was built as a high rise office building and is currently unoccupied. The purpose of this study is to determine the condition of the mechanical systems located throughout the building.

Summary of Findings

Property Evaluated: 88 Elm Street
Rochester, NY 14604

Report Date: April 7, 2011

By: LaBella Associates, P.C.

For: Mr. Chuck Fox
City of Rochester
Department of Neighborhood Development and Business
City Hall, Room 005A
30 Church Street
Rochester, NY 14614

SITE	
Neighborhood Type	*Not in scope*
Slope of Site	*Not in scope*
Access from Street(s)	*Not in scope*
Pavement	*Not in scope*
Parking	*Not in scope*
Walks	*Not in scope*
Loading Provisions	*Not in scope*
Paved Area	*Not in scope*
Landscaping	*Not in scope*
Irrigation	*Not in scope*
Lighting	*Not in scope*

UTILITIES	
Electric: Rochester Gas and Electric	**Water: Rochester City Water Bureau**
Gas: Rochester Gas & Electric	**Sanitary: Rochester City**
Telephone & Communications: None	**Cable TV: None**
Storm: Rochester City	

CODES & COMPLIANCE	
Applicable Codes: Building Codes of New York	**Construction Types:** *Not in scope*
Seismic: Not Applicable (See Section 4.2)	

2.0 SUMMARY EVALUATION

2.1 Plumbing Conditions Conclusions and Recommendations

Portions of the existing storm and sanitary drainage systems are intact and are salvageable, but would require modifications to suite future owner needs. The existing domestic water systems including the domestic hot water system have been completely removed and therefore new systems would need to be designed and installed.

2.2 Fire Protection Conditions Conclusions and Recommendations

Portions of the existing fire protection system including fire pump and standpipes remain but are inoperable. Standpipes go up through chases adjacent to the two (2) existing stair towers and feed existing hose cabinets in the stair towers. The existing double check detector assembly has been removed and the incoming water service valve closed.

All fire protection equipment remaining in the building shall be removed with the exception of the standpipes and a new automatic sprinkler system shall be installed per NFPA 13 requirements.

2.3 Mechanical Conditions Conclusions and Recommendations

All HVAC systems, equipment and components were found to be inoperable, including boilers, a chiller, air-handling units, pumps, heat exchangers, piping, valves and any and all peripheral components.

All HVAC equipment and components remaining in the building should be removed and new systems installed.

2.4 Electrical Conditions Conclusions and Recommendations

The electrical systems for this facility have been previously removed, with only a temporary electrical power system still in place. Some existing raceway and penetrations still exist that could facilitate new installations. Renovation of the space will require new electrical and telecommunications service entrances, power distribution, lighting, telecommunications distribution, and fire alarm systems. Optionally, consideration should be given to providing electronic access control and intrusion detection systems. The opinion of probable construction cost for replacing all electrical systems in this facility is $2,100,000.

3.0 PROPERTY DESCRIPTION AND OBSERVATIONS

The following terms are used throughout the report and may be defined as follows:

Excellent: New or like new
Good or Very Good: Satisfactory as is
Fair: Satisfactory as is in general, however, may require short term and/or immediate attention
Poor: Requires immediate repair, replacement or significant maintenance

3.1 Site Name and Address

Property Name
88 Elm Street

P**roperty Address**
88 Elm Street
Rochester, NY 14604

Property Size
Not included in scope of work.

Parking Spaces
Not included in scope of work.

3.2 Building Data

Number of Buildings: One buildings

Building Area: 83,200 sq. ft.

Number of Stories: Thirteen stories including Mechanical penthouse floor.

Applicable Building Code

The applicable building code for this property is the Building Code of New York State 2010 and other codes as referenced by the building code.

4.0 SITE & BUILDING INSPECTION OBSERVATIONS

4.1 Site

Not included in scope of work.

4.2 Structural Elements

Not included in scope of work.

4.3 Exterior Enclosure Elements

Not included in scope of work.

4.4 Interior Building Elements and Finishes

Not included in scope of work.

4.5 Vertical Transportation

4.5.1 Elevators – Main Building

The existing vertical transportation system includes three passenger style elevators. Each elevator travels from the first floor to the twelfth floor with one of the elevators also traveling from the basement to the thirteen floor mechanical space. The elevators were neither usable nor accessible and could not be inspected. A visual inspection from the elevator mechanical space located in the basement was conducted. Access to only one of the elevator shafts was possible. The inspection showed visible damage (broken) to the cabling of at least two of the elevators. The elevator cars could not be accessed for inspection.

Observation/Comments

A minimal visual inspection from the base of the elevator shaft revealed damaged cabling.

Recommendations

It is recommended that the elevators be inspected for safety as well as functionality.

5.0 MECHANICAL SYSTEMS

5.1 Plumbing

5.1.1 Domestic Water

Observation/Comments

The existing combined fire protection and domestic water service enters the basement mechanical room. Prior to the fire protection system riser the domestic water service tees off from the main combined service and is cut at this point. All other accessible domestic water piping in the building has been removed. It is assumed that piping buried in walls that is not easily accessible via a chase still remains.

An existing gas fired domestic water heater appears to have been removed. An existing horizontal storage tank with steam heat exchanger remains and appears original to the building, but is in need of replacement.

Recommendations

Design and installation of a complete new domestic water distribution system including installation of a backflow prevention device, domestic water heater(s) and a domestic hot water recirculation system is required.

5.1.2 Sanitary Drainage and Vent

Observation/Comments

The existing sanitary piping is cast iron and DWV copper and appears to fully remain. A main chase running up through the entire building contains the main sanitary and vent stacks. In the roof mechanical penthouse, the sanitary waste stack and vent stack combine and the stack vent continues through the roof. At each floor a branch that serves the existing gang toilet rooms enter the stack. The main building sanitary sewer exits the building in the basement just below the first floor slab. Existing floor drains in the basement floor remain, but their discharge point is unknown. There was no sewage ejector pump noted.

Recommendations

Based on future owner space programming, portions of the existing sanitary system can remain for reuse.

5.1.3 Storm Drainage

Observation/Comments

Existing storm roof drains remain, but horizontal storm piping below the roof appears to have been cut and removed. Vertical piping in main chase remains to the basement where it exits the building. All existing storm piping insulation has been abated and removed.

Recommendations

Connect existing storm drains to existing vertical storm leaders in main chase and re-insulated storm piping.

5.1.4 Plumbing Fixtures

Observation/Comments

All existing wall hung plumbing fixtures have been removed in their entirety. Existing fixture carriers remain. Existing floor set service sinks remain.

Recommendations

Verify fixture count with proposed occupant load per floor and if existing toilet room layout is code compliant, install new plumbing fixtures utilizing existing fixture carriers and sanitary piping. If fixture count does not meet current code, then total renovation of existing toilet rooms will need to occur; including modification to fixture quantity, layout and sanitary/domestic water piping.

5.1.5 Natural Gas System

Observation/Comments

The existing 2" Natural Gas service has been valved and capped in the basement near the existing water service entrance. All other gas piping from this point has been removed inside the building.

Recommendations

Verify natural gas service size with proposed new space and water heating natural gas appliances. Coordinate with authority having jurisdiction and RGE if increased service size is required.

5.2 Fire Suppression (Sprinkler Systems)

Observation/Comments

The existing fire pump and stair tower standpipes remain. All other existing fire protection equipment and devices including double check detector assembly and sprinkler distribution piping have been removed.

Recommendations

Remove any existing fire protection system equipment, devices and controls except existing stairwell standpipes and provide new hydraulically calculated automatic fire protection system meeting current NFPA 13 requirements based on proposed occupancy and hazard.

5.3 Heating, Ventilation, and Cooling (HVAC) Systems

5.3.1 Heating

There are no existing operable heating systems. There are two Weil McClain cast iron sectional boilers located in the penthouse mechanical space. There are partial remnants of a hot water distribution system located in the penthouse as well as in the basement. Some pipe risers were located in a common piping shaft. All heating elements have been removed from the floor areas except for recessed hot water wall convectors located in toilet rooms and entrance areas.

5.3.2 Cooling/Ventilation

The cooling and ventilation for the building was provided primarily from a central air handling unit located in the penthouse mechanical space. Air was distributed to the individual floors via supply and return air duct risers located in

a common vertical shaft. All distribution ductwork has been removed. Separate air handling systems were found in the basement. These systems have been disconnected and distribution ductwork has been removed.

A Trane CentraVac centrifugal chiller model PCV2FC1D2 is located in the basement. The equipment has been disconnected and abandoned in place. The chilled water and condenser water pumps are abandoned in the basement.

5.3.3 Controls

All controls for the building have been removed or abandoned in place. Remaining components indicate the building controls were a pneumatic based system.

5.3.4 HVAC Observation/Comments

There are no operational systems remaining in the building. All equipment and remnant components would appear to be non operable or repairable. This would include the boilers, chiller, air-handling units, pumps, heat exchangers, piping, valves and any and all peripheral components.

5.3.5 HVAC Recommendations

All HVAC equipment and components remaining in the building should be removed. The chiller located in the basement would require removal by a technician certified according to regulations of the United States Environmental Protection Agency. New systems, designed for the proposed building configuration, should be installed. An opinion of probable construction costs for HVAC systems to service the entire building is $2,912,000.

6.0 ELECTRICAL SYSTEMS

6.1 Electrical Service Entrance

The original electrical service entrance equipment for this facility was installed in the late 1960s when the building was first constructed. The equipment is a 120/208-volt, 3-phase, 4 wire switchboard located in the basement, with service entrance raceway entering the facility below grade near the intersection of Atlas and Elm Streets. The switchboard was manufactured by Continental Electric. Refer to photos E-1 and E-2, Appendix A.

While the original service entrance switchboard for this building is still technically in the basement, the internal parts have been removed, and the shell is currently being used as a pull box and current transformer enclosure for a temporary electrical service. The temporary electrical service was installed to support a previous abatement project. Installed in 2010, the temporary electrical service is an 800-amp, 120/208-volt, 3-phase, 4-wire arrangement with current transformer type utility metering. Refer to photo E-3, Appendix A.

The temporary electrical service conductors terminate to an 800-amp GE Spectra main circuit breaker panelboard that serves as the temporary service entrance equipment, and is installed adjacent to the original service entrance equipment enclosure. The utility meter is adjacent to the temporary service panel.

As is common among buildings in the area, RG&E provides electrical service at 120/208-volts directly to the customer, with transformers located in a series of underground vaults in the area. Transformers are owned and operated by RG&E in public right-of-ways, so the customer does not have to provide real-estate or access to service transformers.

Observation/Comments

The original service entrance equipment, as noted above, has been emptied, and is not salvageable for reuse. The temporary service entrance, while in excellent condition, is not sized to support this type of building. The temporary electrical service could be beneficial for construction, and could also be used as part of the permanent electrical distribution system.

Recommendations

Replace the electrical service entrance with new conductors and equipment sized to support the building's expected occupancy. Consider utilizing a 120/208-volt, 3-phase, 4-wire arrangement to eliminate the need for a service transformer.

6.2 Normal Power Distribution

The original power distribution for the facility consisted of (2) 1000-amp Continental Electric buss ducts running vertically through the building, and a motor control center buss-tied to the original service entrance equipment. The buss ducts were previously directly connected the main switchboard, traveled horizontally through the basement, and then connected to the vertical shaft. At some point in the past, several sections of the horizontal bus ducts have been removed, along with the majority of the buss plugs. Panelboards that were originally connected to the buss plugs to provide power on each floor have also been removed. Refer to photo E-7, Appendix A.

The motor control center, which provided power and motor starters for the mechanical equipment in the basement, has been mostly stripped of internal components and the associated feeders. The motor control center is also a product of Continental Electric. Refer to photo E-4, Appendix A.

Temporary electrical panels are located on each floor of the building, connected back to the temporary electrical service panelboard with aluminum type SE jacketed cabling. The cabling is routed on cable racks through the basement, and then travels vertically on cable racks through one of the stair towers, feeding panels located on plywood backboards on the landings for each floor. The panels are 24-space, 120/208V, 3-phase, 4-wire 100A main lug load centers manufactured by GE. Circuit breakers are provided in the temporary electrical service panelboard, protecting the panels at 100-amps. Refer to photos E-5 and E-6, Appendix A.

Observation/Comments

Buss ducts appeared to be in poor condition, and obtaining the quantity of missing hardware required to put them back into service would likely be difficult and expensive, as Continental Electric is no longer in business. Replacement motor starters are likely available for the motor control center through other manufacturers, but the cost to retrofit an entire motor control center would likely be more expensive than new equipment, and the end result would be a non-UL listed system that is well past its expected service life. The temporary distribution, while convenient for construction purposes, is neither of adequate capacity, nor code compliant for a permanent installation.

Recommendations

Provide a new electrical distribution system, either through buss duct or home-run cabling in metallic raceway, to feed power distribution panelboards on each floor of the structure and the mechanical penthouse. Provide new motor control centers and associated feeders as appropriate to support mechanical equipment in the basement and in the rooftop mechanical penthouse.

6.3 Wiring Devices and Branch Circuit Wiring

With limited exceptions, the original branch circuit wiring and associated devices have been removed throughout the building. This includes essentially all conductors and any raceway not poured into concrete.

Receptacles are present at the temporary distribution panel backboards located on each floor in the south-east stairwell landing.

Observation/Comments

Numerous floor penetrations exist that could be re-used for power wiring, if coordinated with planned layout of the space. Raceways poured into the concrete stair towers for lighting and fire alarm devices are also good candidates for reuse.

Recommendations

Provide branch circuit wiring to support proposed building occupancy.

6.4 Lighting Systems

Interior lighting for the facility has been removed, with only a few luminaires remaining that have been abandoned in place, mainly in the stair towers and some recessed cans in the entrance soffit. No exterior luminaires, beyond the aforementioned recessed cans are present at this site. Some very limited temporary string lighting is present in the basement and one of the upper floors. Refer to photos E-8, E-9, and E-10, Appendix A.

Observation/Comments

As mentioned earlier, some existing raceway poured into the concrete stair towers for lighting could likely be reused in a renovation.

Recommendations

Provide new lighting throughout the facility, including required emergency egress lighting, to support the proposed occupancy.

6.5 Fire Alarm Systems

Existing fire alarm systems throughout the facility have been removed, with the exception of a handful of devices abandoned in place. Refer to photo E-11, Appendix A.

Observation/Comments

As mentioned earlier, some existing raceway poured into the concrete stair towers for fire alarm devices could likely be reused in a renovation.

Recommendations

Provide a new fire alarm and detection system throughout the building as required for the proposed occupancy.

6.6 Telephone/Paging/IT Communication Systems

All existing communications cabling, distribution equipment and utilization devices have been previously removed. Based on a review of the facility, it appears that the original telecommunications service entrance to this building was through the adjacent building to the north's basement, which is not uncommon for buildings in this area.

Telecommunications cabling was previously distributed throughout each floor utilizing an in-floor raceway system that still exists, with removable access plates leading back to the stacked vertical closets which also contain the existing buss duct for power distribution. Presumably vertical backbone cabling interconnected telecommunications backboards in these stacked closets. Refer to photos E-12 through E-15, Appendix A.

Observation/Comments

The existing in-floor raceway system appears to be in good condition, and could conceivably be reused, provided the layout is compatible with the proposed occupancy.

Recommendations

Provide new telecommunications service entrance(s) and distribution as required to support the intended occupancy of the facility.

6.7 Security Systems

With the exception of a retrofitted and obviously no longer in-use electric door strike that was observed, no other electronic security or access control systems were observed in the facility.

Observation/Comments

None.

Recommendations:

Based on the intended occupancy of the building, consider installing an electronic access control system utilizing proximity type card or fob readers. Because of the extensive use of glass on the perimeter of the building, consider installing and electronic intrusion detection with glass-break sensors on the lower floors of the building at a minimum.

7.0 ADA COMPLIANCE

The review of ADA Title III compliance was not included in this scope of work. It is recommended that a thorough in depth study be completed in an effort to document non-conforming conditions.

8.0 QUALIFICATIONS

8.1 Document Review and Interviews

The following people or organizations were interviewed by LaBella Associates staff during the site visit:

- Chuck Fox – City of Rochester

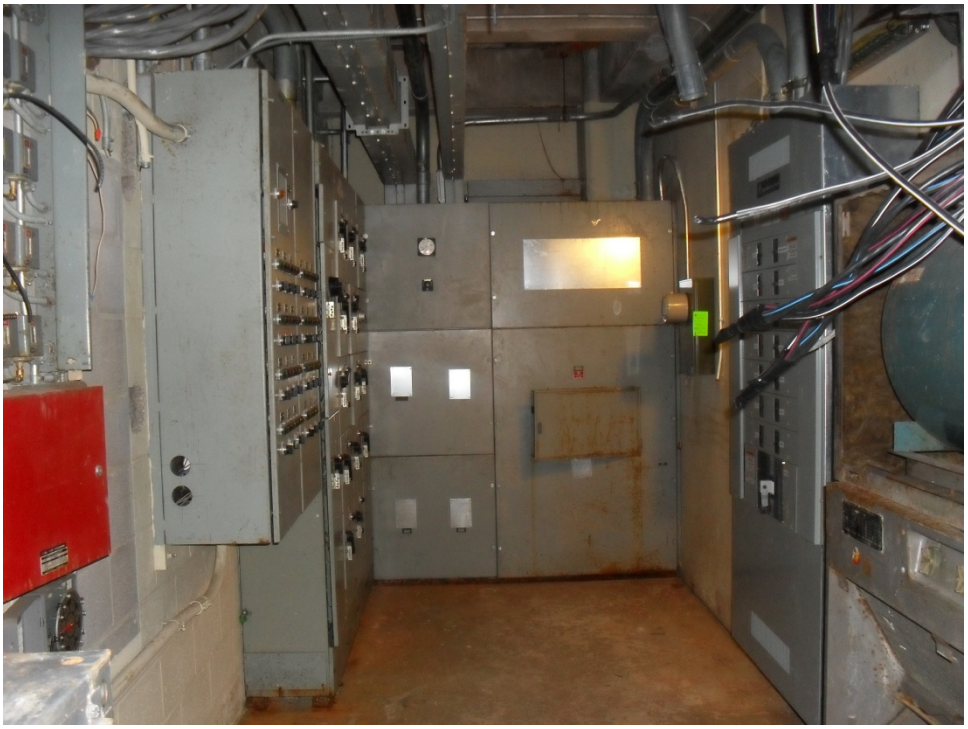
LaBella Associates, P.C. staff involved with analysis:

- Richard Morelle – Mechanical
- David Myers – Fire Protection
- Steve Longway – Electrical
- Brett Driscoll – Plumbing

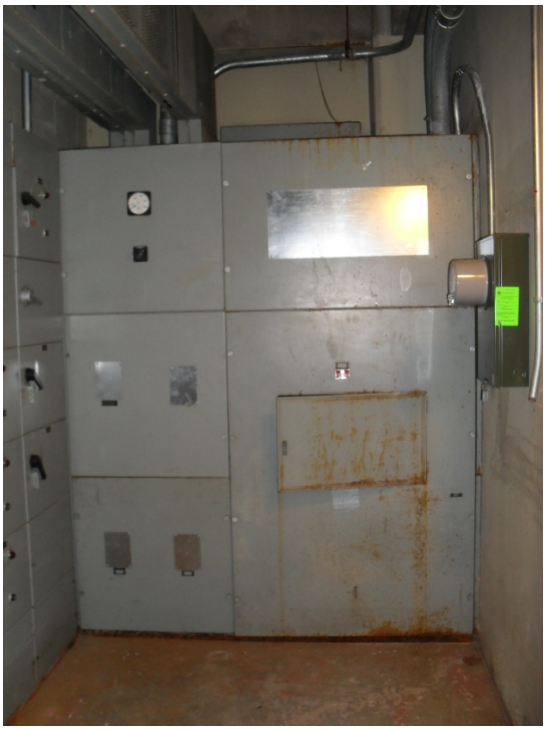
APPENDIX A

PHOTO LOG

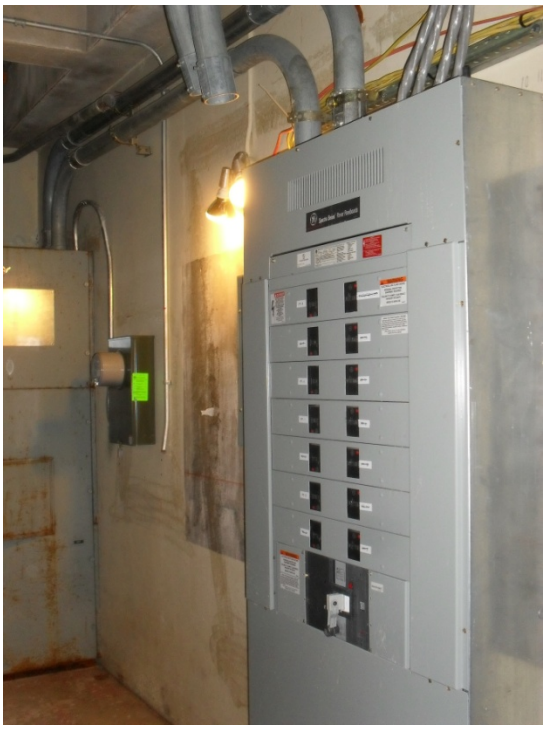
ELECTRICAL PHOTOS



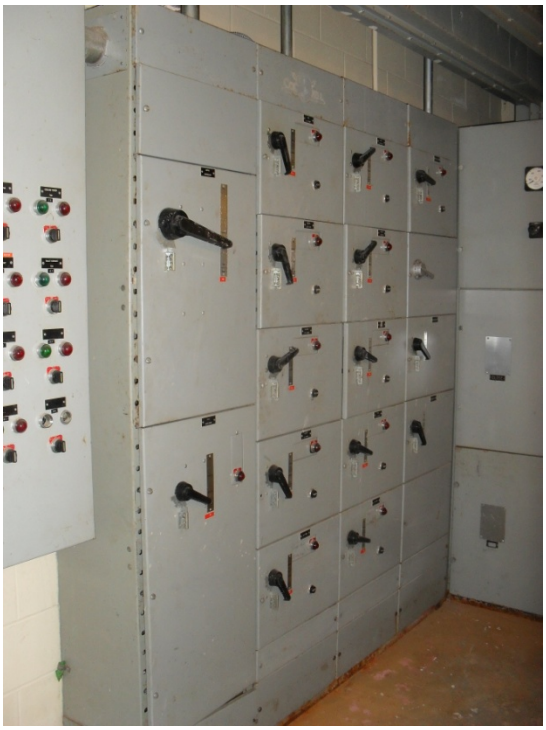
E-1: ELECTRICAL SERVICE AND DISTRIBUTION EQUIPMENT



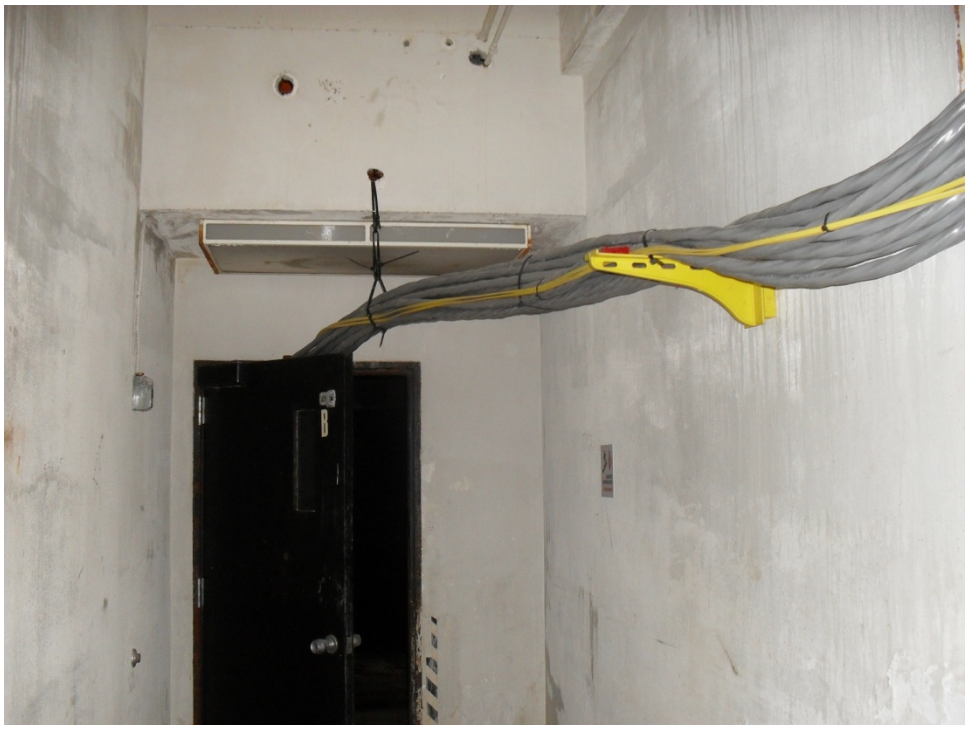
E-2: ABANDONED SERVICE ENTRANCE SWITCHBOARD



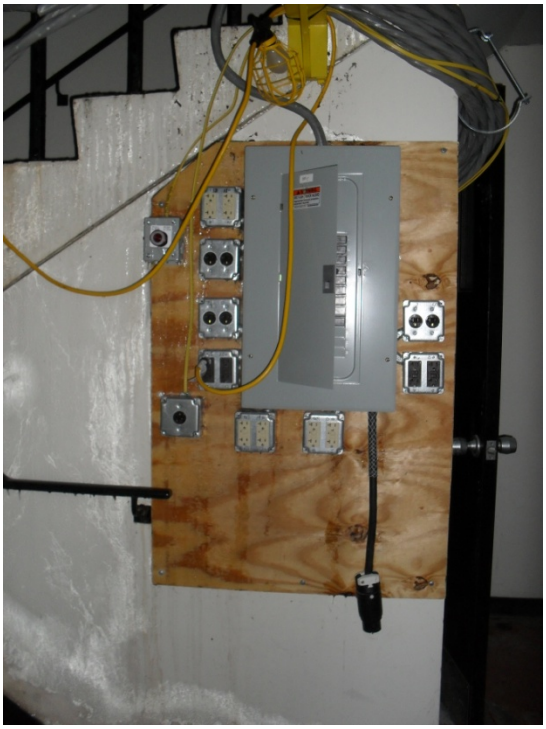
E-3: TEMPORARY SERVICE ENTRANCE SWITCHBOARD



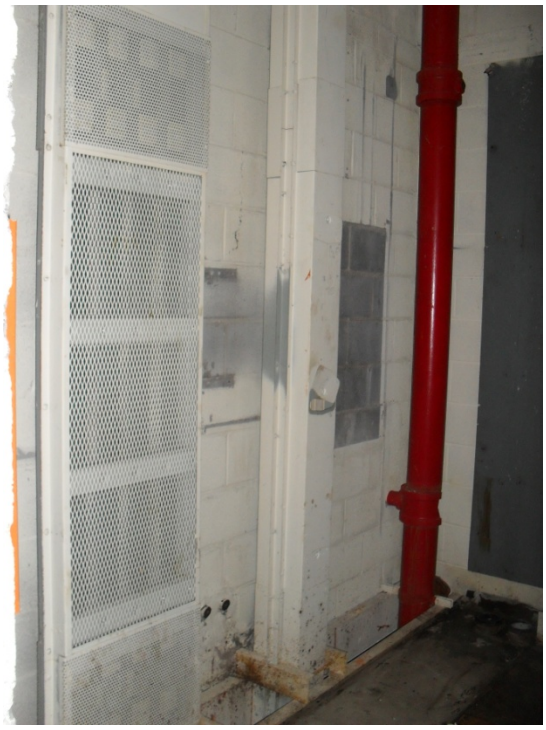
E-4: ABANDONED MOTOR CONTROL CENTER



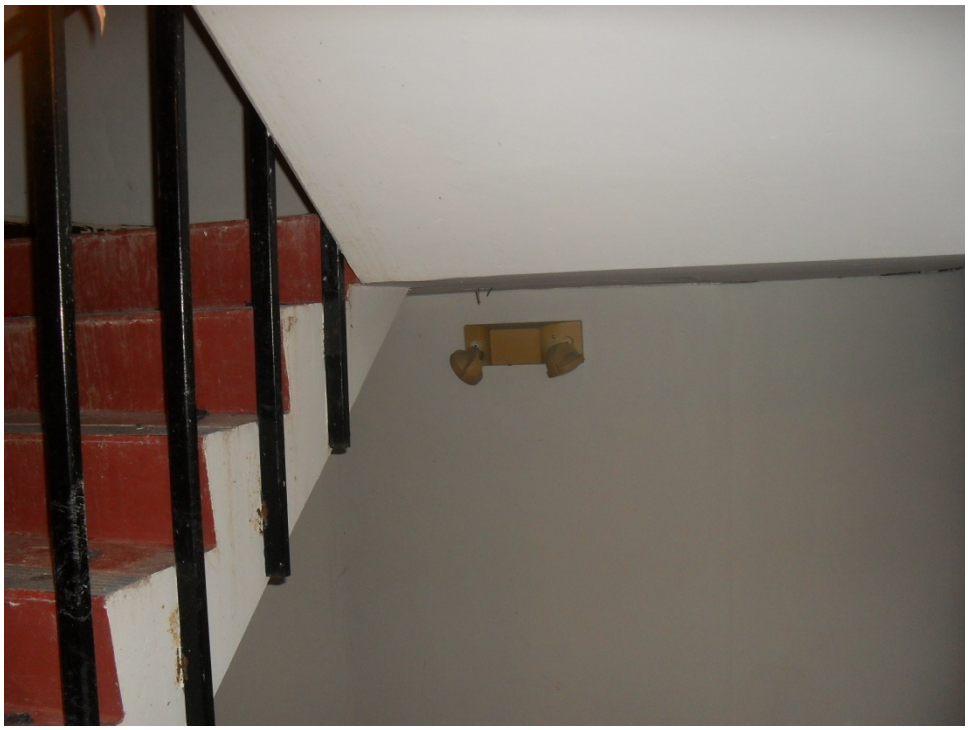
E-5: TEMPORARY POWER DISTRIBUTION CABLING IN STAIR TOWER



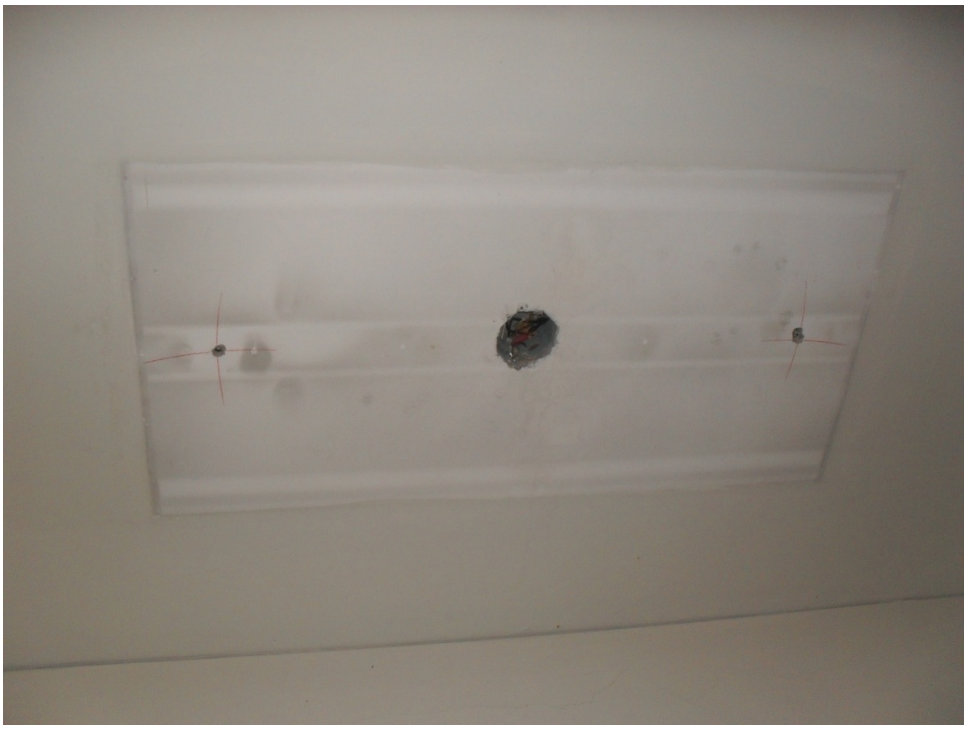
E-6: TEMPORARY POWER DISTRIBUTION PANEL IN STAIR TOWER



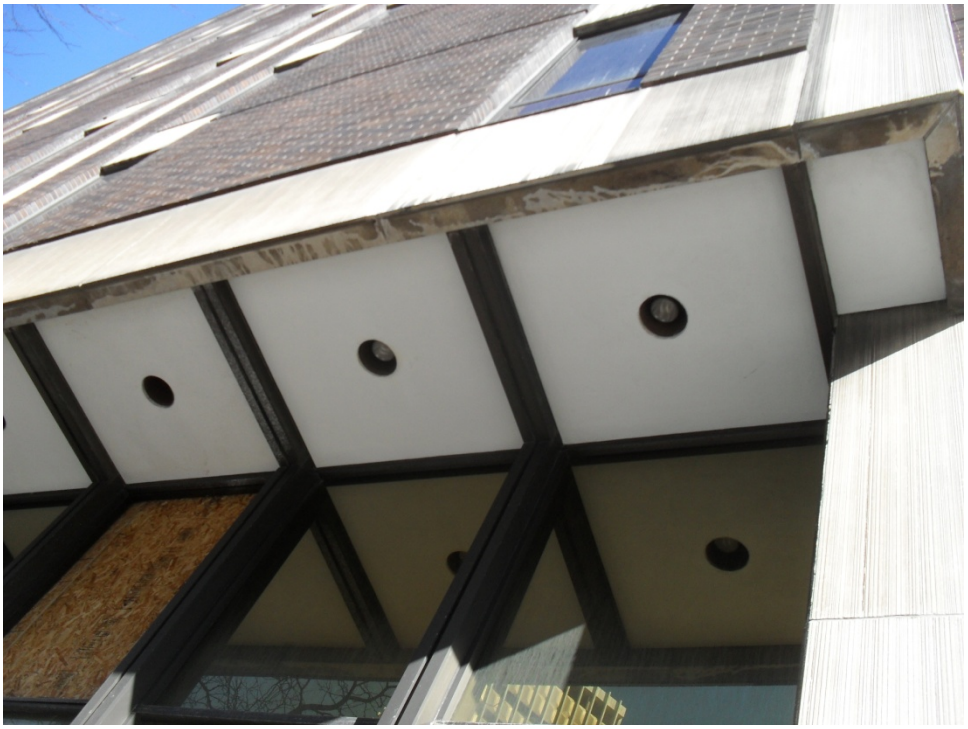
E-7: VERTICAL SECTIONS OF BUSS DUCT IN STACKED CLOSETS



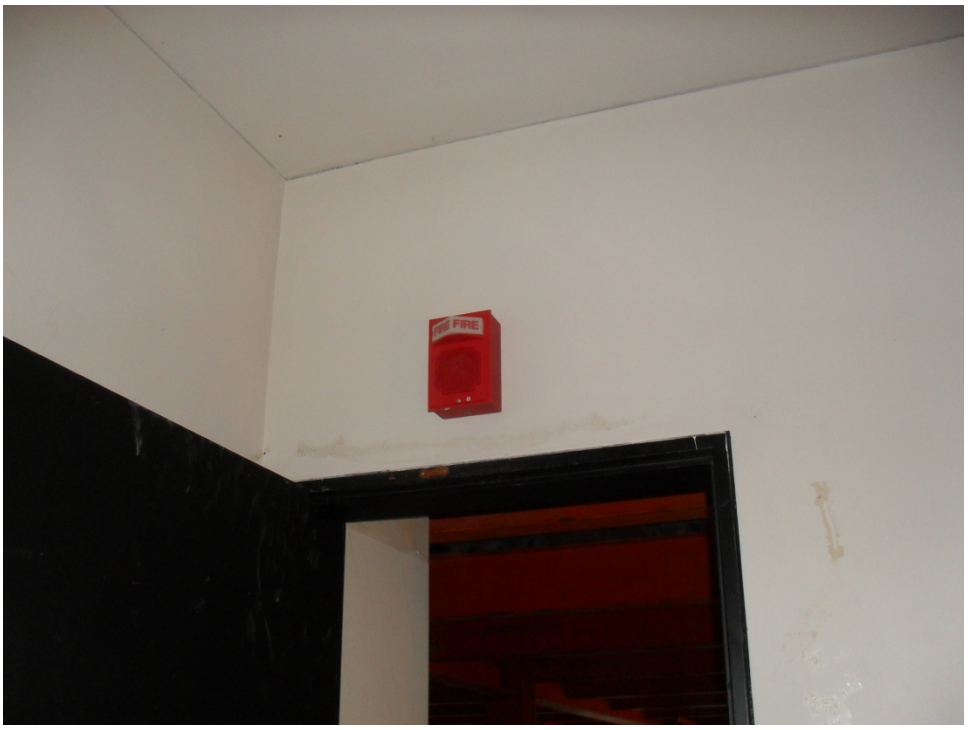
E-8: TYPICAL ABANDONED IN PLACE LUMINAIRE



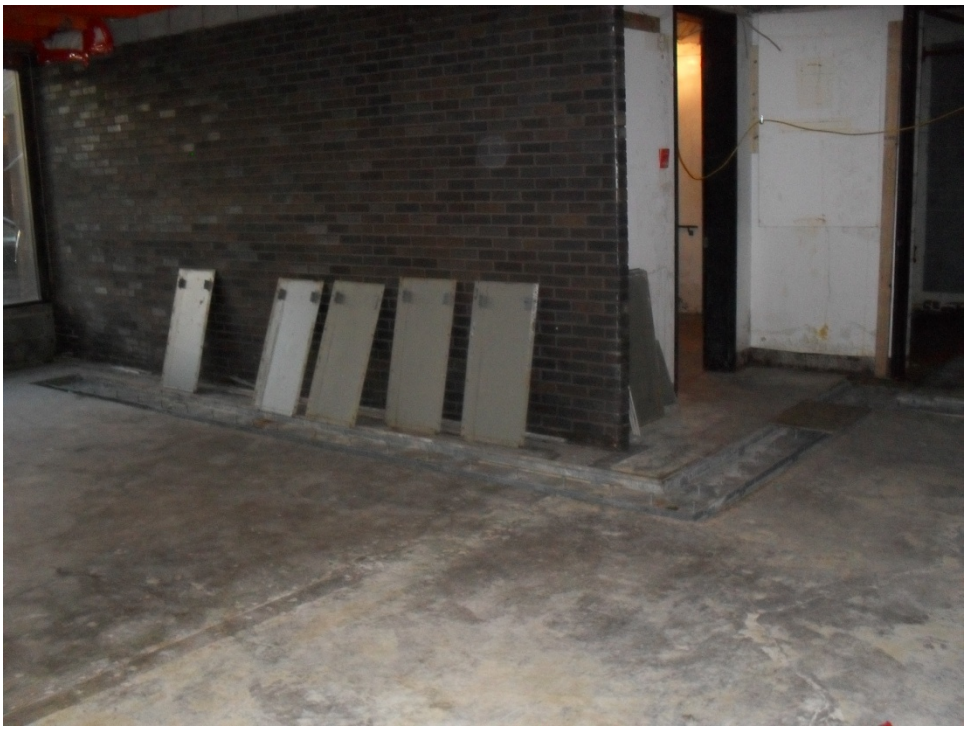
E-9: LUMINAIRE RACEWAY RECESSED IN CONCRETE STAIR TOWER



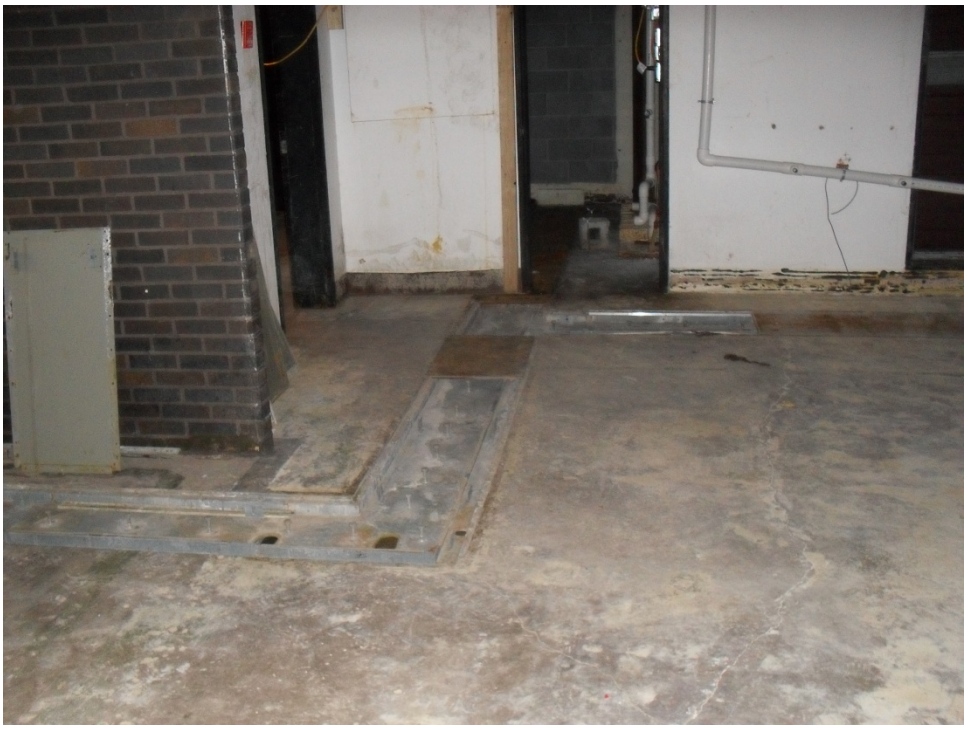
E-10: SOFFIT MOUNTED LIGHTING AT BUILDING ENTRANCE



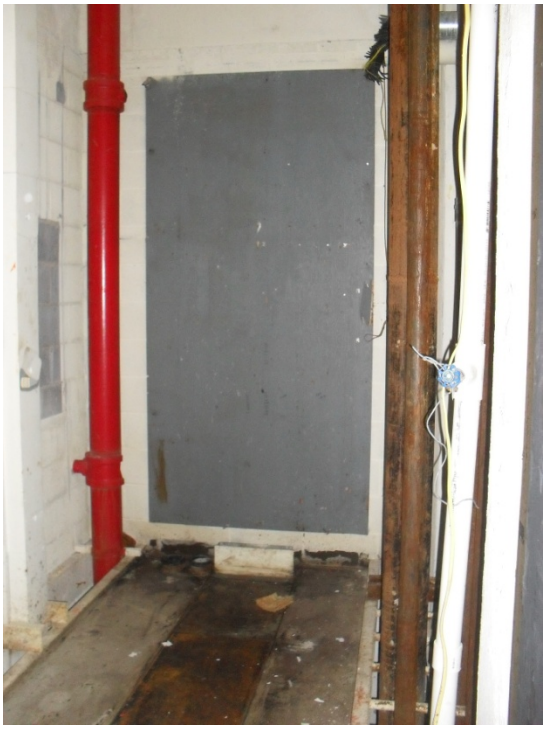
E-11: TYPICAL ABANDONED IN PLACE FIRE ALARM DEVICE



E-12: IN-FLOOR RACEWAY SYSTEM AND COVERS



E-13: IN-FLOOR RACEWAY SYSTEM ENTERING STACKED CLOSET

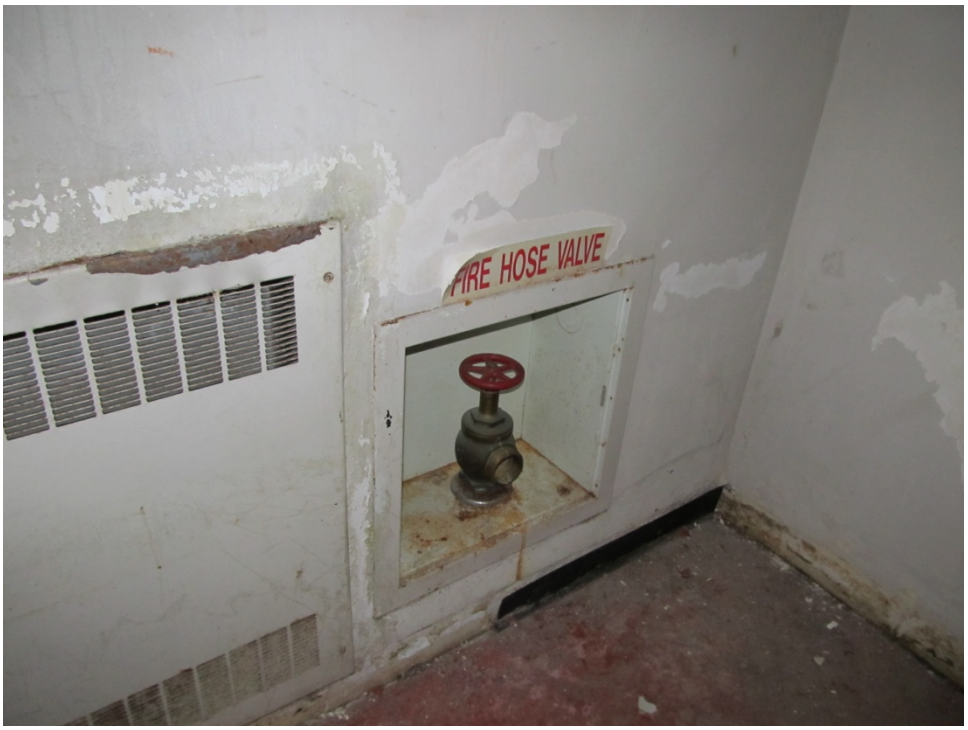


E-14: IN-FLOOR RACEWAY IN STACKED CLOSET AND TELECOMMUNICATIONS BACKBOARD

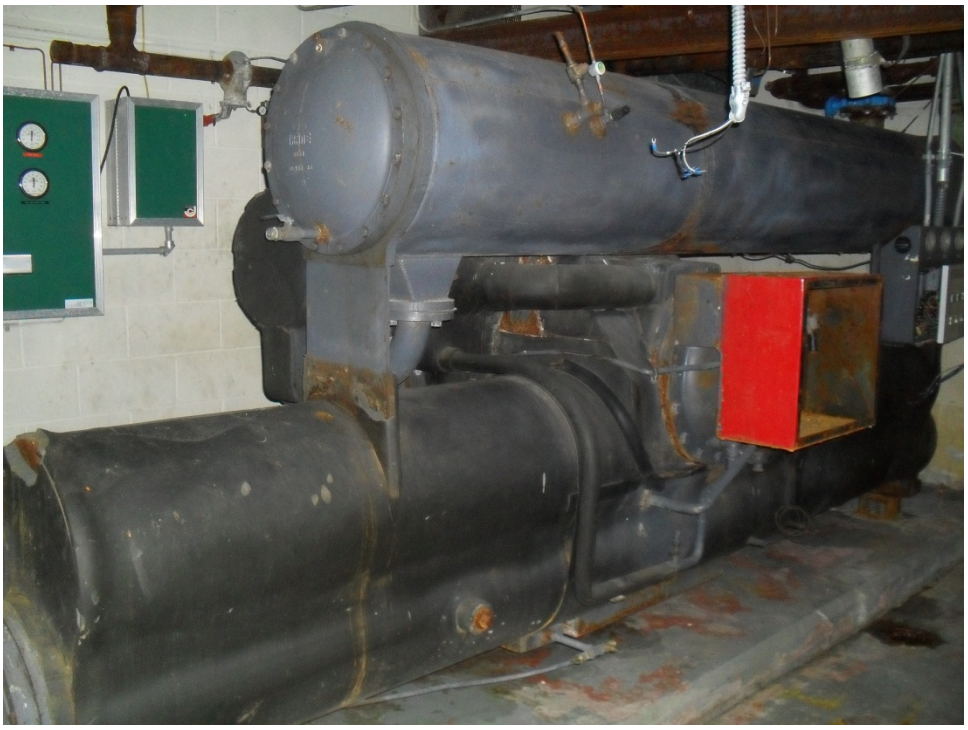
E-15: IN-FLOOR RACEWAY PENETRATIONS AND THROUGH-FLOOR PENETRATIONS

MECHANICAL (FIRE PROTECTION, HVAC, PLUMBING) PHOTOS

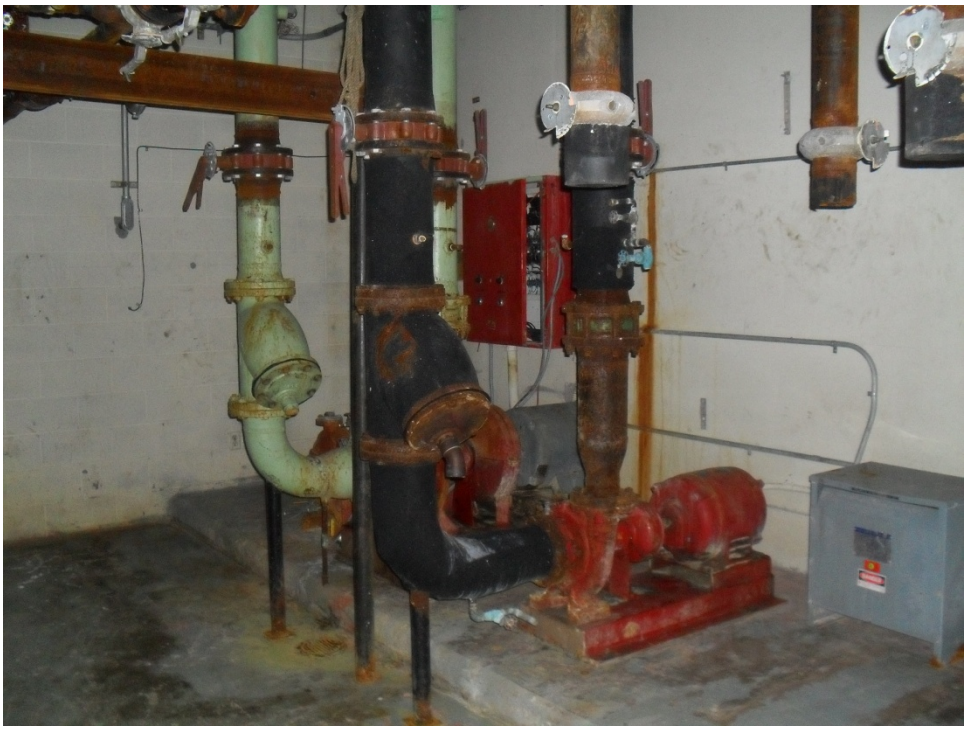
Fire Pump Station in Basement



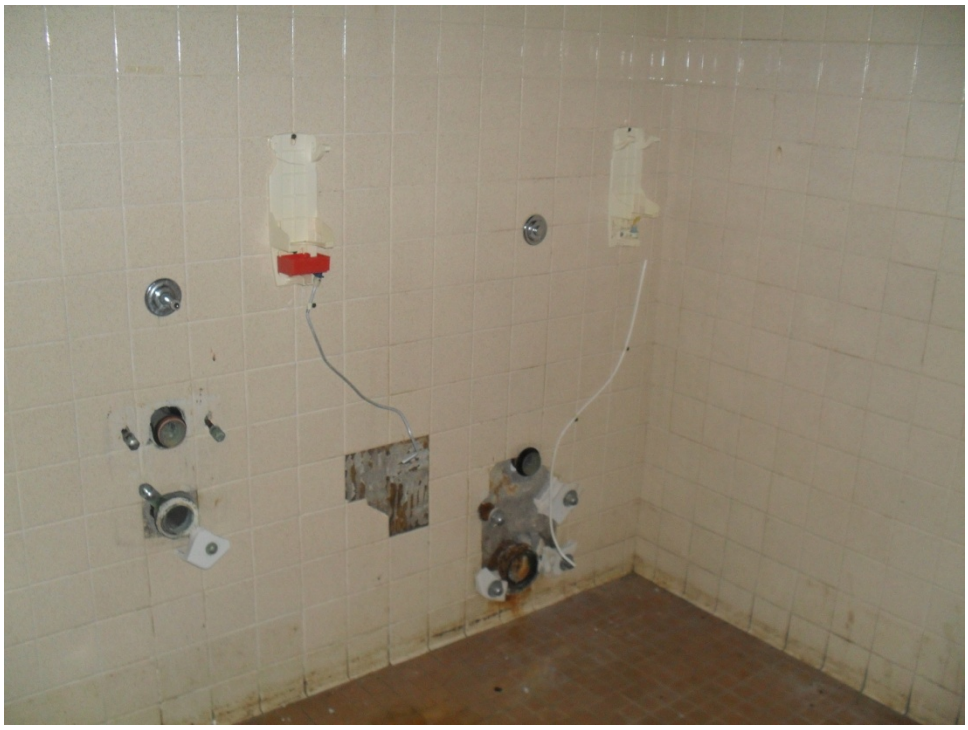
Typical Stairwell Fire Hose Connection



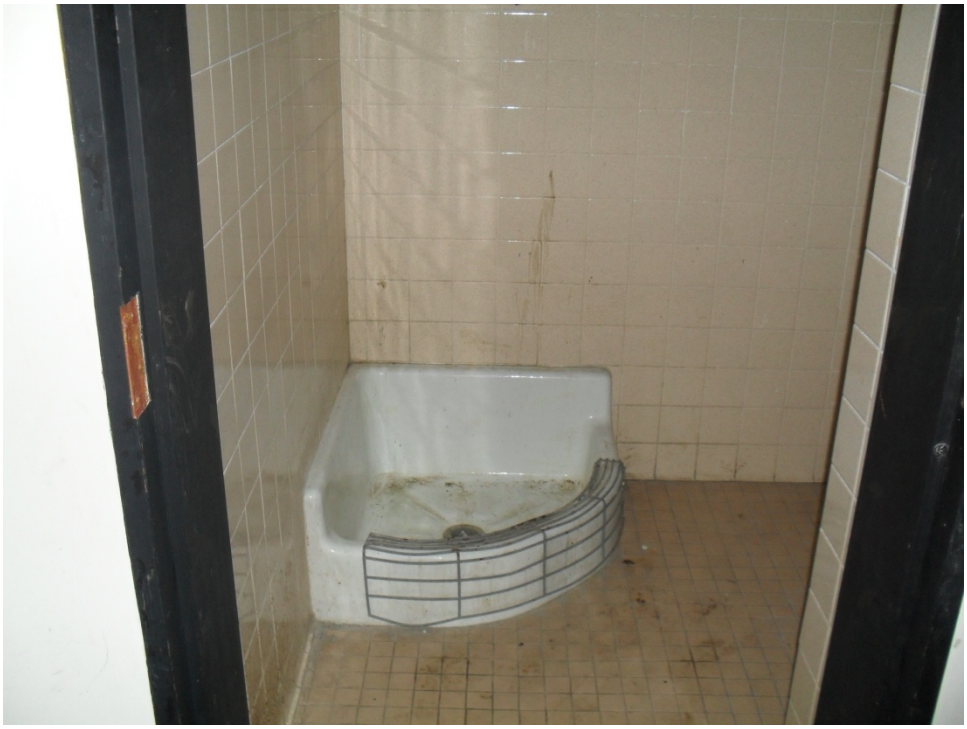
Abandoned Centrifugal Chiller located in basement



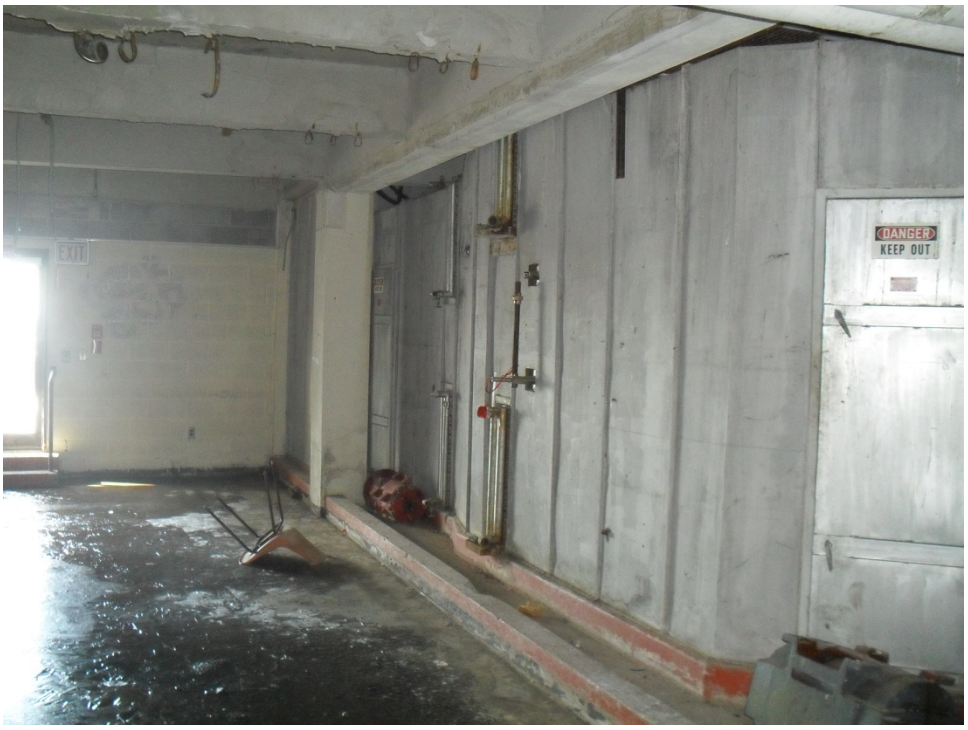
Abandoned chilled water and condenser water pumps



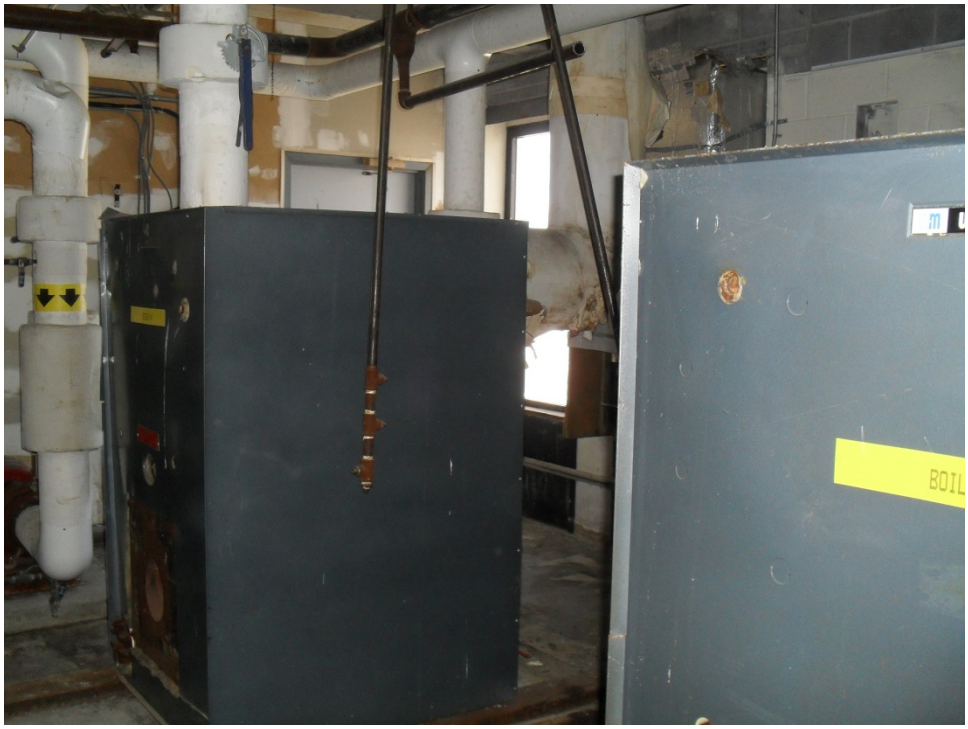
Typical abandoned toilet room



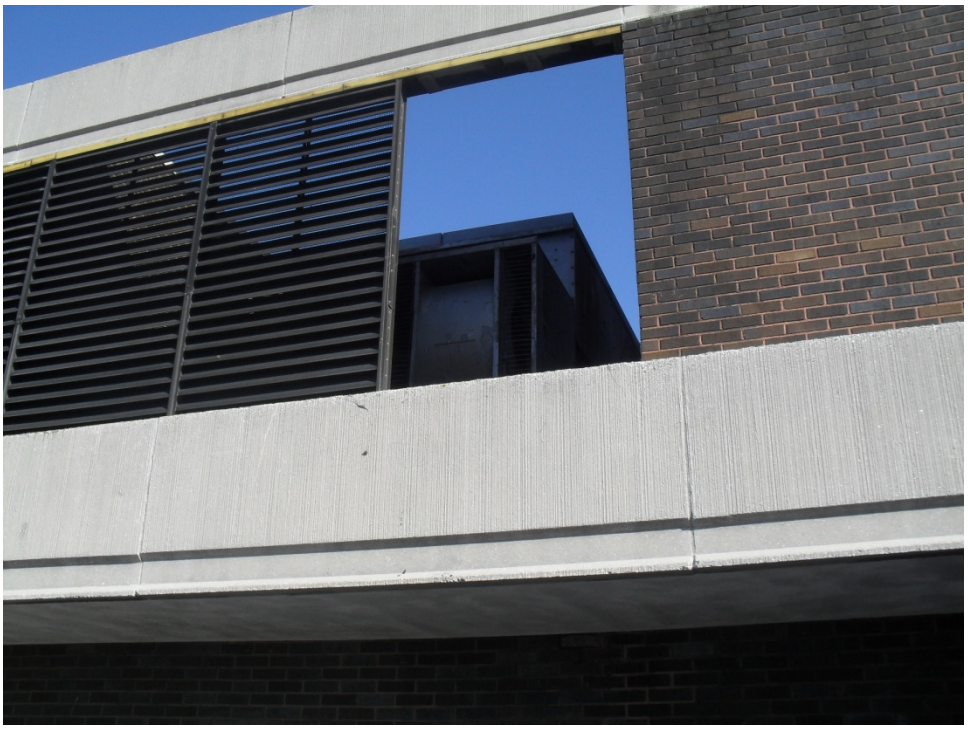
Abandoned janitor's closet



Abandoned AHU in penthouse mechanical space



Abandoned boilers in penthouse mechanical space



Abandoned cooling tower on roof