Sample Commercial Inspection Report

**Jack Reilly Associates, Inc.**

**Commercial & Residential Building Inspectors**

**410-276-6444 301-351-5040**

*jr@jackreillyassociates.com*

LIGHT COMMERCIAL INSPECTION REPORT

DOWNTOWN WASHINGTON, DC

## I. Scope of the inspection

The following building inspection report is based on two walk-throughs that took place over XXX hours by one person on June XXXX. It is contains observations from this brief survey and the expert opinion of one person with 30 years of experience in private building inspection. The report essentially follows the format common for pre-purchase of a commercial building in the metropolitan Washington area but does not purport to comply with the first published standard for private inspections of commercial buildings: ASTM Standard E2018-99.

Under this ASTM standard there is a fairly lengthy written disclosure signed by the seller, the plans for the building, particularly the as-built plans, are scrutinized and the inspection is done over a several-day period by a team of two to five people. There is some duplication of the annual inspections done by the local authority; often there will be a fire protection specialist and an elevator specialist. Estimated costs are projected over two years and are normally based on actual bids or on recognized estimating manuals used in conjunction with the measurements from the plans.

Needless to say, if such inspections do become popular in this area they will add considerably to the inspection cost.

The following report is based on a normal visual inspection without any rigorous testing of the systems, which would clearly have disrupted the business operations of the tenants in the building. As would be the case with an inspection performed under ASTM Standard E2018-99 liability is confined to the cost of the inspection.

## II. General Overview

This is a building which is now approximately 90 to 120 years old. At the time of its construction it would have been considered a very fine and expensive building. There is a possibility that it may initially have been a single family mansion house, but it seems more likely that it was a four-unit apartment building with commercial space on the ground floor for doctors, opticians and so on. It is our opinion that the building was built with steam heat and indoor plumbing which was unusual at the time. It appears to have been built with an elevator and, considering its proximity to the White House, this may not be the original building on the site.

The building has solid masonry exterior walls and we think it likely that nearly all the floors in the building are reinforced concrete. In apartment buildings of this era, however, it was often the practice to build some parts of the floor with steel and concrete and others with flooring on conventional joists. Some of the floors have enough bounce to indicate that there may be joists, but steel and concrete were certainly found on all levels of the building and even the roof is on a concrete deck.

At the base of the elevator shaft, near the electrical relays, two old elevator licenses were found, indicating that the building remained an apartment building through the late 1960s. It is our guess that at that point the building was renovated and converted to commercial use with the enclosure of the rear sleeping porches and replacement of the original steam system and original galvanized plumbing system. The wiring was also upgraded at that time with the pulling of new wires through the electrical conduit and other use of BX cable.

More recently, the building has been spruced up and cleaned and a new roof added. The cooling system was tested during both our visits and was in working order. It is getting somewhat old, as is the elevator. The heating plant is coming into the age at which it may need replacement, but by and large the systems in the building are in remarkably good condition, as is the structural condition of the building itself.

In some jurisdictions, such as parts of Pennsylvania, there is often a requirement that a commercial building changing hands or undergoing rehab must exhibit some compliance with the Americans with Disabilities Act. Often, such requirements will focus on wheelchair handicapped and no other handicapped. Washington, D.C. does not have any such regulation and no substantial steps appear to have been taken to make the building more handicapped accessible during the past decade.

Of greater consequence, please request a fire marshal inspection and certifications that the building complies with all

applicable fire codes.

On environment issues, we might suggest that you install an alpha strip for measuring the radon in the building. Such a strip would be left in the basement off the ground someplace in the center of the building for approximately six months to one year. These are often a more accurate way of measuring radon than short two-day or four-day tests. Downtown Washington is not noted for having high radon areas.

It is quite likely that on some of the older doors and wood trim in the building that some of the original layers of paint are lead-based. None of these are flaking or deteriorated and we see no need at this point to go to the expense to have x-ray equipment brought in to determine whether there is any lead-based paint as none of it at this time poses an immediate hazard or risk to anyone. If extensive tear-out or remodeling were considered in future, this should begin with testing for lead paint in areas that would be affected.

There is a possibility that there may have been some use of asbestos in the building. Some of the pipe lagging in the pump room is an off-white material which is quite likely to contain asbestos. At present, none of this is readily friable or likely to become airborne. Nevertheless, samples were taken and will be send it to a lab for analysis. If asbestos is found to be in this insulation, it should be left alone and undisturbed. In the event that it should become necessary to have the pipe lagging removed, this would have to be done by a contractor licensed to handle asbestos. In the attic of the building, there is a thin layer of insulation which appears to be quite old. Much of it appears to be fiberglass but some of that may also be rockwool insulation. Certainly decades ago, rockwool could contain any variety of industrial wastes which were practical for use with insulation. These would include loose and friable asbestos and a sample was taken of this insulation and will also be sent for analysis. Because of the use of this loose insulation in the attic, we did not enter the attic crawl areas or go through the attic.

**III. Basement**

The basement has recently been finished as an essentially windowless but quite functional office space and the exterior walls, like the interior walls are now finished in drywall.

The building was constructed at a time at which basements were essentially used for storage or to provide quarters for servants. In other words, few precautions were taken to insure that seepage was not a problem, while rising damp in the brickwork is often a common problem and can give rise to mold. At present there are no indications of seepage or mold from rising damp, but much of the finish work is quite new. It is conceivable that during winter months, particularly at times when there is a good deal of snow and ice, that seepage may occur along the front basement wall of the building.

**IV. Electrical**

The building has a three-phase 600-amp electrical service providing either 120 volt or 208 volt circuits. All of the three-phase breakers appear to be located in the pump room as is a sub-panel which is for the basement circuits.

There is a fair amount of rigid conduit in the pump room, and it appears likely that contemporary wiring has been pulled through that within the past couple of decades. We saw no indication of cloth-wrapped rubber insulation on any of the circuitry on panels opened. Other than wires running through the conduit, this appeared to be flexible metal-sheathed cable (BX); in other cases, flexible metal conduit (Greenfield) has been used. All of the wiring examined in the panels in the pump room was copper.

No attempt was made to open the mains disconnect on the front basement wall or any of the three sub-panels in the upper part of the building. The first-floor sub-panel appears to control the circuits for that floor, while the one for the second floor appears to cover the second and third floors, and the one on the fourth floor the fourth and fifth floors.

A spot check was made of the receptacles in the building. This was done with a simple three-pin receptacle tester. As might be expected in a building with wiring systems this old and using conduit there were indications that there may be minor cross-connection problems, induction problems, or impedance to ground problems. Certainly in places where computers are to be used, the wiring should be more thoroughly examined and the circuits tested; you may find it appropriate to add dedicated circuits for any mainframes or possibly some PCs.

The emergency exit signage lighting appeared to be in proper functioning condition.

**V. Heating**

As part of the 1960s rehab, modern fan-coil units were placed in most of the rooms in the upper parts of the building, and a modern gas-fired boiler and electric chiller were installed in the basement. The existing boiler is approximately 35 to 45 years old and has an input of 850,000 BTUs. Normally, these boilers last 30 to 40 years and it is appropriate to have the system checked and serviced regularly. At the time of the inspection, the conversion from use of the chiller to use of the boiler had not been made and the boiler was not fired. However, we did note that the burners themselves appear to be in good condition and we were given to understand that the changeover will be made by a boiler engineer and that

maintenance has been quite regular in the past. We would suggest that this boiler be replaced with a more efficient boiler.

It is our opinion that the boiler is oversized for the building and most likely duplicates the size of the previous boiler, which existed prior to the replacement of the windows. It is frankly quite difficult to get a boiler this size replaced in the Washington area. The replacement boiler would have to be brought in in sections and assembled on site. As few plumbing companies have experience with such assembly and near-immediate failure of such boilers is not rare, it would be our suggestion that a series of high efficient boilers be used and that these be set up so that only one would be in use during moderate weather and that the additional boilers would kick-in whenever demand increased

Water from the boiler or chiller is piped through the building to two pipe fan-coil units. In short, there is a supply pipe on one side and a return on the other. These units normally last 22 to 30 years. New fan-coil units with limited ducting have been installed in the drop ceiling of the basement and new fan-coil units have been installed on the first floor.

Throughout the rest of the building, many of the older fan-coil units are still in place. All were operational and functioning but many of them are likely to need replacement in the foreseeable future. It seems likely that new blowers were installed on these as part of the recent renovation, but the coils themselves were not taken out and chemically cleaned by a professional to remove the dust that has build-up. The condensate lines at the base of each of the coils are wider than normal and back-up problems should not readily occur.

The most important item of routine maintenance with the fan-coil units is maintaining the filters. All the ones in the basement are in place and were snug. Most on the first floor are missing. The ones throughout the rest of the building are in some cases properly installed and in other cases they are not. As part of the recent rehab the old metal covers for the fan-coil units were replaced with custom-built wooden cabinet-type covers and some of these have difficulty carrying the filters and keeping them snug.

We would recommend that the filters on all these be replaced eight to 12 times a year and that in the spring you consider having the coils themselves cleaned.

**VI. Cooling**

As with the boiler, we would recommend that a maintenance contract, if possible with warranty provisions, be maintained on the chiller system. Over the years, major components of the system have been replaced and the system was working properly at the time of the inspection. The outside cooling tower appears to have been rebuilt on the inside and the fan was working properly as were the components in the boiler room. We think it likely that major components of the chiller system will need replacement before the boiler does.

**VII. Energy Use, Windows and Ventilation**

Because of its construction, this is a fairly tight building. The majority of the windows appear to have been replaced fairly recently, perhaps within the last decade. It is even possible that the front windows were replaced as part of the recent rehab. The majority of these windows are aluminum frame, single-hung windows with outside single-hung storm windows. There is a thermal break between the outside primary window and the storm windows. There are no spring balances on the sashes at the back of the building, but there are such spring balances at the front.

In the rear former screen porches of the building, the windows are of single-weight glass with aluminum frames. These are predominantly fixed windows with some awning windows.

In the attic there is a thin sprinkling of rockwool and fiberglass insulation. If this contains asbestos you might consider removal. This will depend on how often people are working in the attic.

There are two ventilating shafts in the building. One is to provide negative pressure in the bathrooms. The fan for this is located in the attic and the discharge is located on the roof. We were unable to get this fan to operate. The other ventilating shaft is opposite the bathrooms near the other party wall; most of the louvered vents for this shaft are in the walls above the closets. We were quite uncertain as to why this shaft was installed.

On the roof there is a very large fan for this shaft which we were able to turn on in the pump room. We were not able to witness its rotation, but the electric motor was certainly working. Judging by its size, this may have been for a small commercial kitchen in the basement of the building at some time in the past. If possible, try to get an explanation for this larger fan. We see little point in leaving it operating.

It would certainly be appropriate to get the exhaust for the bathrooms to function and to be left on.

There are no roof top gravity vents for attic ventilation.

**VIII. Plumbing**

The building has a new copper entrance pipe with a shut-off valve located behind a small panel in the front basement wall.

The supply pipes appear to be copper throughout and the wastelines a combination of cast iron and plastic. We believe that all the interior supply lines and wastelines were replaced as part of the renovation in the 1960s and these should prove durable. Within the past six to nine months all of the plumbing fixtures were replaced and no signs of polybutylene or other questionable contemporary materials were found. As none of the fixtures had their locations changed, any problems that occur with the fixtures during the first year would be covered by the plumber's warranty as required by D.C. law. Only a spot check was made of the fixtures, and these all seem to be in good order.

The building has a small residential water heater of either 40 or 50 gallons. As there is only one shower in the building and no kitchen or other areas requiring much hot water, this should be sufficient. It was noted that the smoke pipe for the water heater is now disconnected from the chimney and this certainly should be reattached as soon as possible.

**IX. Elevator**

The elevator in the building is quite old and certainly no serious upgrading appears to have taken place within the past 30 or 40 years. It is quite conceivable that this is the

original elevator to the building. There are a variety of mechanical relays in the basement and we were given to understand that the elevator is now serviced every one to two months, almost on a regular basis. We would suggest that you contact the company that is providing the service and find out their prognosis for the elevator and their normal service charges and contracts.

We would also recommend that you obtain the certificate of annual inspection issued by the D.C. government for the elevator. There is no telephone in the elevator at present and if it is retained for any time I would certainly suggest that one be installed. At present the elevator appears to be functional, but was having trouble leveling out at different floors. At times it would stop a few inches above the floor level and then drop down before coming to a complete stop.

**X. Fire Safety**

We would strongly recommend that you request and obtain a certification from the D.C. fire marshal after inspections of the building within the next few weeks indicating that it complies with all applicable fire codes. We believe that the fire marshal will require some upgrades in terms of signage and emergency lighting.

Each floor of the building, including the basement, has adequate secondary egress. There is no sprinkler system in the building, but there is a dry pipe system in a chase along the hallway near the elevator. There is a manual fire alarm system.

The fire escape is in reasonable condition but certainly needs scraping and painting and some repair work and possibly replacement of some of the railing sections which have rusted out.

**XI. Floors**

As indicated earlier, we believe that each level of the building has a steel-reinforced concrete deck. Oddly, on the exterior of the building, it is possible to see that the concrete for the fifth floor was installed in such a way that we believe that each level of the masonry was brought up to floor level and then the concrete was poured so that the edge of the concrete is exposed above the roof of the lower building next door.

The primary staircase around the elevator is marble and a recent concerted effort has been made to restore it. There is also marble in the first floor and some areas where hardwood flooring on sleepers has recently been installed. Much of the other flooring is carpeted.

**XII. Walls and Ceilings**

The walls and ceilings are a combination of trowelled-on plaster and drywall which

has been installed as part of the recent work. One of the nicer aspects of the building is that during the 1960s rehab, an old practice of lowering ceilings, installing paneling and smashing out old ornate plaster work was not done. Much of the original plaster work is still in place.

**XIII. Fireplaces, Chimneys and Flues**

The chimney for the boiler and water heater has a single flue with a terra cotta liner. The top four sections of the liner are beginning to scale and drop material down into the base of the chimney. This is not at all unusual for a building which was at one time heated by coal or oil. At present this chimney does not need cleaning by a professional, but we would strongly recommend that at least once a year the smoke pipe for the boiler in the basement be pulled from the chimney and that any debris or any bits of terra cotta that have fallen be removed.

We strongly caution you that any examination by a chimney sweep will result in dire warnings that the system is unsafe due to the deterioration at the top and that they will not warrant it and that they would like to reline it. At this point we would

recommend against any relining. As the Department of Energy has mandated that our heating plants be more efficient, the old rule that a flue could be too small but could never be too big is no longer true. With changes in the heating plant it is quite likely that the flueing system for the boiler and the water heater will have to be changed to insure that flue gases actually leave the building. Until such time it would be ill-advised to do much with this chimney or flue other than perhaps to install a screen over the top of keep out trash and debris.

There is also a very large chimney on the roof in the northwest corner of the building. At present there is a poured-in-place concrete cap on top of this chimney. we believe that the chimney itself contains perhaps five flues with terra cotta liners and at least four inches of brick between the liners.

Although fireplaces are in place, substantial changes would have to be made to make them usable. Normal requirement is that the top of a wood-burning chimney must be at least four feet above anything within ten feet of it. With the larger, more modern building next door, this clearly poses a severe problem for the chimney.

Moreover, there are no dampers or adequate smoke shelves in the fireplaces themselves and marble has recently been installed in such a way that it extends into the fireboxes. If an attempt were made to convert these to wood-burning fireplaces, it is likely that the marble would be damaged. Alternately, it might be possible to run a gas line up along the side of the fireplaces, install gas logs in them and then to use small metal flues through the existing flues to vent these to the outside.

If this is not done and the fireplaces are simply left in their present ornamental condition, we would suggest that some fiberglass be stuffed up in the base of the flues above the visible part of the fireboxes.

**XIV. Roof**

A built-up hot-tar and felt roof has recently been installed on top of the concrete roofing deck. Stone was then added to the final flood coat. The flashings and copings around the perimeter of the roof and along the skylight and brick penthouse for the elevator pulleys appear to be in reasonable condition. Normally, these roofs last 15 to 20 years. There are no gravity vents through the roof for ventilating the attic space. The only vents are for the two vent shafts in the building.

Along the front parapet, extensive reworking appears to have been done within the last eight to fifteen years. The slate work is in quite good condition. An oddity of it is that the slate was nailed in with galvanized nails which are beginning to rust out. For a job of this quality we would have expected copper nails. At present these nails should at least be tarred over with roofing cement. At the base of the parapet and above the front cornice work, lead sheeting has been used. This appears to be fairly recent and in quite serviceable condition.

**XV. Gutters and Drainage**

Along the back of the building, facing the fire escape on both sides, a new gutter has recently been installed. This appears to be custom-fabricated stainless steel. The downspout discharges into a subsurface drain and this system appears to be in satisfactory condition. At the front of the building, water on the parapet is collected and is discharged through a small drainpipe on the south end of the lead ledge. This pipe appears to run through the building and, we believe, connects with one of the plastic pipes above the dropped ceiling in the basement. In short, we believe that it, in turn, like the condensate lines for the fan coils, discharges into the floor drain in the pump room.

**XVI. Exterior Surfaces**

The front facade is in good condition. The stone work has recently been powerwashed and joints between the stone are in satisfactory shape. Minor settlement cracks have been filled in and most of the joints have appropriately soft mortar which we assume to be a combination of sand, Portland cement and lime. As it is quite possible that the stone work is simply a veneer on eight-to-twelve inch brick, a careful visual examination of the exterior of the building should be made at least once a year, in the fall, to be certain that the mortar joints have not washing out making it possible for freeze-thawing to occur behind the facade.

On the back of the building, common brick has been used and appears to have been repointed within the past 25 to 35 years. We saw no need for repointing the brick other than in quite minor areas at this time.

**XVII. Exterior Grounds**

There are flower beds in front, and these and the front steps appear to be in satisfactory condition as does the rear parking area. At the time of inspection, a new chain-link fence had been installed around the cooling tower for the chiller, but the gate had not yet been installed.

All in all, this is a very grand building which is now approximately 80 to 110 years old. The building appears to have undergone extensive rehab of all the systems approximately 35 to 40 years ago with the exception of the elevator. More recently, the building has been redecorated and a new roof installed and other upgrades carried out.

I believe that the likely major costs will come from the elevator, the chiller system, fire code compliance, and possibly the boiler.

If there are any further questions, please call.

Respectfully submitted,

Jack Reilly, for

Jack Reilly Associates, Inc.