

# BUILDING INSPECTION SERVICES



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*Date of Inspection:*

March 25 & 26, 2019

*Inspection Report Prepared for:*

Sandpiper Towers Condominium Association, Inc.  
c/o Dennis Smith (President) & Dolores Melton (Treasurer)

*B.I.S. Case Number:*

009/1902/23778

*Property Inspected:*



205 Highway A1A  
Satellite Beach, Florida 32937

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6/27/19

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Melton (Treasurer)

## INTRODUCTION



Pursuant to the authorization by representatives of the condominium association, an evaluation was conducted on the common areas of the structure at the above referenced address. The purpose of the inspection was to render an opinion regarding the physical deficiencies of various building systems as well as to determine conditions which may compromise personal safety. The inspection scope also focuses on establishing current priorities for corrective measures on certain deficient conditions and other conditions where deferred maintenance can be considered.

Building Inspection Services performed a cursory visual inspection of the common areas and certain individual living units. This report on the deficiencies found and/or visible alterations, changes or omissions of significant nature are included in the report. In addition, the report provides a schedule for life expectancy of major components as follows:

***Roofing System, Electrical System, Plumbing System, Mechanical Systems, Structural Components, Elevator System(s), Fire Alarm System, Seawall/Retaining Wall and Swimming Pool & Equipment***

The results of this inspection in the accessible areas only on the above identified property, including only those phases requested, are located on the following pages. All systems and components requiring replacement or repair should be replaced or repaired by licensed contractors and then fully checked by qualified personnel for proper operation in order to ensure their complete functionality since existing conditions after further examination could reveal additional deficiencies.

PAGE 1

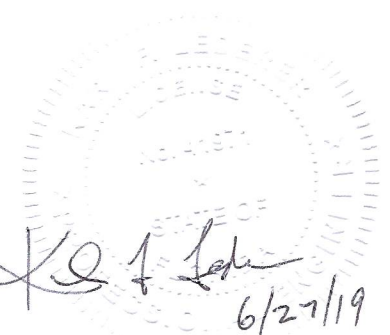
  






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## ROOFING SYSTEM

The roofing system over the condominium structure consists of a TPO single-ply membrane system on the main section and a built-up tar & gravel system on the lower section over the covered parking garage. The single-ply membrane roofing system was installed in 2018 according to documentation furnished by the association. The built-up tar & gravel system was installed in 2002, according to permit records available through the Brevard County Building Department online portal. A cursory visual inspection of the roofing systems was performed and the following conditions are detailed below:

### **Inspection Findings**

#### *Thermoset Single-Ply Membrane System (Main Section)*

- The south roof access hatch shocks have failed, do not allow opening and closing of the hatch, and need to be replaced.
- The north roof access hatch latch has broken off, does not allow opening and closing of the hatch, and needs to be replaced.
- The roof section exhibits ponding water conditions at numerous locations throughout the roofing system. Standards within the roofing industry hypothesize that prolonged ponding water conditions can reduce useful roof service life by up to 50%. The algae development observed in several areas, indicates that the ponding water conditions remain on the roof surfaces beyond the maximum allowance permitted by the building code, as defined below:

***Positive Roof Drainage.*** *The drainage condition in which consideration has been made for all loading deflections of the roof deck, and additional slope has been provided to ensure drainage of the roof within 48 hours of precipitation. (2017 Florida Building Code, Building; Section 1502)*

Furthermore, it is the duty of the roofing contractor to notify the owner of any possibility of ponding water, as indicated by the building code below:

***1521.13*** *Prior to starting the work the contractor has the responsibility of notifying the owner, by means of the roofing permit and required owner's notification for roofing considerations herein, of any possibility of ponding water and recommend a structural review if ponding water is a possibility. (2017 Florida Building Code, Building)*

Lastly, the roofing system does not have slope as required by the building codes which mandate that a minimum slope of ¼ inch in 12 inches be provided for thermoset single-ply membrane roofing systems, as indicated below:

***1507.12 Thermoset single-ply roofing.*** *The installation of thermoset single-ply roofing shall comply with the provisions of this section.*

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*1507.12.1 Slope. Thermoset single-ply membrane roofs shall have a design slope of not less than one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage. (2017 Florida Building Code, Building)*

Given the age of the roofing system, it is recommended that the roofing contractor's contractual agreement and warranty information be reviewed to determine whether action can be taken resolve the ponding water conditions.

*Built-Up Tar & Gravel System (Lower Section)*

- The lower roof section exhibits evidence of leakage at numerous locations throughout the covered parking garage. The roofing system was installed in 2002, as previously noted above and therefore has exceeded its useful service life. The typical useful service life of built-up tar and gravel roofing systems is generally 12-16 years.

Roof surface life expectancy is subject to many variables including, but not limited to, the quality of design, the quality of the materials used, the quality of skill of the installation, the weather conditions at the time of installation and subsequent to the installation and the quality of the continuing maintenance program adopted after the completion of the installation.

The quality of materials used can only be determined with certainty by analyzing the results of test cuts into the roofing systems (beyond the scope of a visual inspection) and most of the other factors can only be surmised. Therefore, any life expectancy forecast can only be an educated guess based on assumptions such as: That workmanlike installation procedures and materials were employed and that diligent routine maintenance has been and will continue to be performed on an original roof design which met local standards. If any of these assumptions are incorrect then the life expectancy forecast may be incorrect as well. Of course, predicting what future weather conditions might be is just not possible.

This estimate of surface life expectancy, taking into account the current estimated age of the roof (if available from the owner) and the surface conditions observed, is taken from the Sheet Metal and Roofing Contractors Association Roof Life Expectancy Guidelines for roof installations that meet minimum industry and code requirements.

Additionally, there are some areas of the roof surfaces where the aggregate (gravel) has washed off resulting in exposure of the felts. Exposure of the felts to ultraviolet radiation can result in accelerated deterioration and moisture penetration into the roofing system. The roof surfacing does not meet the minimum requirements of the building code as indicated below:

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**1519.12 Surfacing.** Roofing assemblies shall be surfaced in compliance with the product approval. Surfacing shall be in sufficient quantity to comply with the required fire classification. Aggregate surfacing shall not be used on slopes greater than 3:12. Aggregate shall be embedded in a flood coat of bitumen applied over a prepared top ply.

**1519.12.1** On slopes of 3:12 or less, not less than 400 pounds (182 kg) of roofing gravel or 300 pounds (145 kg) of slag per square shall be applied. A minimum of 50 percent of the total aggregate shall be embedded in the flood coat of bitumen...

The lower roof section exhibits ponding water conditions at numerous locations throughout the roofing system. The algae development observed in several areas, indicates that the ponding water conditions remain on the roof surfaces beyond the maximum allowance permitted by the building code, as defined below:

**Positive Roof Drainage.** The drainage condition in which consideration has been made for all loading deflections of the roof deck, and additional slope has been provided to ensure drainage of the roof within 48 hours of precipitation. (2017 Florida Building Code, Building; Section 1502)

The roofing system does not have slope as required by the building code which mandates that a minimum slope of  $\frac{1}{4}$  inch in 12 inches be provided for built-up roofing systems, as indicated below:

**1507.10 Built-up roofs.** The installation of built-up roofs shall comply with the provisions of this section.

**1507.10.1 Slope.** Built-up roofs shall have a design slope of not less than one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage, except for coal-tar built-up roofs that shall have a design slope of not less than one-eighth unit vertical in 12 units horizontal (1-percent slope).

Given the number and/or extent of the individual defects described above, we feel the overall conditions indicate that the present roof covering has lost its integrity and no longer suitable for repairs. Replacement of the roof covering is, therefore, recommended and should include replacement of rotten wood substrate and/or related components, when found.

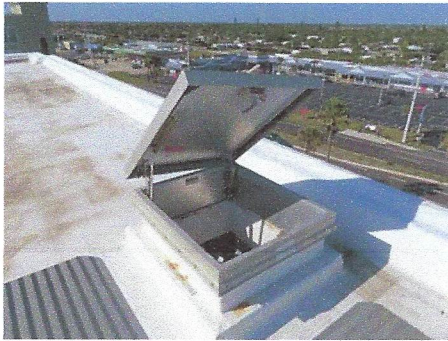
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A circular seal for the Florida Building Inspection Network (BIN). The outer ring contains the text 'FLORIDA BUILDING INSPECTION NETWORK' and 'BIN'. The inner ring contains 'MEMBER OF THE INTERNATIONAL ASSOCIATION OF BUILDING INSPECTORS'. The center of the seal features a stylized graphic of a building or roof structure.





Pictures



View of south roof access hatch and damaged shocks which prevent proper opening/closing



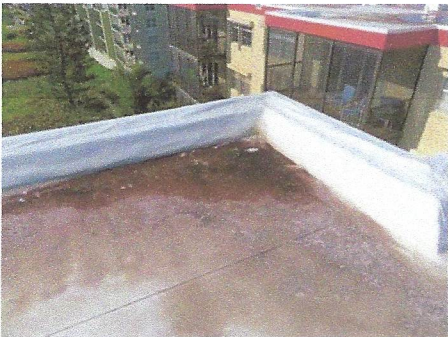
View of north roof access hatch with latch that has broken off



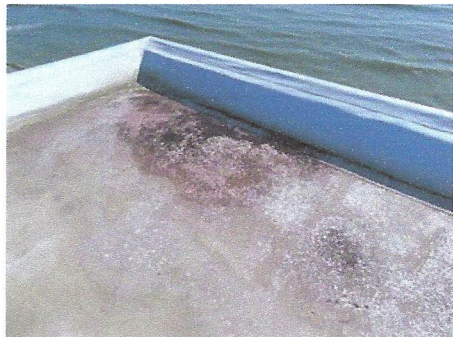
Closer view of latch that has broken off



View of latch on roof deck



View of typical ponding water and algae development on main roof surfaces



View of typical ponding water and algae development on main roof surfaces



View of typical ponding water and algae development on main roof surfaces



View of typical ponding water and algae development on main roof surfaces

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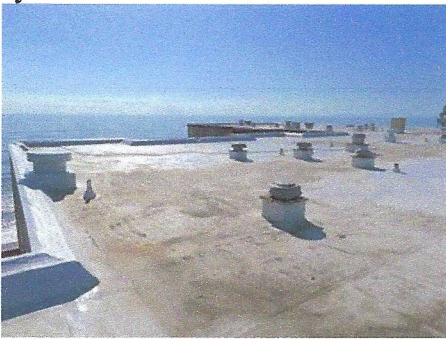




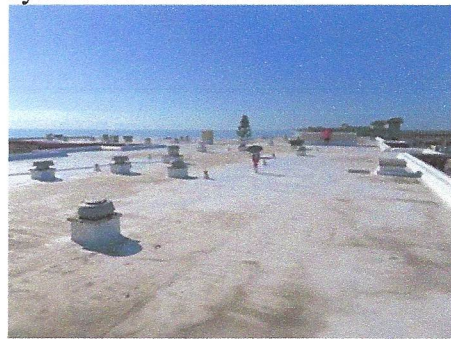
General view of single-ply roofing system on main section



General view of single-ply roofing system on main section



General view of single-ply roofing system on main section



General view of single-ply roofing system on main section



General view of tar & gravel roofing system on lower section



General view of tar & gravel roofing system on lower section



General view of tar & gravel roofing system on lower section



View of typical ponding water and algae development on lower roof surfaces

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View of typical vegetation growth on the lower roof surfaces



View of typical leakage evidence (water stains) observed at ceiling areas over covered parking



View of leakage evidence through improvised light fixture cover



Closer view of leakage evidence through improvised light fixture cover



Closer view of leakage evidence through improvised light fixture cover



View of reemergence of leakage evidence along north edge after previous refinishing



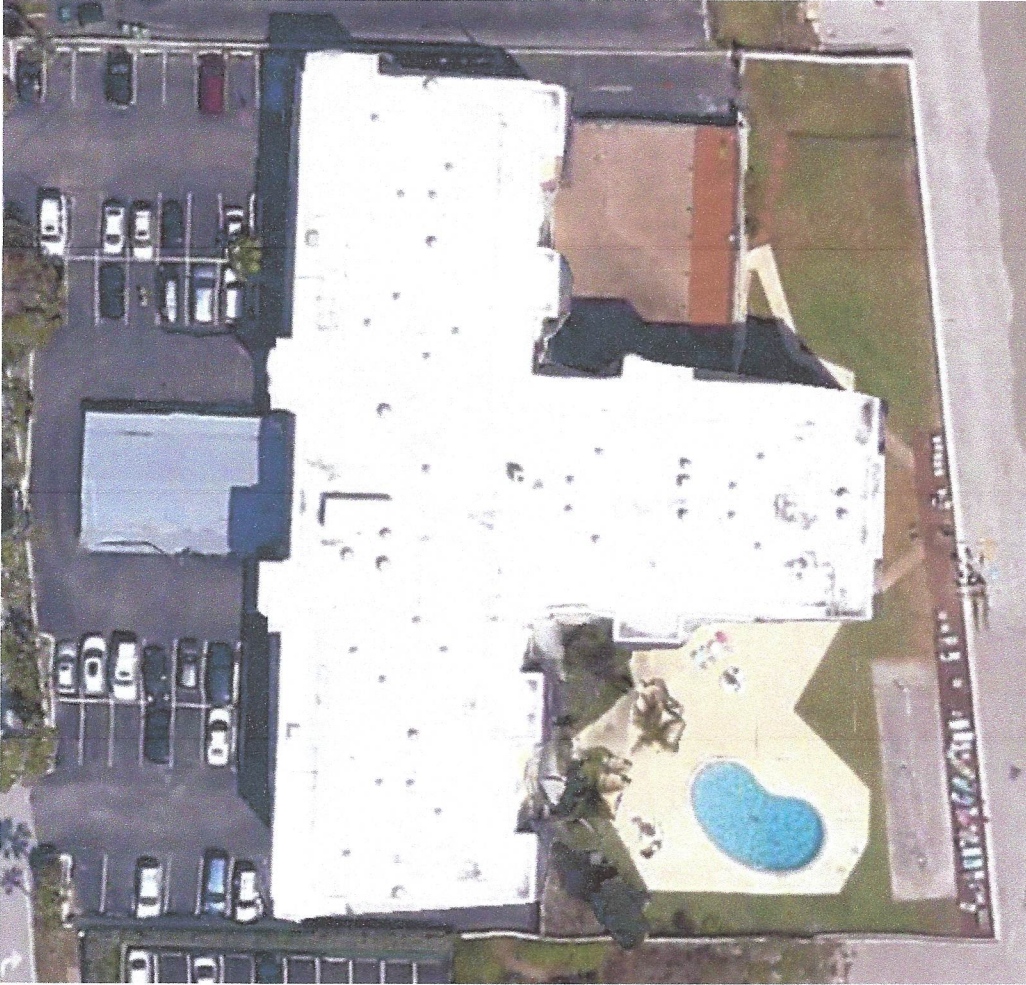
View of reemergence of leakage evidence along north edge after previous refinishing



View of reemergence of leakage evidence along north edge after previous refinishing

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Aerial image of building and roofing systems

## ELECTRICAL SYSTEM

The electrical systems throughout the structure are original from the time of building construction. A cursory visual inspection of the readily accessible components of the electrical systems within the commons areas was performed and the following conditions are detailed below:

### **Inspection Findings**

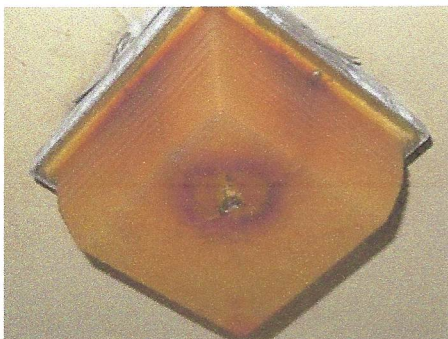
- There are several damaged light fixtures with damaged and/or missing globes or covers in various locations of the south covered parking areas. All such areas should be located and replaced for personal safety and protection of the electrical system.
- The pool equipment room sub-feed panel cover is missing a knock-out blank and a knock-out blank filler should be installed to prevent against contact with energized components.

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- There was an open junction box with exposed wiring due to removal of a light fixture at the lobby southwest ceiling. If no other fixture is installed at this location then the exposed wires must be covered with an appropriate electrical box plate cover.
- The non-metallic sheathed wiring at the front carport north side pole-mounted light fixture is exposed to physical damage and needs to be protected by conduit or other approved means.
- There was disconnected conduit with exposed wiring at the front carport north side which needs to be repaired.
- The rear deck area stairway light fixture is damaged and needs to be replaced.
- The rear deck area stairway receptacle weatherproof enclosure has been improperly repaired with tape and requires correction. In addition, the receptacle does not have ground fault protection and needs
- The north stairway fourth-floor landing light fixture is damaged and needs to be replaced.
- The north stairway third-floor landing light fixture has a missing globe which needs to be replaced.
- The second-floor laundry room restroom light fixture has a missing globe which needs to be replaced.
- The maintenance office south wall junction box is open with exposed wiring which should be covered with an appropriate cover plate.



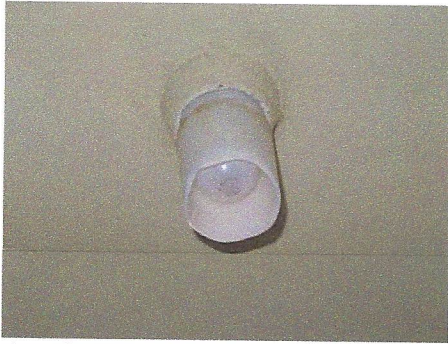
View of typical damaged light fixture cover in south covered parking area



Another view of typical damaged light fixture cover in south covered parking area

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Another view of typical damaged light fixture cover in south covered parking area



View of typical missing cover at laundry room restroom light fixtures



View of damaged light fixture in north stairway at fourth-floor landing



Closer view of damaged light fixture



View of damaged light fixture at rear deck stairway



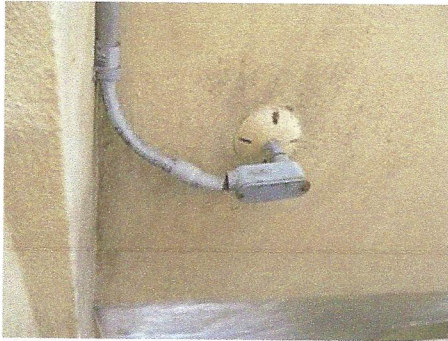
Closer view of damaged light fixture



View of receptacle weatherproof cover with improper tape repair and absence of ground fault protection

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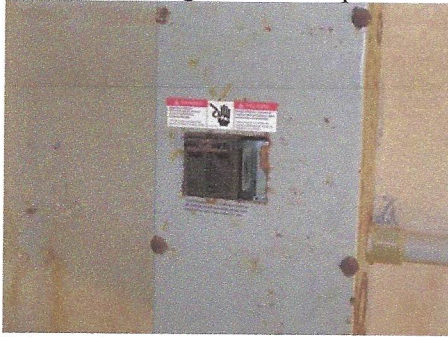




View of disconnected conduit with exposed wiring at front carport north side



Closer view of disconnected conduit and exposed wiring



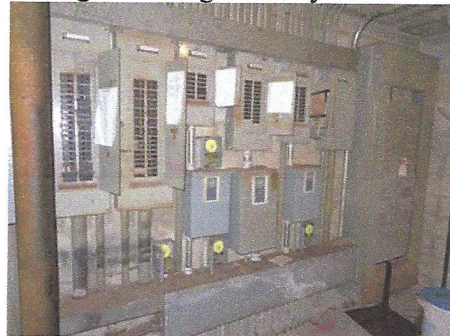
View of pool equipment electrical disconnect and missing knock-out blank



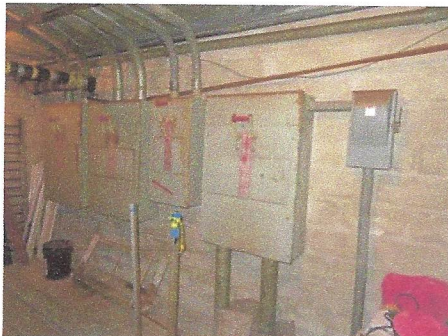
View of open junction box and exposed wiring at ceiling in lobby area



General view of typical meter bank and main disconnects in electrical rooms on most floors



General view of main electrical room distribution panels and main disconnects



General view of main electrical room and main disconnects

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## PLUMBING SYSTEM

The plumbing systems throughout the structure consist of copper supply piping and cast-iron waste piping which are original from the time of building construction. A visual inspection of the readily accessible components of the plumbing systems within the commons areas was performed and the following conditions are detailed below:

### **Inspection Findings**

- There was evidence of plumbing component leakage (water damage) observed at the Card Room northeast ceiling/soffit. Representatives of the association indicated the leakage occurs due to back-ups in the cast-iron waste lines.
- There was evidence of current and previous leakage at numerous areas of the cast-iron waste piping observed throughout the covered parking areas at the north and south sides of the structure. Additionally, there are several areas with cracked and heavily corroded cast-iron waste lines. Evidence of previous leakage and improper/temporary repairs were noted at numerous locations.

Given the nature of the above noted conditions, it is recommended that the cast-iron waste lines be replaced. Since the repair and estimating process for piping replacement is so labor intensive and since existing conditions after further examination could reveal additional deficiencies and related repair costs, completely reliable estimates for this remedial procedure are not practical. The obtaining of several competitive bids for the required remedial work is recommended.

- The supports for various piping, throughout the covered parking areas, have rusted away. All such areas should be located and properly supported to prevent sagging of the lines and undue vibration which can result in damage and/or leakage.
- There were unsupported water supply and waste lines observed in the following locations: pool equipment room, north covered parking area at several locations and south covered parking area at several locations. All such areas should be located and properly supported to prevent sagging of the lines and undue vibration which can result in damage and/or leakage.

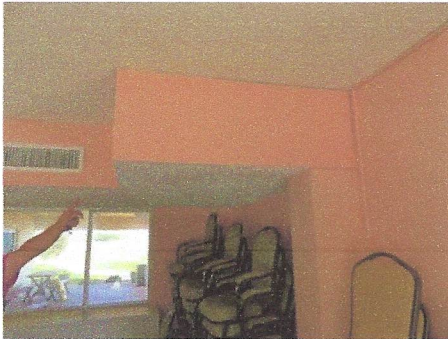
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Pictures



View of leakage evidence from plumbing components above ceiling in card room



Closer view of leakage evidence which occurs due to back-ups in cast-iron waste piping



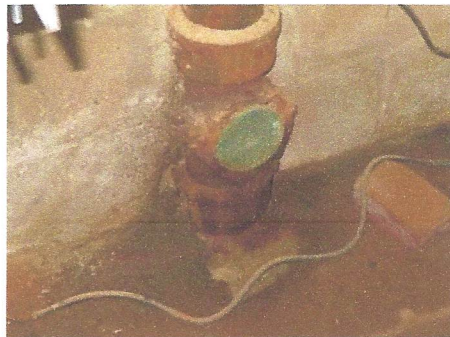
View of leakage evidence at PVC waste line connection to cast iron in pool equipment room



Closer view of leakage evidence



View of typical cast-iron waste piping in boiler room



View of leakage evidence from cast-iron clean-out in boiler room

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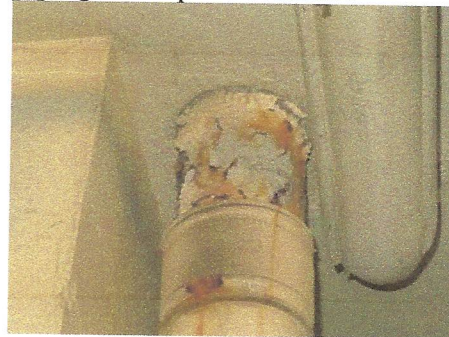
View of typical heavily corroded/deteriorated cast-iron waste piping and repairs evidence



View of typical heavily corroded/deteriorated cast-iron waste piping and repairs evidence



View of typical improper repair evidence and leakage waste piping



View of typical heavily corroded/deteriorated cast-iron waste piping and repairs evidence



View of typical cast-iron waste piping, from living units, in south covered parking area



Closer view of leakage evidence from cast-iron waste piping

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View of typical cracked and deteriorated cast-iron waste piping with evidence of leakage



View of typical piping supports which have rusted away in covered parking areas



Closer view of piping supports which have rusted away in covered parking areas



Closer view of piping supports which have rusted away in covered parking areas



Another view of piping supports which have rusted away in covered parking areas



View of improper support of piping in south covered parking area



Closer view of improper piping support



View of unsupported waste piping in north covered parking area

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View of unsupported waste piping in north covered parking area



View of unsupported supply piping in pool equipment room

### MECHANICAL SYSTEMS

The mechanical systems throughout the structure consist of the following: geothermal heat exchanger with associated hydronic supply piping, return piping and circulating pumps which work in conjunction with air handlers in the individual living units. In addition, there are ventilation systems provided throughout the structure for venting/exhaust of kitchens, bathrooms and laundry rooms. A visual inspection of the readily accessible components of the mechanical systems within the commons areas was performed and the following conditions are detailed below:

#### **Inspection Findings**

- The hydronic supply and return lines exhibit evidence of previous leakage and improper/temporary repairs at various locations throughout the covered parking areas. All areas exhibiting evidence of leakage and improper repair should be located and corrected. The hydronic piping is wrapped with insulation in most areas, which conceals possible defects. It is the recommendation of this firm that the insulation should be removed from a representative number of locations to ascertain the condition of the piping and whether additional deficiencies are present.
- Most, if not all, of the shut-off valves at the hydronic supply/return lines throughout the covered parking areas have deteriorated valve handles and are inoperable. Replacement of the all affected shut-off valves is recommended.
- The book room air handler unit has restricted air movement across the evaporator coil due to a dirty coil which needs to be pressure cleaned.
- The maintenance office air handler unit has been dismantled and abandoned. Replacement of the air handler unit is recommended.

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- Most, if not all, of the rooftop ventilation domes/covers have been improperly repaired and/or secured with duct tape or the like. There were also numerous areas with corroded or missing fasteners which permit moisture intrusion into the structure. The ventilation domes/covers should be properly secured in manner which provides protection against high velocity windstorms as well as moisture intrusion. If the ventilation domes/covers cannot be suitably repaired/secured, then replacement of the ventilation assembly is advised.
- Many of the laundry room restroom exhaust fans have been removed. The exhaust fans which have not been removed are not function. Replacement of the all exhaust fans is recommended, should the restrooms be restored for use.
- There rooftop mid-east exhaust flue (chimney) is open to weather and moisture intrusion. An appropriate cap should be installed to prevent moisture intrusion into the structure.

Notation: The evaluation of the mechanical systems within the confines of the individual living units was not part of this inspection, however leakage occurred from the supply lines at one of the unit air handlers during the time of this inspection, which resulted in inundation of the common areas and leakage into the lower floors.

### Pictures



View of typical hydronic supply/return lines in covered parking areas



Another view of typical hydronic supply/return lines in covered parking areas



View of typical improper/temporary repairs observed on hydronic piping



View of typical improper/temporary repairs observed on hydronic piping

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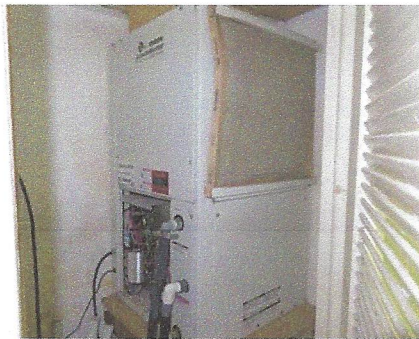




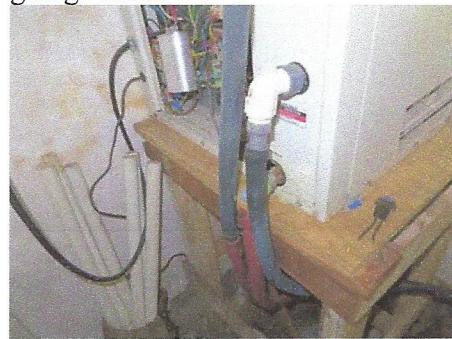
View of typical nonfunctional shut-off valve with deteriorated valve handle at hydronic piping in covered garage areas



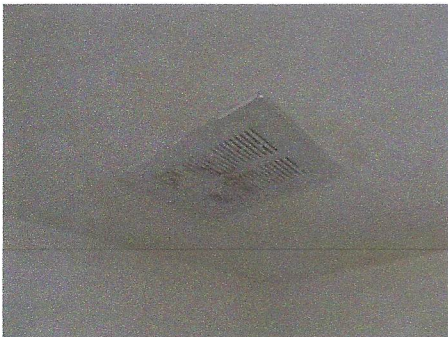
Another view of typical nonfunctional shut-off valve with deteriorated valve handle at hydronic piping in covered garage areas



View of card room area air handler unit



View of typical rubber supply and return lines which should be routinely checked for wear/deterioration



View of typical nonfunctional exhaust fan observed in laundry room restrooms



View of typical missing exhaust fan assembly in laundry room restrooms



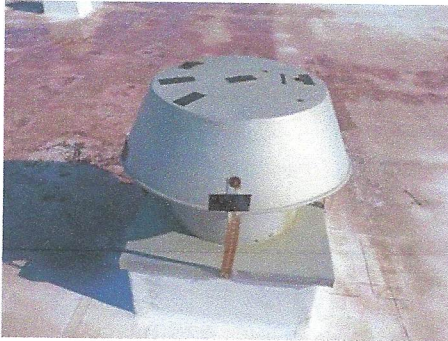
View of typical improper duct tape repairs at ventilation dome/covers



View of typical improper duct tape repairs at ventilation dome/covers

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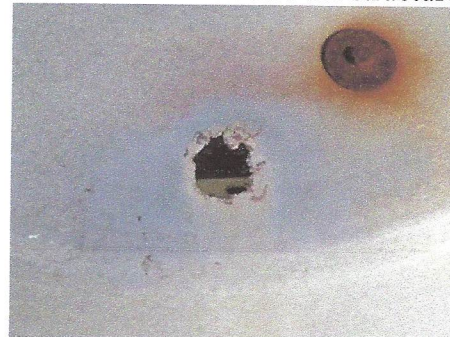
View of typical improper duct tape repairs at ventilation dome/cover



View of typical ventilation dome/cover which has rusted through and allows moisture intrusion into the structure



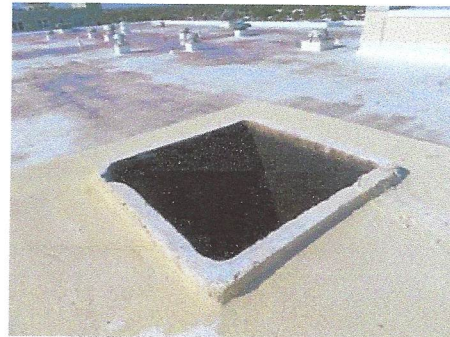
Another view of typical ventilation dome/cover which has rusted through and allows moisture intrusion into the structure



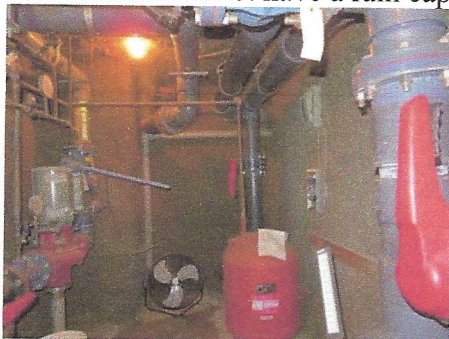
Closer view of holes in ventilation dome/cover which allow moisture intrusion into structure



View of chimney at mid-east rooftop area which does not have a rain cap



Closer view of chimney and absence of a rain cap



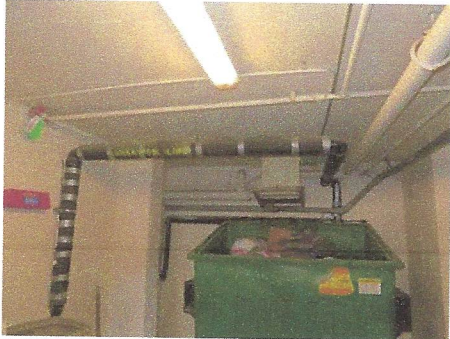
View of mechanical room and related components



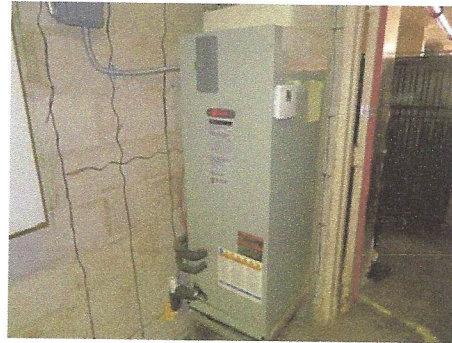
View of hydronic piping in mechanical room

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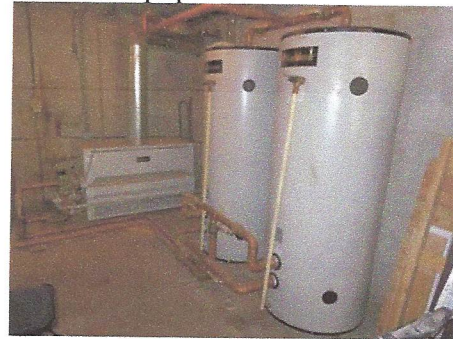
View of hydronic piping in dumpster area



General view of air handler unit in elevator equipment room



View of condensing unit for elevator equipment room



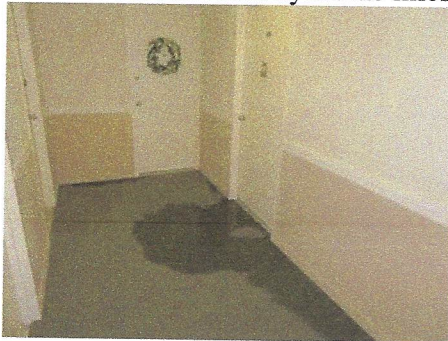
General view of boiler room



View of inundation which occurred in fourth-floor south corridor due to leakage from air handler unit hydronic lines



Another view of inundation on fourth-floor



View of leakage at third-floor from above unit

*XG & Sel*  
6/27/19





The purpose of this structural inspection is to visually find evidence of abnormal settlement, lateral movement or structural weakness in the accessible load bearing structural components of the structure. All conclusions of the inspector have been made on the basis of what was visible and accessible at the time of the inspection and are not opinions covering areas where inspection of any portion of the structure would necessitate removing or defacing any part of the structure. Where accessible, the inspector's examination includes various areas of the structure.

Putting together all the inspector's observations regarding the load bearing structural components that were inspected (listed below) this structure, with a minimal amount of shrinkage, settlement or expansion crack lines, revealed the following:

### **Inspection Findings**

- Spalling conditions were visible at this structure in the following locations: south covered parking area ceiling/soffit over "Garrett" parking space, south covered parking area beam over southwest entry, south covered parking area ceiling/soffit over "Smith" parking space, south covered parking area south beam, north covered parking area ceiling and beam adjacent to #401, unit #505 balcony at corner, south covered parking area at the bottom of several columns, north and south covered parking area ceiling/deck at various plumbing penetrations, exterior north side column adjacent to barbecue area, exterior east side window sill north of card room and exterior north side headers/lintels over some of the second, third and fourth-floor windows. In addition to the above noted areas, there were numerous balconies with cracks at the corners and along the edges which should be sounded and/or opened to ascertain whether spalling is present.

"Spalling" is a condition where the reinforcing steel rods within the concrete rust or scale, causing outward pressure upon the concrete and forcing the structural member to weaken at that point. We recommend the condition be repaired by breaking off any loose concrete, exposing the rebar to inspection, wire brushing the steel and/or replacing any steel that has lost 25% of its diameter and then using gunite or a high compression cement to replace the area of damaged concrete.

Since the repair and estimating process for spalling conditions is so labor intensive and since existing conditions after further examination could reveal additional deficiencies and related repair costs, completely reliable estimates for this remedial procedure are not practical. In addition, no allowance can be provided for the accessibility required to make repairs. Estimation should include an allowance for scaffolding, swing-stages or other vertical means of access to conduct the necessary repairs. The obtaining of several competitive bids for the required remedial work is recommended.

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6/27/19





It is also noted that most, if not all, of the windows have roll-down storm shutters with externally mounted enclosures which may be concealing possible spalling conditions on the header/lintels. Additional evaluation beyond the scope of this visual inspection (i.e. removal of the shutter enclosures) may be necessary to ascertain the extent of spalling conditions.

- The north covered parking area northeast column has rusted through and needs to be replaced. There are also several other columns in the nearby areas affected by corrosion which needs to be wire brushed and protected with rust inhibitive to prevent further deterioration which can lead to loss of structural integrity.
- There was prevalent evidence of moisture penetration around the window openings. Most, if not all of the windows are original from the time of building construction. It is the recommendation of this firm that consideration be given towards budgeting for replacement of the windows.

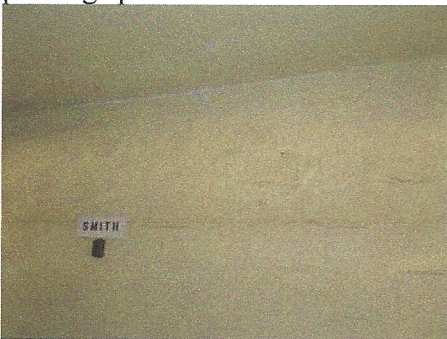
### Pictures



View of spalling condition at ceiling in covered parking area near "Garrett" parking space



Closer view of spalling conditions



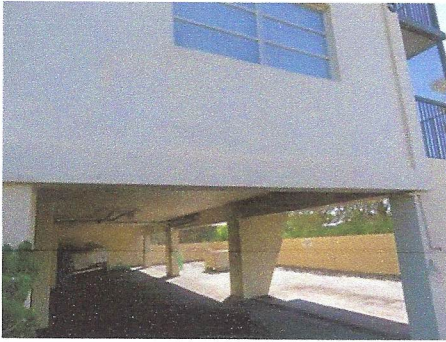
View of spalling condition at ceiling in covered parking area near "Smith" parking space



Closer view of spalling conditions

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6/27/19





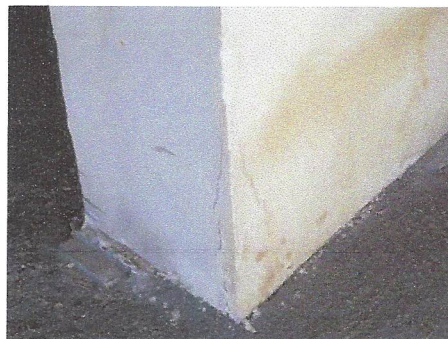
View of spalling condition at southwest beam over entry into south covered parking area



Closer view of spalling conditions



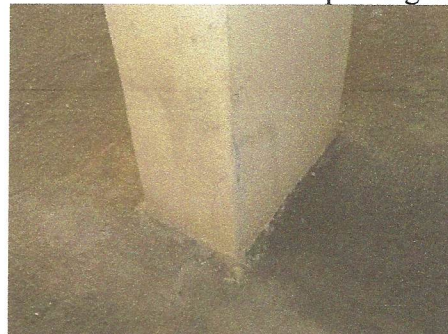
Another view of spalling conditions at beam



View of spalling conditions at base of column in south covered parking area



View of spalling conditions at base of column in south covered parking area



View of spalling conditions at base of column in south covered parking area



Closer view of spalling condition at base of column in south covered parking area



View of spalling evidence at north beam over front carport

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Closer view of spalling evidence and patching



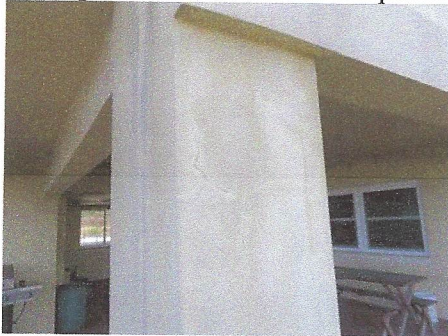
View of spalling condition at north covered parking area ceiling/deck near #401



Closer view of spalling condition at ceiling/deck in north covered parking area



View of barbecue area and column with spalling condition



Closer view of spalling conditions on column at barbecue area



View of typical exterior north side window with spalling condition at header/lintel



Closer view of spalling condition on header/lintel



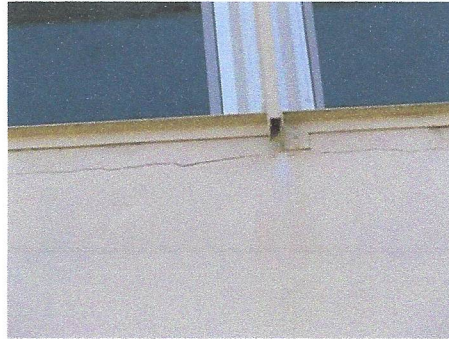
Another view of spalling condition on header/lintel

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View of exterior north side window with spalling condition at sill below



Closer view of spalling condition at sill below window



View of exterior east side window adjacent to card room with spalling condition at sill



Closer view of spalling condition on sill below window



View of east side stairway from rear deck



View of spalling condition at upper stairway landing



Closer view of spalling condition at landing



View of spalling condition at edge of landing

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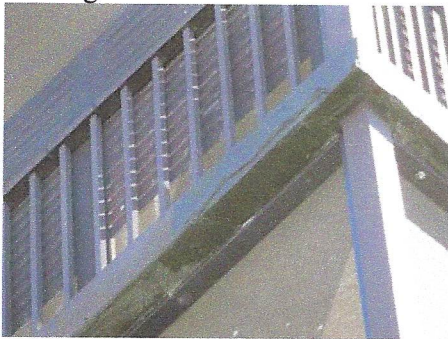




View of spalling condition at edge of landing



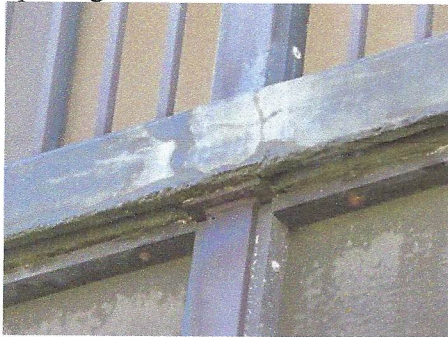
View of spalling condition at underside of stairway



View of typical cracks on balcony edges which should be opened and/or sounded for spalling



View of typical cracks on balcony corners which should be opened and/or sounded for spalling



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View of north covered parking area northeast column which has rusted through and needs to be replaced



Closer view of column which and foundation which need to be replaced

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View of typical north covered parking area column with corrosion which needs to be wire brushed and protected with rust inhibitive



Closer view of typical corrosion on north covered parking area columns



General view of typical north covered parking area columns



Closer view of typical corrosion on north covered parking area columns



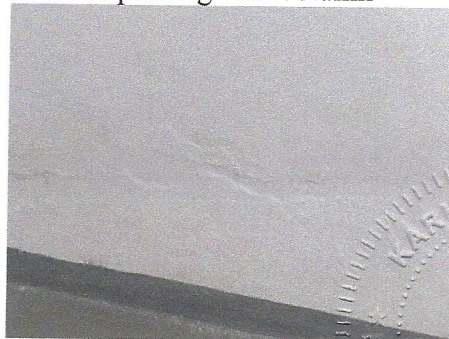
General view of typical north covered parking area columns



Closer view of typical corrosion on north covered parking area column



View of typical moisture penetration evidence around window openings in stairway



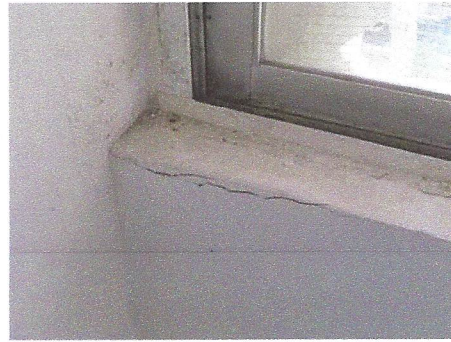
Closer view of moisture penetration evidence

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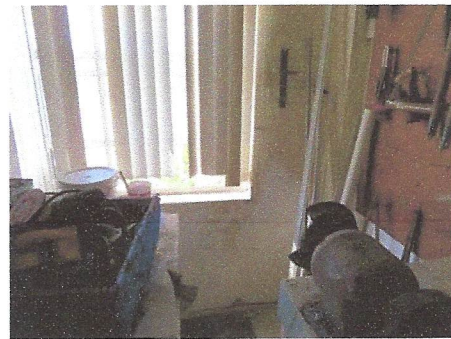
View of typical moisture penetration evidence around window openings in stairway



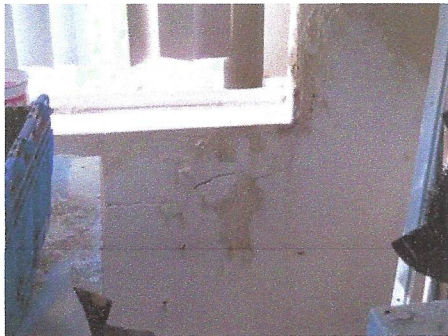
Closer view of moisture penetration evidence



Closer view of moisture penetration evidence



View of moisture penetration evidence at maintenance office wall around window



Closer view of moisture penetration evidence

## ELEVATORS

The elevators consist of two (2) hydraulic elevator systems which, in most part, are original from the time of building construction, save for repairs and modifications which have been conducted throughout the lifespan of the structure. A cursory visual inspection of the readily accessible components of the elevator systems was performed and the following conditions are detailed below:

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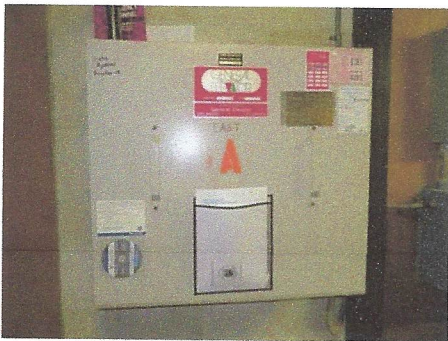




### Inspection Findings

- The condominium association representative indicated that there is a service contract on the elevator systems through ThyssenKrupp which has submitted a proposal for repair work to be done on the systems. On March 26, 2019, Michael Cocchiola, the service/sales representative for ThyssenKrupp was contacted to discuss the repair proposals and service history for the elevator systems. Cocchiola followed up by email correspondence promising to provide all service records and repair proposals. As of April 30, 2019, Building Inspection Services has yet to receive the information, after several attempts to reach Cocchiola.

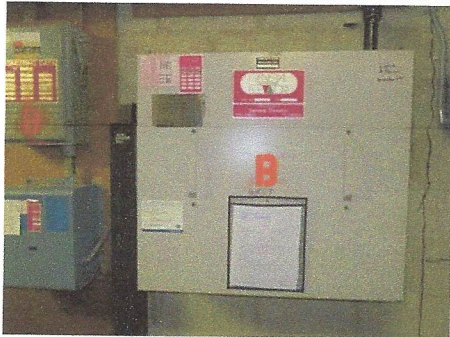
### Pictures



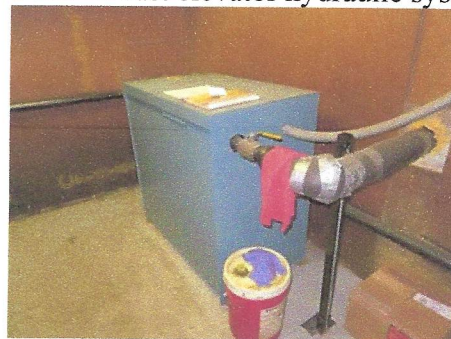
View of east elevator control board



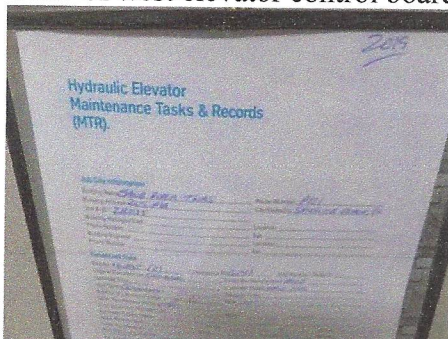
View of east elevator hydraulic system



View of west elevator control board



View of west elevator hydraulic system



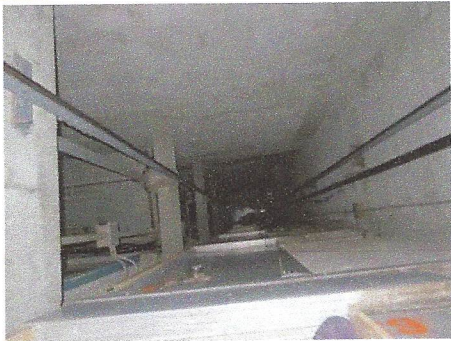
View of ThyssenKrupp service log posted in elevator equipment room



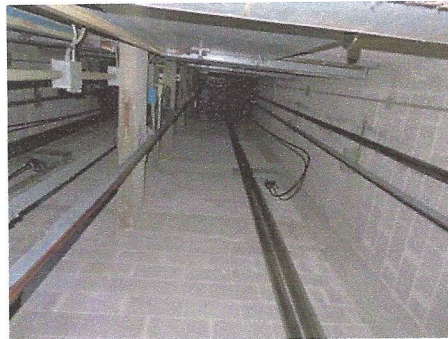
View of top of elevator hoistway

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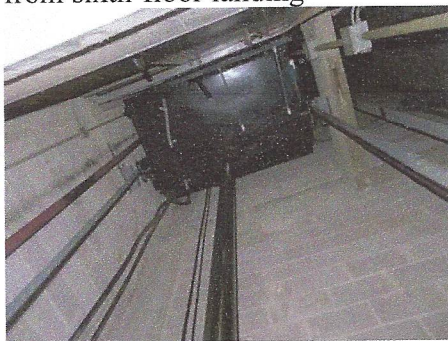




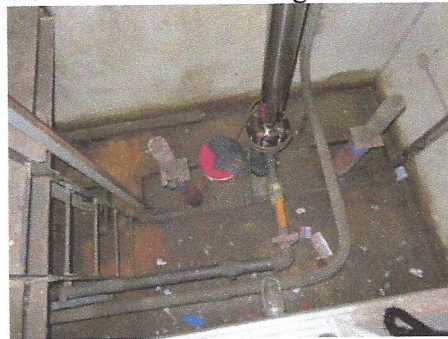
View of elevator hoistway looking down from sixth-floor landing



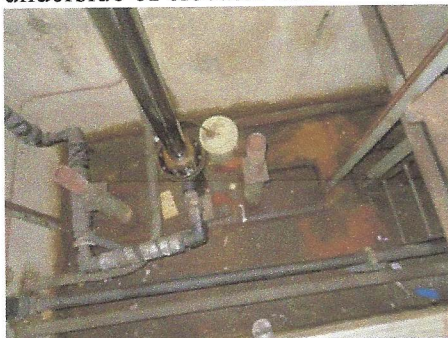
View of elevator hoistway looking down from sixth-floor landing



View of elevator hoistway looking at underside of elevator cab



View of elevator hoistway pit below west cab



View of elevator hoistway pit below east cab

## SEAWALL

The seawall/retaining wall was inspected for structural soundness and the following conditions were found:

### **Inspection Findings**

- Spalling conditions were observed at numerous locations of the retaining wall columns, cap and panels.

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“Spalling” is a condition where the reinforcing steel rods within the concrete rust or scale, causing outward pressure upon the concrete and forcing the structural member to weaken at that point. We recommend the condition be repaired by breaking off any loose concrete, exposing the rebar to inspection, wire brushing the steel and/or replacing any steel that has lost 25% of its diameter and then using gunite or a high compression cement to replace the area of damaged concrete.

Since the repair and estimating process for spalling conditions is so labor intensive and since existing conditions after further examination could reveal additional deficiencies and related repair costs, completely reliable estimates for this remedial procedure are not practical. The obtaining of several competitive bids for the required remedial work is recommended.

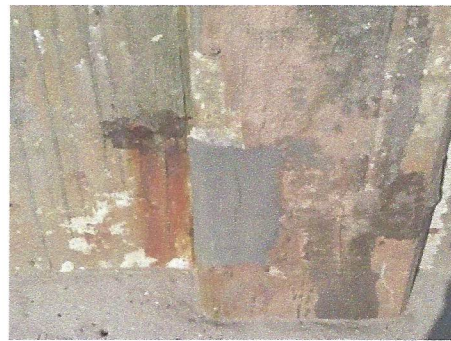
- Many of the seawall panels have open joints which need to be properly sealed/filled to prevent washout of the backfill.

Notation: Repairs of the seawall/retaining wall require approval local jurisdiction, as well as environmental agencies. No allowance pertaining to possible fees have been included in the repair estimation. The local municipality should be contacted to establish all applicable fees for the recommended repairs.

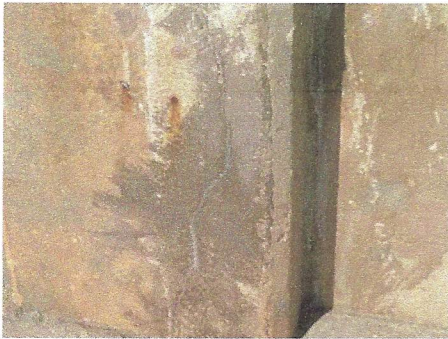
### Pictures



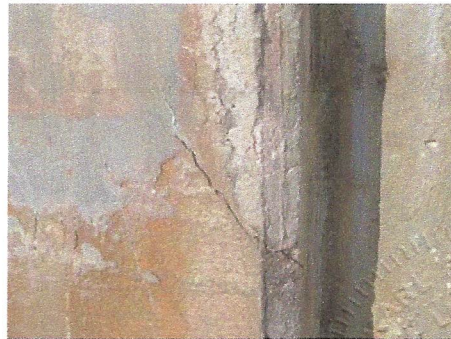
View of typical spalling condition on seawall column



View of typical spalling condition on seawall column



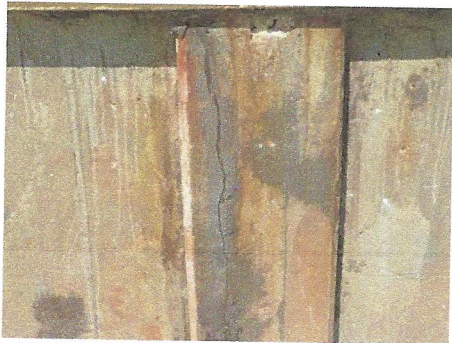
View of typical spalling condition on seawall column



View of typical spalling condition on seawall column

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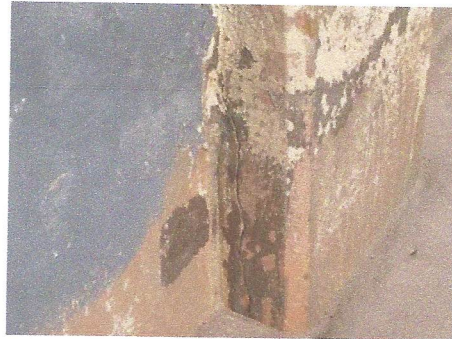
View of typical spalling condition on seawall column



Closer view of typical spalling condition on seawall column



Closer view of typical spalling condition on seawall column



Closer view of typical spalling condition on seawall column



Closer view of typical spalling condition on seawall column



View of typical cracks associated with spalling at seawall panels



View of typical open joint in seawall panels which need to be properly sealed to prevent washout of backfill



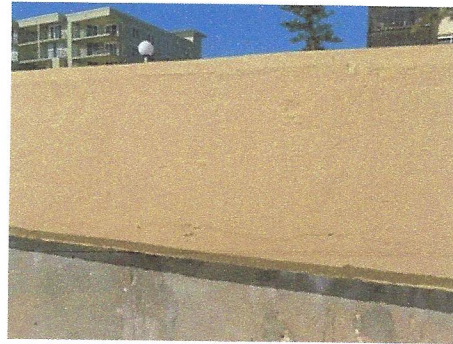
Closer view of typical open joint at seawall face

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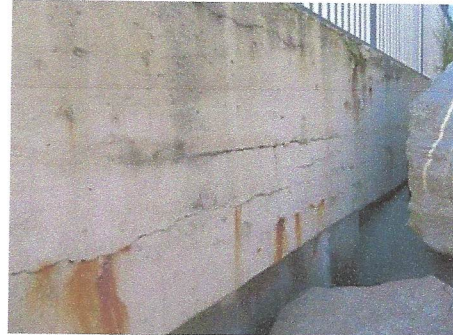
Closer view of typical open joint at seawall face



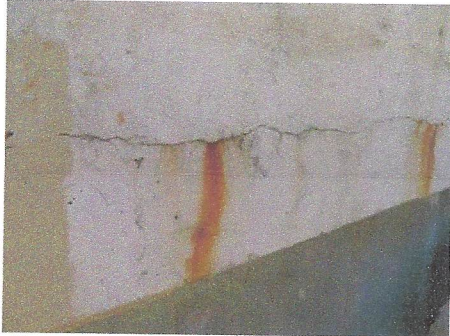
View of spalling evidence at seawall cap at east side



View of spalling evidence at seawall cap at east side



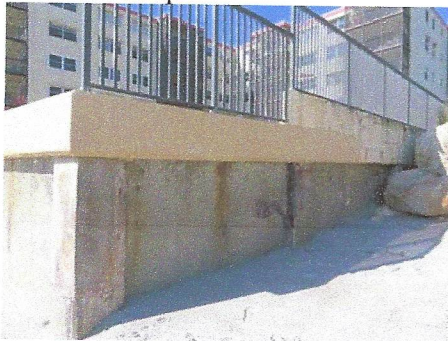
View of spalling evidence at seawall cap at north side



Closer view of spalling evidence at north side cap



Closer view of spalling evidence at north side cap



General view of seawall south elevation



General view of seawall south elevation

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General view of seawall east elevation

### SWIMMING POOL

The above ground pool recirculating system and equipment were checked for functionality and the following conditions were found:

#### **Inspection Findings**

- The pool equipment external bonding protection is missing and needs to be installed for proper grounding of the system. An electrical contractor should be retained to properly ground the pool equipment with existing bonding for personal safety.
- The pool light fixture does not function. Replacement of the pool light assembly is recommended.
- There was leakage evidence observed at the pool equipment chlorinator housing due to deteriorated gasket/seal which needs to be replaced.
- Excessive air bubbles were observed coming out of the return jets which is an indication of leakage on the suction side of the system. We recommend the system be serviced to determine the condition of the suction side lines, seals and valves.
- There is apparent water loss from the pool at the perimeter drainage according as indicated by the building maintenance personnel. The pool is refilled daily due to water loss, according to maintenance. Further investigation beyond the scope of this visual inspection (i.e. pressure test on the lines or a dye test) is recommended.

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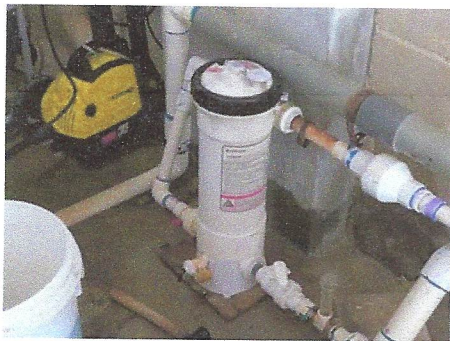
Pictures



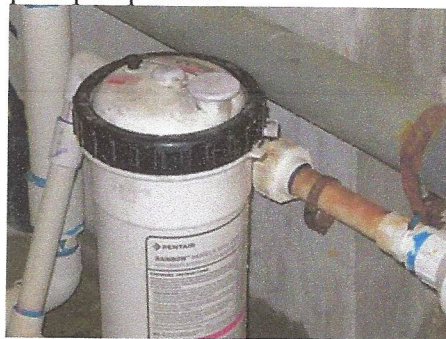
View of pool recirculating pump



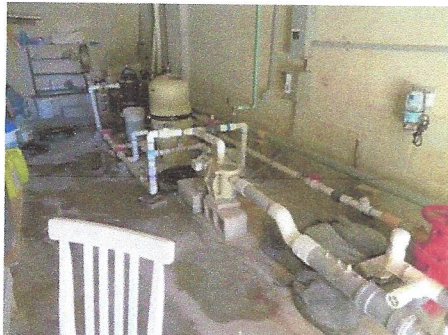
View of missing external bonding wire at pool pump motor



View of chlorinator cell with leakage at top cover



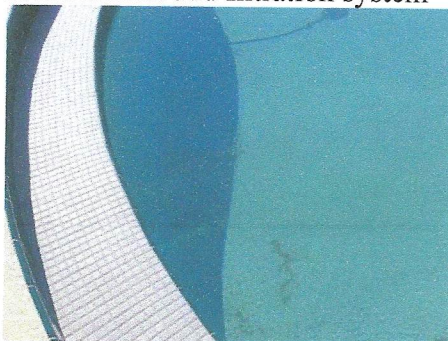
Closer view of chlorinator cell cap which leaks due to a deteriorated seal/gasket



General view of swimming pool recirculation and filtration system



View of abandoned cartridge filter



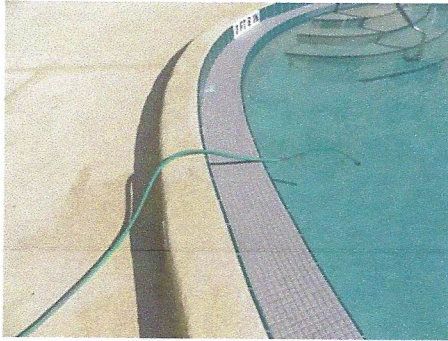
View of excessive bubbling from return jets which is an indication of leakage on the suction side



General view of swimming pool

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View of pool being refilled



View of perimeter drainage shelf which leaks, as per building maintenance personnel

### FIRE ALARM SYSTEM

The fire alarm system and related components were checked for functionality and the following conditions were found:

#### **Inspection Findings**

- There was a "System Trouble" code indicated on the fire alarm control panel indicating a fault within the system. The system is currently disabled and incapable of functioning as designed and intended.
- The Radionics Fire Alarm Communicator and Fire Control Instruments, Inc. Fire Alarm Control Center were manufactured in 1991 and therefore have exceeded their useful service life. Most fire alarm systems are manufactured to have a life span of 10 to 15 years. Of course, many systems are in service far longer, but maintenance and replacement parts become more costly and difficult to acquire once the manufacturer no longer supports the product.

In addition, the smoke detectors in the hallway corridors, which work in conjunction with the fire alarm system, are comparatively aged and therefore have exceeded their useful service life.

Given the number and/or extent of the individual defects described above, we feel the overall conditions indicate that the smoke detectors, fire alarm and fire communications systems are no longer suitable for repairs and therefore need to be replaced.

*K. J. Hill*  
6/27/19

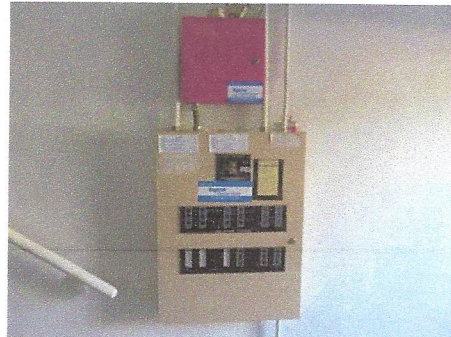




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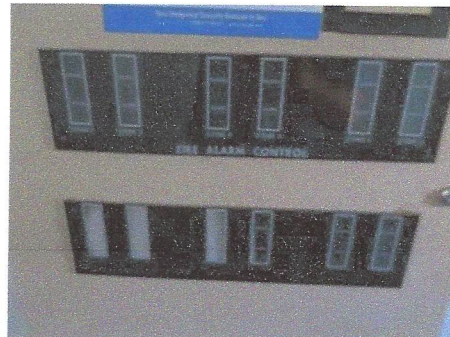
View of typical smoke detector device in hallway corridors which has exceeded its useful service life



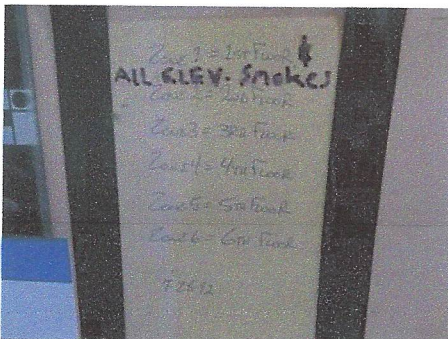
View of fire alarm control panel and communications panel



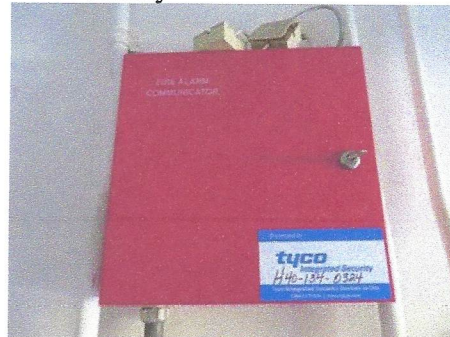
View of "System Trouble" code displayed on fire alarm control panel



View of fire alarm control panel zones which are not illuminated to indication functionality



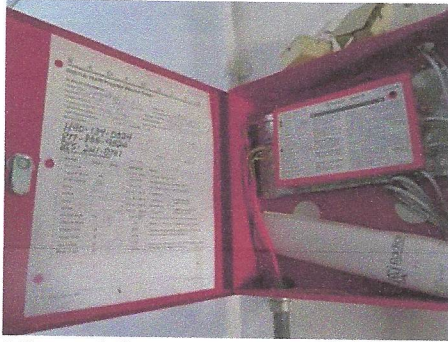
View of fire alarm zone schedule per floor



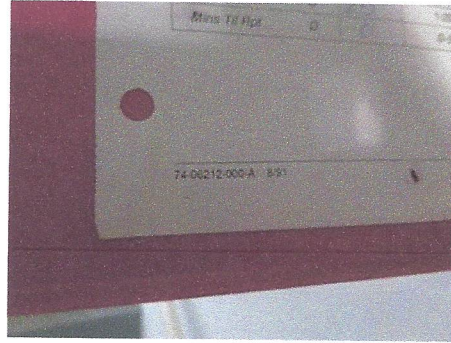
View of fire alarm communications panel

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View of fire alarm communications panel with door open



View of manufacturing date on fire alarm control panel

*Joe F. [Signature]*  
6/27/19





**GENERAL TERMS AND CONDITIONS**

*Scope of Roof Report*

**NOTICE: THIS IS NOT A STRUCTURAL DAMAGE REPORT.** This is a report of the observable evidence of leakage thru the roof covering on the date of inspection. This inspection does not include, except as noted in this report, the following: nonpermanent roof attachments such as, but not limited to, aluminum, fiberglass, wood or canvas; the quality of existing repairs; conditions requiring routine maintenance; surface deterioration; cracked, broken or loose tile; life expectancy; surface drainage; gutters; detached structures; or any damage to the cosmetic or structural components of the structure from roof leakage.

If any evidence of past or present roof leakage or repair is noted in this report, it is recommended that the property owner and other interested parties review the repair contract, or contracts, to determine who made the repairs, what the scope of repairs were and what warranties were issued. **DUE TO THE DIFFICULTY OF DETERMINING THE WATERTIGHTNESS OF REPAIR WORK WITH ONLY A VISUAL INSPECTION, IF NO PREVIOUS ROOF REPAIR CONTRACTS OR WARRANTIES ARE AVAILABLE THEN FURTHER MORE CONCLUSIVE TESTING, IN THE FORM OF A CONTROLLED WATER TEST, IS AVAILABLE AS A SEPARATE SPECIAL INSPECTION.** It is further recommended that the property owner or other interested parties have a structural inspection performed to determine the existence and nature of structural damage to the inspected property.

*Scope of Mechanical, Electrical, Plumbing and/or Structural Report*

This is a report of only the observable, functional deficiencies and apparent condition of the mechanical and structural components of the systems inspected, on the date of inspection. The Inspection service does not include, nor does policy permit, the relocation of equipment, cartons, furnishings or any other item restricting the testing or visual examination of the entire or component parts of these systems. The report may not mention these items of exclusion due to visual restrictions at the time of inspection.

**THE FOLLOWING ITEMS AND CONDITIONS WERE NOT INCLUDED IN THE RESPECTIVE INSPECTION PHASE BUT ARE AVAILABLE AS SEPARATE SPECIAL INSPECTIONS: ELECTRICAL SYSTEM** - low or fluctuating line voltage from the utility, plug-in fixtures or appliances and equipment specifically included in any other inspection phase; **AIR CONDITIONING** - the design, balance and BTU Cooling or heating capacity of the system; **KITCHEN APPLIANCES** - clothes washer, clothes dryer and all portable (not built-in) appliances; **PLUMBING SYSTEM** - low or fluctuating water pressure from the utility, the septic tank/drain field or sewer hook-up and all water treatment equipment; **SWIMMING POOL** - testing for leakage and all pool system attachments; **STRUCTURAL COMPONENTS** - termite damage and/or structural termite damage, design and load calculations, moisture penetration through exterior vertical or horizontal surfaces, interior or exterior damage caused by such conditions and all non load bearing components.

**ADDITIONAL INSPECTION PHASES AVAILABLE INCLUDE, BUT ARE NOT LIMITED TO:** Mold, Moisture Screening, Wind Mitigation, 4-Point Insurance, Chinese Drywall, Lawn Sprinklers, Clothes Washer & Dryer, Windows & Hardware, Doors & Hardware, Fireplaces & Chimneys, Insulation, Hot Tubs, Saunas, Whirlpools, Fountains, Intruder Alarm Systems, Catch Basins, Driveways & Paved Surfaces, Elevators, Fences, Gutters, Intercom Systems, Septic Tank Systems, Solar Heating Systems, Water Treatment Systems, Well Pumps, Moisture Penetration thru Vertical Surfaces, Cosmetic and/or Structural Termite Damage, Tennis Courts, and any other exterior appurtenance, etc.

*General Notations for all Inspection Phases*

The accuracy of the information, opinions, estimates of repair/replacement costs or useful life expectancies contained in this certified report, based on a visual inspection only, are not to be construed as a guarantee that any deficiency does or does not exist, nor as a guarantee that future deficiencies will not occur, therefore Building Inspection Services assumes no liability resulting from this report. **THE COSMETIC FEATURES AND CODE COMPLIANCE OF THE SYSTEMS INSPECTED, EXCEPT AS NOTED IN THE REPORT WERE NOT PART OF THIS INSPECTION; EITHER ARE AVAILABLE AS A SEPARATE SPECIAL INSPECTION.** Some inspection phases, or items and components mentioned in this report, may not be included in the buyer's rights under the purchase contract. For clarification of your particular inspection rights consult your Realtor, Broker or Attorney. **THE INSPECTION RESULTS CONTAINED IN THIS REPORT ARE NOT INTENDED TO RELIEVE OR INDEMNIFY THE SELLER FROM ANY PRE-CLOSING RESPONSIBILITIES OR OBLIGATIONS NOR TO SUBSTITUTE FOR THE BUYERS FINAL WALKTHRU INSPECTION BEFORE CLOSING. FURTHER EXPLANATION OR CLARIFICATION, IF REQUIRED, IS AVAILABLE UPON REQUEST.**

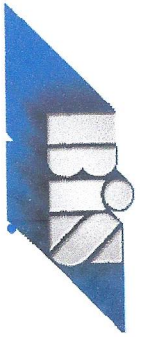
If any action, special proceedings or other proceeding shall be brought arising out of, in connection with or by reason of this inspection report, it is understood and agreed to by the parties hereto that BIS is not an insurer, that the payment for the inspection and inspection report is based solely on the value of the service provided by BIS in the performance of the limited visual inspection and production of the inspection report as described herein, that it is impracticable and extremely difficult to fix actual damages, if any, which may result from a failure to perform such services, and in the case of failure to perform such services (mistakes or omissions) and resulting loss, BIS's liability hereunder shall be limited and fixed in an amount equal to the cost of that portion of the inspection report which is in contention, as liquidated damages, and not as a penalty, and this liability shall be exclusive. CLIENT understands and agrees that CLIENT shall pay an additional fee of three times the amount of the inspection fee to receive a report without these limitations. The adverse party shall reimburse Building Inspection Services for the cost of said action and for reasonable attorney's fees and the venue thereof shall be Miami-Dade County, Florida.

**UNBIASED WRITTEN INSPECTION REPORTS**



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6/27/19





**BUDGET ANALYSIS**

BIS Case # 009/1902/23778

Component	Description	Estimated age (years)	Estimated remaining useful life expectancy (years)	* Estimated current replacement cost expressed as:				
				Total amount	(a) 35, 2-bedroom 2-bathroom apartments with square feet each	(b) 15, 1-bedroom 1-bathroom apartments with square feet each	(c) 10, 3-bedroom 3-bathroom apartments with square feet each	(d) 1, 1 bedroom 1-bathroom apartments with square feet each
Roof System	Built-Up Tar & Gravel	17	0	\$28,457	\$473	\$419	\$527	\$384
Elevator(s)	Hydraulic Elevator Systems	55	0	\$187,000	\$3,106	\$2,751	\$3,461	\$2,524
Fire Alarm Systems	Fire Alarms	27	0	N/A	N/A	N/A	N/A	N/A
Common Plumbing	Cast-Iron Waste Piping	55	0	\$1,100,000	\$18,272	\$16,184	\$20,361	\$14,849
Common Electrical	N/A	55	0	\$2,400	\$40	\$35	\$44	\$32
Swimming Pool	Swimming Pool & Recirculating Equipment	55	0	\$1,875	\$31	\$28	\$35	\$25
Structural & Seawall	N/A	55	0	\$2,700,000	\$44,850	\$39,725	\$49,976	\$36,448
Mechanical Systems	Geothermal/Hydronic Systems	15	10	\$0	\$0	\$0	\$0	\$0

\* Based on each unit's proportional share of the common expenses

\*\* Multiples used in calculations:

(a) 0.0166112; (b) 0.0147128; (c) 0.0185097; (d) 0.0134994

\*\*\* The aforementioned calculations were established from "Exhibit C" of the Condominium Bylaws furnished by the association.

\*\*\*\* Life expectancy is subject to many variables including, but not limited to, the quality of design, the quality of the materials used, the quality of skill of the installation, the weather conditions at the time of installation and subsequent to the installation and the quality of the continuing maintenance program adopted after the completion of the installation. The quality of materials used can only be determined with certainty by analyzing and performing test (beyond the scope of a visual inspection) and most of the other factors can only be surmised. Therefore, any life expectancy forecast can only be an educated guess based on assumptions such as: That workmanlike installation procedures and materials were employed and that diligent routine maintenance has been and will continue to be performed on an original design which met local standards. If any of these assumptions are incorrect then the life expectancy forecast may be incorrect as well. Of course, predicting what future weather conditions might be is just not possible.

*[Handwritten Signature]*  
6/27/19