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LICENSED SPECIAL
INSPECTOR OF
THRESHOLD BUILDINGS

Steven D. Young, P.E.
President

April 11, 2023

Town of Highland Beach
3616 South Ocean Boulevard
Highland Beach, Florida 33487
Attn: Jeffrey Remas, CBO Building Official

RE: HIGHLAND TOWERS, INC.
2921 SOUTH OCEAN BOULEVARD
HIGHLAND BEACH, FLORIDA 33487

STRUCTURAL MILESTONE INSPECTION – PHASE ONE

To Whom It May Concern,

The following Phase One Structural Milestone Inspection Recertification for the referenced building (Highland Towers Inc.) has been prepared by Steve Young, P.E., for the firm Howard J. Miller, P.E., Inc.

PROJECT: HIGHLAND TOWERS, INC.

- **Building address and property control number:**
 - Address: 2921 South Ocean Boulevard, Highland Beach, Florida 33487
 - Control Number: 24-43-46-33-35-000-0000
- **Name, license number and business address of the Special Inspector:**
 - Name & Licenses: Steve Young, PE: 45437; SI: 0991
 - Address: 3850 N.W. Boca Raton Blvd., Suite 1, Boca Raton, Florida 33431
- **Type of construction per Chapter 6 of the FBC:**
 - Type: 1B
- **Building footprint size, height, number of stories, total floor area:**
 - Footprint size: approximately 15,000 square feet
 - Height: approximately 80 feet
 - Number of stories: 8 floors
 - Total floor area: approximately 120,000 square feet

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- **Movement of structural components with respect to each other:**
 - During the recent concrete/stucco/masonry repair project performed under permit #'s 19-0153 and 20-0014 from 2020 through 2023 vertical, diagonal, and horizontal cracks throughout all of the exterior walls were inspected, sealed, and/or repaired, as necessary.
 - No significant movement of structural components with respect to each other was detected.
- **Deterioration of materials and any affect on the structural integrity of the building:**
 - During the above-mentioned 2020 – 2023 project, cracked and spalled concrete, stucco and masonry were determined to be caused by typical oceanfront deterioration due to rusting reinforcement steel throughout the vast majority of balconies and catwalks, and throughout the exterior walls.
 - **Repairs:**
 - Upon removal of all deteriorated stucco from all balcony and catwalk ceilings and removal of all balcony and catwalk floor coverings, all exposed concrete spalls were repaired, as necessary.
 - Upon removal of all deteriorated stucco from all exterior walls, all exposed concrete and masonry cracks and spalls were repaired, as necessary.
 - Completion of the above-mentioned repairs eliminated all, if any, significant compromise to the overall structural integrity of the building.
- **The manner in which the inspection occurred and inspection and testing method:**
 - During the above-mentioned 2020 – 2023 project, all balconies, catwalks, and exterior walls were inspected via visual and sound tapping methods. Upon removal of delaminated stucco and concrete all exposed concrete and masonry were inspected again utilizing the same visual and soundings methods in order to determine the extent of necessary concrete removal, reinforcement repairs, and replacement of concrete.
- **Condition of foundation, columns, bearing walls, steel framing, roof system, windows, seawall, etc.**
 - See report commentary and conditions of the above-mentioned building elements below.

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REPORT COMMENTARY

The following paragraphs and sentences *typed in italics* have been copied from the Miami-Dade County Building Department's General Consideration and Guidelines ¹ dated November 11, 2021, Broward County Building Safety Inspection Program (BORA #05-05) ² updated January 31, 2023, and the Boca Raton Building Department's Guidelines ³ dated August 24, 2021. Howard J. Miller, P.E., Inc. uses these guidelines for the basis of our Structural Recertification Procedures and provide commentary below each paragraph with the conditions noted during our inspections of Highland Towers, Inc. located at 2921 South Ocean Boulevard, Highland Beach, Florida 33487.

Scope of Structural Inspection ^{1,2,3}

The fundamental purpose of the required inspection and report is to confirm in reasonable fashion that the building or structure under consideration is safe for continued use under present occupancy. As implied by the title of this document, this is a recommended procedure, and under no circumstances are these minimum recommendations intended to supplant proper professional judgment. ^{1,2,3}

Such inspection shall be for the purpose of determining the general structural condition of the building or structure to the extent reasonably possible of any part, material or assembly of a building or structure which affects the safety of such building or structure and/or which supports any dead or live load, or wind load, and the general condition of its electrical systems pursuant to the applicable Codes. ^{1,2}

In general, unless there is obvious overloading, or significant deterioration of important structural elements, there is little need to verify the original design. It is obvious that this has been time tested if still offering satisfactory performance. Rather, it is of importance that the effects of time with respect to degradation of the original construction materials be evaluated. It will rarely be possible to visually examine all concealed construction, nor should such be generally necessary. However, a sufficient number of typical structural members should be examined to permit reasonable conclusions to be drawn. ^{1,2,3}

Visual Examination will, in most cases, be considered adequate when executed systematically. The visual examination must be conducted throughout all habitable and non-habitable areas of the building, as deemed necessary, by the inspecting professional to establish compliance. Surface im-perfections such as cracks, distortion, sagging, excessive deflections, significant misalignment, signs of leakage, and peeling of finishes should be viewed critically as indications of possible difficulty. ^{1,2,3}

Testing Procedures and quantitative analysis will not generally be required for structural members or systems except for such cases where visual examination has revealed such need, or where apparent loading conditions may be critical. ^{1,2,3}

Manual Procedures such as chipping small areas of concrete and surface finishes for closer examinations are encouraged in preference to sampling and/or testing where visual examination alone is deemed insufficient. Generally, unfinished areas of buildings such as utility spaces, maintenance areas, stairwells and elevator shafts should be utilized for such purposes. In some cases, to be held to a minimum, ceilings or other construction finishes may have to be opened for selective examination of

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critical structural elements. In that event, such locations should be carefully located to be least disruptive, most easily repaired and held to a minimum. In any event, a sufficient number of structural members must be examined to afford reasonable assurances that such are representative of the total structure. ^{1,2,3}

Evaluating an existing structure for the effects of time, must take into account two basic considerations; movement of structural components with respect to each other, and deterioration of materials. ^{1,2,3}

With respect to the former, volume change considerations, principally from ambient temperature changes, and possibly long-time deflections, are likely to be most significant. Foundation movements will frequently be of importance, usually settlement, although upward movement due to expansive soils actually may occur, although infrequently in this area. Older buildings on spread footings may exhibit continual, even recent settlements if founded on deep unconsolidated fine grained or cohesive soils, or from subterranean losses or movements from several possible causes. ^{1,2,3}

With very little qualifications, such as rather rare chemically reactive conditions deterioration of building materials can only occur in the presence of moisture, largely related to metals and their natural tendency to return to the oxide state in the corrosive process. ^{1,2,3}

In this marine climate, highly aggressive conditions exist year-round. For most of the year, outside relative humidity may frequently be about 90 or 95%, while within air-conditioned buildings, relative humidity will normally be about 55 to 60%. Under these conditions moisture vapor pressures ranging from about 1/3 to 1/2 pounds per square inch will exist much of the time. Moisture vapor will migrate to lower pressure areas. Common building materials such as stucco, masonry and even concrete, are permeable even to these slight pressures. Since most of our local construction does not use vapor barriers, condensation will take place within the enclosed walls of the building. As a result, deterioration is most likely adjacent to exterior walls, or wherever else moisture or direct leakage has been permitted to penetrate the building shell. ^{1,2,3}

Structural deterioration will always require repair. The type of repair, however, will depend upon the importance of the member in the structural system, and degree of deterioration. Cosmetic type repairs may suffice in certain non-sensitive members such as tie beams and columns, provided that the remaining sound material is sufficient for the required function. For members carrying assigned gravity or other loads, cosmetic type repairs will only be permitted if it can be demonstrated by rational analysis that the remaining material, if protected from further deterioration can still perform its assigned function at acceptable stress levels. Failing that, adequate repairs or reinforcement will be considered mandatory. ^{1,2,3}

Written reports shall be required attesting to each required inspection. Each such report shall note the location of the structure, description of the type of construction, and general magnitude of the structure, the existence of drawings and location thereof, history of the structure to the extent reasonably known, and a description of the type and manner of the inspection, noting problem areas and recommended repairs, if required to maintain structural integrity. ^{1,2,3}

Evaluation: Each report shall include a statement to the effect that the building or structure is structurally safe, unsafe, safe with qualifications, or has been made safe. It is suggested that each report

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also include the following information indicating the actual scope of the report and limits of liability. This paragraph may be used: ¹

"As a routine matter, in order to avoid possible misunderstanding, nothing in this report should guarantee for any portion of the structure. To the best of my knowledge and ability, this report represents an accurate appraisal of the present condition of the building based upon careful evaluation of observed conditions, to the extent reasonably possible. ¹

Foundations: ^{1,2,3}

If all of the supporting subterranean materials were completely uniform beneath a structure, with no significant variations in grain size, density, moisture content or other mechanical properties; and if dead load pressures were completely uniform, settlements would probably be uniform and of little practical consequence. In the real world, however, neither is likely. Significant deviations from either of these two idealisms are likely to result in unequal vertical movements. ^{1,2,3}

Monolithic masonry, structures are generally incapable of accepting such movements, and large openings. Since, in most cases, differential shears are involved, cracks will typically be diagonal. ^{1,2,3}

Small movements, in themselves, are most likely to be structurally important only if long term leakage through fine cracks may have resulted in deterioration. In the event of large movements, contiguous structural elements such as floor and roof systems must be evaluated for possible fracture or loss of bearing. ^{1,2,3}

Pile foundations are, in general, less likely to exhibit such difficulties. Where such does occur, special investigation will be required. ^{1,2,3}

Grade-level and ground-level material/fill, soils and/or sedimentary settling as well as other signs of subsurface cavitation shall be inspected. Where surface-level concrete slabs show signs of sinking and/or structural cracks due to erosion or sediment washout these should be inspected as well. Where any of the preceding conditions may have an effect on the weight-bearing capacity for the structures above them, they must be investigated. ³

FOUNDATION:

- **Conditions revealed during inspections conducted by Howard J. Miller, P.E., Inc. are noted below:**
 - **The assumed construction of the foundation consists of pre-cast concrete pilings, pile caps, and grade beams supporting poured-in-place reinforced concrete columns and floor and roof slabs above.**
 - **No attempt was made to inspect the pilings, pile caps, and grade beams due to the lack of evidence of differential settlement throughout the exterior floor slabs and exterior walls, columns, and beams.**

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- The lack of movement of structural components with respect to each other and the lack of diagonal cracks extending out from window/door headers and sills are indications that the building exhibits no indications of significant settlement. Therefore, no further inspection and/or testing of the foundation elements below ground level were deemed necessary.
- The building's structural frame elements shown in the photos below exhibit no cracks and/or signs of settlement within the ground floor walls, columns, and floors and/or overhead beams and ceilings.



north wing - s.e. corner exterior wall without cracks



north wing – north elevation ext. ground floor wall without cracks

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west wing – west wall elevation ext. ground floor wall without cracks



n.e. storage room – west wall, columns & floor without cracks



n.e. storage room – north wall, columns, ceiling, and floor without cracks

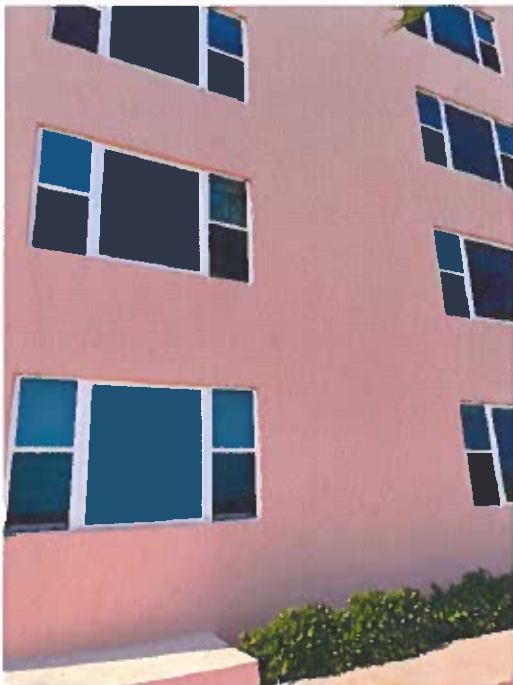


n.e. storage room – column and ceiling without cracks

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s.w.storage room – south floor, wall, ceiling, and floor without cracks s.w. storage room – north shear wall, floor & ceiling without cracks



East elevation – stack 07 wall without cracks from ground up to roof

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Roofs ^{1,2,3}

Sloping roofs, usually having clay or cement tiles, are of concern in the event that the covered membrane may have deflections, if merely resulting from deteriorated rafters or joists will be of greater import. Valley flashing and base flashing at roof penetration will also be matters of concern. ^{1,2,3}

Flat roofs with built up membrane roofs will be similarly critical with respect to deflection considerations. Additionally, since they will generally be approaching expected life limits at the age when building recertification is required careful examination is important. Blisters, wrinkling, alligatoring, and loss of gravel are usual signs of difficulty. Punctures or loss of adhesion of base flashings, coupled with loose counterflashing will also signify possibility of other debris, may result in ponding, which if permitted, may become critical. ^{1,2,3}

ROOF:

- **Conditions revealed during inspection(s) conducted by Howard J. Miller, P.E., Inc. are noted below:**
 - **The main tower roof slab is covered with a built-up roofing membrane system.**
 - **Although minor blistering and delamination's were noted throughout the top surface of the membrane, no leaks have been reported throughout the penthouse level apartment ceilings.**
 - **The entire roofing system is scheduled for removal and replacement this coming April, 2023.**



west wing – built-up roofing membrane



north wing – built-up roofing membrane

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Masonry Bearing Walls ^{1,2,3}

Random cracking, or if discernible, definitive patterns of cracking, will of course, be of interest. Bulging, sagging, or other signs of misalignment may also indicate related problems in other structural elements. Masonry walls where commonly constructed of either concrete masonry units, or scored clay tile, may have been constructed with either reinforced concrete columns and tie beams, or lintels. ^{1,3}

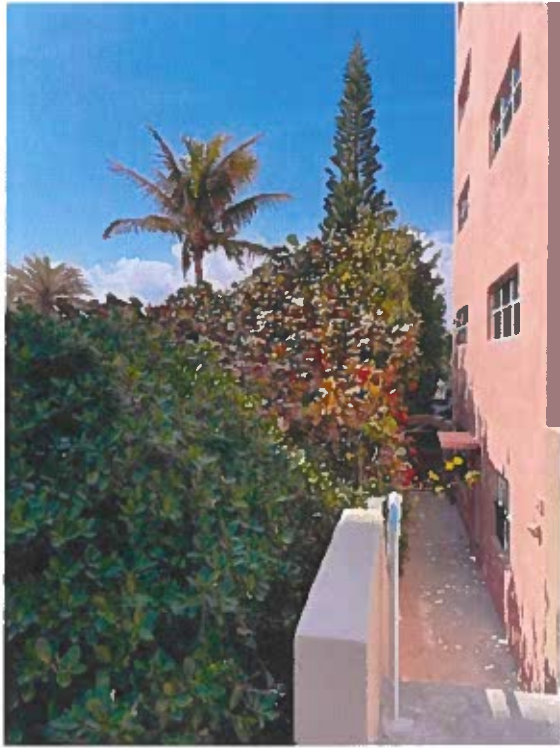
Of most probable importance will be the vertical and horizontal cracks where masonry units abut tie columns, or other frame elements such as floor slabs. Of interest here is the observation that although the raw materials of which these masonry materials are made may have much the same mechanical properties as the reinforced concrete framing, their actual behavior in the structure, however, is likely to differ with respect to volume change resulting from moisture content, and variations in ambient thermal conditions. ^{1,2,3}

Moisture vapor penetration, sometimes abetted by salt laden aggregate and corroding rebars, will usually be the most common cause of deterioration. Tie columns are rarely structurally sensitive, and a fair amount of deterioration may be tolerated before structural impairment becomes important. Cosmetic type repair involving cleaning, and parching to effectively seal the member, may often suffice. A similar approach may not be unreasonable for tie beams, provided they are not also serving as lintels. In that event, a rudimentary analysis of load capability using the remaining actual rebar area, may be required. ^{1,2,3}

MASONRY BEARING AND/OR EXTERIOR NON-BEARING WALLS:

- **Conditions revealed during inspection(s) conducted by Howard J. Miller, P.E., Inc. are noted below:**
 - **The building appears not to have been constructed with bearing masonry. Support of elevated slabs is provided by poured-in-place reinforced concrete columns, walls, and beams.**
 - **All cracked and spalled bearing columns and beams within the exterior walls were repaired during the above-mentioned 2020 – 2023 project.**
 - **All cracked and spalled stucco covered exterior walls were repaired and sealed during the above-mentioned 2020 – 2023 project.**

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south elevation 01 stack wall without cracks and spalls



east elevation 02 stack wall without cracks and spalls



south elevation – stack 05/06 wall without cracks & spalls



south elevation – stack 07 wall without crack and spalls

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Floor and Roof Systems^{1,2,3}

Cast in place reinforced concrete slabs and/or beams and joists may often show problems due to corroding rebars resulting from cracks or merely inadequate protecting cover of concrete. Patching procedures will usually suffice where such damage has not been extensive. Where corrosion and spalling has been extensive in structurally critical areas, competent analysis with respect to remaining structural capacity, relative to actual supported loads, will be necessary. Type and extent of repair will be dependent upon the results of such investigation.^{1,2,3}

Pre-cast members may present similar deterioration conditions. End support conditions may also be important. Adequacy of bearing, indications of end shear problems, and restraint conditions are important, and should be evaluated in at least a few typical locations.^{1,2,3}

*Post-tensioned steel cables may have been compromised due to deterioration of surrounding concrete, over-tensioning, or insufficient concrete coverage at construction time or damaged in the process of retrofitting/renovations during the life of the structure. This should be evaluated in at least a few locations and where signs of visible stressing have occurred.*³

Steel bar joists are, of course, sensitive to corrosion. Most critical locations will be web member welds, especially near supports, where shear stresses are high and possible failure may be sudden, and without warning.^{1,2,3}

Cold formed steel joists, usually of relatively light gage steel, are likely to be critically sensitive to corrosion, and are highly dependent upon at least nominal lateral support to carry designed loads. Bridging and the floor or roof system itself, if in good condition, will serve the purpose.^{1,2,3}

Wood joists and rafters are most often in difficulty from "dry rot", or the presence of termites. The former (a misnomer) is most often prevalent in the presence of sustained moisture or lack of adequate ventilation. A member may usually be deemed in acceptable condition if a sharp pointed tool will penetrate no more than about one eighth of an inch under moderate hand pressure. Sagging floors will most often indicate problem areas.^{1,2,3}

Gypsum roof decks will usually perform satisfactorily except in the presence of moisture. Disintegration of the material and the form-board may result from sustained leakage. Anchorage of the supporting bulb tees against uplift may also be of importance.^{1,2,3}

*Floor and roof systems of cast in place concrete with self-centering reinforcing, such as paper backed mesh and rib-lath, may be critical with respect to corrosion of the unprotected reinforcing. Loss of uplift anchorage on roof decks will also be important if significant deterioration has taken place, in the event that dead loads are otherwise inadequate for that purpose.^{1,2,3} Expansion joints exposed to the weather must also be checked.*¹

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FLOOR AND ROOF SYSTEMS:

- **Conditions revealed during inspection(s) conducted by Howard J. Miller, P.E., Inc. are noted below:**
 - **The elevated apartment, (including balcony) catwalk and stairwell, and roof floors are constructed of poured-in-place reinforced concrete.**
 - **All cracked and spalled balcony and catwalk floors and ceilings were repaired during the above-mentioned 2020 – 2023 project.**
 - **All cracked and spalled stucco covered balcony and catwalk ceilings were repaired and sealed during the above-mentioned 2020 – 2023 project.**
 - **All balcony and catwalk floors were waterproofed during the above-mentioned 2020 – 2023 project.**



7th floor catwalk floor and ceiling without cracks & spalls

7th floor catwalk floor and ceiling without cracks and spalls

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4th floor catwalk floor & ceiling without cracks and spalls



1st floor catwalk floor & ceiling without cracks and spalls



east elevation – 02/03 balcony floors, ceilings, and edges without cracks and spalls

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Steel Framing System ^{1,2,3}

Corrosion, obviously enough, will be the determining factor in the deterioration of structural steel. Most likely suspect areas will be fasteners, welds, and the interface area where bearings are embedded in masonry. Column bases may often be suspect in areas where flooding has been experienced, especially if salt water has been involved. ^{1,2,3} Concrete fireproofing will, if it exists, be the best clue indicating the condition of the steel. ¹

- **Conditions revealed during inspection(s) conducted by Howard J. Miller, P.E., Inc. are noted below:**
 - **The building was constructed and found without any structural steel framing systems.**

Concrete Framing Systems ^{1,2,3}

Concrete deterioration will, in most cases, similarly be related to rebar corrosion possibly abetted by the presence of saltwater aggregate or excessively permeable concrete. In this respect, honeycomb areas may contribute adversely to the rate of deterioration. Columns are frequently most suspect. Extensive honeycomb is most prevalent at the base of columns, where fresh concrete was permitted to segregate, dropping into form boxes. This type of problem has been known to be compounded in areas where flooding has occurred, especially involving salt water. ^{1,2,3}

Thin cracks usually indicate only minor corrosion, requiring minor patching only. Extensive spalling may indicate a much more serious condition requiring further investigation. ^{1,2,3}

In spall areas, chipping away a few small loose samples of concrete may be very revealing. Especially, since loose material will have to be removed even for cosmetic type repairs, anyway. Fairly reliable quantitative conclusions may be drawn with respect to the quality of the concrete. Even though our cement and local aggregate are essentially derived from the same sources, cement will have a characteristically dark grayish brown color in contrast to the almost white aggregate. A typically white, almost alabaster like coloration will usually indicate reasonably good overall strength. ^{1,2,3}

Conditions revealed during inspection(s) conducted by Howard J. Miller, P.E., Inc. are noted below:

- **The elevated apartment, (including balcony) catwalk and stairwell, and roof floors are constructed of poured-in-place reinforced concrete with support of all floors including the stairwells provided by poured-in-place reinforced concrete columns and beams.**
- **All cracked and spalled balcony and catwalk floors, ceilings, columns, and beams were repaired during the above-mentioned 2020 – 2023 project.**

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balcony stack 05 floors, walls, & ceilings without cracks & spalls



balcony stack 04, 03/02,01 floors, walls, ceiling without cracks & spalls



balcony stacks 06/07 floors, walls, ceilings, and edges without cracks and spalls

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Balcony stack 02/03 floors, ceiling, edges & walls without cracks & spalls Balcony 04/05 floors, ceiling, edges & walls without cracks & spalls

Windows^{1,2,3} and Doors¹

Window^{1,2,3} and door¹ condition is of considerable importance with respect to two considerations. Continued leakage may have resulted in other adjacent damage and deteriorating anchorage may result in loss of the entire unit in the event of severe windstorms, even short of hurricane velocity. Perimeter sealants, glazing, seals, and latches should be examined with a view toward deterioration of materials and anchorage of units for inward as well as outward (suction) pressure, most importantly in high buildings.^{1,2,3}

Structural Glazing When installed on threshold buildings, structural glazing curtain wall systems, shall be inspected by the owner at 6 months intervals for the first year after completion of the installation. The purpose of the inspection shall be to determine the structural condition and adhesive capacity of the silicone sealant. Subsequent inspections shall be performed at least once every 5 years at regular intervals for structurally glazed curtain wall systems installed on threshold buildings.¹

- **Conditions revealed during inspection(s) conducted by Howard J. Miller, P.E., Inc. are noted below:**
 - **All non-Code compliant windows and doors throughout the building were recently replaced under a separate permit and inspected by others.**

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- All adjacent structural framing (walls, columns, beams, floors, and ceilings) surrounding the windows and door were inspected for concrete/stucco/masonry deterioration and repaired as necessary during the above-mentioned 2020 – 2023 project.
- All newly installed windows and doors included installation of new perimeter caulking. All perimeter caulking of any remaining Code-compliant windows and doors were replaced where necessary and resealed during the above-mentioned 2020 – 2023 projects' painting scope of work.



south elevation – stack 05 windows & doors

east elevation – stack 04 windows & doors

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west elevation – unit 703 windows & door

north elevation – unit 605 windows & door

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west elevation – 4th floor lobby windows



north elevation – unit 403 windows & door

Wood Framing^{1,3}

Older wood framed structures, especially of the industrial type, are of concern in that long term deflections may have opened important joints, even in the absence of deterioration. Corrosion of ferrous fasteners will in most cases be obvious enough. Dry rot must be considered suspect in all sealed areas where ventilation has been inhibited, and at bearings and at fasteners. Here too, penetration with a pointed tool greater than about one eighth inch with moderate hand pressure will indicate the possibility of further difficulty.^{1,2,3}

- **Conditions revealed during inspection(s) conducted by Howard J. Miller, P.E., Inc. are noted below:**
 - **The building was constructed and found without any wood framing systems.**

Building Facade¹

Appurtenances on an exterior wall of a threshold building are elements including, but not limited to, any cladding material, precast appliques, exterior fixtures, ladders to rooftops, flagpoles, signs, parapets, railings, copings, guardrails, curtain walls, window frames (including hardware and lites), balcony and

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terrace enclosures, including greenhouses or solariums, window guards, window air conditioners, flower boxes, satellite dishes, antennae, cell phone towers, and any equipment attached to or protruding from the façade that is mechanically and/or adhesive attached. ¹

- **Conditions revealed during inspection(s) conducted by Howard J. Miller, P.E., Inc. are noted below:**
 - See above-mentioned inspections regarding window and door frames.
 - All previously existing balcony enclosures were removed and not reinstalled and/or replaced.
 - All balcony railings were removed and replaced during the above-mentioned 2020 – 2023 project.
 - All stairwell railings were removed during the above-mentioned 2020 – 2023 project.
 - All catwalk railings were inspected for deterioration, repaired as necessary during adjacent catwalk edge repairs and catwalk floor waterproofing during the above-mentioned 2020 – 2023 project.



west elevation – N.W. corner catwalks



west elevation – catwalks & stairwell

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east elevation – all balconies at stacks 01 – 04 finished without balcony enclosures



south elevation – all balconies at stacks 05 – 07 finished without balcony enclosures

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Loading ^{1,2,3}

It is of importance to note that even in the absence of any observable deterioration, loading conditions must be viewed with caution. Recognizing that there will generally be no need to verify the original design, since it will have already been "time tested", this premise has validity only if loading patterns and conditions remain unchanged. Any material changes in type and/or magnitude or loading in older buildings should be viewed as sufficient justification to examine load carrying capability of the effected structural system.^{1,2,3}

- **Conditions revealed during inspection(s) conducted by Howard J. Miller, P.E., Inc. are noted below:**
 - **The building was found without any structurally significant changes in loading conditions throughout the exterior of the building and within randomly selected apartment interiors.**

Additional structures:

- **Conditions revealed during inspection(s) conducted by Howard J. Miller, P.E., Inc. are noted below:**
 - **Pool deck:**
 - **The pool deck is a poured-in-place concrete on-grade slab.**
 - **The pool is an in-ground reinforced concrete pool.**
 - **Seawalls:**
 - **The oceanside seawall was inspected for alignment and concrete deterioration.**
 - **The wall was found without visible indications of misalignment and found with one minor concrete spalled area above beach level and landside level at the time of inspection. The visible concrete deterioration was repaired during the above-mentioned 2020 – 2023 project.**
 - **The intracoastal seawall was inspected for alignment and concrete deterioration.**
 - **The wall was found without visible indications of misalignment and without concrete deterioration noted above water level and land level at the time of the inspection.**

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east elevation – pool deck



east elevation - seawall & south stairs



east elevation – east seawall – south end



east elevation – seawall looking north

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west elevation – seawall looking north



west elevation – seawall looking south

SUMMARY:

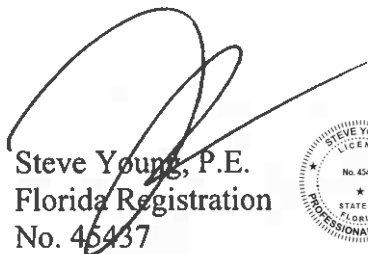
1. **Deterioration:** All significant concrete, stucco, and masonry deterioration throughout the entire exterior surfaces of the building excluding the roof slab have been repaired during the 2020 – 2023 projects and there are currently no visible signs of new significant deterioration.
 - a. The roof slab will need to be inspected upon removal of the existing roofing membrane during the currently scheduled April, 2023 roofing project.
2. **Timeframe:** Based upon the current conditions, the expected timeframe to repair major/critical structural elements is typically determined upon future inspections. Currently it is recommended that the inspection be performed prior to the next painting and concrete repair project recommended 7 to 8 years from completion of the current project.
3. **Phase II inspection:** A Phase II inspection is not required.

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4. **Based upon my evaluation, this building is structurally safe and currently requires no repairs for a safe continued use and occupancy.**

5. **Notes:**

- a. As a routine matter, in order to avoid possible misunderstanding, nothing in this report should be construed directly or indirectly as a guarantee or warranty for any portion of the structure. To the best of my knowledge and ability, this report represents an accurate appraisal of the applicable and present condition of the building based upon visual inspections of the easily accessible portions of the structure. It is understood by all parties to include the property owner that my recommendation for **re-certification** does not release or indemnify the property owner in any way or form from properly maintaining the property for safe continued use and occupancy at all times.
- b. Furthermore, this report is not a zoning or Code compliance report. Life-safety inspections were not performed and to the best of our knowledge not required to be performed. Furthermore, Howard J. Miller, P.E., Inc. (HJM), including myself, have made no attempt to excavate, demolish, or otherwise remove existing construction and therefore can make no judgments as to elements not readily visible or otherwise not exposed to view. HJM and I offer no opinion as to the accuracy of line and grade, adequacy of structural design, conformance to Building Codes, nor propriety of materials constructed or manufactured off-site. HJM and I do not imply that we have observed or noted all structural defects. The content of this report is based solely on inspection of areas made accessible at the time of the inspection and no testing is part of this report.


Steve Young, P.E.
Florida Registration
No. 45437
April 11, 2023

