



November 28th, 2023

Building Officials
Pembroke Pines Building Department
601 City Center Way
Pembroke Pines, FL 33025

Re: Heron Pond Condominium
Structural Conditions – Building #14
Updated Findings

Dear Building Officials:

Since the end of July of this year a representative of ACG Engineering Services, Inc. (ACG), acting on my behalf, has surveyed all nineteen buildings at the Heron Pond Condominium complex. We have attached a copy of drawing S-3.0, a plan reflecting our findings from our survey of the structural conditions for Building #14. This sheet has been submitted with the set of permit drawings for the repair project. This report is being submitted subsequent to full perimeter destructive observations conducted at Buildings #2 and #3 and spot-check destructive observations made at Buildings #5 and #10. We have learned the following:

- Those findings at Buildings #2, #3, #5, and #10 have confirmed that the visual indications (from the non-destructive observation phase) are accurate – areas observed to reflect damage in fact have revealed damage and those areas not noted to reflect damage have been generally found to be damage-free.
- The termite damage to the exterior walls appears to have originated with the paneling used as exterior sheathing. Termite “tunneling” appeared to run in between the inside face of the paneling and the exterior faces of the wall 2x4 members.
- The balconies, the portions of the building structures permanently and fully exposed to the weather and elements, have sustained the worst of the wood damage.
- The bay windows, portions of the building structure whose undersides are permanently exposed to the weather and elements, have also sustained significant levels of damage.
- Even the balcony damage appears to lessen as the affected structural members get further away from the outside balcony edges.
- A number of the building corners have sustained significant structural damage.
- To date, none of the second-floor trusses exposed by stucco and sheathing removal show section loss or compromise.
- The sections of the second-floor wall that have been exposed, even when directly adjacent to first floor wall damage, have been observed to be intact, with no appreciable damage witnessed.
- In summary, to date, what has been exposed strongly suggests that the floor and roof trusses, except where sections of floors have been noted as being “soft” or “bouncy”, have not been compromised by termite or water damage.
- What has been exposed to date also demonstrates that the damage to the exterior wall 2x4 structure is intermittent; that is to say that much of the wall 2x4 structure is intact and need not be replaced.



Based on our original report of our survey findings for this building, combined with what we have since observed, as part of destructive observation of portions of Buildings #2, #3, #5, and #10, we offer the following summary:

A summary of our **findings** is as follows:

- There are signs of water damage at the bay window of Unit #201.
- There is a section of sagging floor in Unit #202.
- The Pergo flooring in Unit #206 shows signs of damage that may reflect structural issues underneath.
- There are water marks in the ceiling of Unit #207.
- There are cracks in the ceiling of Unit #103.
- There are signs of termite and water damage in both Units #105 and #106.
- There are at least 94 different locations around the building where damage has been visually detected, involving all 16 units.
- Additionally, signs of previous repairs have been noted at 21 other locations around the building.
- There are signs of damage visible on all eight (8) balcony stacks.
- There are signs of damage to sections of exterior walls that appear to carry significant second floor and roof loads.
- There are at least five (2) locations where damage has been observed in sections of the structure that clearly appear to have been recently repaired; in these locations fresh signs of damage are telegraphing through the finishes.

Our findings lead to the following **concerns**:

- The water damage in Unit #201 may be a sign that structural damage exists.
- The sagging floor section in Unit #202 is very likely a sign of weakened floor joists below.
- The fact that the Pergo flooring in Unit #206 is damaged may hint at structural concerns beneath the flooring.
- Water marks in the ceiling of Unit #207 suggest that water has penetrated the roof and found its way to the ceiling, and therefore, the trusses above as well, maybe damaging them.
- Cracks in the ceiling of Unit #103 may reflect differential deflections between equally loaded adjacent joists, a sign of damaged, weakened joists.
- The termite damage and water damage in Units #105 and #106 create suspicion that water and termite damage may also exist in the floor joists that are located directly above.
- Damage sustained by the exterior structural components, sections of the walls, all balconies, and bay windows, in the form of termite and water related wood deterioration, is significant.
- Of additional concern is that approximately 10% of recently repaired sections are already showing new signs of deterioration. All previous repair areas should be re-addressed.
- All of the balcony stack structures, including joists, beams, and columns, have sustained significant structural damage.
- Some of the apparently compromised sections of exterior wall appear to carry considerable 2nd floor and/or roof loads, but do not appear to pose a safety concern at the present time. Prior to the removal of any structure during the repair process, the second floor and roof structures should be adequately shored.



Based on our concerns, we **recommend** the following:

- The flooring and/or the ceiling should be removed, as required, to address the noted damages in the interiors of Units #201, #202, #103, #105, #106, #206, and #207.
- All access to all balconies (both levels) must be prohibited until repairs have been made.
- All balcony ceilings should be removed to allow for visual observations of the second floor and roof structures.
- All second-floor balcony and bay window structures should be shored and then rebuilt as required.
- All roof trusses over the second-floor balconies shall be repaired as required.
- Damages that do extend into the interior of the building must be identified and repaired upon discovery.
- Wall bulges, cracks, and delaminations must be removed and those wall sections repaired in accordance with the loads that they carry.
- Based on findings, Units #101, #201, #102, #202, #103, #203, #105, #205, #106, #206, and #207 should be completely vacated. It is not necessary to vacate units not listed here until such time as the repair project has commenced.
- During the repair project for this building, the building should be vacated to allow for an expeditious repair process and to prohibit the presence of non-construction personnel on an active construction site.

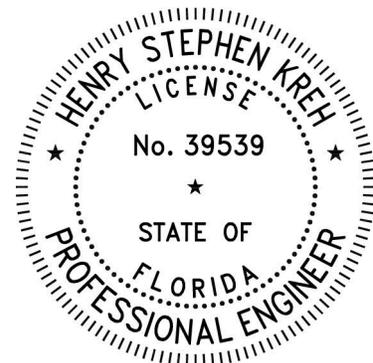
The destructive observations made at Buildings #2, #3, #5, and #10 and their close correlation with the non-destructive visual inspections of those buildings confirm that the observations made by visual inspection of this building provide an accurate assessment of the structural damage sustained by this building's structure. In general, it is my professional opinion, to the best of my knowledge, that less than 25% of the structure has sustained damage. All sections that have sustained damage shall be repaired and/or replaced.

We have provided, attached to this report, photographs from our destructive observations of Building #2.

Please do not hesitate to let us know if you have any additional questions, comments, or concerns.
Thank you.

Respectfully submitted,

Henry S. Kreh, P.E.
Vice President
ACG Engineering Services, Inc.
FL PE No. 39539/FL SI No. 736



PHOTOGRAPHS



Photo #1 – Removed Severely Damaged Exterior Balcony Beam/
Revealing Adjacent Joist with Only Limited Damage



Photo #2 – Progression of Joist Damage/Each Joist, Moving in from
The Edge, Shows Less and Less Damage



Photo #3 – Damage to Vertical Wall 2x4, Showing Termite “Tunneling”
Damage with the Deterioration on the 2x4 Face Adjacent to
The Exterior Panel (Not Shown)



Photo #4 – The Exterior Balcony Beam Has Been Completely Damaged And Removed/This Balcony Structure Damage is Severe



Photo #5 – The Floor Joist Most Directly Adjacent to the Removed Wall Panel Shows No Signs of Damage



Photo #6 – Water Damage Is Evident, Having Affected the Sheathing at Both Corners



Photo #7 – Sheathing Stripped from Both Levels of Wall/Showing That the Extensive Damage to the First Level Wall Does Not Translate to the Second Floor Wall Structure

