

November 12, 2024

Serena Shores Condominium of Indian Harbour Beach Condominium Association, Inc. 1965, 2035 Highway A1A Indian Harbour Beach, FL 32940

Re: State Mandated Structural Milestone Inspection

Dear Board and Association Members,

This report is intended to meet the requirements of the Florida State mandated Phase I Structural Milestone Inspection for Serena Shores Condominium in Indian Harbour Beach, Florida. The report covers accessible components including load bearing walls, columns, beams, horizontal slabs, visible components and/or collateral visible aspects such as settlement cracking. No other components are left to be inspected. **Currently,** we do not see any safety issues or structural capacity concerns and the buildings are safe to occupy.

Building Construction Type – Serena Shores consists of two, four-story, residential oceanfront condominium buildings. Each building has six (6) stacks of balconies, with three living units in each stack. Access to the units is by the elevator with external corridors, or by stairwells. The ground floor is for below building parking and common areas.

The building plans accessed for this survey are dated February 2003, so the building is believed to be 21 years old. The poured in place concrete horizontal slabs are constructed with post-tensioned cables. They are supported by structural load bearing columns. The exterior walls are a masonry construction with a painted stucco finish.

History – A comprehensive restoration project was completed in 2015-2016. The south building was substantially completed between April and October 2015. The north building renovation was delayed due to missing PT cables on the 3rd and 4th level balconies. Those levels required full redesign and replacement. Substantial completion of the north building was in mid-2016. As part of that project, all current spalling and collateral PT work was completed. In addition, new sliding glass doors, new balcony and walkway floor coatings and railings were installed, all appropriate actions for an oceanfront condominium restoration project.

In 2024, a balcony restoration project was completed. The floor coatings were removed at the areas where structural concrete repairs were needed. Post tension cable repairs were completed on an as-needed basis. Railings and hurricane shutters were removed only as needed to access the concrete repairs. After repairs, the floor coatings were repaired and then received a fresh topcoat.

Balconies – The balconies of both buildings were repaired as needed in 2024. All concrete repairs to the beams, slabs and columns were completed at that time. Where needed, the floor coatings were repaired and then received a fresh topcoat. It is recommended to follow cyclic restoration cycles of 7 to 10 years, which will occur on any aged coastal building. These cycles should be planned for and coordinated with exterior building painting cycles (2031-2034). At that time, any needed concrete repairs would be completed, railings removed and reinstalled as needed, the floor coatings repaired as needed and fully top coated.

Walkways – Walkways/Stairs – Future walkway repairs should be combined with the next restoration cycle project. It is recommended to follow cyclic restoration cycles of 7 to 10 years for these repairs as well.

Railings – The existing railings are a typical, surface-mounted, aluminum picket system. They were replaced in 2016. These railings come with a Kynar or PVDF finish that would provide 20-30 years of service without the need to repaint with appropriate care and maintenance. Surface mounted railings properly installed with non-corrosive components and stainless-steel anchors with sealed fastener penetrations and base plates left open to drain, greatly reduce the concrete damage at the balcony slab edge. Surface mounted railings can then be easily removed for future cyclic structural concrete repairs as needed and then reinstalled after work is completed.

Sliding Glass Doors – The sliding glass doors were replaced during the 2015-2016 project. They should continue to be maintained, cleaned and have functional weep holes.

Any aged sliding glass doors remaining should be replaced as part of the next restoration cycle or sooner. "Coastal Quality" products are recommended and should consider corrosion resistance, coating finish performance, superior water resistance, the use of all stainless-steel hardware, concealed/sealed stainless-steel fasteners, energy efficiency and proper tint. Many of these are not achieved with a "minimum" code compliant door.

Exterior Wall Painting – Painting cycles are recommended at 7 to 10 years. Painting should be completed as part of or immediately after the next cyclic concrete restoration project in seven to 10 years. Any signs of concrete spalling and/or stucco damage to the walls and window sills should be repaired prior to painting.

Shutters – The shutters, much like the sliding glass doors, are typically the individual unit owner property and responsibility. The shutters can also many times become part of the restoration project. In some cases, the shutters need to be removed to access the concrete spalling damage, or to apply the new floor coatings. Other issues common with shutters are the inappropriate use of non-stainless fasteners, and directly mounting the tracks to the floor surface which blocks drainage, damages the coatings, and contributes to concrete spalling.

It is recommended to remove shutters from the balconies on an as-needed basis to perform needed concrete repairs and apply floor coatings. Any non-stainless fasteners should be removed and reinstalled with stainless steel fasteners. All shutters without drainage shims should be removed and reinstalled with proper provisions for drainage.

Repairs - Any cyclic repairs in the future should be completed by a contractor with proven experience in structural concrete restoration on occupied coastal buildings, under the supervision of an experienced professional engineer. The repairs should be completed to ICRI (International Concrete Repair Institute) standards including ICRI No. 310.1R-2008 "Guide for Surface Preparation for the Repair of Deteriorated Concrete Resulting from Reinforcing Steel Corrosion." Anything short of this standard will result in repeat failures of the repairs in the near term. Following these procedures will result in long-term structural repairs.

The concrete removal and excavation process will necessitate the localized removal of the floor finishes, stucco and paint, railings, and in some cases, shutters and sliding glass doors. These items will need to be factored into the project scope of work and budget considerations. In some cases, these items can be removed/reinstalled/repaired to complete the concrete repairs. In other cases, it may be more appropriate to remove the item and replace with new. This decision can be based on the age and condition of the item, the budget available, the motivation for maintenance considerations over time, and the tolerance for aesthetic imperfections.

An inspection before the next painting cycle should take place to determine cyclic damage and provide an estimated budget. Please do not hesitate to contact me if any additional information is required.

Sincerely,

James E. Emory, P.E., S.I. FL # 60965 Keystone Engineering & Consulting, Inc. President and Principal Engineer



This item has been digitally signed and sealed by [Tomas Ponce PE, FL # 0050068], on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.