

NBC

Engineer warned of 'major structural damage' years before Florida condo collapsed

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By [Tom Winter](#), [Henry Austin](#) and [Didi Martinez](#)

A consultant warned there was evidence of “major structural damage” below the pool deck of a [Miami Beach-area condo building](#) nearly three years before it collapsed.

As officials continue to investigate what caused the deadly collapse at Champlain Towers South, officials in the [Florida city’s Surfside suburb](#) late Friday released a trove of documents related to the building, including the consultant's [October 2018 report](#).

The findings from consultant engineer Frank Morabito also showed there was “abundant cracking” and crumbling in the underground parking garage of the [12-story building](#), which suddenly collapsed as residents slept in the early hours of Thursday morning.

Morabito said the waterproofing below the pool deck and entrance drive was failing, “causing major structural damage to the concrete structural slab below these areas.”

“Failure to replace the waterproofing in the near future will cause the extent of the concrete deterioration to expand exponentially,” he said.

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The main issues with the waterproofing, Morabito said, were that it had been “laid on a flat structure,” which had not been sloped to drain, so the water sat on the waterproofing until it evaporated. This was a “major error” by the original developers, he said.

Morabito also noted that “several sizeable spalls were noted in both the topside of the entrance drive ramp” as well as the underside of the pool, the entrance drive and planter slabs “which included instances with exposed, deteriorating rebar.”

“Visual observations revealed that many of the previous garage concrete repairs are failing resulting in additional concrete cracking, spalling and leaching of calcium carbonate deposits,” he said, adding that he was “convinced that the previously installed

epoxy injection repairs were ineffective in properly repairing the existing cracked and spalled concrete slabs.”

Morabito went on to recommend that concrete slabs, which were “showing distress” by the entrance and pool deck, “be removed and replaced in their entirety.”

“Unfortunately, all of these failed slab areas are under brick pavers, decorative stamped concrete and planters which require completed waterproofing replacement,” he said.

Morabito gave no indication that the building was in imminent danger, but he said that it needed repairs, which would be aimed at maintaining the building’s structural integrity.

“Though some of this damage is minor, most of the concrete deterioration needs to be repaired in a timely fashion,” he said.

Morabito Consultants said in a statement that it was "working closely with the investigating authorities to understand why the structure failed."

Officials said Saturday that five people had been [confirmed dead and 156 were unaccounted for](#).

[Miami-Dade County Mayor Daniella Levine Cava said at news conference Saturday](#) that she was not aware of the 2018 report.