



G & M Engineering, Inc.
Consulting and Design Engineers

October 29, 2025

Mr. Chris Baker
Waterlogic, Inc.

chris@waterlogicinc.com

REFERENCE: Chestnut Creek Homeowners Association, Marietta, Georgia
Swimming Pool and Pool Deck Review

Dear Mr. Baker:

At your request, Kelvin D. Garmon, P.E., of G&M Engineering, Inc., conducted an inspection of the swimming pool and concrete pool deck area at the Chestnut Creek Subdivision, Marietta, Georgia. The purpose of our review was to evaluate the structural integrity of the swimming pool shell, evaluate the concrete pool deck and provide our opinion of the swimming pool amenity area as a whole.

PROJECT SUMMARY

The referenced swimming pool and amenity area appear to be approximately 45-years of age and some concerns have been raised regarding the integrity of the swimming pool and condition of the concrete pool deck. G&M Engineering, Inc. has been retained to review the conditions at the amenity area and provide any necessary recommendations for restoration of structural concerns with the swimming pool and concrete pool deck.



EVALUATION

Upon reviewing the swimming pool, we observed cracks in the surface of the pool that would indicate settlement of the pool shell is occurring and it is critical to eliminate the settlement. Given the age of the pool structure consideration should be given to complete removal and replacement of the pool. The



remediation of a settlement issue at any swimming pool is costly and there are unknowns with how the actual pool shell was constructed originally in approximately 1980 that can cause other frustrations when attempting to install foundation piles to support the pool shell. During our review, we also observed very uneven surfaces (walls) within the pool shell that would indicate a poor plaster project or projects over the years. This would require the entire surface of the pool to be chipped to expose the original concrete pool walls



and allow a new coat of plaster to be installed. This process can reveal other issues such as underlying cracks or damage to the walls within the pool. Given the age and condition of this pool, in our opinion great consideration should be given to complete demolition and replacement of the pool.

The concrete pool deck typically has a service life of approximately 40 years and since this pool deck is 45 years of age and the surface is in poor condition, we have concluded that the pool deck has reached the end of its useful life. The spalling of the concrete surface to reveal the gravel within the original concrete is not a safe walking surface and the continued spalling of the concrete will only increase in severity as the concrete continues to age. This deterioration of the concrete is based upon age, exposure to chemicals from the pool water, etc. Continuing with our review of the pool deck, we observed some locations where patches were performed. We also observed some cracks in the concrete pool deck that allow water direct access to the soils under the concrete and this will result in further movement of the concrete and more cracks.



RECOMMENDATION AND CONCLUSION

We would recommend that the swimming pool and concrete pool deck be removed and replaced. This is based upon the age of the amenity and the cost associated with restoring the pool and concrete pool deck to a condition that would provide more than 10 years of continued service life to the community.

If the Association chooses to complete the restoration without a complete removal of the swimming pool the following would be necessary:

- Chipping all existing plaster from the interior surface of the pool.



- Installation of 22 foundation piles to support the pool shell that is currently experiencing settlement. This is done by cutting holes through the bottom of the pool shell to allow the helical piles to be installed and then new steel reinforcement installed within the holes and new concrete installed.
- Restoration of the cracks in the pool shell with staples.
- Installation of new plaster which will need to include new water line tiles.

The restoration of the concrete pool deck in our opinion is required due to condition and age. The work should include a land disturbance permit from Cobb County. This will require engineering drawings for the concrete pool deck removal and replacement.

In conclusion, the overall integrity of the swimming pool has been compromised with the cracks observed in the surface of the pool shell and given the age of the pool and pool deck serious consideration should be given to a complete rebuild of the pool area. The above recommendations have been provided as a guide and they are not intended as a complete scope of work for the restoration required.

Sincerely,



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