

July 11, 2022  
Project No. 211031001

Mr. Mike Hoolihan  
Williams Homes  
24911 Avenue Stanford  
Santa Clarita, California 91355

Subject: Swimming Pool Backfill Recommendations  
24934 Old Stone Way (Lot 6)  
Stevenson Ranch, California

Reference: Ninyo & Moore, 2019, Geotechnical Evaluation, Julien Property, 24934 Old Stone Way, Stevenson Ranch, California, Claim No. 1257P-1, Project No. 211031001, dated December 20.

Dear Mr. Hoolihan:

We understand that it is proposed to remove the existing swimming pool located in the backyard of the subject property. This letter provides our geotechnical recommendations for the demolition and removal of the pool and backfilling with compacted fill. It should be noted that the deeper fill soils underlying the backyard including the pool area have some potential for future soil settlement. Accordingly, we recommend that no hardscape or other types of improvements that may be sensitive to differential settlement be placed within the backyard.

## **EXCAVATION**

Demolition activities should include the removal of the gunite shell and other materials associated with the swimming pool. Existing utilities within the project limits should be re-routed or protected from damage by construction activities. Obstructions that extend below subgrade of the improvements should be removed and the resulting holes filled with compacted soils. Materials generated from clearing operations should be removed from the site and disposed at a legal dumpsite.

Disturbed soils that remain following demolition of the swimming pool and associated improvements should be removed to undisturbed soils. A representative of Ninyo & Moore should observe the bottom of the swimming pool excavation prior to filling to evaluate the bottom conditions. Prior to placing fill, the bottom should be scarified, moisture-conditioned to slightly over the optimum moisture content, and recompact to 90 percent relative compaction, as evaluated by ASTM International (ASTM) D1557.

We anticipate that excavations within the existing fill materials at the site may be accomplished with conventional earthmoving equipment in good working condition. We anticipate that the materials encountered during near-surface remedial grading will be comprised predominantly of moist silty clay with fragments of siltstone.

Temporary near-vertical excavations not exceeding a depth of approximately 4 feet should be feasible. Excavations that are unstable or deeper than 4 feet should be laid back to slope inclinations of approximately 1½:1 (horizontal to vertical) or flatter. Where temporary slopes are not possible, shoring should be placed. Excavations should be performed in accordance with OSHA's regulations. On-site soils should be considered as Type C soils in accordance with OSHA guidelines.

## **BACKFILL**

In general, the on-site soils should be suitable for reuse as backfill provided they are free of trash, debris, or other deleterious materials. Wet soils, if encountered, should be allowed to dry to a moisture content slightly above optimum prior to their placement as backfill. Fill should generally be free of rocks or lumps of material in excess of 4 inches in diameter. Rocks or hard lumps larger than approximately 4 inches in diameter should be broken into smaller pieces or should be removed from the site.

Imported soil should consist of clean, non-expansive, non-organic, granular material. Materials for use as fill should be evaluated by Ninyo & Moore prior to importing. The contractor should be responsible for the uniformity of import material brought to the site.

Fill should be placed and compacted in accordance with sound construction practices. Fill materials should be moisture-conditioned to slightly above the optimum laboratory moisture content. The lift thickness for fill soils will vary depending on the type of compaction equipment used, but should generally be placed in horizontal lifts not exceeding 8 inches in loose thickness. Fill materials should be compacted to a relative compaction of 90 percent as evaluated by ASTM D 1557. Fill should be tested for specified compaction level by Ninyo & Moore.

The recommendations provided in this letter are based on the assumption that Ninyo & Moore will provide geotechnical observation and testing services during remedial grading. In the event that the services of Ninyo & Moore are not utilized during construction, we request that the selected consultant provide the owner with a letter (with a copy to Ninyo & Moore) indicating that they fully understand Ninyo & Moore's recommendations, and that they are in full agreement with the recommendations contained in this letter.

We appreciate the opportunity to be of service on this project.

Respectfully submitted,  
**NINYO & MOORE**



Scott M. Johnson, CEG  
Principal Geologist

BHT/SMJ/DBC



Daniel Chu, PhD, PE, GE  
Chief Geotechnical Engineer

