

Spieker Development Project Excavation and Bedrock Impacts

Seven Hills Ranch is rolling terrain that is **formed on bedrock** that is present at or near the surface.

The Spieker Development proposal for the Ranch calls for extensive grading that would excavate large volumes of bedrock. It will require thousands of heavy dump truck runs on neighborhood streets over the period of at least a year, and most likely longer, to remove 75,000 cubic yards of soil and bedrock.

Bedrock excavation requires rock hammers, drum cutters, rock rippers, dozers and/or graders – all of which generate excessive **noise, dust, air pollution and vibration**. In the case of this development, this activity would often take place very close to existing homes, a school and the adjacent City park. The site would resemble a working quarry, in particular if the excavated bedrock is processed (broken down) on-site for use as fill. An immense amount of fill, 150,000 cubic yards, is required for this proposal.

Examples of potential excavation methods and impacts (skip ads if they appear at the start of the videos by clicking “Skip Ad” which will appear in the lower right of video after 5 seconds):

Drum cutters and mills [▶ EK 110 - Limestone Rock Excavation](#)

Hydraulic hammers (aka Hoe rams) [▶ Excavation in hard rock without blasting .](#)

Rippers [▶ Caterpillar D10 ripping rock](#)

(If the video shorts don't appear, simply search on YouTube for the excavation methods noted.)

To accommodate the proposal's largest building and its surrounding villas, the western hill would be leveled by cutting up to **28 feet depth** of bedrock, for the maintenance building over **20 feet depth** of bedrock would be cut from the existing hill and the plan calls for recontouring the eastern ridgeline, starting with **removal of the top 11 feet**, again, much of it composed of bedrock.

The [Spieker Proposal](#) minimally addresses the bedrock issues. The Draft EIR discusses bedrock under existing conditions and mitigation measures but concludes that the impact would be "*Less than significant...with mitigation incorporated*". This is a suspect conclusion given the existing terrain and the amount of landscape reconfiguration required for the proposal.

The project's bedrock disturbance WILL have SIGNIFICANT impact should it go through as proposed.

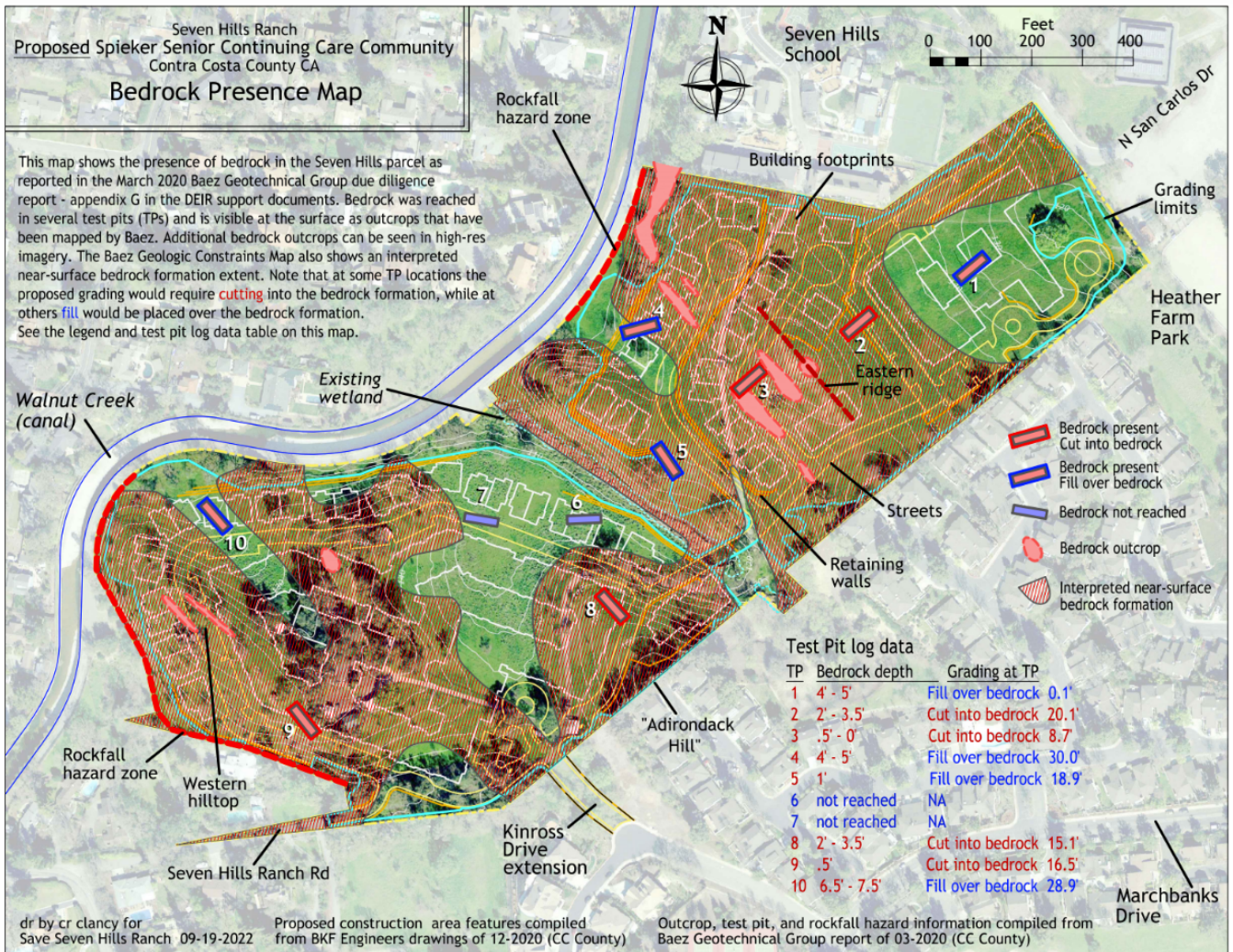
A reminder: Seven Hills Ranch is under County jurisdiction but is adjacent to the City of Walnut Creek's Heather Farm Park, several Walnut Creek neighborhoods, and the Seven Hills School. Impacts from the project would be felt by Walnut Creek residents, and County residents within Walnut Creek's "Sphere of Influence".

This imagery and elevation data for the above information comes from the USGS – and Spieker project data from the County's website. It is compiled by Charles Clancy - retired GIS analyst who has produced geotechnical and other map graphics for Save Seven Hills Ranch to assist all in understanding the Spieker Development Proposal.

See next page for a Bedrock Map of the site.

Seven Hills Ranch
 Proposed Spieker Senior Continuing Care Community
 Contra Costa County CA
Bedrock Presence Map

This map shows the presence of bedrock in the Seven Hills parcel as reported in the March 2020 Baez Geotechnical Group due diligence report - appendix G in the DEIR support documents. Bedrock was reached in several test pits (TPs) and is visible at the surface as outcrops that have been mapped by Baez. Additional bedrock outcrops can be seen in high-res imagery. The Baez Geologic Constraints Map also shows an interpreted near-surface bedrock formation extent. Note that at some TP locations the proposed grading would require **cutting** into the bedrock formation, while at others **fill** would be placed over the bedrock formation. See the legend and test pit log data table on this map.



| TP | Bedrock depth | Grading at TP |
|----|---------------|-------------------------|
| 1 | 4' - 5' | Fill over bedrock 0.1' |
| 2 | 2' - 3.5' | Cut into bedrock 20.1' |
| 3 | .5' - 0' | Cut into bedrock 8.7' |
| 4 | 4' - 5' | Fill over bedrock 30.0' |
| 5 | 1' | Fill over bedrock 18.9' |
| 6 | not reached | NA |
| 7 | not reached | NA |
| 8 | 2' - 3.5' | Cut into bedrock 15.1' |
| 9 | .5' | Cut into bedrock 16.5' |
| 10 | 6.5' - 7.5' | Fill over bedrock 28.9' |

dr by cr clancy for
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Proposed construction area features compiled
 from BKF Engineers drawings of 12-2020 (CC County)

Outcrop, test pit, and rockfall hazard information compiled from
 Baez Geotechnical Group report of 03-2020 (CC County)