



ENGINEERING REPORT

CLIENT: Summit Brick Company
601 East 13th Street
Pueblo, CO 81001

PROPERTY ADDRESS: 1224 Ruppel Street
Pueblo, CO 81001

LEGAL DESCRIPTION: Lot 1, Block 1, Belmont 1st Filing

INSPECTION DATE: July 8, 2020
REPORT DATE: August 8, 2020

PURPOSE: Provide an engineering opinion regarding alleged house damages due to Summit Brick's nearby mining operation.

ATTENDEES: Rick Kidd and Julie Welte

BACKGROUND:

The homeowner contacted Summit Brick after receiving a Permittee / Structure Owner Agreement. These agreements were sent out to homeowners as required by a permitting process for the existing nearby Native Clay Mine. The homeowner stated that she has some cracks in her house and she believes they may be related to the Summit Brick mining operation south of her home. According to County records, the home was constructed in 1952 and remodeled in 1968. Pueblo Regional Building Department records do not show construction permits for the home within the last 30 years.

OBSERVATIONS and OPINIONS:

The home is a single family residence ranch style house. It is of frame construction and the exterior is lap siding. It is constructed over a crawl space. The homeowner showed us several cracks in the drywall finish of her home. She said that sometimes she hears cracking or popping noises in the house. Several cracks were at typical locations of drywall butt joints or extending upwards from corners of doors and windows. One was noted in a header over an archway. There were some cracks seen in ceilings. One of these had water damage near it. No indication of structural movement was identified in the exterior finish. The portions of the foundation stem wall that were exposed to the

exterior appeared to be in good condition and without significant cracking. The concrete slab on grade patio did not show any signs of movement. It was noted that the gutter downspouts on the west side of the home discharge near the foundation.

Progressing from the house toward the open-pit clay mine there is a 24-foot wide garage. It is approximately 51-feet from the garage to the Summit Brick clay mine property. It is approximately another 75-ft, or 150-feet from the house, to the high-wall cut of the mine. The depth of the excavated cut, or the height of the high-wall, in this area is less than 15-feet below natural grade. The average of the incline plane from the toe of the high-wall to the house is then flatter than 10 to 1. This is well outside of any potential zone of landslide movement.

No explosives are used in the clay mining operation. The only potential cause of land vibration is from the movement of tracked heavy equipment. Due to the 150-foot distance from the house the vibration transference would be nil to negligible.

CONCLUSIONS:

It is my opinion that the cracks observed in the interior finish of the walls and ceiling are as expected in a home constructed nearly 70 years ago. It is my belief that the cracking is caused by differential settlement, the potential of undersized header over the archway, and the normal expansion and contraction of the wall and ceiling framing and finish. The apparent movement in the home is quite minimal considering that it is built over clay deposits.

The conclusion drawn from my observations and experience in design and construction is that the cracks in the wall and ceiling areas are not due to the open-pit clay mining operations of Summit Brick.

The opinions and conclusions expressed in this report are based on the engineering training and experience, the construction experience, information available to and the observations of the author, and the judgment of the author as of the date of this report. Information may become evident with more intrusive investigation, during demolition, or from additional disclosures and analysis of on-site conditions and that information could affect our opinions and conclusions.

REPORT SUBMITTED BY:
RICKY A. KIDD, PE
President
Kidd Engineering and Construction
Management Services, Inc.
44811 East US Highway 50
Avondale, CO 81022
719-544-5239























