ZFA STRUCTURAL ENGINEERS

san francisco silicon valley sacramento santa rosa napa

Robbie Lyng Alameda Unified School District 2060 Challenger Drive Alameda, California 94501

October 3, 2017

RE: Encinal High School Liquefaction Settlement

Robbie,

ZFA has reviewed the report titled "Geotechnical Engineering Investigation Evaluation of Liquefaction Risk and Liquefaction Induced Settlement Potential at Encinal High School Campus" Report by Miller Pacific dated July 25, 2017. The site is expected to experience some level of liquefaction during the maximum credible earthquake. This is the earthquake that is expected to occur once every 2475 years on average. The expected total settlement at the school site is expected to be between 1.0-2.5 inches. The total differential settlement is expected to be between 0.5-1.5 inches. While some impact on the buildings could occur, we do not believe it will significantly impact the overall building performance during a large seismic event. Based on current standard of practice we do not believe additional steps need to be taken at this time.

Should you have questions, please contact the undersigned.

Regards,

Chen Warn

Chris Warner, SE 4613 **ZFA STRUCTURAL ENGINEERS** Senior Principal