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October 1, 2009

DSA File No. 21-C1  
Application No. 01-109358

Mr. Dale Molyneaux  
Swinerton Management and Consulting, Inc.  
835 College Avenue, Building MS-3  
Kentfield, California 94904

Subject: **Response to Plan Check Comments**  
Science, Mathematics, Central Plant Complex  
Increments 2 & 3, Site Development + Building  
College of Marin  
Kentfield, California  
CEL Project No. 81-02337-PWA

Gentlemen:

At the request of Mr. Eric McDonnell of KPFF, we have prepared this letter to address plan check comments for the subject project. The following items have been addressed at his request:

Retaining Wall Foundations – As mentioned on Page 17 of the Miller Pacific report, "shallow foundations may be suitable in localized areas where bedrock is exposed in the building pad and foundation excavation". It is our understanding that there is a desire for the eastern retaining wall to have a shallow foundation system as opposed to drilled piers which will be used for the building pad. The subject wall extends from approximately building line C to building line N on Sheet S2.00 of the structural plans. CEL has reviewed the bedrock contours presented on Sheet S2.00 of the structural plans, and it appears that the projected contours appear accurate based on the subsurface borings. In particular, bedrock should be at the existing surface elevation in the area of boring MSB-6. We estimate that a transition from bedrock cut to soil over bedrock will exist at approximately line "L" in the retaining wall. The northern end of the wall will have approximately 12 to 15 feet of either engineered fill or stiff alluvium over the bedrock. The proposed retaining wall can be founded on shallow foundations as summarized in the letter prepared by Miller Pacific, dated March 11, 2008. Footings are acceptable across the entire extent of the retaining wall. We expect that some differential settlement on the order of 1/2 to 3/4-inch is possible within the wall due to the variable foundation conditions. We recommend the construction of a vertical separation joint within the footing and wall at approximately building line "L" where the anticipated transition from soil to bedrock is found. This location should be confirmed at the time of construction.

Live Load Retaining Wall Surcharge Design Criteria – It is our understanding that a vehicle surcharge load has been requested for the eastern wall as it will support emergency vehicles on a transient basis. The wall has already been designed for an unrestrained condition with a seismic load as indicated in Table F of the geotechnical report. In addition, we recommend a uniform rectangular surcharge load of 150 psf be applied to the wall.

Central Plan Yard – The proposed equipment pad and fence wall is located adjacent to the main building at the northwest corner. The area is to consist of a six-inch concrete slab-on-grade. This area is underlain by alluvial soils. Small site structures, such as heavy fence posts, can be supported on conventional footings. The footings should be founded a minimum of 24-inches below lowest adjacent finish grade. The allowable bearing capacity for the proposed foundations is 2,500 pounds per square foot (psf) for dead plus live loads. The allowable bearing capacity may be increased by 1/3 for temporary seismic or wind loading. Differential



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settlements across the structures of up to 3/4-inch should be anticipated. Where heavier equipment loads are distributed on a slab, the slab should be designed as a mat slab. The mat should be designed using an allowable bearing capacity of 2000 psf and modulus of subgrade reaction of 175 pci. We note that the central plan structure should be structural separate from the main building.

Cement Ratio of Concrete – The site soils are considered non-corrosive, and Miller Pacific recommended a maximum water to cement ratio of 0.45 using either Type I or Type II cement for concrete structures. CEL takes no exception to the use of a leaner concrete mix based on the structural engineer’s judgment.

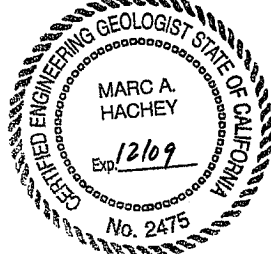
Retaining Wall Design – Lateral support can be obtained from either passive soil resistance and/or frictional sliding resistance of spread footings.

We hope this provides the necessary information at this time. If you have any questions, please contact the undersigned at (925) 314-7100, [mah@ce-labs.com](mailto:mah@ce-labs.com); [ejs@ce-labs.com](mailto:ejs@ce-labs.com).

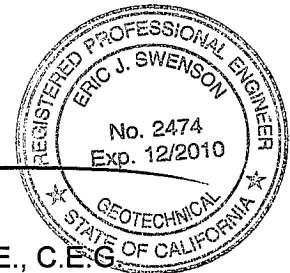
Sincerely,

**CONSOLIDATED ENGINEERING LABORATORIES**

Marc Hachey, C.E.G.  
Senior Engineering Geologist



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Principal Geotechnical Engineer



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