



August 21, 2019  
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Napa Valley Unified School District  
1616 Lincoln Avenue  
Napa, California 94558

Attn: Ms. Jennifer Gibb

Re: Geotechnical Construction Observation & Testing  
Napa Junction Elementary School  
American Canyon, California

### Introduction

This letter includes our proposed scope of services and budget estimate for the construction phase of the new Napa Junction Elementary School located in American Canyon, California. We understand the project includes constructing a new, approximate 10.8-acre, elementary school on an existing undeveloped property. The planned campus improvements include nine-single story classroom structures, one-administration building and one-multiuse structure. Extensive concrete and asphalt pavement pedestrian access paths and play areas and asphalt paved parking areas are also planned. Extensive utilities will also be constructed to provide the pertinent services to the new campus.

Based on our review of the existing project plans, we judge intermittent site observations and testing is appropriate during construction of the remainder of the project that include the following items:

- **Laboratory Testing:**  
We will collect bulk samples of the soils and baserock utilized on the project to determine the maximum laboratory density and optimum moisture content.
- **Subgrade Observation and Testing:**  
We will perform intermittent site visits to observe and perform field density tests during the compaction and preparation of the subgrade. We will also observe a "proof roll" with heavy rubber tire construction equipment of the subgrade to verify a firm and unyielding surface.
- **Foundation Excavation Inspection:**  
We will inspect the foundation excavations to verify the exposed soils are consistent with our geotechnical investigation and recommendations.
- **Vapor Barrier Observations:**  
We will perform intermittent site visits to observe the vapor barrier construction to verify the contractor's compliance with the ASTM E 1643.

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- **Asphalt and Concrete Section Compaction Testing:**  
We will perform intermittent site visits to observe and perform field density tests during the compaction of the subgrade and aggregate baserock utilized to construct the pavement areas.
- **Utility Trench Backfill Testing:**  
We will perform intermittent site visits to observe and perform field density tests on the utility trench backfill.
- **Other geotechnical items, as needed.**

We have not budgeted for concrete sampling and testing. We can provide additional scope and budget to perform concrete and/or asphalt testing upon request. We will also provide a letter report summarizing our observations upon satisfactory completion of the project.

Budget Estimate

We will provide our services on a time and expense basis and the attached budget spreadsheet summarizes our anticipated site visits (number and duration) for the various work items. Based on the plans our discussions with the project team and experiences with similar projects, we estimate our fees will not exceed \$56,800 (time and expense) for the project without further authorization. We can revise this estimate if provided with a construction schedule. Unknowns, such as contractor efficiency, the need for retesting inadequate work, unanticipated subsurface conditions, weather and other factors have been considered in preparing our budget estimate but may still impact the final budget. We will prepare regularly scheduled invoices and update you on our budget status as the work progresses.

Please sign and return a copy of this letter when you would like to proceed. Feel free to contact us with any questions or concerns.

Sincerely,  
MILLER PACIFIC ENGINEERING GROUP



Benjamin S. Pappas  
Geotechnical Engineer No. 2786  
(Expires 9/30/20)

Attachment: Budget Estimate Worksheet

\_\_\_\_\_  
Agreed:

\_\_\_\_\_  
Date

**MILLER PACIFIC ENGINEERING GROUP**  
Field Observation & Testing Budget Estimate Worksheet  
Napa Junction Elementary School  
American Canyon, California

Date: 8/21/19  
Project Number: 936.192  
By: BSP

FIELD COSTS						
	PER UNIT	PER HOUR	SITE VISIT	HALF DAY	FULL DAY	
Associate Engineer	\$ 200.00					
Staff Engineer/Geologist 3	\$ 120.00					
Staff Engineer/Geologist 2	\$ 110.00		1	1	1	
Staff Engineer/Geologist I	\$ 100.00					
Staff Technician 2	\$ 100.00					
Staff Technician I	\$ 95.00					
Prevailing Wage Group 3	\$ 145.00		2	4	8	
O/T \$35 - Weekend/Hol/Night \$45; 4 & 8 hr mins apply	\$ 35.00					
Field Vehicle/Equipment	\$ 9.00		2	4	8	
Nuclear Density Tests	\$ 8.00		4	8	16	
Miles	\$ 0.80		30	30	30	
		\$ -	\$ 474.00	\$ 814.00	\$ 1,494.00	
Work Item	Description	Estimated Days	PER HOUR	SITE VISIT	HALF DAY	FULL DAY
1.0	Subgrade Observation & Testing	10		5	5	
2.0	Foundation Excavation and Testing	18		18		
3.0	Vapor Barrier Inspection	11		11		
4.0	Asphalt & Concrete Section Testing	15		10	3	2
5.0	Utility Trench Backfill Testing	15		10	5	
6.0						
Totals		0	54	13	2	
DOLLARS \$		-	\$ 25,596.00	\$ 10,582.00	\$ 2,988.00	
Total Field Costs:					\$ 39,166.00	
LABORATORY TESTING						
Task	Description	Quantity	Unit \$	Amount \$		
1.0	Compaction Curve ASTM 1557	6	\$280	\$ 1,680.00		
2.0	Drainrock Compliance Testing		\$4,500	\$ -		
3.0	Asphalt Concrete - S-value, Gradation, M.C., Unit Wt. & % Oil		\$850	\$ -		
4.0	Concrete Compression (per Cylinder)		\$45	\$ -		
5.0	Shotcrete Panel Testing (per Panel) 3"		\$500	\$ -		
6.0	R-value		\$390	\$ -		
7.0	Sand Equivalent		\$135	\$ -		
8.0	Durability		\$195	\$ -		
9.0	Gradation/Sieve		\$150	\$ -		
10.0	Class II AB Suite (Rvalue,Sieve, Durability & Sand Equiv)		\$950	\$ -		
Total Lab Costs:				\$ 1,680.00		
ENGINEERING/GEOLOGICAL CONSULT & REPORT						
Personnel	Title	Hours	\$/Hour	Amount \$		
SAS	Principal Eng/Geologist 3		\$ 250.00	\$ -		
MPM	Principal Eng/Geologist 2		\$ 240.00	\$ -		
DSC / EAD	Principal Eng/Geologist I		\$ 230.00	\$ -		
BSP	Associate Engineer I	25	\$ 205.00	\$ 5,125.00		
MFJ	Senior Geologist 2		\$ 180.00	\$ -		
RCA	Senior Engineer I		\$ 170.00	\$ -		
NGK / PDC	Project Engineer 3		\$ 150.00	\$ -		
SLM	Project Engineer 2		\$ 140.00	\$ -		
MMT	Project Engineer 1		\$ 130.00	\$ -		
AJM / JTO	Sr. Tech 2		\$ 120.00	\$ -		
ZMS / ENE	Staff Engineer/Geologist 3		\$ 120.00	\$ -		
NAR / TWM	Staff Technician 2		\$ 100.00	\$ -		
JMO / BPC / GAA	Staff Technician I	60	\$ 95.00	\$ 5,700.00		
KRB / MLT	Project Asst./Word Processor		\$ 85.00	\$ -		
Total Engineering Costs:				\$ 10,825.00		

**Subtotal:** \$ 51,671.00  
**Contingency:** 10% \$ 5,167.10  
**Total:** \$ 56,838.10

**Use for Budget:** **\$ 56,800**