



December 6, 2019  
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City of San Pablo  
13831 San Pablo Avenue  
San Pablo, CA 94806

Re: Proposal for Geotechnical Services  
Inclinometer Replacement  
Hillcrest Road Parcel  
San Pablo, California

Ms. Jill Mercurio:

### Introduction

Per our recent discussion, we are pleased to propose our geotechnical engineering services to replace inclinometers in the slope behind Princeton Plaza commercial development area. Surface and subsurface movement is occurring within a previously repaired landslide area and underlying native bedrock. As of March 2018, nine inclinometers were able to be read at full depth, and several inclinometers have sheared to the point that they are no longer readable.

The purpose of our services is to install geotechnical instrumentation in order to continue to monitor the depth and rate of subsurface movement. Based on our understanding of the project and experience with similar projects, we recommend the following scope of services.

### Task 1 – New Inclinometers

We will perform a site reconnaissance to observe existing conditions, mark the slope inclinometer locations, and notify Underground Service Alert (USA) for identification of known active utilities.

We will drill two (2) borings with track-mounted drilling equipment to install new inclinometers. One inclinometer will be located on a mid-slope bench between sheared inclinometers MPEG-5 and AKA-3, and the other on an upper bench between sheared inclinometers MPEG-4 and AKA-4. We anticipate our explorations will extend about 110 feet below the ground surface. During exploration, we will collect select soil samples and transport them to our laboratory to perform tests to determine their pertinent engineering properties. Additionally, we will install grouted inclinometer pipe and two vibrating wire piezometers into each of the borings to monitor future slope movement and groundwater levels. We will perform a base line reading in the inclinometers a few days after their installation. We will summarize our field and laboratory data in a brief letter report.

### Fee Estimate and Agreement

We will provide our services on a time and expense basis in accordance with the attached Schedule of Charges. Accordingly, we estimate that our fee for the scope of services outlined above and shown on the attached cost estimate sheet would be approximately as follows:

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New Inclinometers and Piezometers (2) and baseline reading..... Budget Est. \$30,000

We trust that this provides the information required at this time. If you or others have further questions, please do not hesitate to call. When you wish to proceed, please provide us with your Subconsultant Agreement for the City of San Pablo.

Yours very truly,  
MILLER PACIFIC ENGINEERING GROUP








Scott A. Stephens  
Geotechnical Engineer 2398  
(Expires 6/30/21)

Attachments: Figure 1 – Inclinator Site Plan  
Cost Estimate Worksheet

● New

X sheared no longer useful

**LEGEND**

-  MPEG INCLINOMETER INSTALLED BY MILLER-PACIFIC, 2011
-  AKA INCLINOMETER INSTALLED BY ALAN KROPP AND ASSOCIATES
-  HB INCLINOMETER INSTALLED BY HERZOG ASSOCIATES
-  K INCLINOMETER INSTALLED BY UNKNOWN AGENCY
-  SUBDRAIN RISER



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FILE: 1681.01SP.dwg

**SITE PLAN**

Slope Monitoring  
3360 San Pablo Dam Road  
San Pablo, California

Drawn Checked MFJ	<div style="border: 1px solid black; padding: 5px; font-size: 2em; font-weight: bold;">1</div> FIGURE
Project No. 1681.01      Date: 02/10/2011	

REFERENCES: Google Earth 2010  
USGS Image Map for Richmond, California 7.5-Minute Quadrangle, United States Geological Survey, 2009

**MILLER PACIFIC ENGINEERING GROUP**

Budget Estimate Worksheet  
San Pablo - Hillcrest  
San Pablo, California

Date: 12/06/19  
Project Number:  
By:

PERSONNEL COST		SAS	MPM	DSC / EAD	BSP	MFJ	RCA	PDC	NGK / SLM	AJM / JTO	MMT / ENE ZMS	NAR	TWM/ JMO BPC	KRB / MLT		
Task	Description	Prin 3 \$250	Prin 2 \$240	Prin 1 \$230	Assoc Eng 1 \$205	Sr Geol 2 \$180	Sr Eng 1 \$170	Proj Eng 3 \$150	Proj Eng 2 \$140	SrT 2 \$120	SE / SG 3 \$120	Tech 2 \$100	Tech 1 \$95	WP \$85		
1.0	Background Review															
2.0	USA / Permit	1									6					
3.0	Drilling	1									24					
4.0	Lab	2										12				
5.0	Report	1									4			1		
6.0	Baseline Readings	1									6					
7.0																
8.0																
Subtotal Hours		6	0	0	0	0	0	0	0	0	40	12	0	1		
Subtotal Dollars		\$ 1,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,800	\$ 1,200	\$ -	\$ 85		
OVERTIME - PREMIUM												Hrs	Unit \$	Amt \$		
Weekday and Saturday												Add	0	\$30	\$ -	
Sunday/ Holiday / Night												Add	0	\$40	\$ -	
<b>Total Personnel Hours:</b>		<b>58</b>	<b>59</b>											<b>Total Personnel Dollars: \$ 7,585</b>		

OTHER CHARGES				
Item	Quantity	Units	Unit \$	Amount \$
Vehicle - Time - Field	24	Hours	\$ 9.00	\$ 216
Vehicle - Mileage	200	Miles	\$ 0.80	\$ 160
Nuclear Density Gage	0	Test	\$ 8.00	\$ -
Sampling or Video Equipment	2	Days	\$ 50.00	\$ 100
Inclinometer	1	Days	\$ 160.00	\$ 160
Inclinometer pipe & Grout @ \$10.00 a foot	220	Feet	\$ 10.00	\$ 2,200
Data Loggers	5	each	\$ 650.00	\$ 3,250
VW Piezometers	4	each	\$ 450.00	\$ 1,800
<b>Total Other Charges:</b>				<b>\$ 7,886</b>

OUTSIDE AND SUBCONTRACT COSTS					
Task	Description	Quantity	Unit	Unit \$	Amount \$
1.0	Exploration (borings) prevailing Wage	24	Hours	\$ 350	\$ 8,400
2.0	Exploration (CPTs)	0	Day	\$ 315	\$ -
3.0	Exploration (trenches)	0	Hours	\$ 125	\$ -
4.0	Per Diem driller	1	each	\$ 400	\$ 400
5.0	CCC permit	1	each	\$1,500	\$ 1,500
<b>Overhead:</b>					<b>20%</b>
<b>Total Outside Cost:</b>					<b>\$ 12,360</b>

<b>Subtotal:</b>		<b>\$ 27,831</b>
<b>Contingency:</b>	<b>10%</b>	<b>\$ 2,783</b>
<b>Total Project Costs:</b>		<b>\$ 30,614</b>
<b>Use for Budget:</b>		<b>\$ 30,000</b>