ROBERT D. COUSINEAU
Consulting Geotechnical Engineer
5924 Temple City Boulevard
TEMPLE CITY CA 91780
626 287 9675 FAX 287 0560

September 23, 2005

Project No. 04-138

Mr. & Mrs. Christopher Madison
720 South San Rafael Avenue
Pasadena, CA 91105

RE Addendum Report to Report of June 21, 2004
720 South San Rafael Avenue

Dear Mr. and Mrs. Madison,

The following is an addendum to the report of June 21, 2004, as requested for you by Dennis Smith, Architect. The reason for the addendum is to respond to the "Review of Soils Report dated June 21, 2004 by Robert D. Cousineau_____", prepared by Sassan Geosciences, Inc., dated August 23, 2005

This review states that a Geology report is necessary to support such development ------- due to the fact that the property is located within a seismically induced landslide zone" (Presumably as defined by Alquist-Priolo Maps)
Please refer to my letter of July 3, 2004, which refutes this statement.

At the time of the investigation a preliminary survey and development plan was used for the report. Since that time, a complete survey and development plans have been prepared by Buff, Smith and Hensman, Architects for the project as shown on their Plates C-1, A-3 and A-4, which accompany this report

An analysis of surficial stability has been prepared and is shown on Plate H, attached. This indicates a factor of safety of 1.75 which exceeds the generally accepted value of 1.5

Shoring design is generally a factor addressed when final plans have been prepared. In any case, calculations shown on Plates I and J indicate that the proposed vertical cuts up to 9 feet would be stable. However, to preclude any requirements by governing agencies, it is recommended that cuts over 5 feet in height be sloped back on a 45 degree angle above 5 feet.

The review report states that the Geotechnical Report indicates that footings can be placed in the colluvium, which is not true. The report recommends that all footings be founded in bedrock. Furthermore I disagree with their statement that industry standards dictate that footings must not be placed in such material.

It is recommended that the horizontal distance from the lowest edge of any footing to the sloping face of the bedrock be at least 5 feet.

Seismic design parameters recommendations in the report for the completion of structural engineering is not required, since in this case Building Code requirements cover this item.

The direct shear tests do not classify the colluvium as silty sand but rather, silty clay. Their statement to the contrary is not correct.

No geology report has been required by the Building Department and therefore none is required and in my professional opinion none is necessary

No out of slope bedding was observed.

The passive resistance of 400 pounds per cubic foot applies to footings founded in bedrock and all footings will be so founded.

The following lateral forces on retaining walls are recommended:

Angle of Slope	Active Pressure – lb/cuft
Level	30
3 : 1	36
2 : 1	43

A freeboard of at least 24 inches is recommended for all retaining walls.

No subdrains are considered necessary.

Since all grading will consist of cuts, no recommendations for compaction are necessary.

Slabs on grade should be at least 4 inches thick and reinforced with 3/8 inch bars, spaced 24 inches each way.

Recommendations for the construction of driveways will be furnished upon request of the Architect.

In order to clarify questions regarding topography and building details, please refer to the architectural drawings mentioned above. To aid in review by City officials, copies of the plates given in the report are attached, together with the calculation sheets, Plates H, I and J.

Site drainage is a responsibility of the civil engineer for the project.

A minimum width of footings of 12 inches is recommended.

Friction between the base of footings and the underlying bedrock may be assumed as 0.4 times the dead load.

The bedrock is considered non-expansive.

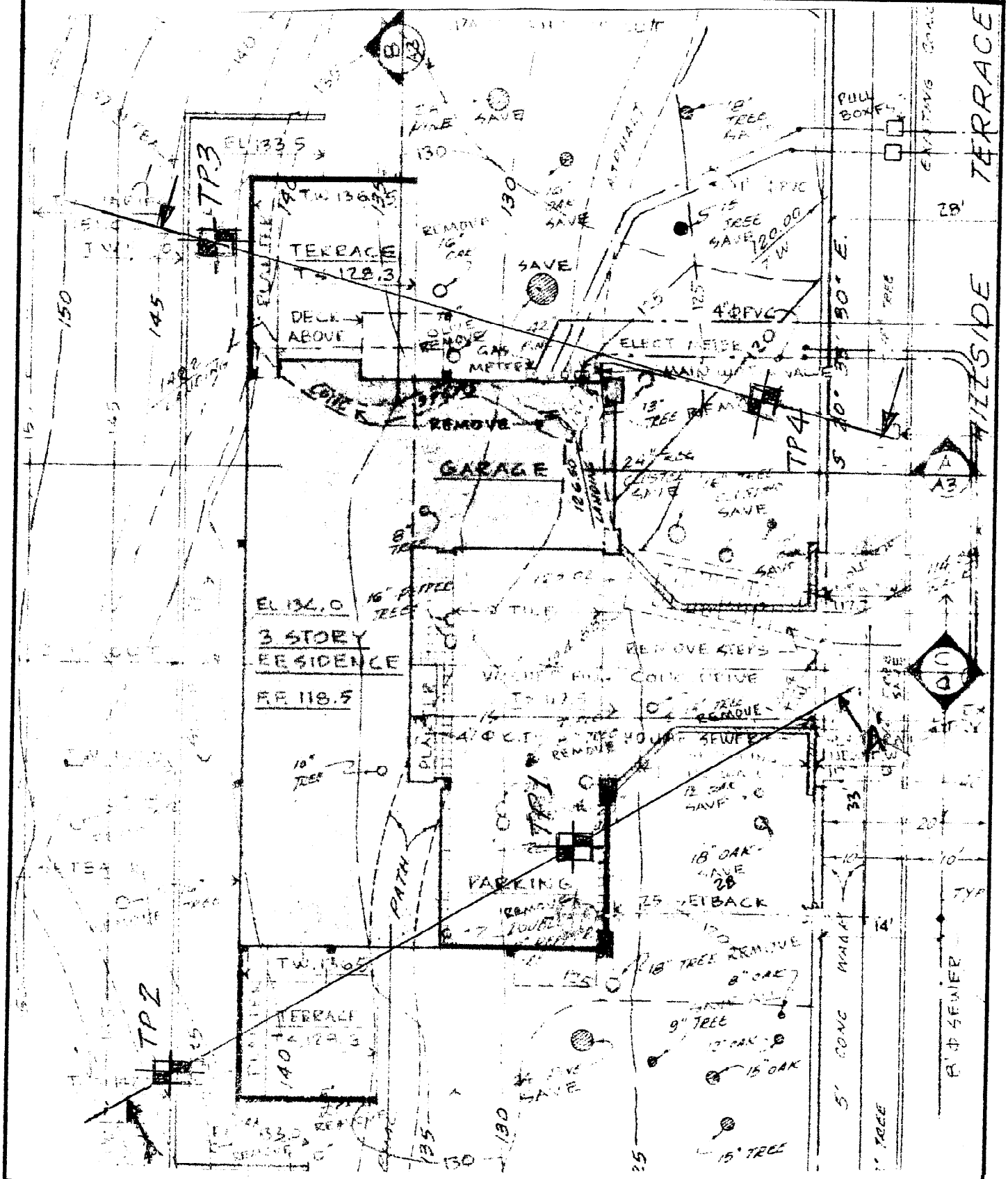
Design of reinforcement of footings is a function of the structural engineer.

Any other questions raised by the architect or City personnel regarding design or other factors related to foundation conditions will be furnished upon request.

Respectfully submitted,

Robert D. Cousineau, P.E.
Registered Geotechnical Engineer

TEST PIT LOCATION PLAN



PROJECT NO.	04-138
PLATE	A

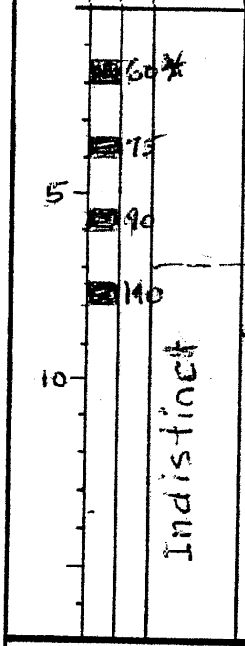
ROBERT D. COUSINEAU CONSULTING GEOTECHNICAL

LOG OF TEST PITS

Date Excavated 06-04-04 | Pit Dimension - Length 4' Width 2' | **TEST PIT 1**

Equipment Hand Tools | Surface Elevation ≅ 127

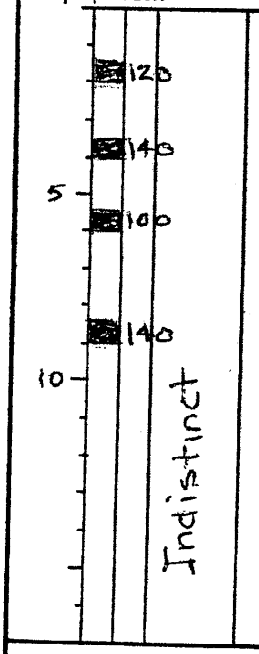
Driving Wt. 36lb Avg. drop 12" | Field Engr. MARK LAI



CLASSIFICATION AND DESCRIPTION	Moisture Content %Dry Wt	Dry Density Lb/cuft	COLOR	MOISTURE	CONSISTENCY
COLLUVIUM Silty CLAY occ. fragments of bedrock	18.3	100			
	18.6	97	Dark Brn	moist	mod firm
	20.6	95			
SILTSTONE/SANDSTONE BEDROCK-POORLY BEDDED	21.0	91			
			Lt. Brn to Grey	moist	mod Hard
End of Pit @ 8.5' *Blows per Foot					

Date Excavated | Pit Dimension - Length Width | **TEST PIT 2**

Equipment | Surface Elevation 121



FILL	9.8	88	Dark & Yel Brn	moist	med firm
COLLUVIUM Sl. Sandy Silty CLAY occ. frag's Bedrock	15.3	102			
SILTSTONE/SANDSTONE BEDROCK-POORLY BEDDED	18.8	84	Lt. Brn	moist	mod Hard
End of Pit @ 8'. Note: Horiz. Scale 1"=2.5'					

PROJECT No. 04-138

PLATE B

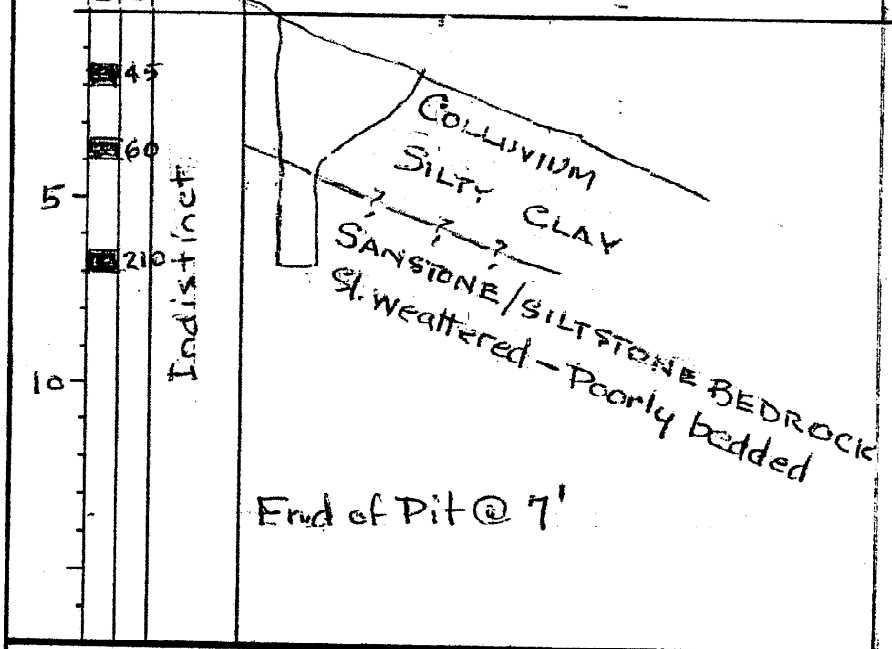
ROBERT D. COUSINEAU – Consulting Geotechnical Engineer

LOG OF TEST PITS

Date Excavated 06-04-04 | Pit Dimension - Length 4' Width 2' | **TEST PIT 3**

Equipment Hand Tools | Surface Elevation 143

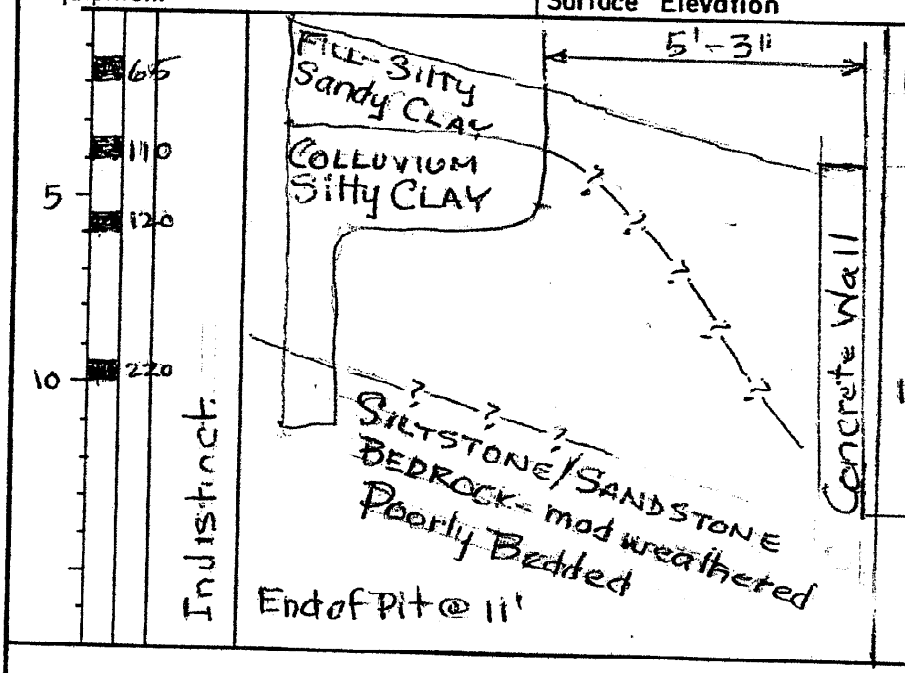
Driving Wt. 36 lb Avg. drop 42" | Field Engr. MARK LAI



CLASSIFICATION AND DESCRIPTION	Moisture Content % DryWt	Dry Density lb/cuft	COLOR	MOISTURE	CONSISTENCY
	18.2	85	Dark Brn	moist	mod firm
	19.6	92			
	21.0	87	Lt. Brn	moist	mod Hard

Date Excavated | Pit Dimension - Length Width | **TEST PIT 4**

Equipment | Surface Elevation



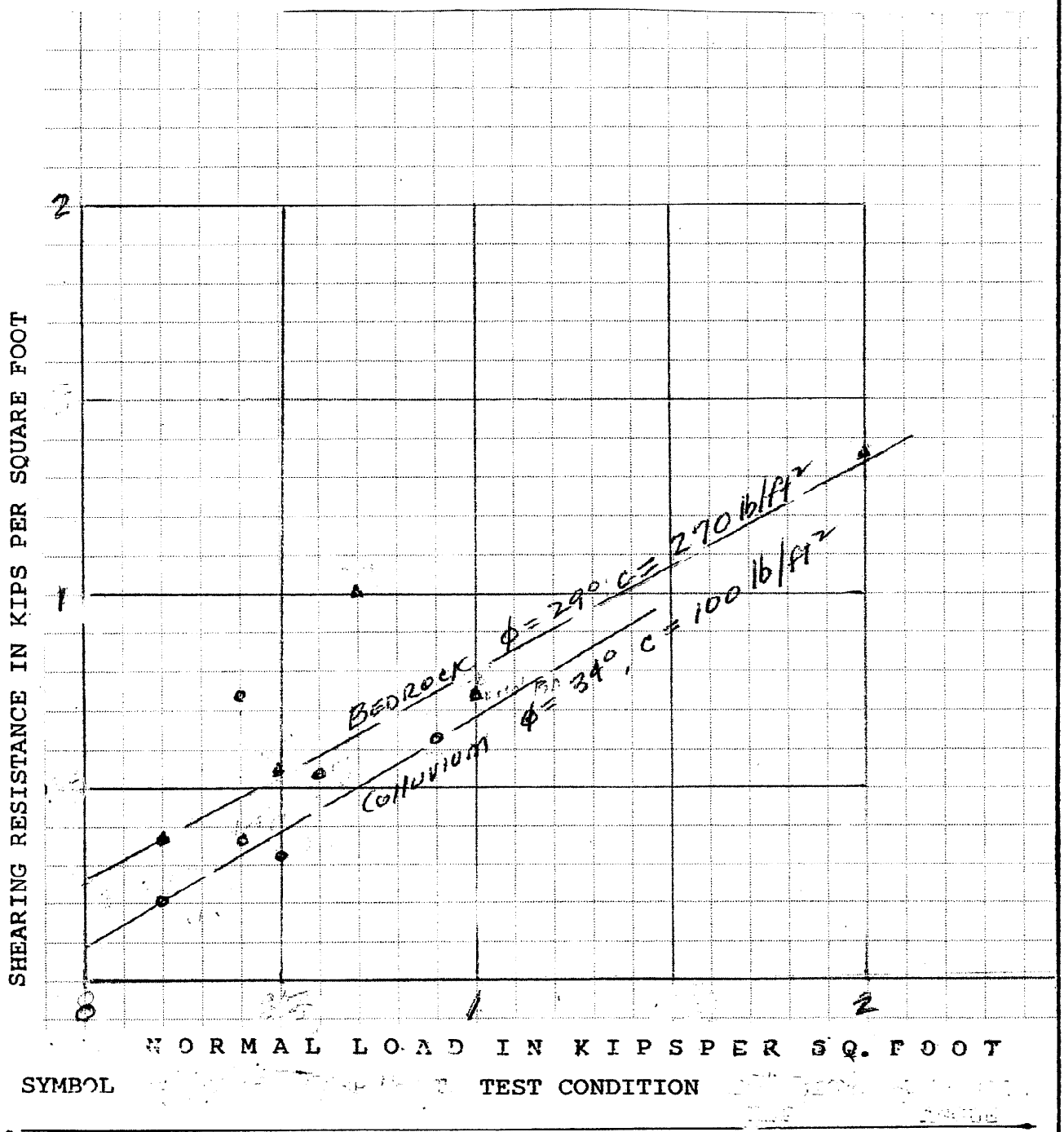
CLASSIFICATION AND DESCRIPTION	Moisture Content % DryWt	Dry Density lb/cuft	COLOR	MOISTURE	CONSISTENCY
	15.8	83	Dk Brn	moist	mod firm
	17.1	88			
	18.3	100	Dk. Brn to Blk	moist	firm
	18.9	85			
			Brn	moist	Hard

PROJECT No. 04-136

PLATE C

ROBERT D. COUSINEAU – Consulting Geotechnical Engineer

DIRECT SHEAR

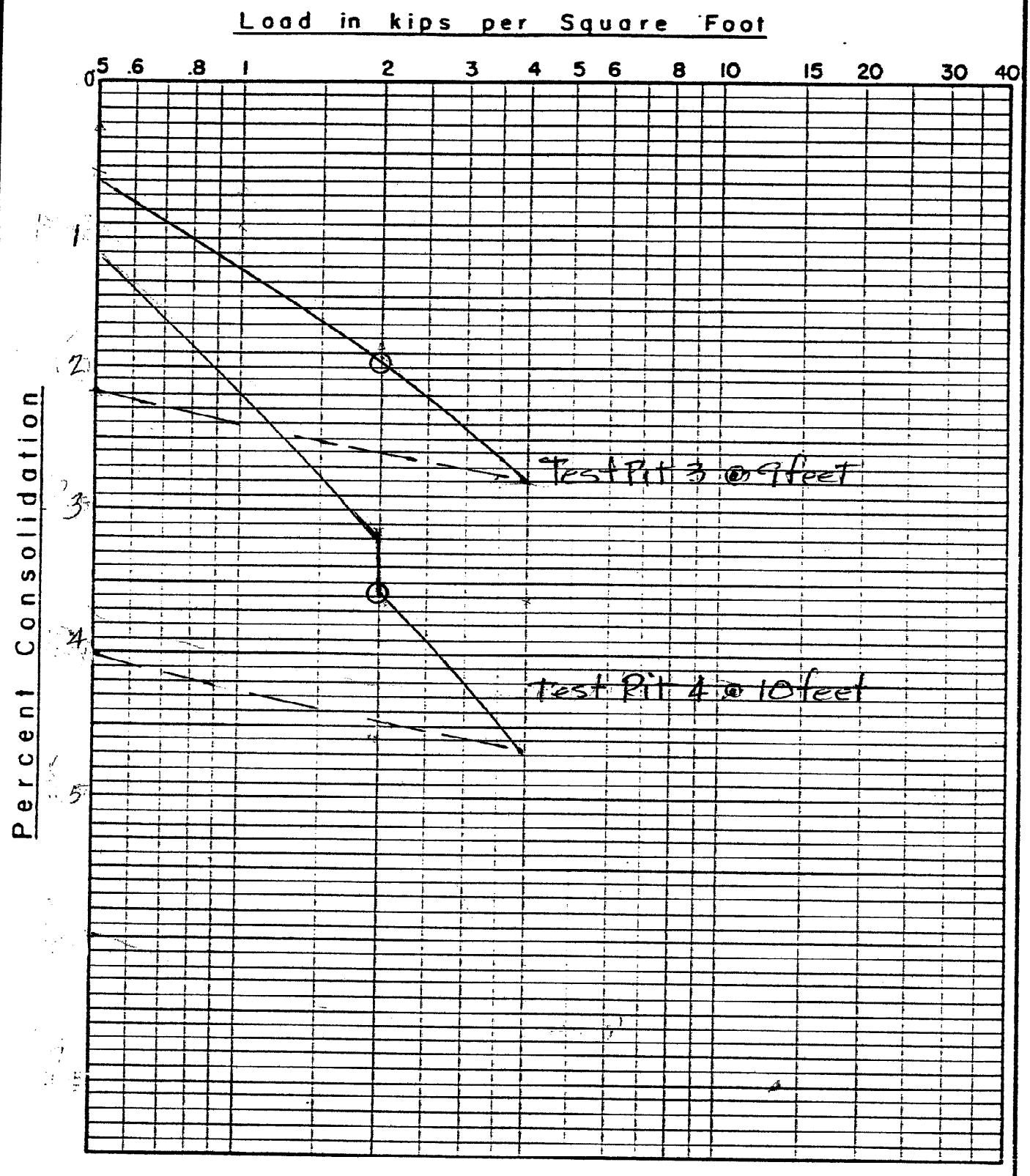


SYMBOL		TEST CONDITION
●	COLLUVIUM	Saturated
▲	BEDROCK	"

PROJECT NO.	04-138
PLATE	D

ROBERT D. COUSINEAU Consulting Geotechnical Engineer

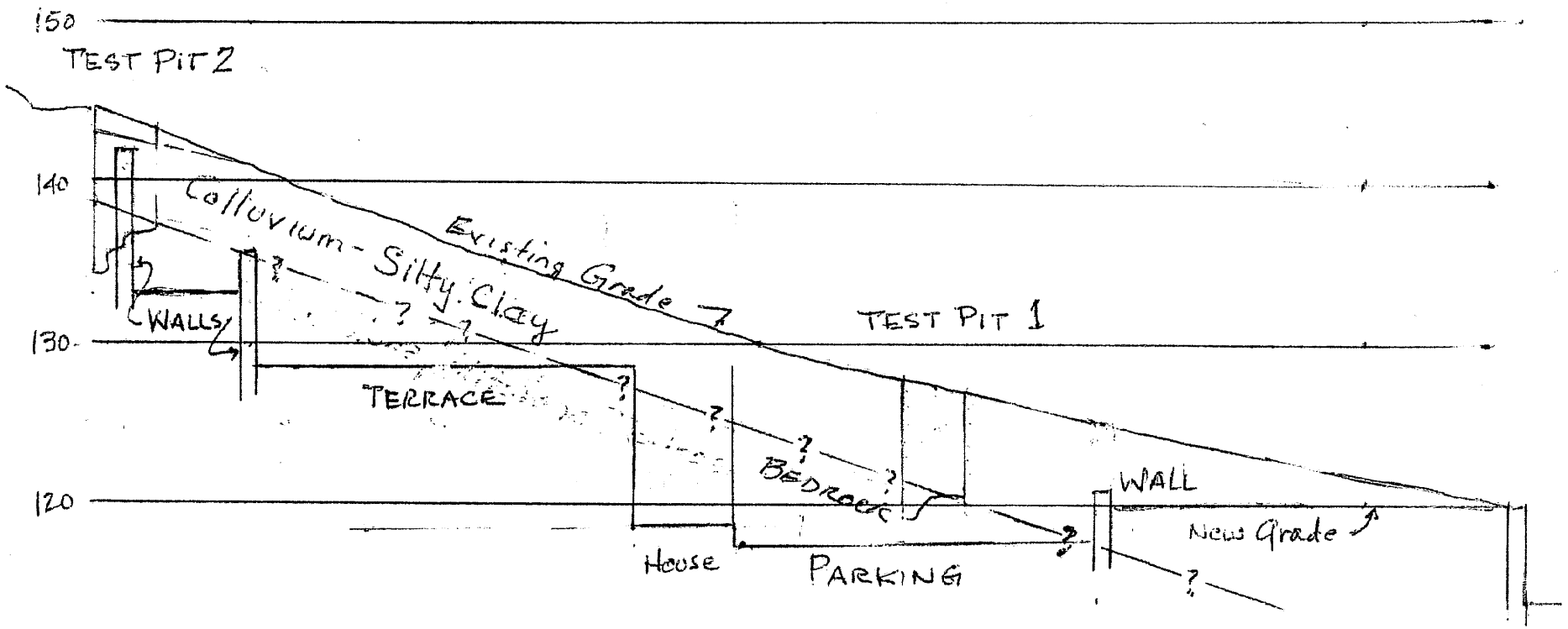
CONSOLIDATION TESTS



○ WATER PERMITTED TO CONTACT SAMPLE

PROJECT No.	04-138
PLATE	E

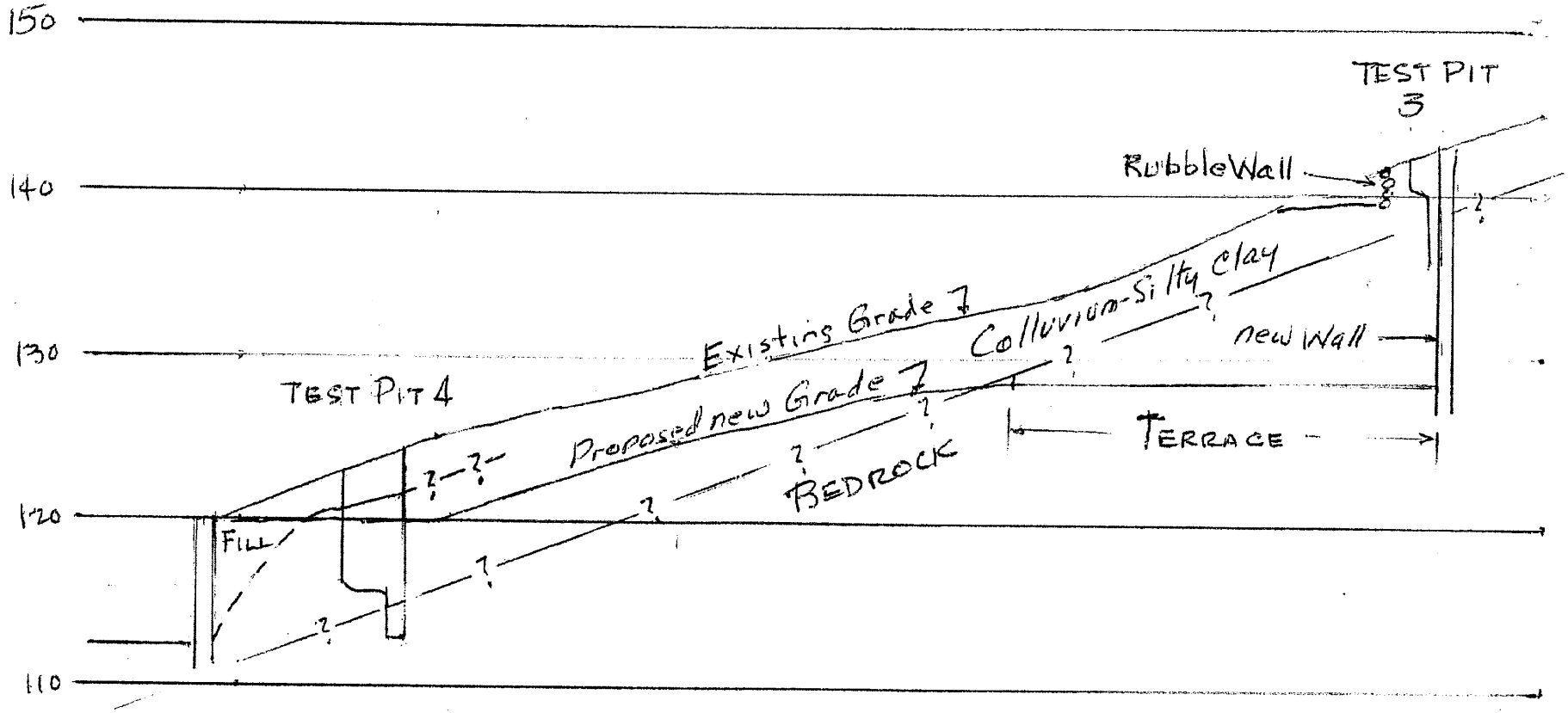
ROBERT D. COUSINEAU – Consulting Geotechnical Engineer



SECTION A-A

Scale 1" = 10'

PLATE F



SECTION B-B'

Scale 1" = 10'

PLATE G

SURFICIAL SLOPE STABILITY

SOIL PARAMETERS

C = 100 (psf) Cohesion

ϕ = 34 (deg.) Angle of Internal Friction

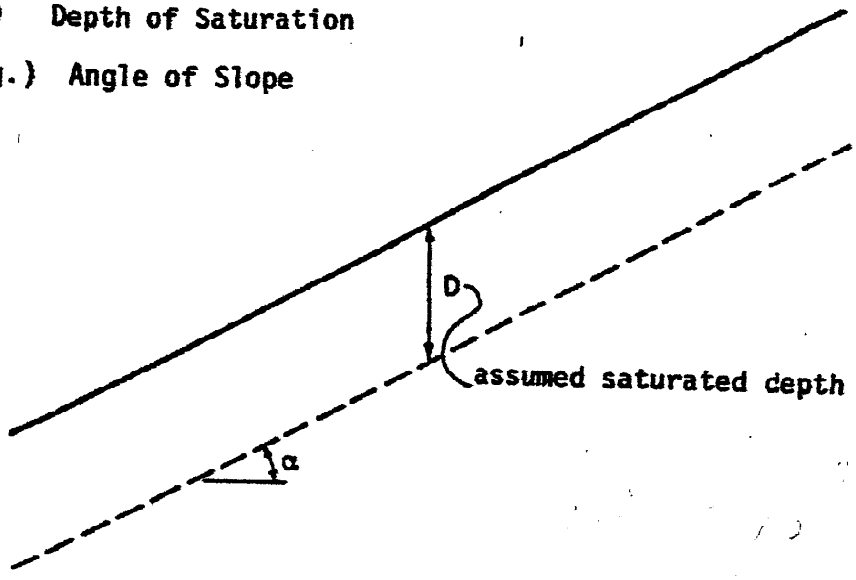
γ_d = 90 (pcf) Dry Unit Weight – AVERAGE

γ_{sat} = 119 (pcf) Saturated Unit Weight

γ_b = 56.6 (pcf) Bouyant Unit Weight

D = 3 (ft) Depth of Saturation

α = 20 (deg.) Angle of Slope



$$FS = \frac{C + D\gamma_b \cos^2 \alpha \tan\phi}{D\gamma_{sat} \cos \alpha \sin\alpha} = \frac{100 + 3 \times 56.6 \times .88 \times .675}{3 \times 119 \times .94 \times .342}$$

$$= \frac{100 + 81}{115} = 1.75$$

$\gamma_b = \gamma_{sat} - \gamma_w = 119 - 62.4 = 56.6$

$\gamma_{sat} = \gamma_d + \left(1 - \frac{\gamma_d}{G \times \gamma_w}\right) \gamma_w = 90 + \left(1 - \frac{90}{2.65 \times 62.4}\right) 62.4$

$= 90 + (1 - .54)\, 62.4$

$90 + 28.70 = 118.7$

G_s = 2.65 Specific Gravity

γ_w = 62.4 (pcf) Unit Weight of Water

PROJECT No.	
PLATE	H

SLOPE STABILITY CALCULATIONS

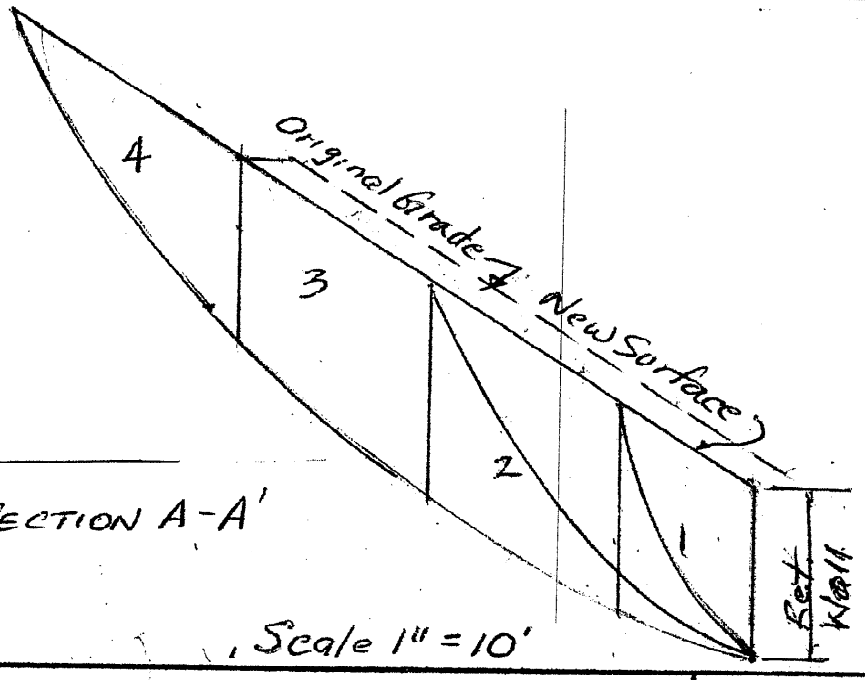
SHEAR STRENGTH PARAMETERS

		Sinα	Cosα	tanφ	
Cohesion - C (lbs./sq.ft.)	270	0.792	0.956	0.554	1
Angle of Internal Friction - Ø	29	0.485	0.875	″	2
Unit Weight - γ (lbs./cu. ft.)	100	0.559	0.829	″	3
		0.819	0.573	″	4

Slice No.	Total Weight of Slice W (kips)	Length L (ft.)	Slide Plane Angle α	Cohesion C (ksf)	Angle of Internal Friction φ	CL	W·Sin α	W·Cos α	W·Cos α·tan φ
1	7	7	17	0.27	29	1.9	2.04	6.69	3.71
2	11	12	29	″	″	3.24	5.34	9.63	5.34
3	10	12	34	″	″	3.24	5.59	8.29	4.59
4	6	20	55	″	″	5.40	4.91	3.44	1.91
					Σ	13.78	17.88	28.05	15.55

Static

$$FS = \frac{\Sigma CL + \Sigma W \cos\alpha \tan\phi}{\Sigma W \sin\alpha} = \frac{13.78 + 15.55}{17.88} = 1.64$$



SECTION A-A'

Scale 1" = 10'

PROJECT No.	
PLATE	I

SLOPE STABILITY CALCULATIONS

SHEAR STRENGTH PARAMETERS

		sin α	cos α	tan ϕ
Cohesion - C (lbs./sq.ft.)	270	.660	.743	.554
Angle of Internal Friction - ϕ (deg.)	29			
Unit Weight - γ (lbs./cu. ft.)	100			

SECTION A-A'

Slice No.	Total Weight of Slice W (kips)	Length L (ft.)	Slide Plane Angle α (deg.)	Cohesion C (ksf)	Angle of Internal Friction ϕ (deg.)	CL (kips/ft.)	W·sin α (kips)	W·cos α·tan ϕ (kips)
1	5	14	42	0.27	29	3.78	3.35	1.86
					Σ	3.78	3.35	1.86

Static

$FS = \frac{\Sigma CL + \Sigma W \cdot \cos\alpha \cdot \tan\phi}{\Sigma W \cdot \sin\alpha} = \frac{3.78 + 1.86}{3.35} = 1.68$

SHEAR STRENGTH PARAMETERS

		sin α	cos α	tan ϕ	
Cohesion - C (lbs./sq.ft.)		.643	.766	.554	1
Angle of Internal Friction - ϕ (deg.)		.839	.545	✓	2
Unit Weight - γ (lbs./cu. ft.)					

SECTION _____

Slice No.	Total Weight of Slice W (kips)	Length L (ft.)	Slide Plane Angle α (deg.)	Cohesion C (ksf)	Angle of Internal Friction ϕ (deg.)	CL (kips/ft.)	W·sin α (kips)	W·cos α·tan ϕ (kips)
1	3.5	9	40	0.27	29	2.43	2.25	1.49
2	5.0	28	57	✓	✓	7.56	4.20	1.51
					Σ	9.99	6.45	3.00

Static

$FS = \frac{\Sigma CL + \Sigma W \cdot \cos\alpha \cdot \tan\phi}{\Sigma W \cdot \sin\alpha} = \frac{9.99 + 3.0}{6.45} = 2.25$

PROJECT No.	
PLATE	J

ROBERT D. COUSINEAU
Consulting Geotechnical Engineer
5924 Temple City Boulevard
TEMPLE CITY CA 91780
626 287 9675 FAX 287 0560

September 3, 2005

Dennis Smith
Buff, Smith & Hensman, Architects
1450 West Colorado Boulevard
Pasadena, CA 91105

Re: Madison Property – 720 South San Rafael Avenue, Pasadena

I have reviewed several statements by "neighbors" to the referenced property and have the following comments.

One of the statements says in part "Soils report is inadequate or needs more study." Is this opinion by a qualified engineer and if not I question the basis for the statement.

Four test pits excavated during the investigation revealed moderately firm topsoil underlain by poorly bedded moderately hard to hard siltstone/sandstone bedrock. Poorly bedded in this case means indistinctly bedded, with no distinct planer attitudes, which is favorable from the standpoint of stability of slope. The bedrock was described as "moderately weathered", not an unusual condition for this type of material, and not suggesting inadequate strength. In fact the test results indicate a reasonably high shear strength.

While the soils were classified as moist, none of the material was observed or tested to indicate saturation, nor was any free groundwater encountered. No springs or water seepage was noted on the property.

As stated in the report, "Since the proposed levels of the house lie considerable below the existing ground surface, all support of the structure is expected to be in bedrock, which should provide excellent support." Since a good deal of the existing material will be removed in the building area, this should provide an additional factor in increasing slope stability and reducing the tendency of the material to slide.

One statement says that "On more than one occasion, our own house and pool have had to be repaired because of mobility of the hillside" Does this person have any report by a qualified engineer or geologist to support this conclusion. There could be a number of causes leading to the distress.

In conclusion, it is my professional opinion that the site and proposed improvements are reasonable and if the recommendations given in the report are followed the site will be sound and stable.

Respectfully submitted,

Robert D. Cousineau, P.E.
Registered Geotechnical Engineer

ROBERT D. COUSINEAU
CONSULTING GEOTECHNICAL ENGINEER
5924 Temple City Boulevard
Temple City, CA 91780
626 287 9675 Fax 626 287 .0560

July 3, 2004

Project No. 04-138

Mr. & Mrs. Christopher Madison
720 South San Rafael Avenue
Pasadena, CA 91105

Re: Proposed New Residence at 720 So. San Rafael Avenue
(facing Hillside Terrace), Pasadena.
Addendum to Report of June 21, 2004

Dear Mr. & Mrs. Madison,

The referenced property is situated outside the "Earthquake Fault Zone" as defined by "Alquist-Priolo Earthquake Fault Zone Act. Therefore, no special precautions in regard to any faults within or directed toward the site need be considered.

Respectfully Submitted,

Robert D. Cousineau, P.E.
Registered Geotechnical Engineer

Distribution: (2) Mr. & Mrs. Madison
(4) Dennis Smith, Buff, Smith & Hensman

Richard P. & Kim Binder

777 Hillside Terrace
Pasadena, California 91105

September 23, 2005

HAND DELIVERED

Pasadena City Council
City Clerk
117 East Colorado Blvd.
Pasadena, CA 91105

Re: Call for Review
Hillside Permit 4395; Tentative Parcel Map 061676;
Tree Removal Permit
720 S. San Rafael Ave.
Applicants: Chris & Lois Madison

Dear Council Members & Mayor:

Our family lives at 777 Hillside Terrace, Pasadena, directly south and adjacent to the above mentioned proposed new homesite development.

I know that you have received the letter from Dale Pelch from Hahn & Hahn Law Firm which details the risks associated with this project. I will not repeat those risks in this letter and bore you with technicalities. Our concerns, however, are very grave and must not be discounted—that is this is a very dangerous project as it affects the stability of the hillside that we share.

I have read the review of the soils report prepared by SASSAN Geosciences, Inc. of Pasadena. In that report, several points are raised that declare the soils report "incomplete and inadequate to support a conclusion that the site is appropriate for development." This report identifies serious deficiencies in the documentation offered in support of the project.

Let me tell you a little about our hillside. Last year during the winter rainy season, our family lost two (2) separate retaining wall structures, each 60 feet in length, due to the instability of the hillside. I have since rebuilt the retaining walls in an effort to save the hillside from coming into our home. I can only imagine what might happen to

the integrity of this same hillside if the cutting and removal of 2,250 cubic yards of soil that is proposed actually takes place.

Another concern of ours is the potential huge runoff of water and the associated potential of landslides to our neighbors across Hillside Terrace. I have not read in any of the reports how this will be controlled or dealt with.

I trust that you will do the right thing in this matter and reverse the Hearing Officer's approval of the Permit Application and deny.

Very truly yours,

Richard & Kim Binder

Mrs. Warner W. Henry
887 La Loma Road
Pasadena, California 91105

September 21, 2005

Pasadena City Council
City Clerk
117 East Colorado Boulevard
Pasadena, CA 91105

Re: Call for Review
Hillside Permit 4395
720 South San Rafael
Applicants: Christopher and Lois Madison

Dear City Council Members:

I have received copies of the correspondence to you from the attorneys for Carolyn and Charles Miller, opposing the tentative parcel map and tree removal permit for the aforementioned property.

That piece of property seems to me to invite development. I walk up Hillside Terrace daily, and realize each time I do that that hillside slope is a potentially beautiful building site for someone, and would fit in nicely with the profile of the existing residences, most of which also face steep slope issues. There are so few new building sites left in Pasadena, it seems unconscionable to deny access to one of the last ones available.

It is always inconvenient for neighbors when new construction is proposed in a residential neighborhood. Traffic and parking are impacted; noise and dust are a nuisance; tranquility is disturbed. But that should not be reason enough to deny a permit to build.

We have had several other new home projects in our quadrant of Pasadena recently – our house being one of them, the Franks another, and several years prior to that there were two new homes built on San Rafael. In addition we have had many major remodels. During each construction project, the immediate neighbors were impacted and inconvenienced – as is to be expected – but this is not reason enough to deny a permit.

Our society today is so NIMBY oriented, or perhaps now even BANANA (build absolutely nothing anywhere near anyone) driven, that it becomes more and more difficult to renovate or construct housing in established neighborhoods.

My husband and I are very sorry that we are unable to attend the hearing on September 26th. Were we able to be there, we would **strongly defend** in person the Madison's application for a permit to develop the property. There may be geological mitigating circumstances which will need refinement, but in principle I can see no foundation for any objection to this request on the part of the Madisons.

Just as a matter of record, we are personally acquainted with both the Millers and the Madisons, so my response is not one of friendship or loyalty, but one of fairness and interest in my community's welfare. I hope that the Council will rule in favor of the Madisons.

Yours truly,

Carol Henry

Carol F. Henry

JOHN K. VAN DE KAMP

September 20, 2005

Pasadena City Council
City Clerk
117 East Colorado Boulevard
Pasadena, CA 91105

Re: Call for Review
Hillside Permit 4395; Tentative Parcel Map 061676;
Tree Removal Permit
720 South San Rafael
Applicants: Christopher and Lois Madison

Dear Council Members:

We live at 801 South San Rafael on the other side of San Rafael and down the street from the proposed project.

We have reviewed the letter sent to the Council by Dale Pelch on September 20th and the attached Soils Report of SASSAN which finds the Project's Geotechnical Report "incomplete and inadequate."

In its present state we oppose the project and urge the reversal of the Permit Application. The Pelch and SASSAN letters/review speak for themselves, and will not be repeated ad nauseam here.

Sufficed to say:

(1) The Application calls for a 2-story structure, while in reality a massive 3-story building is proposed.

(2) The excavation will result in the removal of over 2,000 cubic yards of soil requiring up to 450 round trips. The impact of that removal and the other consequences of the construction is overwhelming with respect to the quiet neighborhood in which it is located.

(3) The Geotechnical Report offered by the applicants is plainly deficient.

Far better for the applicants to go back to the drawing board, meet with their neighbors, address their/our concerns, and if they decide to go forward, file an application that meets the requirements of Pasadena's laws, including its Hillside Ordinance.

Sincerely yours,

John K. Van de Kamp

Andrea L. Van de Kamp

JKV:mas

re: Lot Split at 720 South San Rafael

[illegible] Laughlin

Sept. 22, 2005

To whom it May Concern,

Regarding the issue of splitting the lot at 720 South San Rafael, I as a neighbor to the North of this property am concerned about the removal of dirt to put the house in. I feel this would not only endanger the hill but effect the drainage on all sides. Therefore I am against this action.

Sincerely,

Lucabelle M. Laughlin
(Mrs. H.E. Laughlin

RECEIVED
'05 SEP 26 A9:27
CITY CLERK
CITY OF PASADENA

EDWIN F. MAJOR
625 ROCKWOOD ROAD
PASADENA, CALIFORNIA 91105

September 21, 2005

Pasadena City Council
City Clerk
117 East Colorado Boulevard
Pasadena, California 91105

Re: Lot split, tree removal and house development
720 South San Rafael, Pasadena, California 91105

Dear Members of City Council:

Many residents in our neighborhood are strongly opposed to the proposed lot split and development at 720 South San Rafael.

We are looking at a steep hillside on a very narrow street which would be totally disrupted for many months during construction. Also who knows what damage might have been done to the hillside by the recent big rainy season. This development would seem to violate the spirit of the Hillside Ordinance which your Council has been working on recently.

We understand that up to 450 truckloads of dirt would be removed and that a 3 story structure would be built. In the process much damage would probably be done to an aging infrastructure.

We urge the council to deny the lot split and development of this 3 story house and 4 car garage.

Sincerely,
Nancy and Edwin Major
625 Rockwood Road
Pasadena, California 91105