Trepanier Engineering
Professional Civil Engineering

THEODORE W. TREPANIER STATE OF WASHINGTON 16463 REGISTERED PROFESSIONAL ENGINEER

EXPIRES 8/2/02

PLAT OF POINT RILEY

PRELIMINARY DRAINAGE CALCULATIONS

DECEMBER 29,2000

GENERAL CONSIDERATIONS

The site is a 3.81 acres property that will be subdivided into 13 duplex lots in the City of Arlington. The property will consist, in addition to roads, utilities and duplexes, of a park tract and a tract for drainage and open space. The soils are sandy and infiltration will be used for stormwater disposal. Soil logs were taken to confirm this (copy attached). The depth to the water table is greater than 13 feet so a deep infiltration trench can be provided.

PROPOSED CONDITIONS

The proposal is for each duplex to have its own Retention/Detention system and to have the road drainage infiltrated in the drainage tract. The following calculations are for each of these two systems.

DUPLEX DRAINAGE

RLPCOMPUTE [HOUSEPOOL] SUMMARY
100 yr MatchQ=PeakQ= 0.0867 cfs Peak Out Q: 0.0199 cfs - Peak Stg: 103.67 ft - Active Vol: 330.51 cf

Running C:\Program Files\StormShed\Example\HOUSEPOOL Report.pgm on Friday, December 29, 2000

Summary Report of all RLPool Data

Project Precips
100 yr] 3.80 in

BASLIST2
[INDIVIDUALDUPLEXES] Using [TYPE1A] As [100 yr]
LSTEND

BasinID	Peak Q Event	Peak T	Peak Vol	Area	Method	Raintype
	(cfs)	(hrs)	(ac-ft)	ac	/Loss	
INDIVIDUALDUPLEXES		0.0867	8.00	0.0297	0.10	SBUH/SCS
	TYPE1A	100 yr				

BASLIST [TYPE1A] AS [100 yr] DETAILED
[INDIVIDUALDUPLEXES]
LSTEND

Drainage Area: INDIVIDUALDUPLEXES

Hyd Method:	SBUH Hyd		Loss Method:		SCS CN Number
Peak Factor:	484.00		SCS Abs:	0.20	
Storm Dur	24.00 hrs				
	Area	CN	TC		
Pervious	0.0000 ac	77.00	0.00 hrs		
Impervious	0.1000 ac	98.00	0.08 hrs		
Total	0.1000 ac				

Supporting Data:
Impervious CN Data:

road/asphalt/building	98.00	0.1000 ac

Impervious TC Data:

Flow type:		Description:		Length:	Slope:
	Coeff:	Travel Time			
Fixed	by inspection	0.00 ft	0.00%	5.0000	5.00 min

HYDLIST SUMMARY
[ELMER]
LSTEND

HydID	Peak Q	Peak T	Peak Vol	Cont Area
	(cfs)	(hrs)	(ac-ft)	(ac)
ELMER	0.02	10.00	0.0288	0.1000

STORLIST

[HOUSEINFIL]
LSTEND

Node ID: HOUSEINFIL

Desc:	Manhole structure			
Start El:	100.0000 ft		Max El:	108.0000 ft
Contrib Basin:				Contrib Hyd:
	Length	Width	Void Ratio	
	6.0000 ft	50.0000 ft	30.00	

DISCHLIST
[trench]
LSTEND

Control Structure ID: trench - Infiltration control structure

Descrip:	Multiple Orifice			
Start El	Max El	Increment		
100.0000 ft	105.0000 ft	0.10		
Infil:	1.21 in/hr		Multiplier:	1.00

ROAD DRAINAGE

RLPCOMPUTE [ROADPOOL] SUMMARY
100 yr MatchQ=PeakQ= 0.6506 cfs Peak Out Q: 0.1147 cfs - Peak Stg: 104.00 ft - Active Vol: 2876.48 cf

Running C:\Program Files\StormShed\Example\ROADPOOL Report.pgm on Friday, December 29, 2000

Summary Report of all RLPool Data

Project Precips
[100 yr] 3.80 in

BASLIST2
[ROADDEVELOPED] Using [TYPE1A] As [100 yr]
LSTEND

BasinID	Peak Q Event	Peak T	Peak Vol	Area	Method	Raintype
-------	(cfs)	(hrs)	(ac-ft)	ac	/Loss	
ROADDEVELOPED		0.6506	8.00	0.2228	0.75	SBUH/SCS
	TYPE1A	100 yr				

BASLIST [TYPE1A] AS [100 yr] DETAILED
[ROADDEVELOPED]
LSTEND

Drainage Area: ROADDEVELOPED

Hyd Method:	SBUH Hyd		Loss Method:		SCS CN Number
Peak Factor:	484.00		SCS Abs:	0.20	
Storm Dur	24.00 hrs				
	Area	CN	TC		
Pervious	0.0000 ac	77.00	0.00 hrs		
Impervious	0.7500 ac	98.00	0.08 hrs		
Total	0.7500 ac				

Supporting Data:
Impervious CN Data:

road/asphalt/building	98.00	0.7500 ac

Impervious TC Data:

Flow type:		Description:		Length:	Slope:
	Coeff:	Travel Time			
Fixed	by inspection	0.00 ft	0.00%	5.0000	5.00 min

HYDLIST SUMMARY
[BUNNY]
LSTEND

HydID	Peak Q	Peak T	Peak Vol	Cont Area
-------	(cfs)	(hrs)	(ac-ft)	(ac)
BUNNY	0.11	11.83	0.2229	0.7500

STORLIST
[ROADINFILTRATION]
LSTEND

Node ID: ROADINFILTRATION

Desc:	Manhole structure			
Start El:	100.0000 ft		Max El:	108.0000 ft
Contrib Basin:				Contrib Hyd:
	Length	Width	Void Ratio	
	12.0000 ft	200.0000 ft	30.00	

DISCHLIST

[trench]

LSTEND

Control Structure ID: trench - Infiltration control structure

Descrip:	Multiple Orifice			
Start El	Max El	Increment		
100.0000 ft	105.0000 ft	0.10		
Infil:	1.21 in/hr		Multiplier:	1.00

GEOTEST SERVICES, INC.
Engineers, Geologists and WABO Special Inspectors
741 Marine Drive • Bellingham, WA 98225 • **Phone 360.733.7318** • Fax 360.733.7418 • e.mail geotest@nas.com

RECEIVED
NOV 15 2000
TREPANIER ENGINEERING

November 9, 2000
Job No. G0356

Romo Construction
1304 South Beach Drive
Camano Island, Washington 98282

Attention: Laurence W. Romo

Re: Soils Logs
Romo Plat
35th Avenue Northeast
Arlington, Washington

Dear Mr. Romo:

As requested, we have observed excavation of a series of test pits at the subject site. The purpose of our services was to provide soils logs with soils classified in accordance with the USDA textural classification.

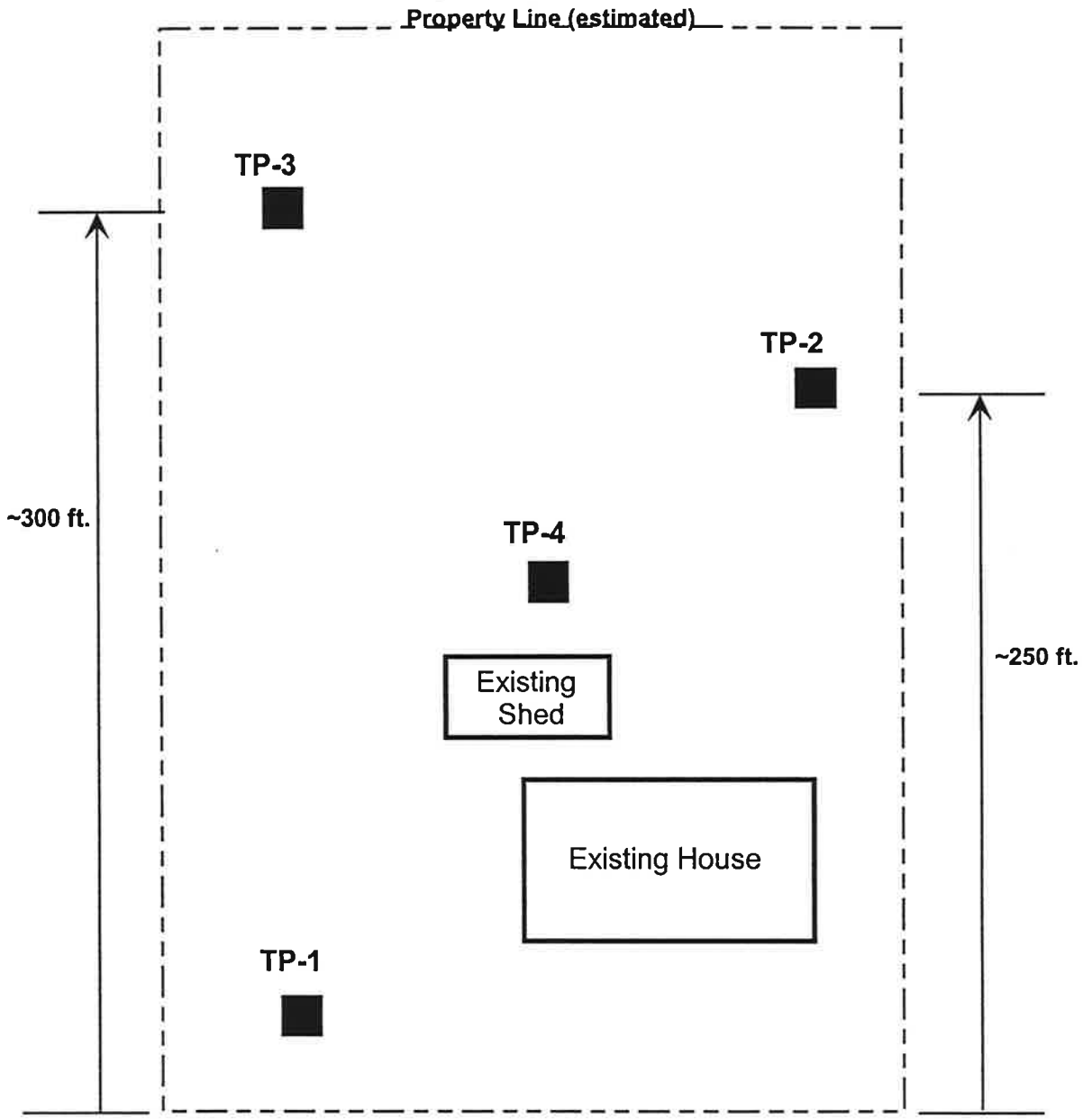
The results of the subsurface exploration are attached on the Exploratory Location Plan and the Test Pit Logs.

We appreciate the opportunity to be of service to you on this project. If any questions should arise regarding this letter, please contact the undersigned.

Respectfully Submitted,
GeoTest Services, Inc.

Douglas S. Lynne, P.E.
Geotechnical Services Manager

Attachments: Figure 1: Exploratory Location Plan
Test Pit Logs



NOT TO SCALE

reference: hand sketch
by GeoTest Services, Inc.
dated October 30, 2000

GEOTEST SERVICES, INC.
741 Marine Drive
Bellingham, WA 98225
phone: (360) 733-7318
fax: (360) 733-7418

Date: 11-8-00	By: DSL	Scale: NONE	Project
			G0356

EXPLORATORY LOCATION PLAN
ROMO PLAT
35TH AVENUE NORTHEAST
ARLINGTON, WASHINGTON

Figure
1

TEST PIT LOGS
ROMO PLAT
G0356

Test Pit TP-1 (excavated on October 30, 2000)
No groundwater observed during excavation.

0.0' to 1.0'	dark brown sandy loam
1.0' to 6.5'	gray loamy sand
	-roots to 7 feet
6.5' to 12.0'	gray gravelly loamy sand

Test Pit TP-2 (excavated on October 30, 2000)
No groundwater observed during excavation.

0.0' to 1.0'	dark brown sandy loam
1.0' to 7.0'	gray loamy sand
	-roots to 7 feet
7.0' to 14.0'	gray gravelly loamy sand

Test Pit TP-3 (excavated on October 30, 2000)
No groundwater observed during excavation.

0.0' to 1.0'	dark brown sandy loam
1.0' to 6.0'	gray loamy sand
	-roots to 7 feet
6.0' to 12.0'	gray gravelly loamy sand

Test Pit TP-4 (excavated on October 30, 2000)
No groundwater observed during excavation.

0.0' to 1.0'	dark brown sandy loam
1.0' to 9.0'	gray loamy sand
	-roots to 7 feet
9.0' to 12.0'	gray gravelly loamy sand