

# OSSF Soil & Site Evaluation

Page 1 (Soil & Site Evaluation)

Date Performed: 1/20/06

Property Owner: Greg Shaffner

Site Location: 18050 Nelson Loop Streetman, Texas Proposed Excavation Depth: \_\_\_\_\_

## REQUIREMENTS:

At least two soil excavations must be performed on the site, at opposite ends of the proposed disposal area. Locations of soil borings or dug pits must be shown on the site drawing. For subsurface disposal, soil evaluations must be performed to a depth of at least two feet below the proposed disposal field excavation depth. For surface disposal, the surface horizon must be evaluated. Describe each soil horizon and identify any restrictive features on this form. Indicate depths where features appear.

Soil Boring Number: <u>1</u>					
Depth (Feet)	Texture Class	Gravel Analysis (If Applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
1 FT.	<u>III</u>	<u>NA</u>	<u>no</u>	<u>no</u>	<u>CL</u>
2 FT.	<u>IV</u>			<u>Yes</u>	<u>Clay</u>
3 FT.					
4 FT.					
5 FT.					

Soil Boring Number: <u>2</u>					
Depth (Feet)	Texture Class	Gravel Analysis (If Applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
1 FT.	<u>III</u>	<u>NA</u>	<u>no</u>	<u>no</u>	<u>CL</u>
2 FT.	<u>IV</u>			<u>Yes</u>	<u>Clay</u>
3 FT.					
4 FT.					
5 FT.					

## FEATURES OF SITE AREA

Presence of 100 year flood zone

Presence of upper water shed

Presence of adjacent ponds, streams, water impoundments

Existing or proposed water well in nearby area (within 150 feet)

Ground Slope

☒ Yes ☐ No

☐ Yes ☒ No

☒ Yes ☐ No

☐ Yes ☒ No



I certify that the findings of this report are based on my field observations and are accurate to the best of my ability.

Phil M. Baker #2004  
(Signature of person performing evaluation)

1-20-06  
(Date)

SE#9819  
Registration Number and Type

Date Performed: 1/12/06Site Location: 8050 Nelson Loop, Streetman, Texas ☒ Subsurface Disposal ☐ Surface Disposal

## Schematic of Lot or Tract

## Show:

Compass North, adjacent streets, property lines, property dimensions, location of buildings, easements, swimming pools, water lines, and any other structures where known, all to scale.

Location of existing or proposed water wells within 150 feet of the property.

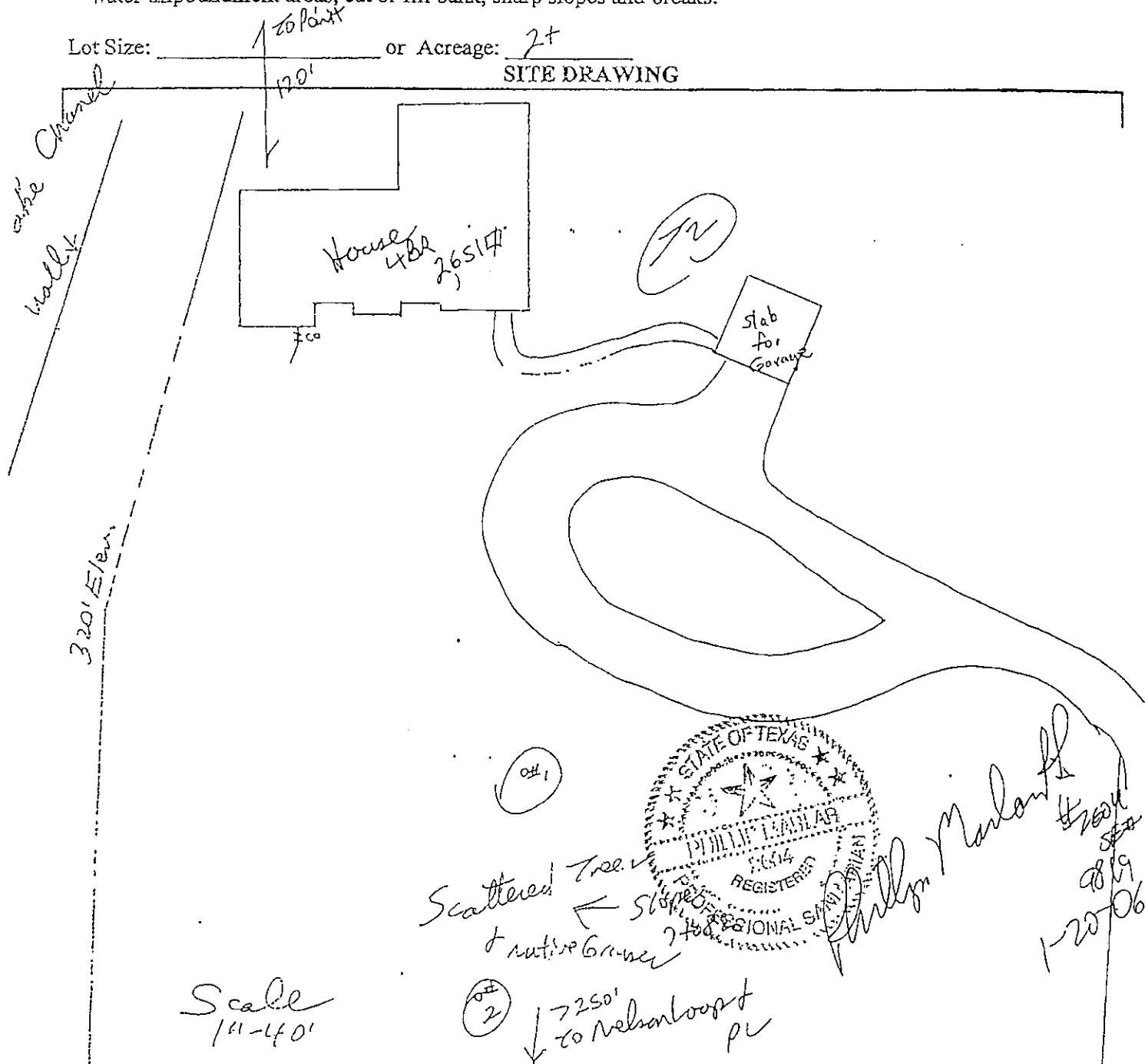
Indicate slope or provide contour lines from the structure to the farthest location of the proposed disposal field.

Location of soil boring or excavation pits (show location with respect to a known reference point).

Location of natural, constructed, or proposed drainage ways (ditches, streams, ponds, lakes, rivers, etc.), water impoundment areas, cut or fill bank, sharp slopes and breaks.

Lot Size: 120' or Acreage: 2+

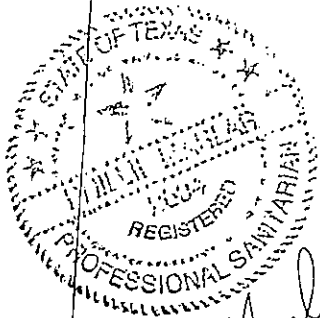
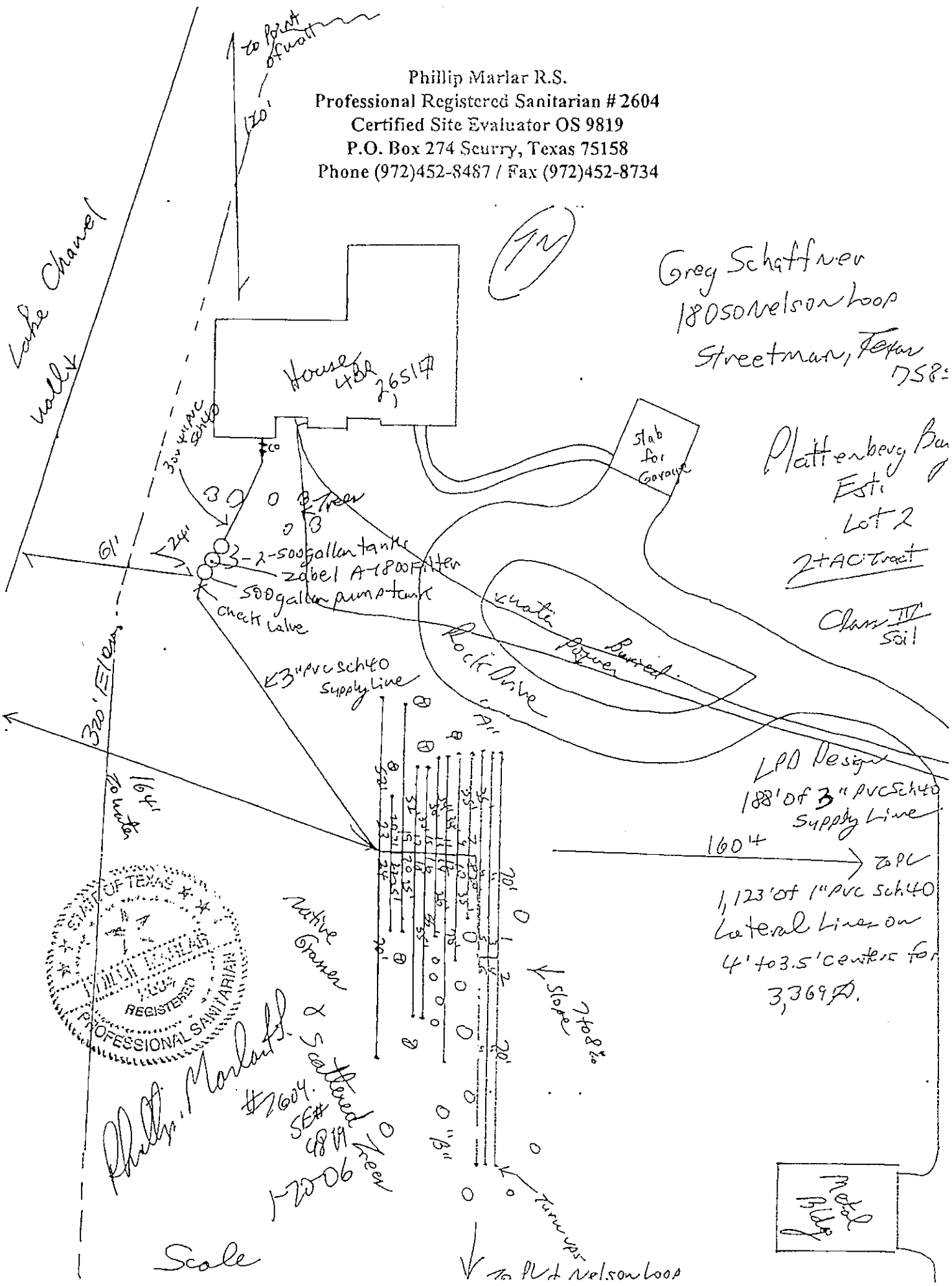
## SITE DRAWING



Phillip Marlar R.S.  
 Professional Registered Sanitarian # 2604  
 Certified Site Evaluator OS 9819  
 P.O. Box 274 Scurry, Texas 75158  
 Phone (972)452-8487 / Fax (972)452-8734

Greg Schaffner  
 18050 Nelson Loop  
 Streetman, Texas 75885

Plattenberg Bar  
 Est.  
 Lot 2  
 2+AC Tract  
 Class III Soil



Phillip Marlar  
 #2604  
 SE# 4819  
 1-2006

Scale

11/19/06

**Phillip Marlar R.S.**  
**Registered Professional Sanitarian**  
**P.O. Box 274 Scurry, Texas 75158**  
**Phone (972) 452-8487**

January 20, 2006  
Tarrant Regional Water District Designated Representative  
Attn: Chris Robinson

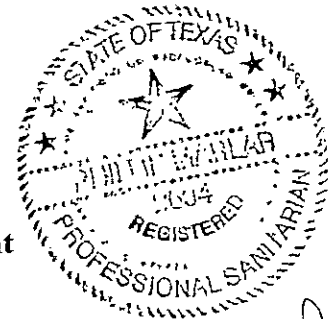
Subject Property: Greg Schaffner's property at 18050 Nelson Loop Streeman, Texas  
Subject Design: Low Pressure Dosing System ( Plattenberg Bay Est. lot 2 )

**Design Parameters:**

4 Bedroom future home ( 2,651 sq ft of living area) (4 Bedroom Equivalent)  
4 Bedroom Home ( Water Saving Fixtures) = 300 gpd  
Soil Evaluation Class IV soil  
Long Term Loading Rate .1 gal / sq ft / day  
Required Absorption Area = 300 gpd / .1 gal / sq ft / day = 3,000 sq ft  
Designed Absorption Area = 3,369 sq ft  
Total Length of Laterals = 1,123'

**System Parameters**

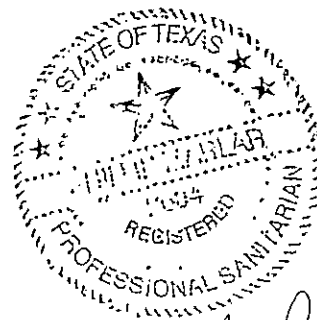
2 - 500 gallon tanks  
An A-1800 Zabel Filter on outlet of the second 500 gallon tank  
500 gallon pump tank with high water alarm  
Supply Line - 3" diameter sch 40 piping  
Lateral Lines - 1 "diameter sch 40 piping  
Supply Line Length - 188'  
Lateral Line Length - 1,123'  
Hole Size in Laterals - 1/8"  
First & last hole in each line must be 2 to 3' from end & start of lines  
Hole Spacing - 5 to 8' (See attached chart)  
# Holes - 183  
Elevation Head - 17'  
Friction Head - 1.84' (using .82 friction rate)  
Pressure Head - 2' (Operating Head)  
Total Head - 20.84 Ft  
.5 HP Barnes STEP-SS pump with 20.84 Ft head will pump 65+ gpm  
GPM at 2 ft Operating Head = 58.52 gpm  
Type Pump - .5 HP Submersible Sewer Pump Barnes STEP-SS or equivalent  
Pump at 58.52 gpm will deliver 28 ft. head  
Lateral Depth - 22 to 30 " (Average Depth 26")  
Excavation width 6" to 1' wide      Rock - washed clean 3/8 to 1"  
Rock Depth - at least 8" under the pipe (laterals) then another 4" for total of 12"  
Earthen dams to be installed every 20' through out lateral lines  
Volume Supply Line - 68.99 gallons      Volume Laterals - 46.04 gallons



*Phillip Marlar R.S.*  
#2604  
SE#  
9810  
1-2006

Phillip Marlar R.S.  
Registered Professional Sanitarian  
P.O. Box 274 Scurry, Texas 75158  
Phone (972) 452-8487

Volume Supply & Laterals - 115.03 gallons Check Valve Required - YES  
Minimum Dosing required - 299.19 gallons  
Proposed minimum dosing - 300.43 gallons  
(23.75" of effluent depth in pump tank to be pumped at a time)



*Phillip Marlar* *PS*  
#2604  
SEA  
9819  
1-20-E

Greg Schaffner - Elevation Chart

Line	Side "A"	Side "B"
1 & 2	1'-8"	2'
3 & 4	1-11	2-4
5 & 6	2-2	2-8
7 & 8	2-8	2-10
9 & 10	2-11	3-1
11 & 12	3-2	3-8
13 & 14	3-7	3-6
15 & 16	3-11	4-1
17 & 18	3-11	4-1
19 & 20	3-11	4-4
21 & 22	4-6	4-8
23 & 24	4-9	5-2

Tank - 13'-3"



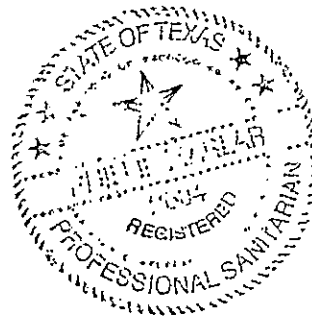
*Phil Schaffner*  
 #2694  
 3-9819  
 1-20-06

**Phillip Marlar R.S.**  
**Registered Professional Sanitarian**  
**P.O. Box 274 Scurry, Texas 75158**  
**Phone (972) 452-8487**

**Greg Schaffner LLP - OSSF Specifications (Elevation Chart)**

Line	Elevation Avg/Line	Difference in Elev.	Pressure Head
1 & 2	2'	0	2'
3 & 4	2'	0	2'
5 & 6	2.5'	.5'	2.5'
7 & 8	3'	1'	3'
9 & 10	3'	1'	3'
11 & 12	3.5'	1.5'	3.5'
13 & 14	3.5'	1.5'	3.5'
15 & 16	4'	2'	4'
17 & 18	4'	2'	4'
19 & 20	4'	2'	4'
21 & 22	4.5'	2.5'	4.5'
23 & 24	5'	3'	5'

Lateral lines will vary from 22 to 30" in depth.  
Average line depth will be 26" in depth.

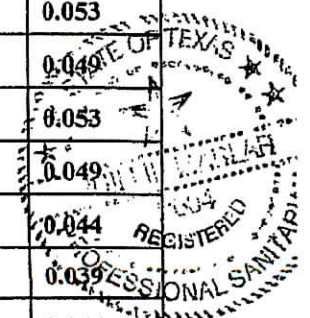


*Phillip Marlar*  
#12604 SE#9819  
1-20-06

**Phillip Marlar R.S.**  
**Registered Professional Sanitarian**  
**P.O. Box 274 Scurry, Texas 75158**  
**Phone (972) 452-8487**

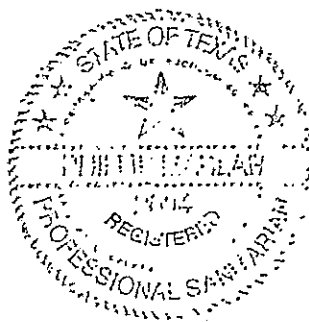
**Greg Schaffner LLP - OSSF Specifications**

Line	Length	Pressure Head	Hole Space	# Holes	Hole Size	Flow GPM/Hole	Rate GPM/Line	GPM/Ft./Line
1	70'	2'	5'	14	1/8"	.26	3.64	0.052
2	70'	2'	5'	14	1/8"	.26	3.64	0.052
3	70'	2'	5'	14	1/8"	.26	3.64	0.052
4	70'	2'	5'	14	1/8"	.26	3.64	0.052
5	70'	2.5'	5.5'	13	1/8"	.29	3.77	0.053
6	70'	2.5'	5.5'	13	1/8"	.29	3.77	0.053
7	35'	3'	6'	6	1/8"	.32	1.92	0.054
8	20'	3'	6'	3	1/8"	.32	.96	0.048
9	35'	3'	6'	6	1/8"	.32	1.92	0.054
10	35'	3'	6'	6	1/8"	.32	1.92	0.054
11	34'	3.5'	6.5'	5	1/8"	.345	1.72	0.050
12	70'	3.5'	6.5'	11	1/8"	.345	3.79	0.054
13	34'	3.5'	6.5'	5	1/8"	.345	1.72	0.050
14	26'	3.5'	6.5'	4	1/8"	.345	1.38	0.053
15	30'	4'	7'	4	1/8"	.37	1.48	0.049
16	55'	4'	7'	8	1/8"	.37	2.96	0.053
17	30'	4'	7'	4	1/8"	.37	1.48	0.049
18	55'	4'	7'	8	1/8"	.37	2.96	0.053
19	52'	4'	7'	7	1/8"	.37	2.59	0.049
20	25'	4'	7'	3	1/8"	.37	1.11	0.044
21	20'	4.5'	7.5'	2	1/8"	.39	.78	0.039
22	25'	4.5'	7.5'	3	1/8"	.39	1.17	0.046
23	52'	5'	8'	7	1/8"	.41	2.87	0.055
24	70'	5'	8'	9	1/8"	.41	3.69	0.052
Totals	1123'			183			58.52	



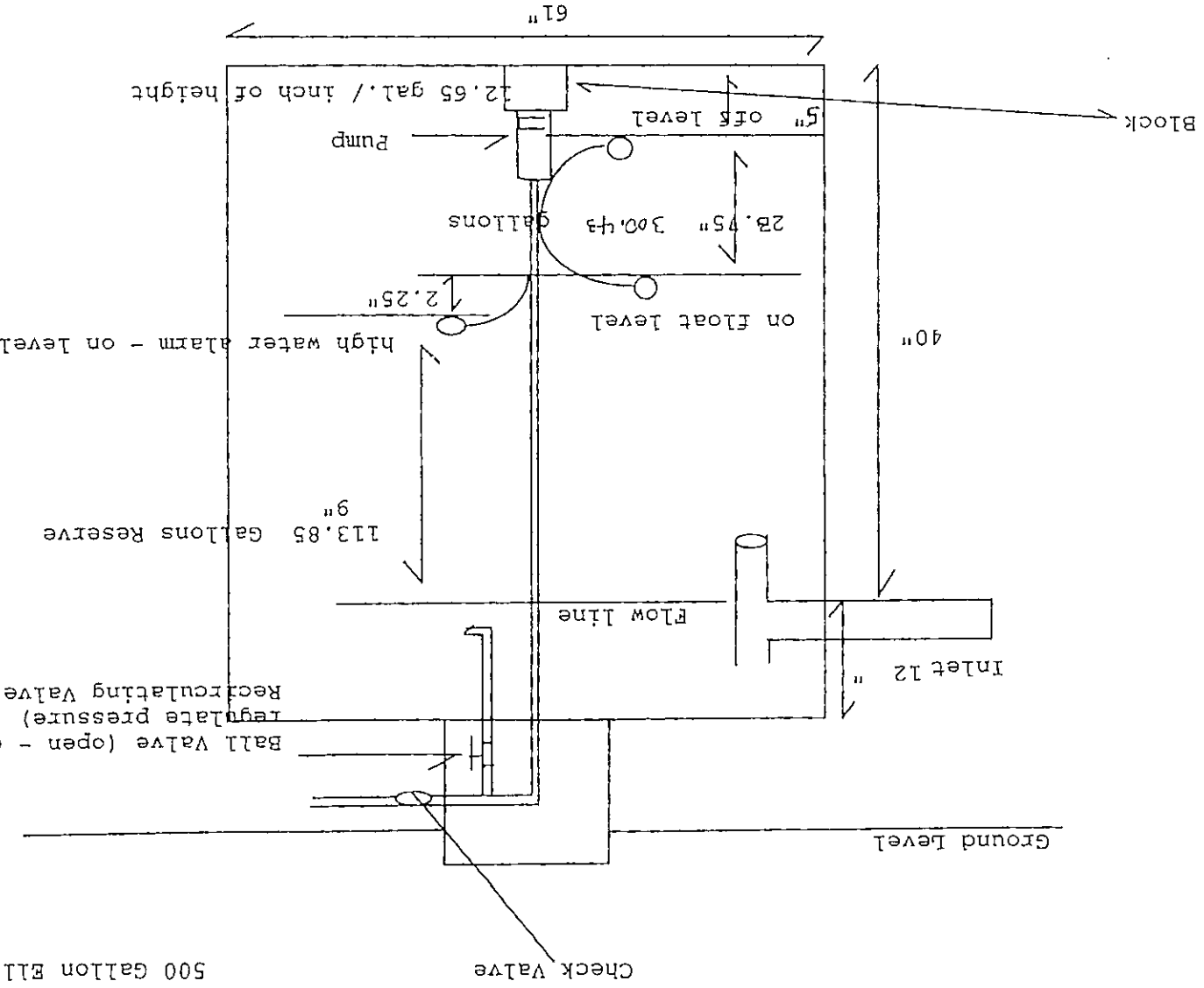
*Phillip Marlar*  
 #2601  
 SE  
 9894  
 1-20-06

All lateral lines to be 22 to 30" in depth.  
Average line depth to be 26" in depth.

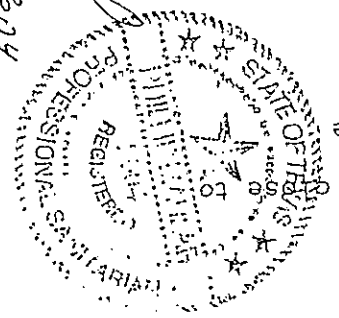


Phillip Marlowe S.  
#12604  
SE #9814  
1-20-06

500 Gallon Ellison Tank



Pump Time 5.13 minutes for 300.43 gallons at 58.52 gpm  
 at .86 psi (2ft).  
 Total Head 20.84 FT at 58.52 gpm for 3" Sch 40 PVC  
 1/2 HP Barnes STEP-SS @ 58.52 gpm will deliver 28 FT total head.



*J. M. Anderson*  
 #12604  
 55#4984  
 1-20-06

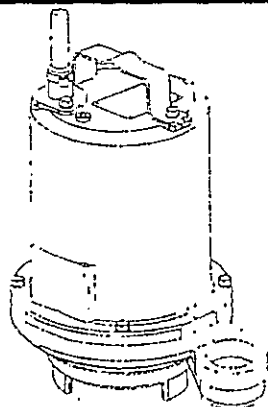
# BARNES® STEP-SS

## SUBMERSIBLE EFFLUENT PUMPS

### 3/4" Spherical Solids Handling

### Single Seal

SECTION	B
PAGE	9
DATE	12/99
REPLACES	NEW



Series: STEP-SS 0.5 & 1.0 HP  
3450 RPM



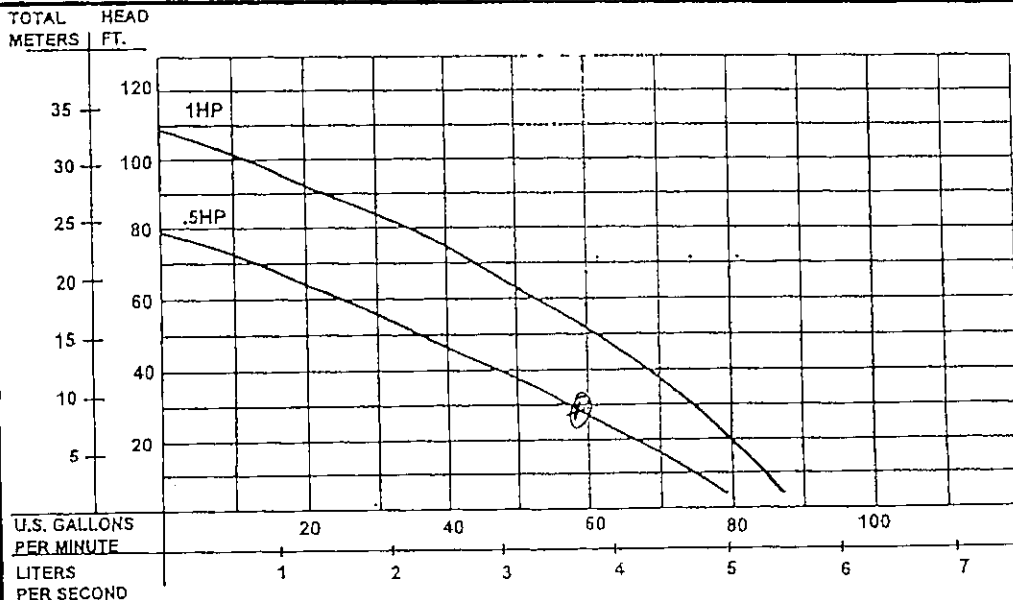
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UL 778

NRTLIC

#### Description:

PUMP IS DESIGNED FOR HANDLING SEWAGE EFFLUENT IN TYPICAL SEPTIC TANK/EFFLUENT APPLICATIONS.

DISCHARGE: 2" (51MM) NPT, Vertical  
LIQUID TEMPERATURE: 104°F (40°C) Continuous.  
VOLUTE: Cast Iron ASTM A-48, Class 30.  
MOTOR HOUSING: Cast Iron ASTM A-48, Class 30.  
SEAL PLATE: Cast Iron ASTM A-48, Class 30.  
IMPELLER: Design: Single Vane, Enclosed, Polypropylene with Stainless Insert, Dynamically Balanced, ISO G6.3, 416 Stainless Steel  
Material: Buna-N  
SHAFT: 300 Series Stainless Steel  
SQUARE RINGS: 300 Series Stainless Steel  
HARDWARE: Air Dry Enamel.  
PAINT: Single Mechanical  
SEAL: Design: Carbon/Ceramic/Buna-N  
Material: Hardware - 300 Series Stainless  
CABLE ENTRY: 15 ft. (4.6M) Cord, Plug on 120 Volt, Custom Molded For Sealing And Strain Relief.  
SPEED: 3450 RPM (Nominal).  
UPPER BEARING: Single Row, Ball, Oil Lubricated  
LOWER BEARING: Single Row, Ball, Oil Lubricated  
MOTOR: Design: NEMA L-Single Phase, NEMA B-Three Phase Torque Curve. Completely Oil-Filled, Squirrel Cage Induction, Class B  
Insulation: Permanent Split Capacitor (PSC). Includes Overload Protection. In Motor, 200-240/480 is Tri Voltage, 600V. Requires Overload Protection to be Included in Control Panel.  
SINGLE PHASE: Seal Materials, Impeller Trims,  
THREE PHASE: N/C Temperature Sensor with Cable for 3 Phase Pumps (Requires Relay in Control Panel), Additional Cable.  
OPTIONAL EQUIPMENT:



Testing is performed with water, specific gravity of 1.0 @ 68° F, other fluids may vary performance.

**CRANE®**

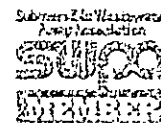
A Crane Co. Company

PUMPS & SYSTEMS

Barnes Pumps, Inc.  
Distributor Sales & Service Dept.  
420 Third Street/P.O. Box 603  
Piqua, Ohio 45356-0603  
Ph: (937) 615-3595  
Fax: (937) 773-7157

Barnes Pumps, Inc.  
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Mansfield, Ohio 44907-2674  
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Fax: (419) 774-1530

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Bramalea, Ontario  
Canada L6T 2J6  
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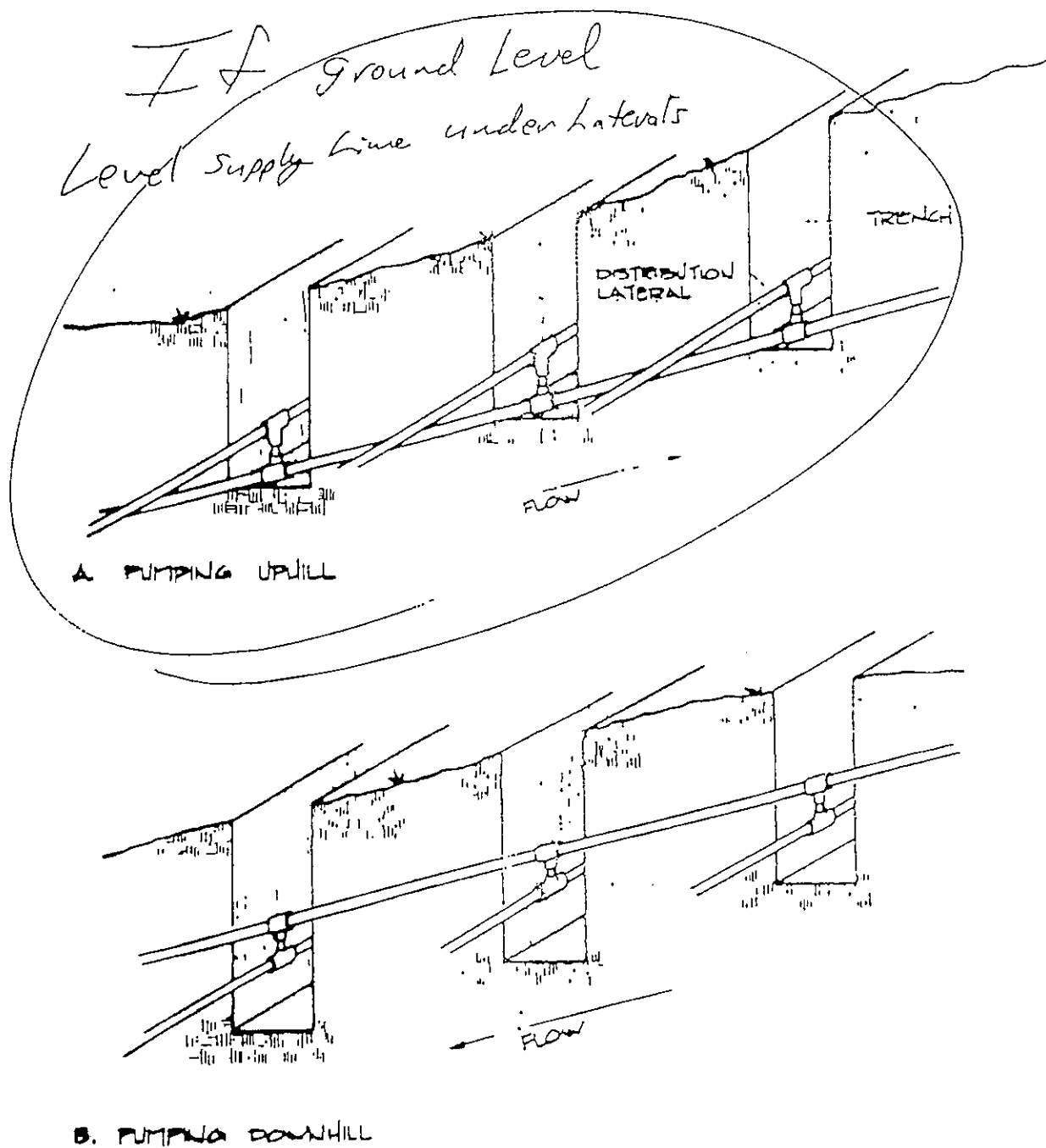


Figure 10. Manifold placement on slopes