

Public Health, Seattle and King County

Site Design Application Form for Individual On-Site Sewage System (OSS)

(Submit 5 copies of application with 4 copies of plans)

Record I.D. Number: ON 0138852  
Department Use Only

Approximate Site Address: 11235 165TH Ct. NE

ATTACH A DETAILED ROUTE/DIRECTION MAP FOR LOCATING THE PROPERTY.

Name and address of property owner | John DeVore 11235 165th Ct NE Redmond, WA 98052

Applicant Name: DeVore John Street Address: 11235 165th Ct. NE City-Zip Code: Remond, WA 98052 Phone: 206.730.1923

Designer: Huard Dave Street Address: PO Box 2243 City-Zip Code: North Bend WA 98045 Phone: 425.831.1781

THIS IS NOT A PERMIT

PROPERTY INFORMATION: Legal Description Attached

Parcel # (APN): 236640-0200 Section: 36 Township: 26 Range: 05

Subdivision Name: Equestrian Tracts Lot: 20 Block:

Property Size: 41,550 Sq. ft. Acreage: 0.95 Rural Area  Urban Area

Distance from property line to nearest sewer: >200

Water Supply:  (IP) Individual  Group A Supply  Group B Supply

Public Water Supply Name: City of Redmond ID #

Sensitive Area: N (Y?N) If yes, specify (L,W,O) L=Landslide W=Wetlands O=Other

SYSTEM INFORMATION: \* Repair \*

New System  Repair Design  Correction of OSS Failure? Yes Y?N Detailed Plans Attached (4 sets) Y Y?N

Type of Building: SF SF=Single Family MF=Multiple Family COMM=Commercial INST=Institutional

Type of System Proposed: O G=Gravity GP=Gravity with pump M=Mound SF=Sand Filter

PD=Pressure Distribution HT=Holding Tank CT=Composting Toilet E=Experimental O=Other ATU-SDS

Dates Soils Logged: 1/25/2017 Soil Log Data Attached: (min. 4/lot) Y Y?N

Depth to Watertable or Restrictive Layer: 25 Inches Maximum Slope in Drainfield/Reserve Area 5 %

CALCULATIONS:

Number of bedrooms: 4 Total Gallons/Day (450 minimum): 570 Gal. Soil Texture Type (1A-5) 4

Application Rate: 0.6 Gal/sq ft/day Total Absorption Area: 1440 Sq. ft. Trench Width 1 inches

Total Drainfield Length: 720 Ft. Septic Tank Size: 1650 Gal. Garbage Grinder N Y?N

Pump Chamber Size (if needed) 1500 Gal. Trench Depth (min/max): 06/10 inches

I understand that failure to comply with the Code of King County Board of Health Title 13 may result in the disapproval of the sewage system being proposed in this application. Non-compliance may also lead to revocation of my Designer's Certificate of Competency and/or appropriate legal action by the Health Department.

Designer's Signature: [Signature] K.C.ID# 5100122 Date: 2-14-17

FOR HEALTH DEPARTMENT USE ONLY: NOTE: SYSTEM MUST BE INSTALLED BY A KING COUNTY CERTIFIED INSTALLER UNLESS OTHERWISE PROVIDED BY CODE

APPROVED (date) 3/3/17 BY: [Signature]

Comments: Prior to stab-out, a non-conforming sewer transport line must be sleeved under driveway. Notice on title is required.

Pre-construction meeting required between designer, installer, builder prior to permit issuance

APPROVAL OF THIS DESIGN APPLICATION IS BASED SOLELY ON INFORMATION PROVIDED IN THIS APPLICATION AND DOES NOT CONSTITUTE PERMISSION TO BEGIN CONSTRUCTION OF THE PROPOSED SEWAGE DISPOSAL SYSTEM OR ANY OTHER IMPROVEMENTS ON THE SITE. THIS APPROVAL SHALL NOT BE CONSIDERED AN ASSURANCE, EITHER EXPRESSED OR IMPLIED, THAT DEVELOPMENT PERMITS FOR THE SITE WILL BE ISSUED.

THIS APPLICATION EXPIRES TWO YEARS FROM DATE OF APPROVAL.

DISAPPROVED (date): UNLAWFUL TO OCCUPY BY:

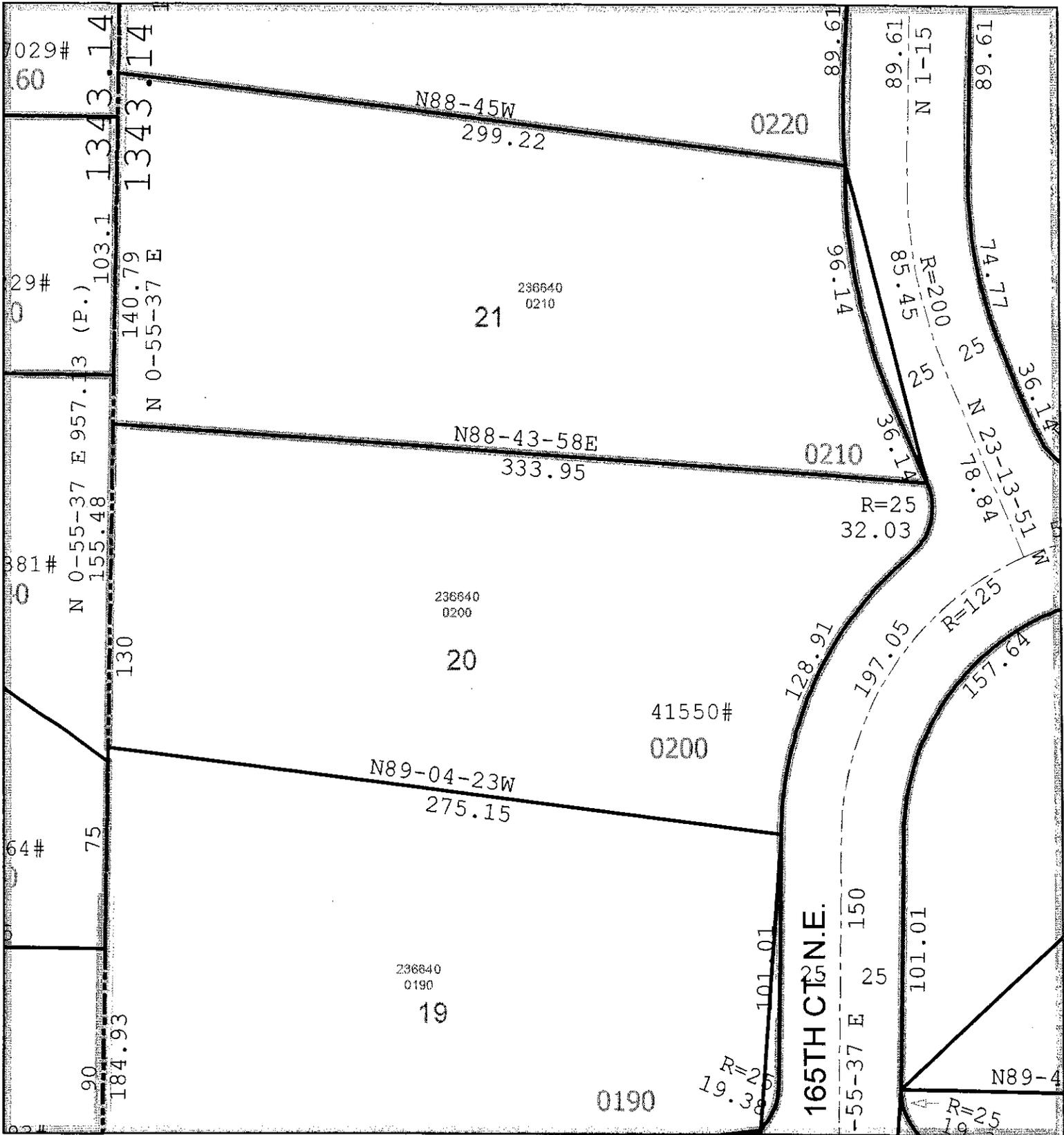
See attached Site Deficiency Sheet.

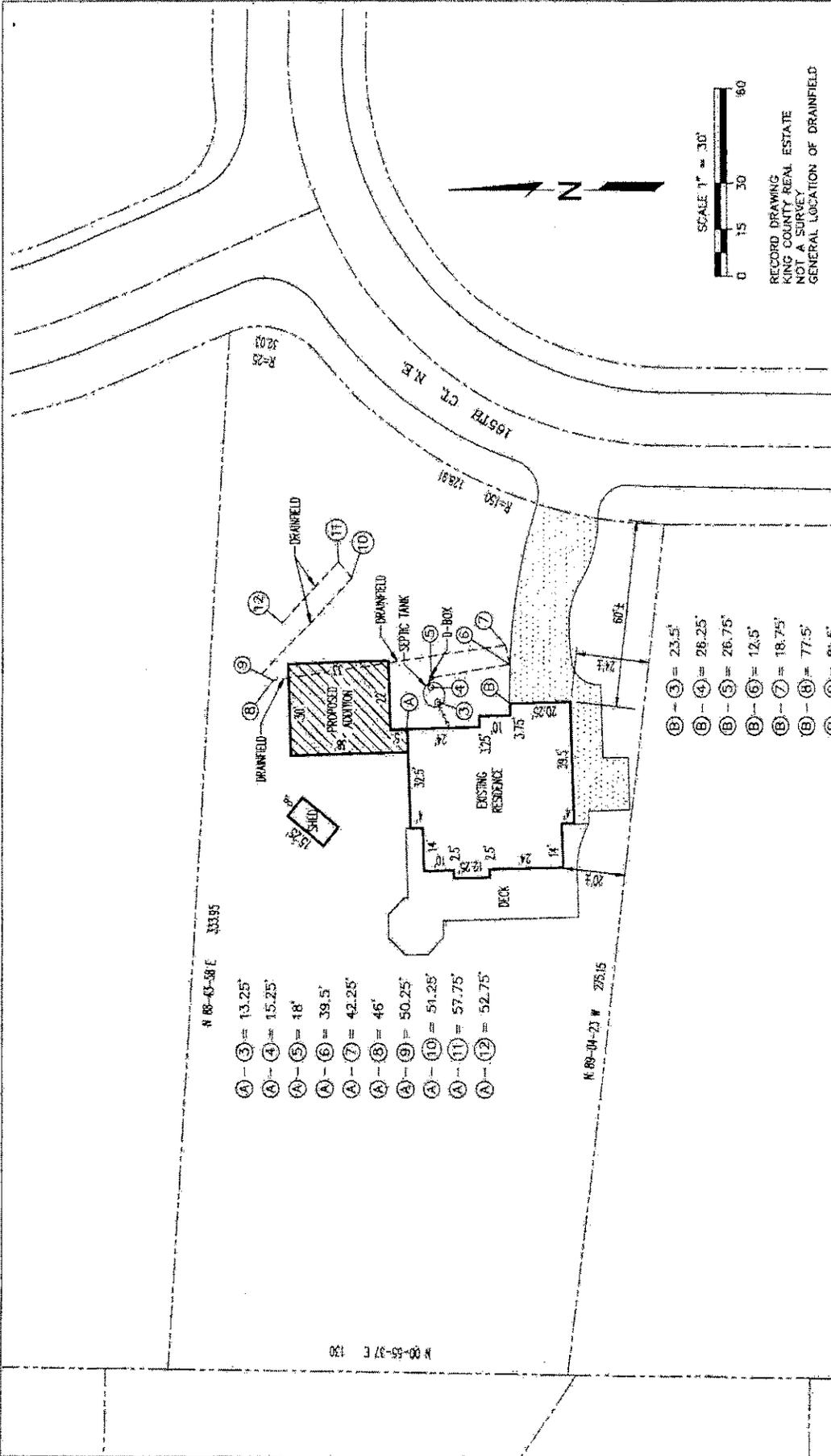
Any person aggrieved by any decision or final order of the Health Officer may file a written application for appeal to Health Officer within 60 calendar days of the date of the above decision. (Title 13, K.C.B.O.H. Chapter 13.12 - Sewage Review Committee). CS 13.15.97 Rev 7/21/00

RECEIVED FEB 16 2017 EASTGATE ENVIRONMENTAL HEALTH RECEIVED 03-08-17

UNLAWFUL TO OCCUPY THIS IS NOT A PERMIT. APPROVED BY HEALTH DEPT







N 89-03-38 E 333.95

- (A)-(3) = 13.25'
- (A)-(4) = 15.25'
- (A)-(5) = 48'
- (A)-(6) = 39.5'
- (A)-(7) = 42.25'
- (A)-(8) = 46'
- (A)-(9) = 50.25'
- (A)-(10) = 51.25'
- (A)-(11) = 57.75'
- (A)-(12) = 52.75'

- (B)-(3) = 23.5'
- (B)-(4) = 28.25'
- (B)-(5) = 26.75'
- (B)-(6) = 12.5'
- (B)-(7) = 18.75'
- (B)-(8) = 77.5'
- (B)-(9) = 81.5'
- (B)-(10) = 65.25'
- (B)-(11) = 72'
- (B)-(12) = 78.5'

**AQUA TEST**  
INCORPORATED

1-800-221-3159

TITLE: RECORD DRAWING  
ADDRESS: 11235 165TH COURT N.E.  
REDMOND, WA 98052  
PARCEL NO. 2366400200  
DRAWN BY: Mark Nelson  
SCALE: 1"=30' | DATE: AUG. 2016

SHEET 1 OF 1  
JOB NO. AB2016-077

N 00-65-37 E 130

N 89-04-23 W 275.15



PLANNING DEPARTMENT  
Development Engineering  
(425) 556-2876

February 7, 2017

John Devore  
11235 165<sup>th</sup> Court NE  
Redmond, WA 98052  
(425) 485-3003  
(206) 730-1923

**Re: Sewer Availability for 11235 165<sup>th</sup> Court NE, Redmond, WA 98052 (Parcel # 2366400200)**

To Whom it May Concern:

The City of Redmond is the utility purveyor for the property at 11235 165<sup>th</sup> Court NE, Redmond, WA. The city is currently providing water service to the property. However, there is no sanitary sewer pipe in the neighborhood and the property has no access to the public-owned sewer system within 200 feet. If you have any other questions, please contact me. Thanks!

Sincerely

Zheng Lu, P.E.  
Senior Utility Engineer  
Development Engineering | City of Redmond

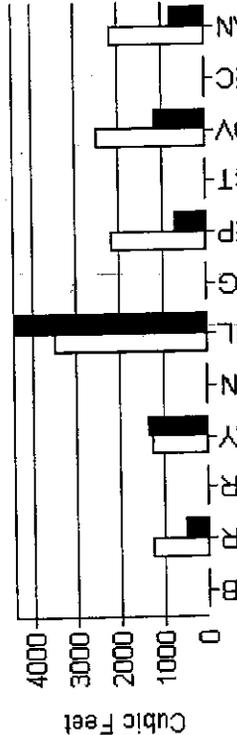


**CITY OF REDMOND, UTILITY BILLING**  
 15670 NE 85<sup>TH</sup> STREET, 3NFN  
 REDMOND, WA 98052  
 Office Hours: Mon-Fri, 8am-5pm

Phone 425-556-2152  
 Fax 425-556-2909  
 utilitybilling@redmond.gov



Historical Water Consumption Comparisons



PRIOR YEAR CONSUMPTION     CURRENT YEAR CONSUMPTION

**PREVIOUS BALANCE**  
 Payment - Thank You  
**BALANCE FORWARD**

**CURRENT CHARGES**

45551771    Average Consumption Per Day: 12.12 CF    376,300  
 From 11/01/2016 to 01/05/2017 (66 Days)  
 Water Consumption    800  
 Water Base Charge: Water - 3/4 inch

Stormwater

Total Water Charges  
 Total Stormwater Charges  
**TOTAL CURRENT CHARGES**

**TOTAL AMOUNT DUE**

You can now sign up for recurring credit card payments.  
 Register at [www.redmond.gov/ubonlinepayment](http://www.redmond.gov/ubonlinepayment).

STATEMENT DATE	ACCOUNT NUMBER
01/10/17	003322-000
SERVICE ADDRESS OR PARCEL NUMBER	
11235 165TH CT NE	
PAYMENT DUE DATE	BILL DATE
01/30/17	NOV 09 - JAN 10
AMOUNT DUE	AMOUNT PAID
\$76.54	

• RETAIN THIS UPPER PORTION FOR YOUR RECORDS •

\$89.62  
 -89.62  
 \$0.00

14.32  
 29.10  
 33.12

43.42  
 33.12  
 \$76.54

**\$76.54**

*PAD 11-2-17 #3548*

*425 556-2801 - 2800*

ON-SITE SEWAGE DISPOSAL SYSTEM  
KING COUNTY  
TAX PARCEL #236640-0200

LEGAL DESCRIPTION: SEE ATTACHED

I. PROJECT

To replace a failed OSS for a 4-bedroom single-family residence. Water supply is a public source. Due to limited space and shallow drip irrigation will be utilized.

II. TANKS

The tank specified is an approved MicroFast 0.75 (CCP1650BIO). The septic tank will be watertight and have locking risers extending to grade. The pump tank will be a 1500-gallon single compartment concrete tank. The pump tank will have a locking riser extending to grade. The pump will be mounted and fitted so it can be easily removed and remounted without removing the float switches. Conduct watertight testing of all tanks, test to consist of 24-hour standing head test. No leakage is acceptable.

III. AS-BUILT INSPECTIONS

Pre-installation inspection, as-built inspection, pressure test, final cover inspection and other required as-built materials have not been paid as part of this design package. All additional inspections, field work, or other services required by the designer shall be additional with a payment due prior to the stub-out release. Please call for current pricing.

IV. PRE-TREATMENT

A MicroFAST 0.75 system with (2) Salcor UV units in parallel will be utilized. See attached installation instructions and detail sheets.

V. PLUMBING

All plumbing must be of PVC material. The house side-sewer connection pipe must be four (4) inch diameter ASTM D3034; all others must be Class 200.

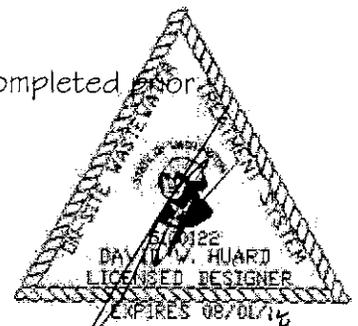
VI. ELECTRICAL

All electrical work from the pump station to the control panel must be completed prior to final inspection.

VII. NETAFIM DRIPFIELD

Install a minimum of 720 lineal feet Netafim drip lines on 2' centers with emitters on 1' spacing. See calculation sheet for details.

The flow rate to the dripfield is 5.0 gpm - dripfield shall be dosed 12 times daily  
 $570/12 = 47.5$  gallons per dose       $47.5 / 5.0 = 9.5$  minutes on and 2 hours off.



### VIII. CONTROL PANEL

Use a Rhombus TD-1 timer control panel. The system must be equipped with a free standing electrical control panel that is weather tight and suitable for outside installation. The panel must have an audio and a visual high level alarm. The front panel must be visible from the pump tank lid. All electrical wiring must be done in accordance with manufacturer's specifications and Washington State Electrical code.

### SOIL LOGS 1-25-17

SOIL LOG #1 0-2" SOD, 2-25" LIGHT BROWN SANDY LOAM WITH ROOTS (TYPE 4), 25-31" SATURATED, WATER @31".

SOIL LOG #2 0-2" SOD, 2-28" LIGHT BROWN SANDY LOAM WITH ROOTS (TYPE 4), 28-33" GRAY, SATURATED, WATER @33".

SOIL LOG #3 0-4" SOD, 4-29" LIGHT BROWN SANDY LOAM WITH ROOTS (TYPE 4), 29-32" GRAY SANDY LOAM, DRY @32".

SOIL LOG #4 0-10" SOD/DISTURBED, 10-34" LIGHT BROWN SANDY LOAM WITH ROOTS (TYPE 4), 34-40" GRAY, SATURATED, WATER @40".

SOIL LOG #5 0-12" SOD/DISTURBED, 12-35" LIGHT BROWN SANDY LOAM WITH ROOTS (TYPE 4), 35-40" GRAY, SATURATED, WATER @40".

SOIL LOG #TSL 0-3" SOD, 3-28" LIGHT BROWN SANDY LOAM WITH ROOTS (TYPE 4).



## AGREEMENT FOR PROFESSIONAL SERVICES

**Project:** Operation and Maintenance Inspections    **Phone:** Office-  
**Client Name:**    **Phone:** Cell-  
**E-mail:**    **Phone:** Fax-  
**Site Address:**    **Mailing Address:**  
**City, State:**    **City, State:**  
**Parcel Number:**    **Date:** February 13, 2017  
**System Type:**    **In Service Date:**

**Purpose:** To fulfill the requirements of King County Title 13.60, Operation and Maintenance Monitoring and Management. Attached hereto and as a part of this contract are: Copy of Operation/Performance Monitoring Report and the interval requirements by system type as detailed in King County Title, Table 13.60-1.

**SCOPE AND COSTS OF WORK:** HUARD SEPTIC DESIGN AND MONITORING LLC, (herein referred to as "HSDM".) will provide Operation and Maintenance Inspection data solely as a convenience to (Herein referred to as "Client".) Inspection includes one site visit by licensed maintainer per inspection and a written report on forms provided by the health officer (Form Attached.)

Inspection does NOT include additional site visits, meetings, labor, additional inspections, corrections, possible laboratory analysis, tank pumping, or designs required to fulfill the requirements of King County Public Health required to complete the inspection.

Inspection will be performed at the rate applicable to your system type in accordance with HSDM's rate then in force. Any additional work, such as location, accessibility of system or site conditions are such that the inspection cannot be completed, shall be completed on a time and materials basis in accordance with HSDM's hourly rate then in force. Additional administrative fees may be applied for services or additional copies of documentation provided for the convenience of Client.

Should Client cancel the inspection less than 24 hours prior to inspection a cancellation fee of \$75.00 will be applied. Should the inspection be completed prior to cancellation the applicable fee will be charged.

**CLIENT'S RESPONSIBILITIES:** Client is responsible for the continuous operation and maintenance of the on-site sewage system as outlined in the Homeowner's Manual available from the King County Health Department. HSDM shall inspect and report to client on the condition of their on-site sewage system. Client is solely responsible for addressing and correcting any items noted during the inspection.

**NOTICE OF OCCUPANCY:** It is the client's responsibility to notify HSDM of the date of occupancy. If HSDM does not receive said notice within three months of move-in this contract is void.

**BILLING:** HSDM will bill for services progressively. Client shall pay all fees and costs billed by HSDM within 10 days of the date of billing. In the event Client fails to make payment within 30 days, this agreement between the parties shall be in default and can be terminated with or without cause, without liability to either party. However, termination shall not relieve Client of the duty to pay for services rendered by HSDM. In the event of default by Client, Client shall pay HSDM all expenses incurred and fees earned by HSDM in performance of work on behalf of Client through the date of default. Interest at the rate of one and one half percent (1 1/2%) per month will be added to unpaid accounts due over 30 days. HSDM will stop work should Client account(s) become 30 days delinquent. In the event that HSDM institutes legal proceedings to enforce any obligation, Client agrees that venue for such suit shall be King County, Washington at the option of HSDM. All expenses incurred in obtaining any lien or collecting any delinquent amounts including, but not limited to, reasonable attorney's fees, witness fees, court costs, and charges at current billing rates for time, transportation and subsistence shall be paid by Client to HSDM in addition to the delinquent amount. Delinquent accounts shall not be entitled to release of any documents until the account, including any and all additional charges hereunder, has been paid in full.

**GOVERNMENTAL FEES:** Client shall be responsible for the cost of all fees required by governmental agencies that are necessary for this service.

**TERMINATION:** Either party to this Agreement may terminate the work and this Agreement with or without cause, without liability to the other. In the event of such termination, Client shall, upon payment in full of outstanding invoices of HSDM be entitled to retain and utilize the work product prepared by HSDM; provided, however, that use of such work product shall be at Client's sole risk and without liability or legal exposure to HSDM. Client releases, and shall defend, indemnify and hold HSDM harmless from all claims, damages, losses and expenses, including attorney's fees, arising out of or relating, in any way, to Client's use of such work. At HSDM's discretion, a termination charge may also be made to cover costs relating to the project termination.

**CLIENT AUTHORIZATION:** The undersigned Client warrants that he/she is the owner or agent of the owner of the real property upon which services will be rendered by HSDM.

I/We hereby agree to the terms and conditions set forth in this authorization contract and do hereby assume personal liability for charges incurred on this project.

\_\_\_\_\_  
Client

\_\_\_\_\_  
Client

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

## CONSTRUCTION NOTES:

- All work to be conducted in accordance with King County Title 13.
- Install MicroFast 0.75 (CCP1650BIO) gallon tank.
- Install (2) Salcor UV units in parallel.
- Install 1500 gallon approved pump chamber.
- Install drainfield in top 6-10 inches of native soil.
- Install a minimum of 720 lineal feet Netafim driplines at 2' spacing with emitters at 1' spacing.
- Any cuts or banks created down gradient of primary and reserve area may create setbacks, which could invalidate this design.
- Any clearing of land in primary and reserve areas must be done in the presence of a licensed Master or Associate Installer.
- No perforated drains of any kind are allowed within 30 feet of the drainfield and reserve areas.
- DO NOT disturb soils in the primary and reserve area doing so may invalidate this design.
- Any large trees (18 inches in diameter - 2 feet above grade) must be left standing or stumps left in place. The stumps may be grinded, burned or removed in some other fashion, which will not disturb the soils.
- All footing and storm drains shall be diverted away from the drainfield and tank areas.
- All property lines and contour lines are based on assumed data and do not represent an actual field survey - Designer takes no responsibility for accuracy.
- All drip lines shall follow ground contours.
- **A temporary barrier shall be placed around primary and reserve area prior to any construction on this site.**





# MODEL TD Control Panel

## Single phase, simplex timed dosing pump control.

The Model TD control panel provides a reliable means of controlling one single phase pump in onsite septic installations. A programmable timer activates a magnetic motor contactor to turn the pump on and off. A low level cutout float overrides the timer to prevent the pump from running dry. An alarm float activates the audio/visual alarm system indicating a high liquid level. Common applications include sand filter systems, pressure distribution systems, mound systems, or any application requiring a timed dose.

## PANEL COMPONENTS

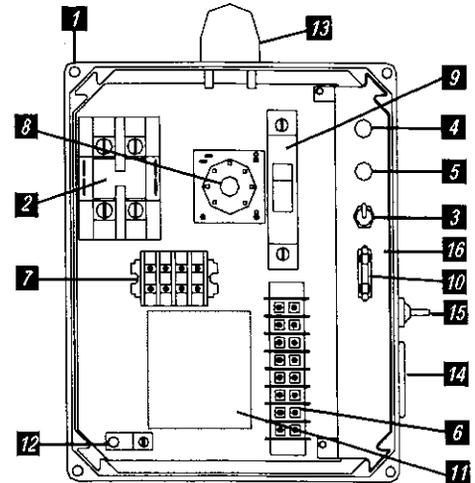
1. **Enclosure** measures 10 x 8 x 4 inches (25.40 x 20.32 x 10.16 cm) NEMA 4X (ultraviolet stabilized thermoplastic with removable flanges for outdoor or indoor use).
2. **Magnetic Motor Contactor** controls pump by switching electrical lines.
3. **HOA Switch** for manual pump control.
4. **Control Fuse**
5. **Alarm Fuse**
6. **Float Switch Terminal Block**
7. **Incoming Power Terminal Block**
8. **Programmable Timer** with separate variable controls allows for setting the on and off times from .05 seconds to 30 hours.
9. **Circuit Breaker** provides pump disconnect and branch circuit protection.
10. **Spare Fuse**
11. **Backplate Label** includes diagram of float, pump, and power connections.
12. **Ground Lug**

**NOTE:** Timer Installation Label and Pump/Float Switch Installation Specification Label are located inside the panel on enclosure cover.

## STANDARD ALARM PACKAGE

13. **Red Alarm Beacon** provides 360° visual check of alarm condition.
14. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating).
15. **Exterior Alarm Test/Normal/Silence Switch** allows horn and light to be tested and horn to be silenced in an alarm condition. Alarm automatically resets once alarm condition is cleared.
16. **Horn Silence Relay** (mounted under bracket).

**NOTE:** other options available.



Model Shown TD1W914X

## FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes one 20' SJE PumpMaster® pump switch and one 20' Sensor Float® control switch
- Complete with step-by-step installation instructions
- Three-year limited warranty



**SJE**  
**Rhombus**  
CONTROLS

PO Box 1708, Detroit Lakes, MN 56502  
1-888-DIAL-SJE • 1-218-847-1317  
1-218-847-4617 Fax  
email: sje@sjerhombus.com  
www.sjerhombus.com



# PF Series High-Head Effluent Pumps (continued)

## Specifications

### 60 Hz

Model	hp	Amps <sup>2</sup>	Nominal Flow (gpm)	Number of Impellers	Discharge (in.)	Length (in.)	Minimum Liquid Level (in.)	Weight (lb)	Rated Cycles/Day
PF100511/12 <sup>1</sup>	0.50	12.7/8.3	10	6	1.25	22.1	20	27	300
PF100712	0.75	8.3	10	8	1.25	25.0	22	30	300
PF1010 <sup>3</sup>	1.00	--	10	--	1.25	--	--	--	100/300 <sup>4</sup>
PF200511/12 <sup>1</sup>	0.50	12.4/6.3	20	6	1.25	24.0	20	27	300
PF2010 <sup>3</sup>	1.00	--	20	--	1.25	--	--	--	100/300 <sup>4</sup>
PF2015 <sup>3</sup>	1.50	--	20	--	1.25	--	--	--	100/300 <sup>4</sup>
PF300511/12 <sup>1</sup>	0.50 <sup>1</sup>	12.2/6.2	30	4	1.25	21.5	22	26	300
PF300712	0.75	8.5	30	6	1.25	25.0	24	30	300
PF3010 <sup>3</sup>	1.00	--	30	--	1.25	26.5	--	--	100/300 <sup>4</sup>
PF3015 <sup>3</sup>	1.50	--	30	--	1.25	32.5	--	--	100/300 <sup>4</sup>
PF500511/12 <sup>1</sup>	0.50	12.1/6.2	50	2	2.00	19.4	22	28	300
PF500712	0.75	8.5	50	3	2.00	22.7	24	31	300
PF5010 <sup>3</sup>	1.00	--	50	--	2.00	--	--	--	100/300 <sup>4</sup>
PF5015 <sup>3</sup>	1.50	--	50	--	2.00	--	--	--	100/300 <sup>4</sup>

### 50 Hz (220 V nameplate, 230 V actual)

Model	hp/kW	Amps <sup>2</sup>	Nominal Flow (gpm)/(L/sec)	Number of Impellers	Discharge (U.S. nom., in.) <sup>5</sup> (in.)/(mm)	Length (in.)/(mm)	Min. Liquid Level (in.)/(mm)	Weight (lb)/(kg)	Rated Cycles/Day
PF100552	0.50/0.37	4.2 <sup>5</sup>	10/0.6	6	1.25	22.0/559	20/508	27/12	300
PF100752	0.75/0.56	6.2 <sup>5</sup>	10/0.6	9	1.25	27.0/686	24/610	30/14	300
PF300552	0.5/0.37	4.0 <sup>5</sup>	30/1.9	4	1.25	21.5/546	22/559	26/12	300
PF500552	0.5/0.37	4.0 <sup>5</sup>	50/3.2	2	2.00	19.4/493	22/559	28/13	300
PF500752	0.75/0.56	6.4 <sup>5</sup>	50/3.2	3	2.00	22.7/577	24/610	31/14	300
PF501052	1.0/0.75	7.4 <sup>5</sup>	50/3.2	4	2.00	26.0/660	27/686	34/15	100/300 <sup>4</sup>

- All 60-Hz 1/2-hp pumps are available in 115- and 230-V (nameplate) models.
- Maximum sustained amperage, single phase. The paired amperage numbers for 1/2 hp pumps are for 115 and 230 V (nameplate), respectively. All other numbers are for 230 V (nameplate). Actual running amperage may exceed the motor's nameplate amperage by 10% (UL 778).
- Will be available mid-2007.
- Single-phase/three-phase.
- Maximum sustained amperage, single phase (220-V nameplate voltage).
- Discharge is female NPT threaded, U.S. nominal size, to accommodate Orenco discharge hose and valve assemblies. Consult your Orenco Distributor about fittings to connect hose and valve assemblies to metric-sized piping.

## Materials of Construction

Discharge:	Glass-filled polypropylene or stainless steel (PF50 models)
Discharge bearing:	Engineered thermoplastic (PEEK)
Diffusers:	Glass-filled PPO (Noryl GFN3)
Impellers:	Celcon <sup>®</sup> acetal copolymer on 10-gpm models; all others are Noryl GFN3
Intake screen:	Polypropylene
Suction connection:	Glass-filled PPO (Noryl GFN3) or stainless steel (PF50 models)
Drive shaft:	7/16 inch hexagonal stainless steel, 300 series
Coupling:	Sintered stainless steel, 300 series
Shell:	Stainless steel, 300 series
Motor:	Franklin motor exterior constructed of stainless steel. Motor filled with deionized water and propylene glycol for constant lubrication. Hermetically sealed motor assures moisture-free windings. All thrust absorbed by Kingsbury type thrust bearing. Rated for continuous duty. Protected against thermal overload and equipped with surge arrestors for added security.

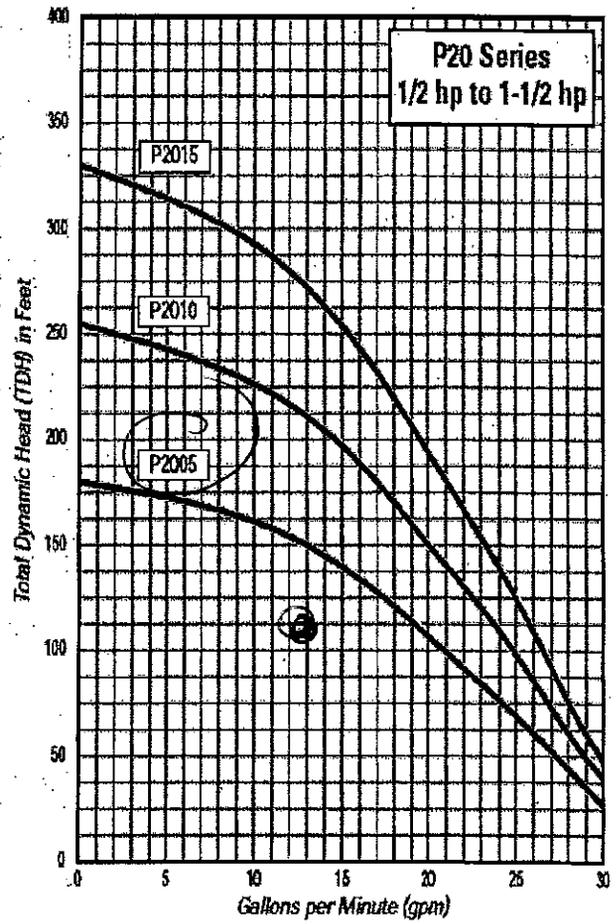
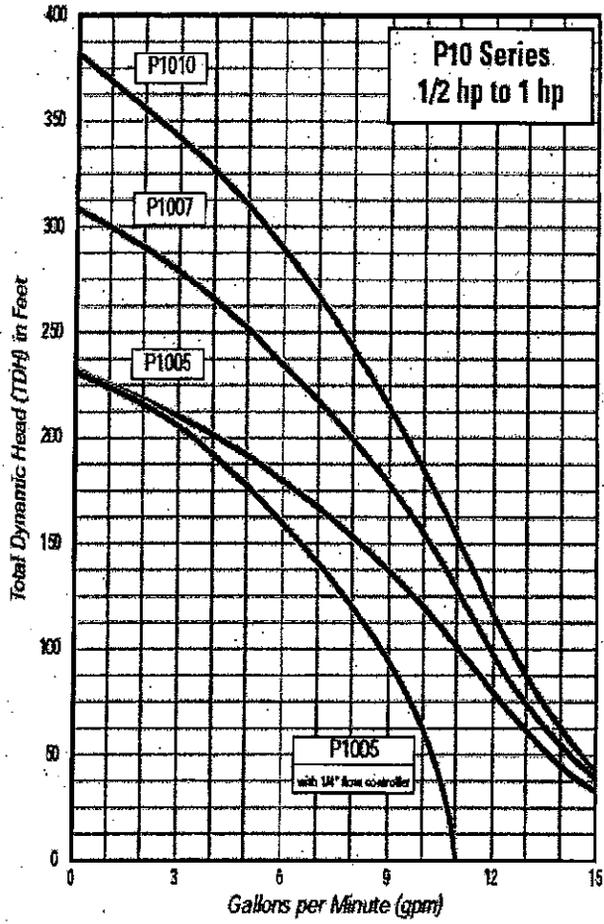


Figure 7 Air/Vacuum Relief Valve in Valve Box with Gravel Sump

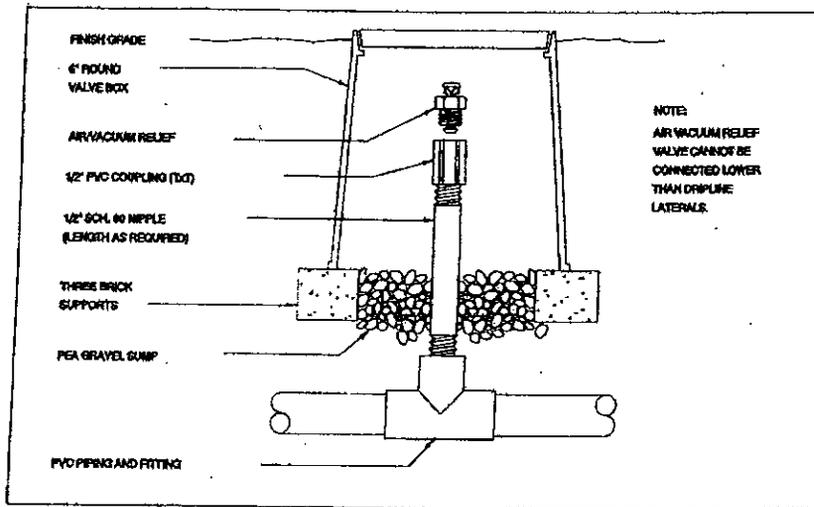
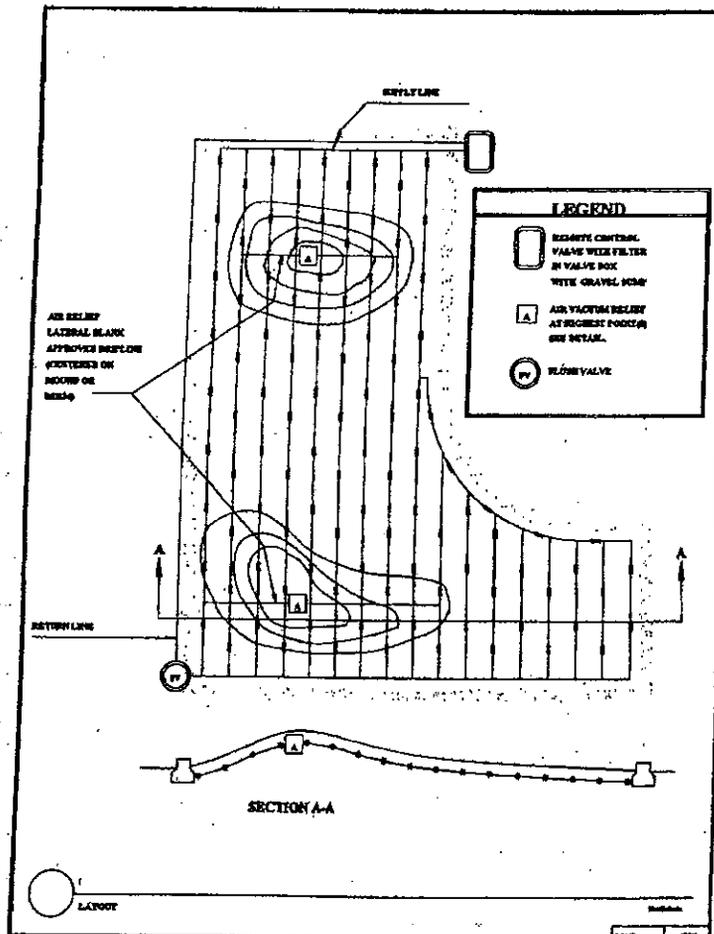


Figure 8 Dripfield Installation on Mounded Site



## Netafim Drip Parts List

1" Tech filter

-NFDF4120

1" adapter

-NFTL075MA

Coupling

-- NFTLCOUP

0.42 gph 12" spacing Bioline

- NFBL412500E

1" air relief valves

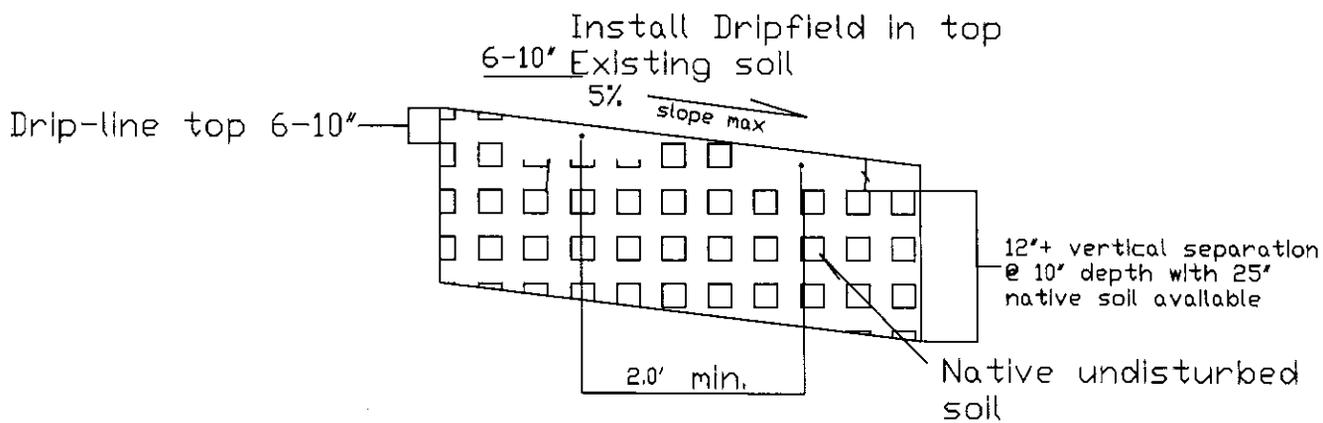
-NFAVR4G

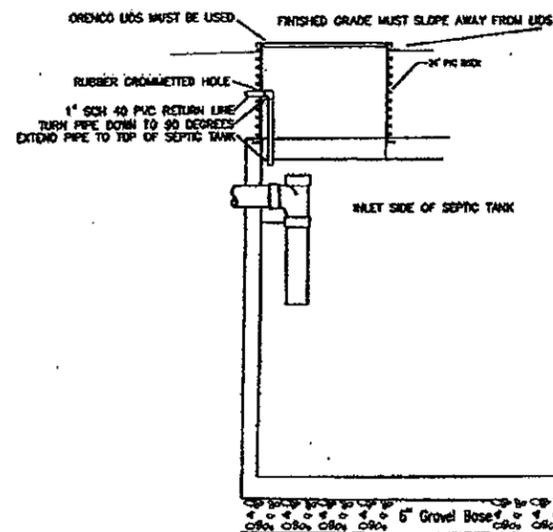
1-100 psi pressure gauges

-ASG100LF

3/4" reclaimer water meter MMMJ23USGR

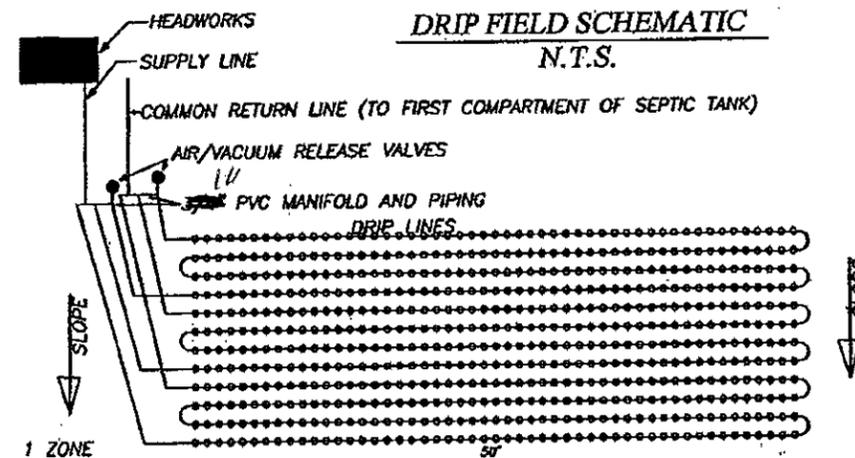
# Subsurface drip cross-sectional drawing





**RETURN LINE CROSS SECTION**

INDIGO DESIGN INC. 360-779-5233

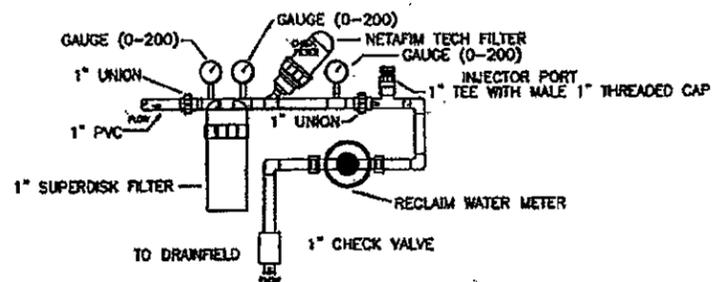


TYPICAL EXAMPLE ABOVE SHOWING THREE LOOPS. LOOPS CAN BE UP TO 200 FEET LONG. THEY DO NOT HAVE TO BE EVEN IN LENGTH BECAUSE OF PRESSURE COMPENSATING EMITTERS. IF LAST LOOP ENDS AT OPPOSITE END, CONNECT WITH 3/4" SCH 40 PVC AND PIPE IT BACK TO THE RETURN LINE MANIFOLD. NUMBER OF LOOP CONNECTIONS WILL VARY FROM DESIGN TO DESIGN. ADHERE TO THE CALCULATION & SPEC SHEET ON THIS PAGE.

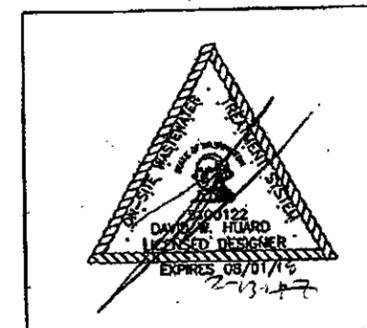
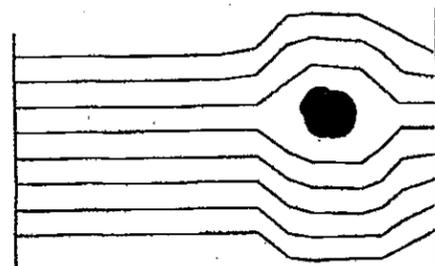
1. DRIP LINES MUST BE INSTALLED AS LEVEL AS POSSIBLE AND PARALLEL TO CONTOURS ON SLOPED SITES.
2. MINIMUM INSTALLATION DEPTH IS 6 INCHES BENEATH GRADE. DRIPLINE MUST BE INSTALLED IN ORIGINAL, UNDISTURBED SOIL. MAXIMUM INSTALLATION DEPTH IS 12"
3. DRIPLINE SPACING MUST BE INCREASED BY ONE FOOT FROM THE VALUES IN TABLE 2 ON SLOPES GREATER THAN 20 PERCENT.
4. MAXIMUM ALLOWABLE FLOW VARIANCE BETWEEN ANY TWO EMITTERS IN A DISTRIBUTION ZONE IS 10 PERCENT.
5. MAXIMUM ELEVATION DIFFERENCE BETWEEN ANY TWO EMITTER IN THE SAME DISTRIBUTION FIELD IS 5 FEET.
6. DRIP LINES SHOULD FOLLOW CONTOURS
7. ROUTE DRIP LINES AROUND TREES, SHALLOW BOULDERS, OLD GROWTH STUMPS, ETC.
8. DO NOT REMOVE LARGE TREES IN DRAINFIELD AREA. STUMPS CAN BE GROUND DOWN FOR AESTHETIC REASONS.

**HEADWORKS DETAIL**

USE LATEST HEADWORKS PROVIDED BY HD FOWLER



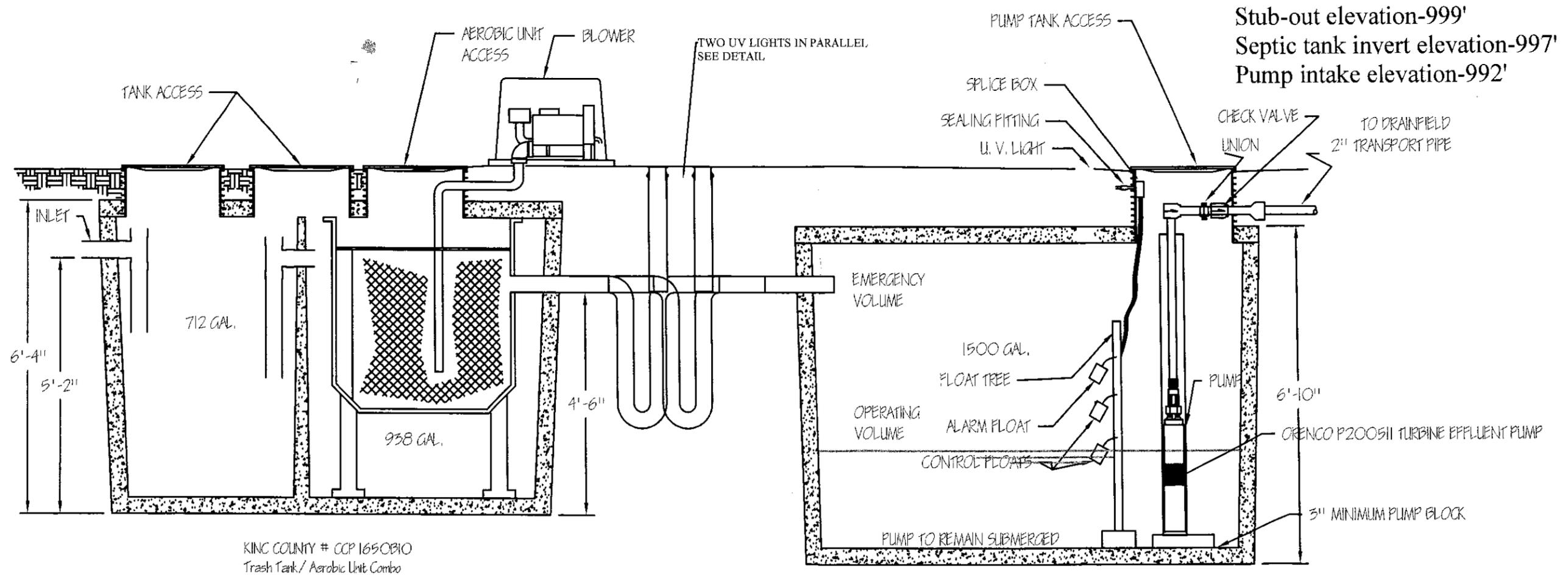
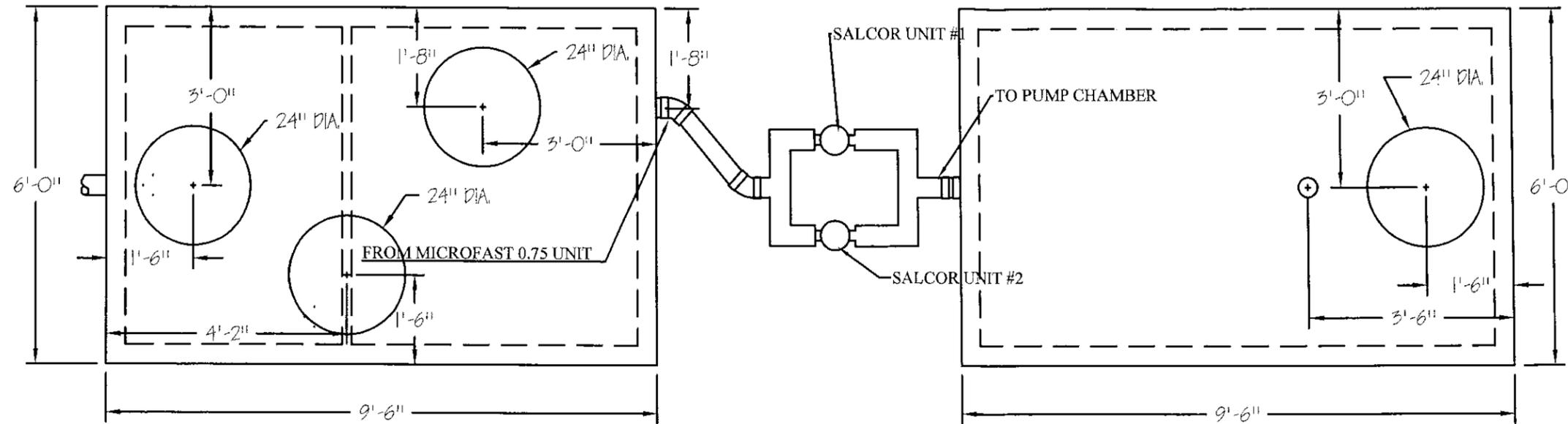
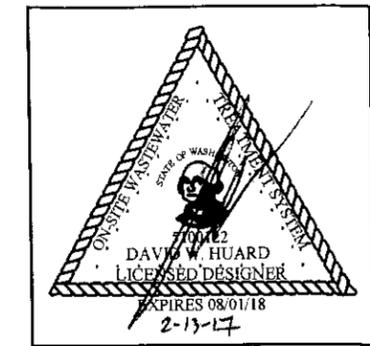
DRIP LINES MUST FOLLOW CONTOURS  
ROUTE DRIP LINES AROUND TREES, SHALLOW BOULDERS,  
OLD GROWTH STUMPS, ETC. AS SHOWN BELOW. DO NOT  
REMOVE LARGE TREES IN DRAINFIELD AREA.  
MAINTAIN SPECIFIED SEPARATION BETWEEN DRIP LINES



HSDM, LLC  
PO BOX 2243  
NORTH BEND, WA 98045  
425.831.1781 PHONE  
425.888.2866 FAX  
WWW.SEPTICDESIGN.NET

KING COUNTY FAST .75 AEROBIC TREATMENT SYSTEM

(750 GAL. TREATMENT)



KING COUNTY # CCP 1650B10  
Trash Tank / Aerobic Unit Combo

KING COUNTY # CCP 150-1  
Pump Tank with U.V. Light

# Site Plan On Site Sewage Disposal

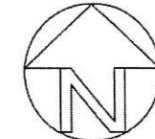
Control Point: Existing House

MicroFast 0.75 with (2) Salcor UV units in parallel.  
Install 1500 gallon pump chamber  
Install 720 lineal Feet Netafim SDS on 2' centers minimum.

Stub-out elevation-999'  
Septic tank invert elevation-997'  
Pump intake elevation-992'

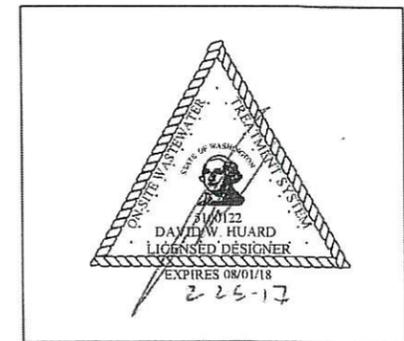
All storm/footing drains must discharge away from tank and drainfield/reserve areas

This Drawing does not represent a survey



SCALE  
1"=20'

Legend	
soil log	○
drainfield trench	—
reserve trench	—
water line	—W—
Drainage	—/—
large trees	○
cleanout	✕



Huard Septic Design & Monitoring, LLC  
PO BOX 2243 North Bend, WA 98045  
425.831.1781 phone/fax 425.888.2866  
dave@septicdesign.net

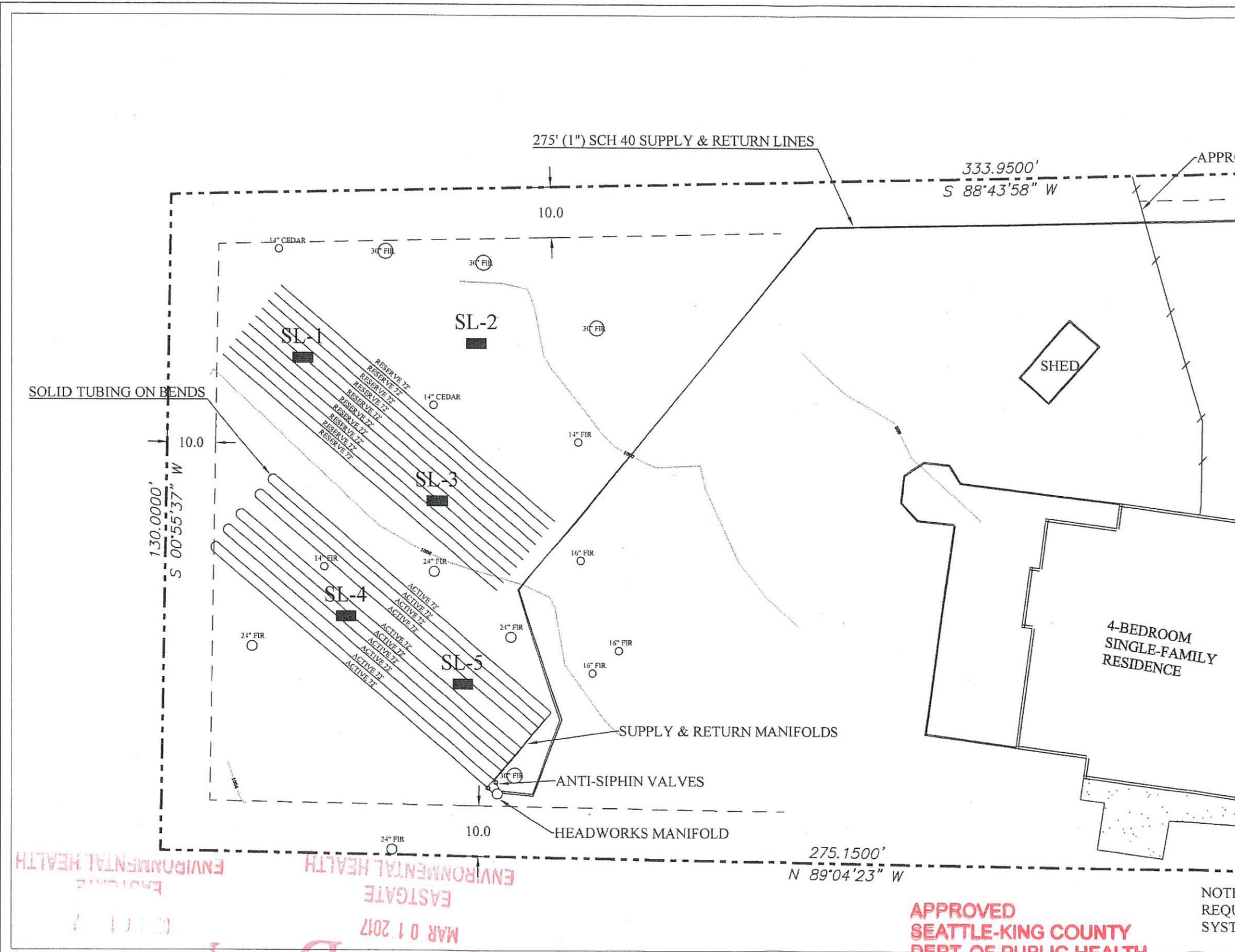
John Devore  
11235 165th Ct. NE  
Redmond, WA 98052  
Tax Parcel #236640-0200  
1-30-17

Dave Huard  
Licensed Designer

NOTE:  
REQUIR  
SYSTEM

APPROVED  
SEATTLE-KING COUNTY  
DEPT. OF PUBLIC HEALTH

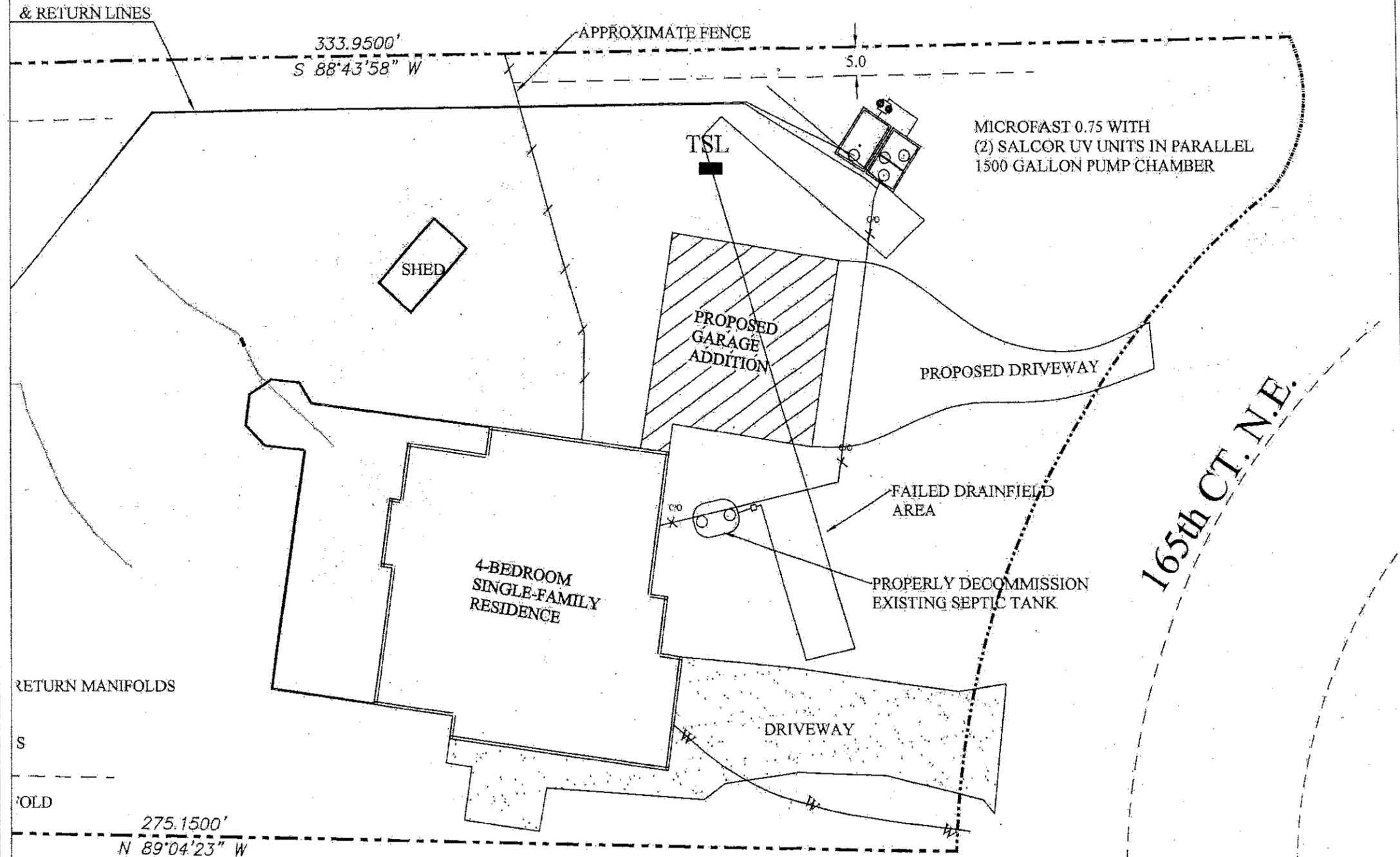
*D. English*  
3/3/17  
EHS  
DATE



RECEIVED  
MAR 01 2017  
EASTGATE  
ENVIRONMENTAL HEALTH  
ENVIRONMENTAL HEALTH

LWA  
EHE

NOTE: STORM WATER INFILTRATION MUST BE 30- FEET FROM ACTIVE & RESERVE DRAINFIELD AREAS IF DOWNGRADIENT. IF STORM WATER INFILTRATION IS UPGRADIENT THE MINIMUM SETBACK IS 100 FEET.



NOTE: A 10-FOOT HORIZONTAL SEPARATION IS REQUIRED BETWEEN WATER LINE AND SEPTIC SYSTEM COMPONENTS.

# Site Plan On Site Sewage Disposal

Control Point: Existing House

MicroFast 0.75 with (2) Salcor UV units in parallel.  
Install 1500 gallon pump chamber  
Install 720 lineal Feet Netafim SDS on 2' centers minimum.

Stub-out elevation-999'  
Septic tank invert elevation-997'  
Pump intake elevation-992'

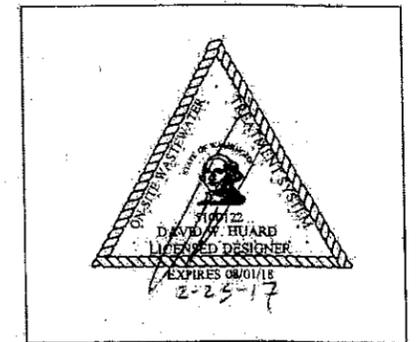
All storm/footing drains must discharge away from tank and drainfield/reserve areas

This Drawing does not represent a survey



SCALE  
1"=20'

Legend	
soil log	▲
drainfield trench	—
reserve trench	- - -
water line	—
Drainage	—
large trees	○
cleanout	*



Huard Septic Design & Monitoring, LLC  
PO BOX 2243 North Bend, WA 98045  
425.831.1781 phone/fax 425.888.2866  
dave@septicdesign.net

John Devore  
11235 165th Ct. NE  
Redmond, WA 98052  
Tax Parcel #236640-0200  
1-30-17

Dave Huard  
Licensed Designer

RECEIVED

MAR 01 2017  
EASTGATE  
ENVIRONMENTAL HEALTH

# Site Plan On Site Sewage Disposal

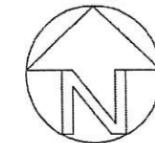
Control Point: Existing House

MicroFast 0.75 with (2) Salcor UV units  
in parallel.  
Install 1500 gallon pump chamber  
Install 720 lineal Feet Netafim SDS on 2'  
centers minimum.

Stub-out elevation-999'  
Septic tank invert elevation-997'  
Pump intake elevation-992'

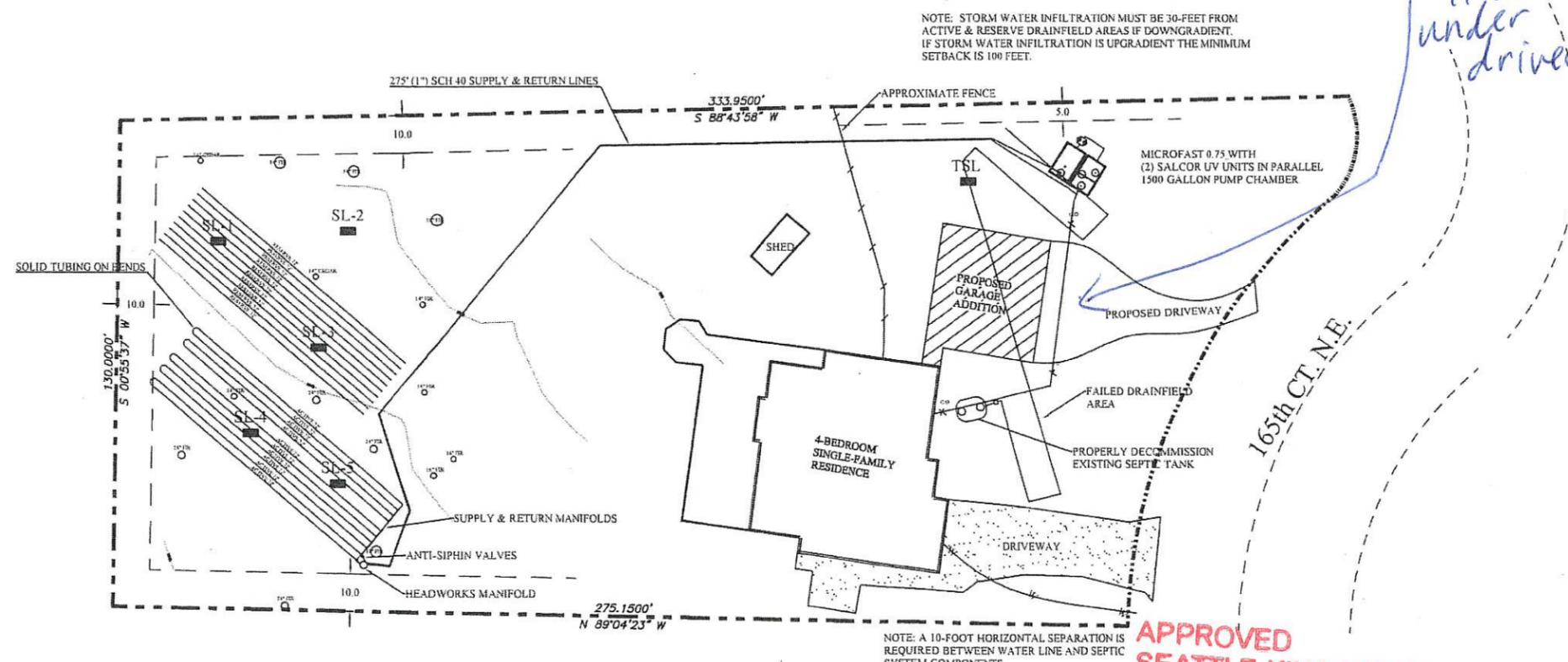
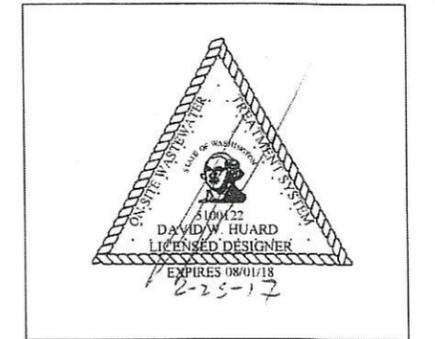
All storm/footing drains must discharge  
away from tank and drainfield/reserve areas

This Drawing does not represent a survey.



SCALE  
1"=40'

Legend	
soil log	—
drainfield trench	—
reserve trench	—
water line	—
Drainage	—
large trees	○
cleanout	*—



NOTE: STORM WATER INFILTRATION MUST BE 30-FEET FROM ACTIVE & RESERVE DRAINFIELD AREAS IF DOWNGRADIENT. IF STORM WATER INFILTRATION IS UPGRADIENT THE MINIMUM SETBACK IS 100 FEET.

NOTE: A 10-FOOT HORIZONTAL SEPARATION IS REQUIRED BETWEEN WATER LINE AND SEPTIC SYSTEM COMPONENTS.

*sleeve sewer transport line under driveway*

APPROVED  
SEATTLE-KING COUNTY  
DEPT. OF PUBLIC HEALTH  
*D. E. Huard*  
3/3/17 EHS  
DATE

Huard Septic Design & Monitoring, LLC  
PO BOX 2243 North Bend, WA 98045  
425.831.1781 phone/fax 425.888.2866  
dave@septicdesign.net  
John Devore  
11235 165th Ct. NE  
Redmond, WA 98052  
Tax Parcel #236640-0200  
1-30-17  
Dave Huard  
Licensed Designer