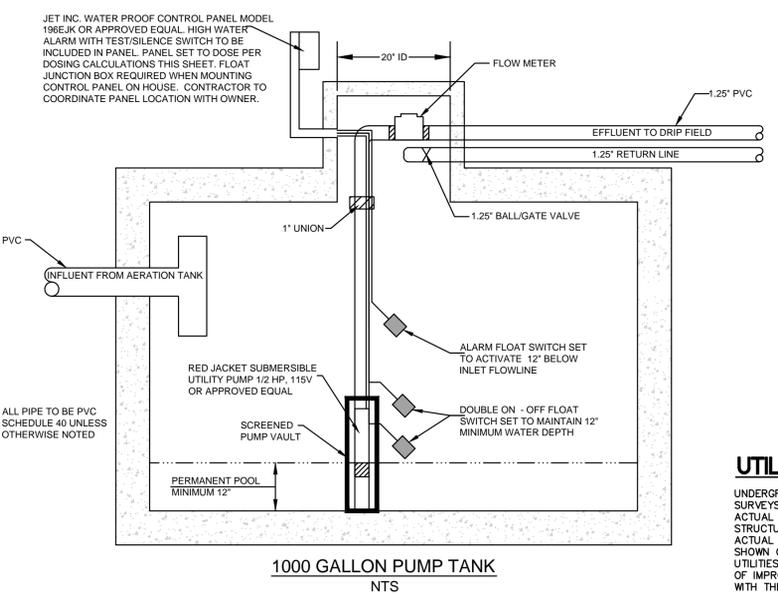
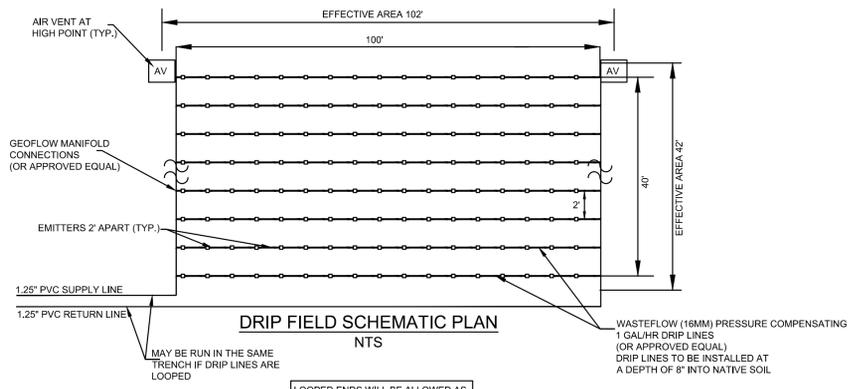
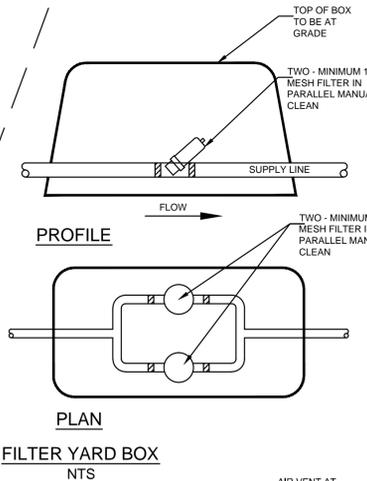
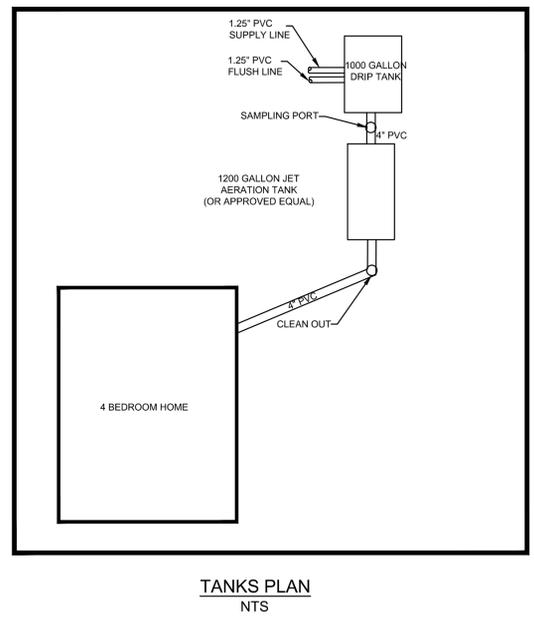
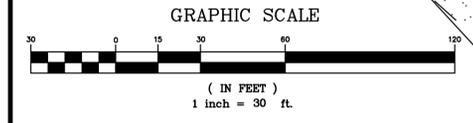


GENERAL NOTES
 1. CONSTRUCTION OF THE ONSITE SEWAGE DISPOSAL SYSTEM SHALL COMPLY WITH THE MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES AS AMENDED BY JEFFERSON COUNTY AND THE SOILS REPORT BY ONSITE SOILS DATED 07/27/2012, 03/20/2013.
 2. SIZE, LOCATION, AND TYPE OF DISPOSAL SYSTEM SHALL NOT BE MODIFIED WITHOUT AUTHORIZATION FROM THE ENGINEER AND JEFFERSON COUNTY.
 3. CONTOURS AND ELEVATIONS WERE SET BASED ON A TEMPORARY BENCH MARK (TBM) ELEVATION OF 102.
 4. TOPO PERFORMED BY KING SEPTIC SERVICE ENGINEERING IS NOT A LEGAL SURVEY.
 5. PLANS FOR THE ONSITE DISPOSAL SYSTEM WERE PREPARED TO MEET MINIMUM STANDARDS PER STATE AND COUNTY REQUIREMENTS. KING SEPTIC SERVICE ENGINEERING DOES NOT REPRESENT NOR WARRANT PROPER OPERATION OR FUNCTION OF INSTALLED SYSTEM FOR ANY PERIOD OF TIME.
 6. ALL STORM WATER RUNOFF FROM THE DWELLING AND SURFACE RUNOFF SHALL BE DIVERTED AROUND AND NOT BE ALLOWED TO ENTER THE SYSTEM.

ONSITE WASTEWATER TREATMENT OPERATION AND MAINTENANCE
 PROPER OPERATION AND MAINTENANCE IS REQUIRED FOR THE ONSITE WASTEWATER TREATMENT SYSTEM TO FUNCTION PROPERLY. KING SEPTIC SERVICE ENGINEERING RECOMMENDS A MAINTENANCE AGREEMENT WITH A QUALIFIED PROVIDER. OWNER IS EXPECTED TO FOLLOW GUIDELINE LOCATED WITHIN THE AERATION TANK SERVICE MANUAL.

SOIL EVALUATION
 ON-SITE SOILS, COPY ATTACHED
 JOHN H. BAUER, SOIL SCIENTIST
 JULY 27, 2012
 MATTHEW W. ROTH, SOIL SCIENTIST
 MARCH 20, 2013

ONSITE WASTEWATER TREATMENT DESIGN
 APPLICATION RATE OF 0.15 GAL/SF/DAY FOR AN ALTERNATIVE ABSORPTION IN SILTY LOAM FILL EXISTING 3 BEDROOM HOME = 150 GAL/DAY X 4 = 600 GAL/DAY (600 GAL/DAY) / (0.15 GAL/SF/DAY) = 4000 SF OF DRIP FIELD REQUIRED SEE TABLES BELOW FOR CALCULATIONS FOR PROPOSED DRIP FIELD PROPOSED NSF #40, CLASS #1, JET 700LL, 750 GAL/DAY TREATMENT PLANT (OR APPROVED EQUAL - MINIMUM 600 GAL/DAY)



UTILITY NOTE:
 UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMo.

KING SEPTIC SERVICE ENGINEERING AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE IMPROVEMENTS SHOWN ON THIS PLAN AND ALL OTHER DRAWINGS MADE BY THE UNDERSIGNED ENGINEER'S SEAL APPEARS. THE CONSTRUCTION MEANS AND METHODS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. KING SEPTIC SERVICE ENGINEERING HAS NO RESPONSIBILITY TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.



King Septic Service Engineering Drip Flow Calculations

Job Description:	1518 Ivy Hill Circle
Contact:	Joe Corio
Prepared by:	Paul Ganey
Date:	16-Apr-13

Worksheet 1- Field Flow

Total field	
Total Quantity of effluent to be disposed per day	600 gallons / day
Hydraulic loading rate	0.15 gallons / sq. ft. / day
Minimum Dispersal Field Area	4,000 square ft.
Total Dispersal Field Area	4,000 square ft.

Flow per zone	
Number of Zones	1 zone(s)
Dispersal area per zone	4,000 square ft.
Choose line spacing between WASTEFLOW lines	2 ft.
Choose emitter spacing between WASTEFLOW emitters	2 ft.
Total linear ft per zone (minimum required)	2,000 ft. per zone
Total number of emitters per zone	1,000 emitters per zone
Select Wasteflow dripline (16mm)	Wasteflow PC - 1 gph dripline
Dose flow per zone	17.00 gpm

If required, choose flush velocity	0.5 ft/sec
How many lines of WASTEFLOW per zone?	20 lines
Fill in the actual length of longest dripline lateral	100 ft.
Equivalent length including flush requirement	143.5347917
Flush flow required at the end of each dripline	0.37 gpm
Total flow required to achieve flushing velocity	7.40 gpm
Total flow per zone - worst case scenario	24.40 gpm

Select Filters and zone valves	
Recommended Filter (item no.)	AP4E-1.5F 1.5" Screen Filter 0.45gpm
Select Zone Valve Type	None
Recommended Zone Valve (item no.)	0 0

Dosing	
Number of doses per day / zone	12 doses
Timer ON Pump run time per dose/zone	2.56 min:secs
Timer OFF Pump off time between doses	1.57 hrs:min
Per Zone Pump run time per day/zone	0:35 hrs:min
All Zones - Number of doses per day / all zones	12 doses / day
All Zones - Pump run time per day/zone	0:00:30 hrs:min:secs
Filter flush timer	0:00:20 hrs:min:secs
Drain timer	0:05:00 hrs:min:secs
Field flush timer	0:01:00 hrs:min:secs
Field flush counter	3 cycles
Time required to complete all functions per day	1:57 hrs:min
Dose volume per zone	50 gallons per dose

PREPARED FOR:
 OWNER
 JOE CORIO
 314-307-0039

PAUL R. GANEY
 MO# PE-2010019544

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 Cedar Hill, MO 63016
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KING SEPTIC SERVICE ENGINEERING

**1518 IVY HILL CIRCLE
 HILLSBORO, MO 63050**

JOB# 212-56

SITE PLAN

04/16/2013 1 of 1