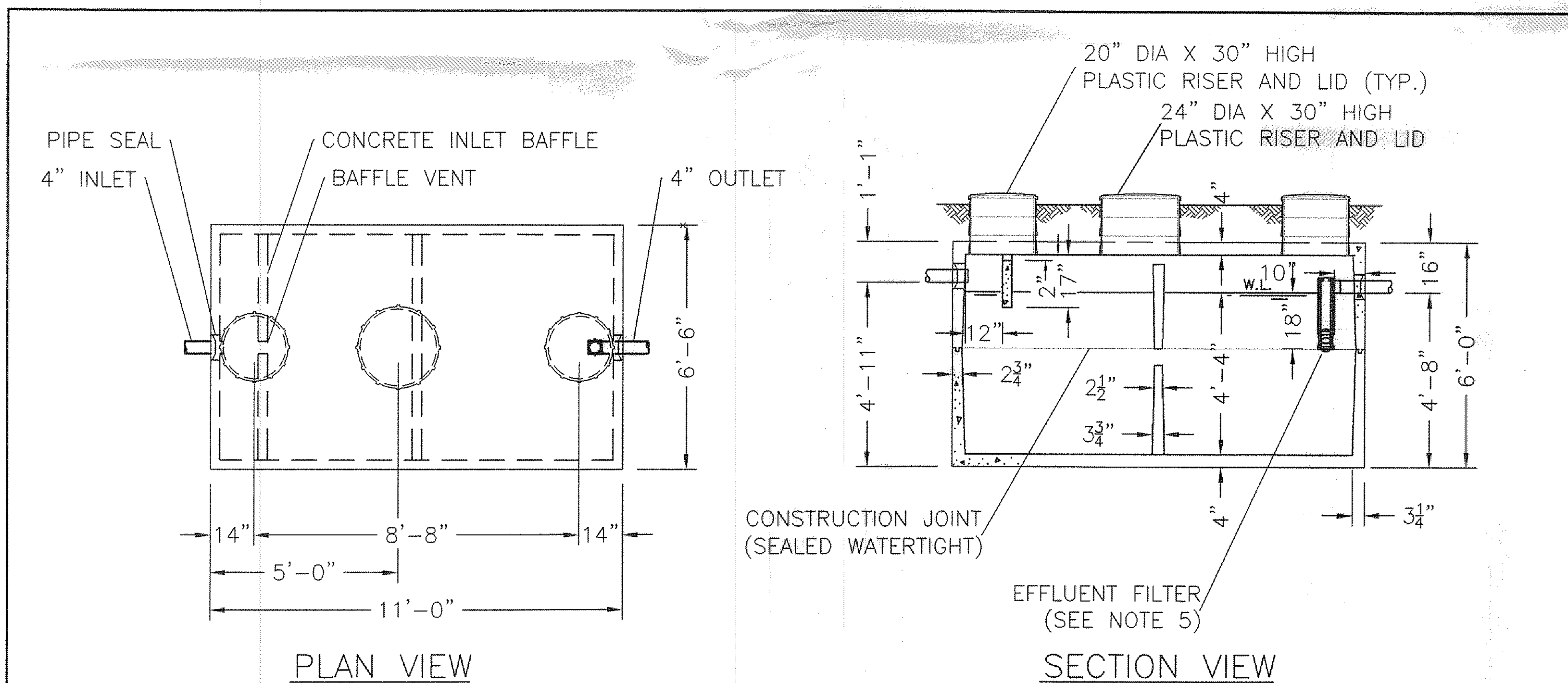


Appendix 1, Section C, 2



NOTES:

1. REINFORCED PRECAST CONCRETE TO HAVE A COMPRESSIVE STRENGTH OF 5000 PSI @ 28 DAYS.
2. PRECAST CONCRETE TANK SHALL MEET OR EXCEED SPECIFICATIONS AS SET BY O.A.C. RULE 3701-293-11.
3. CONCRETE JOINT SEALANT CONFORMS TO ASTM C-990.
4. TANK SEALS CONFORM TO ASTM C-923.
5. EFFLUENT FILTER RETAINS SOLIDS GREATER THAN 1/16" AND CONFORMS TO ASTM C-1227.
6. STAMP OR LABEL TOP OF TANK AS FOLLOWS:
MACK INDUSTRIES LOGO
2000 GAL. TANK CAPACITY
DATE OF MANUFACTURE

THIS DRAWING IS THE PROPERTY OF MACK INDUSTRIES, INC., AND IT OR THE TECHNOLOGY CONTAINED HEREIN MAY NOT BE REPRODUCED NOR USED EXCEPT AS ORIGINALLY INTENDED WITHOUT THE EXPRESSED CONSENT OF MACK INDUSTRIES, INC.

STATE APPROVAL PENDING

DUAL COMPARTMENT 2000 GALLON SEPTIC TANK

O.D.H. 2007 COMPLIANCE, OAC RULE 3701-29-11

DRAWN BY: CJ SCALE: 1/4"=1'-0" DRAWING NO.: D 1000 GAL

DATE: 4/5/07 REV:

MACK INDUSTRIES, INC.
201 COLUMBIA ROAD, VALLEY CITY, OHIO 44280 (330) 483-3111

AMERICAN MANUFACTURING COMPANY

SEPTIC DRIP CALCULATION SHEET

Job Name: Massimo Carmosino Location: City of Kirtland, Lake County, Ohio
Project No.: 11015 Date: 7/11/2011

1 480 GALLONS PER DAY 4 NO. OF BEDROOMS
2 2 ZONES
3 160 FT. (Length) 17 FT. (Width) AREA FOR DISPOSAL LAYO 2720 FT2
4 2 ZONES
5 1600 TOTAL DRIPPER LINE PROVIDED (Zone 1 + Zone 2)
6 2000 SEPTIC TANK SIZE (gallons)
7 2000 DOSING TANK SIZE (gallons)
8 38.46 GALLONS PER INCH IN DOSING TANK (Provided From Manufacturer)

9 ZONE ONE
10 1360 TOTAL ABSORPTION AREA (FT2)
11 800 LINEAR FEET OF DRIP TUBING (Total Tubing for Zone 1)
12 160 LONGEST LATERAL LENGTH (FT) 36.4 Minimum Dose Volume (Gal/Dose)
13 4.07 DOSING FLOW RATE (GPM) (Length of tubing / 2) x (0.61 Gal/Hr) / (60 Min/Hr.)
14 5 NO. RETURN FIELD FLUSH CONNECTIONS (#/zone)
15 8.00 FIELD FLUSH FLOW RATE (GPM) (1.6 gpm/Connection) x (no. of field flush connections)
16 12.07 TOTAL FLOW REQUIRED (GPM) (Dosing flow rate + Field flushing flow rate)

17 ZONE TWO
18 1360 TOTAL ABSORPTION AREA (FT2)
19 800 LINEAR FEET OF DRIP TUBING (Total Tubing for Zone 2)
20 160 LONGEST LATERAL LENGTH (FT) 36.4 Minimum Dose Volume (Gal/Dose)
21 4.07 DOSING FLOW RATE (GPM) (Length of tubing / 2) x (0.61 Gal/Hr) / (60 Min/Hr.)
22 5 NO. RETURN FIELD FLUSH CONNECTIONS (#/zone)
23 8.00 FIELD FLUSH FLOW RATE (GPM) (1.6 gpm/Connection) x (no. of field flush connections)
24 12.07 TOTAL FLOW REQUIRED (GPM) (Dosing flow rate + Field flushing flow rate)

25 13 MAXIMUM DESIGN TOTAL FLUSHING FLOW (GPM)
26 12 FEET OF HEAD LOSS FROM HYDRAULIC UNIT (TDH) (Based (Chart 2A))

27 HYDRAULIC UNIT SUPPLY LINE
28 1.5" PIPE DIAMETER (Inches) (From pump to Hydraulic Unit)
29 20 LENGTH SUPPLY PIPE (FT) (From pump to Hydraulic Unit)
30 7 FEET OF STATIC LIFT (From pump to Hydraulic Unit)
31 9 TOTAL FEET HEAD LOSS IN LINE (Dynamic Head Loss + #50)

32 FORCE MAIN SUPPLY LINE PIPE SIZE & LENGTH:
33 1" ZONE 1 SIZE 70 ZONE 1 LENGTH 7 FT. HEAD LOSS
34 1" ZONE 2 SIZE 70 ZONE 2 LENGTH 7 FT. HEAD LOSS
(Friction losses through supply piping at the specific size, distance and flow, as listed above)

35 RETURN FLUSH LINE SIZE & RETURN:
36 1" ZONE 1 SIZE 70 ZONE 1 LENGTH 3 FT. HEAD LOSS
37 1" ZONE 2 SIZE 70 ZONE 2 LENGTH 3 FT. HEAD LOSS
(Friction losses through return piping at the specific size, distance and flow, as listed above)
38 STATIC HEAD:
39 -1 FEET OF TOTAL STATIC HEAD LOSS (Vertical Lift)
(From the base of the Hydraulic Unit to the highest run of dripper tubing)

40 TOTAL PRESSURE LOSS (Add Items 26, 31, 33/34, 36/37, 39 + Flushing):
41 46 ZONE 1 HEAD LOSS, INCLUDES 16 FEET FLUSHING (Chart 3A)
42 46 ZONE 2 HEAD LOSS, INCLUDES 16 FEET FLUSHING (Chart 3A)
(Total head loss includes friction from pump to H.U., through H.U., supply piping, return piping, Chart 2A, and Chart 3A)

43 PUMP SIZING:
44 46 MAXIMUM TOTAL PRESSURE LOSS (Highest 41 or 42)
45 124 DISC FILTER BACKFLUSH (#31 + 115ft. @ 15 GPM)
46 15 GPM @ 124 FEET 115 VOLTS 1 PHASE 0.5 HP

47 TIMED DOSING PER ZONE:
48 ZONE ONE:
49 4.07 Dosing GPM 8.95 Min/Dose 36.4 Gallons Per Dose (Minimum Fill Ratio 3.5)
50 4.0 Ave. Cycles 6.6 Peak Cycles (Run Frequencies)
51 ZONE TWO:
52 4.07 Dosing GPM 8.95 Min/Dose 36.4 Gallons Per Dose (Minimum Fill Ratio 3.5)
53 4.0 Ave. Cycles 6.6 Peak Cycles (Run Frequencies)

54 AVERAGE DOSING REST TIMES: 182 Minutes
55 PEAK DOSING REST TIMES: 109 Minutes
56 LANDSCAPE LINEAR LOADING RATE: AS PROVIDED 3.00 GPD/LF AS GIVEN FROM SITE ELEVATION OR DESIGNER
57 SOIL LOADING RATE: 0.18 GPD/Sq. Ft. 0.40 GPD/Sq. Ft.

Engineered By:
StreamKey
10515 Reading Road, Cincinnati, Ohio 45241
513-792-1221 phone / 513-792-1223 fax

SHEET NO. FILE:

REVISIONS	BY
REVISED SEPTIC PER LOAD JUNE 30, 2008	WSO
REVISED SEPTIC LOCATION JULY 8, 2008	WSO

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38342 WESTERN PARKWAY, SUITE 10
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SITE PLAN
10856 ANGELA DR., KIRTLAND, OHIO 44094
S/L 25 GREENBRIER ESTATES SUBDIVISION PH. 2 VOL. 39 PG. 23
CARMOSINO RESIDENCE

DRAWN
WSO
CHECKED
DWN
DATE
MAY 17, 2011
SCALE
1" = 20'
JOB NO.
11015
SHEET
3/3
OF SHEETS
11015