E

Type

✓

Plans

SEP14-0161

Permit Number

9141

Street Number

Green Valley Rd

Street Name

CrA

Community Code

130-090-020

APN

PERMIT & RESOURCE MANAGEMENT DEPARTMENT - WELL & SEPTIC SECTION
2550 VENTURA AVENUE, SANTA ROSA, 95403 TELEPHONE (707) 565-1900

☒ **APPLICATION FOR PRIVATE SEWAGE DISPOSAL PERMIT**

☐ **APPLICATION FOR CLEARANCE FOR:** ADD LF FOOTAGE TO EX L.F. FOR UP TO 15 OFFICE EMPLOYEES

Application is hereby made to the Permit & Resource Management Department for a permit to construct or repair a sewage disposal system as described below in compliance with code of Sonoma County or for clearance for other construction.

This permit application must be signed on pertinent signature lines by the **same** person (i.e., contractor or owner/builder.) A letter of authorization from the owner must accompany this application if an agent is signing on the owner's behalf.

APPLICANT: PLEASE PRESS HARD (USE BLACK INK).
FILL IN BETWEEN HEAVY LINES ONLY.
SEE BACK SIDE FOR TERMS OF PERMIT

Building PERMIT #	SEP PERMIT #	EXISTING USE(S) ON SITE:
BLD14-2823	SEP14-0161	

JOB ADDRESS 9141 GREEN VALLEY RD.
NEAREST CROSS STREET ROSS RD
ASSESSOR'S PARCEL No. 130-090-020
SUBDIVISION — LOT — LOT —
CITY GRATON/SEBASTOPOL ZIP 95472

OWNER'S NAME MANZANA PRODUCTS CO. INC.
MAILING ADDRESS 9141 GREEN VALLEY RD
CITY SEBASTOPOL STATE CA ZIP 95472
PHONE (707) 823 5313

SEWAGE DISPOSAL SYSTEM CONTRACTOR OWNER
ADDRESS _____ PHONE No. _____
GENERAL CONTRACTOR _____

INSTALLATION WILL SERVE: ☐ EXISTING RESIDENCE ☐ NEW RESIDENCE
☐ REPLACEMENT RESIDENCE ☐ SECOND UNIT ☒ COMMERCIAL ☐ REPAIR UPGRADE
☐ OTHER: OFFICE ☐ ATTACHED CONDITIONAL STATEMENT

TOTAL (Existing + Proposed)
Number of Units: Total No. of Bedrooms:

Water Supply: ☐ Public ☒ Private

Lot Size: 1045'± × 560'±

OWNER-BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500).):

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044 Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he or she did not build or improve for the purpose of sale.).

☒ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law.).

☐ I am exempt under Sec. _____ B & P.C. for this reason: _____

Date 3-25-14 Owner _____

SONOMA COUNTY
PERMIT AND RESOURCE
MANAGEMENT DEPARTMENT
REVIEWED BY

LICENSED CONTRACTOR'S DECLARATION

I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Contractor ELECTRICAL PERMIT REQUIRED License Class _____

License Number _____ Expiration Date _____

OPERATIONAL PERMIT

A SEPTIC PERMIT SHALL EXPIRE IN THREE(3) YEARS FROM DATE OF ISSUANCE UNLESS OTHERWISE NOTED BY CODE ENFORCEMENT.

THIS PERMIT IS LIMITED TO _____ DAYS.

Violation # _____

CODE ENFORCEMENT Date

WORKER'S COMPENSATION DECLARATION

I hereby affirm under penalty of perjury one of the following declarations:

☐ I have and will maintain a certificate of consent to self-insure for worker's compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

☐ I have and will maintain worker's compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My worker's compensation insurance carrier and policy number are:

Carrier _____
Policy No. _____
(This section need not be completed if the permit is for one hundred dollars ($100) or less).

☒ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the worker's compensation laws of California, and agree that if I should become subject to the worker's compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

3-25-14 Exp. Date — mark fitzgerald Applicant Signature

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

I certify that I have read this application and affirm under penalty of perjury that the above information is correct. I agree to comply with all local Ordinances and State laws relating to building construction. I hereby authorize representatives of the County of Sonoma to enter upon the above-mentioned property for inspection purposes. If, after making the Certificate of Exemption for the Worker's Compensation provision of the Labor Code I should become subject to such provisions, I will forthwith comply. In the event I do not comply with the Workman's Compensation law, this permit shall be deemed revoked.

DATE _____

☒ mark fitzgerald SIGNATURE OF APPLICANT

☐ Contractor ☒ Owner ☐ Other Licensed Professional

9141 GREEN VALLEY RD Address SEBASTOPOL City 95472 ZIP

Layout Plan Approved by: _____ WELL AND SEPTIC SECTION Date 8-21-14

Construction and Permit Finaled by: [illegible] Date 11/25/15

Sennis F:\FORMS\WSS\WSS-013 in process rev: 10/27/05

WHEN APPROVED THIS IS YOUR PERMIT

4 part NCR - all yellow

SEP 14 0167

PEARSON & ASSOCIATES

CIVIL ENGINEERING SERVICES

April 2, 2014
P/A Job: 8.2581

Subject: Update of 3/24/14 Letter submitted for Office Replacement Manzana Products 9141 Green Valley Road

County of Sonoma
Resources Management Dept.
Well and Septic Section
2550 Ventura Avenue
Santa Rosa, Calif. 95403

Attn.: Mario Kalson, R.S.

Per our subject site inspections; the existing septic system was determined to meet current code and therefor was planned to be used (with expansion) for the new office building. The existing leachline looked like it has been functioning and appears to be still in good condition and the 1200 gal. septic tank had very little solids. Based on the existing septic system permitted plans, and the subject site reviews, the existing system has a 75' long, 4'± deep leachline with 2' of rock below the pipe.

Our client has asked that we move the up-dated septic system from the location shown on the 1/10/14 plans submitted last week to the location of the shown expansion mound area. This chance is so the driveway area where the leachlines exist and were proposed will not be lost for the clients use of parking and driveway width.

Based on the soils found in the backhoe pits done at the site reviews and 10/22/02 pits "A" & "B" done for perc testing of 5/4/07 (ave. perc rate was 40 mpi at 30" and 28 mpi at 66"), I propose using the 40 mpi rate for sizing of a mound for the office septic system (0.487 gal./s.f./day).

The planned new office building will replace the existing office use that has been up to 10 employees. The existing office will only have one to two employee for the scales and be mostly used for storage. The planned new office building will be connected to the existing septic system tank & will have up to 10 employees.

Up to ten employees is what the current plan use is for the new office and two employees in the existing office; for a factor of safety, the system is being designed for up to 15 employees. Sizing of the mound for 15 employees = 15 employees x 15 gal./employee/day = 225 GPD. See the attached mound calculations for mound sizing and pumping needs.

The plans dated 4/2/14 submitted with this letter are for a mound design with 200% expansion mounds, all to be in the area of the 3/27/13 ground water pit "B" (& 10/22/02 pits "A" and "B").

Let me know if I need to provide any additional information regarding the above.

Very truly yours,

PEARSON & ASSOCIATES

REGISTERED PROFESSIONAL ENGINEER
JOHN M. PEARSON
No. 23698
EXP 12-15
CIVIL
STATE OF CALIFORNIA

John Pearson

attachments: copy of 3/24/14 letter
mound sizing calcs.

copy: client, file

PEARSON & ASSOCIATES

CIVIL ENGINEERING SERVICES

March 24, 2014
P/A Job: 8.2581

Subject: Update of
8/25/2012 Site Review
for Office Replacement
Manzana Products
9141 Green Valley Road

County of Sonoma
Resources Management Dept.
Well and Septic Section
2550 Ventura Avenue
Santa Rosa, Calif. 95403

Attn.: Mario Kalson, R.S.

Per our subject site inspections; the existing septic system meets current code and therefor is planned to be used (with expansion) for the new office building. The existing leachline looked like it has been functioning and appears to be still in good condition and the 1200 gal. septic tank had very little solids. Based on the existing septic system permitted plans, and the subject site reviews, the existing system has a 75' long, 4'± deep leachline with 2' of rock below the pipe. See the attached data.

Based on the soils found in the backhoe pits done at the site reviews and 10/22/02 pits "A" & "B" done for perc testing of 5/4/07 (ave. perc rate was 40 mpi at 30" and 28 mpi at 66"), I propose using the 40 mpi rate for sizing of this office septic system (0.487 gal./s.f./day).

The planned new office building will replace the existing office use that has been up to 10 employees. The existing office will only have one to two employee for the scales and be mostly used for storage. The planned new office building will be connected to the existing septic system & will have up to 10 employees.

Up to ten employees is what the current plans are for the new office and two employees in the existing office; for a factor of safety, the system is being designed for up to 15 employees. Sizing of the septic system leachline for 15 employees = $\frac{15 \text{ employees} \times 15 \text{ gal./employee/day}}{0.487 \text{ gpd/s.f.} \times 4 \text{ s.f./ ft. of trench.}}$ = 116 feet needed.

The submitted plans include increasing the existing leachfield size by adding a leachline to the north. Added leachline needed is: 116' less the existing 75' = 41'; the plan is to add 70'. Future replacement systems will be in the area of the 3/27/13 ground water pit "B" (& 10/22/02 pits "A" and "B") and be a mound type design based on the 40 mpi infiltration rate; see the attached sizing chart.

Let me know if I need to provide any additional information regarding the above.

Very truly yours,

PEARSON & ASSOCIATES

John Pearson

attachments: 8/23/12 & 3/27/13 site inspection data
mound sizing chart

copy: client, file

P.O. BOX 58 - 7325 MALONE ROAD - FORESTVILLE, CALIFORNIA 95436 - PH.: (707)887-1000

County of Sonoma
Permit & Resource Management Department
Well & Septic Section
2550 Ventura Avenue, Santa Rosa, CA 95403-2829
(707) 565-1900

SEPTIC SYSTEM INSPECTION

Site Address: 9141 Green Valley Rd

Owner: _____

SEPT4-0161

REQUEST FOR INSPECTION

Date of call: _____ Time: _____

Caller: _____

Caller's Phone No.: _____

Remarks: For Final: 1.) OPR 2.) 189 3.) Engineers letter 4.) Final cover/erosion control 5.) Monitoring wells 6.) start-up.

Call taken by: _____

INSPECTION NOTICE

- ☐ Stop work immediately - Call Environmental Health Specialist
  Telephone _____ Hours _____
- ☒ OK to cover leachfield ☒ tank
- ☒ Provide Engineer's letter of approval
- ☐ Provide "As Built" plan to scale
- ☐ Call for inspection on pump & alarm
- ☐ Corrections needed - see remarks below
- ☐ OK to cover with Engineer's approval
- ☒ Issue Operational Permit

For further information call: _____

Hours & Day: _____

Remarks: Tank sizes ok. Watertight pass. Floats ok. Alarm audio/visual working. Line lengths ok/level. Squirt ok.

Daniel [signature] 10/30/14

Environmental Health Specialist's Signature Date

Received by: J-JESUS FLORES C

Contractor's Signature

☐ Posted

PEARSON & ASSOCIATES
CIVIL ENGINEERING SERVICES

September 6, 2015
P/A Job: 8.2581

County of Sonoma
Permit and Resources Management Dept.
Environmental Health Division
2550 Ventura Avenue
Santa Rosa, California 95403

Subject: Inspection of Septic System Installation
9141 Green Valley Road,
Graton, Cal.

Attention: Chris Balanesi, R.S.

Gentlemen:

This letter provides the conclusions of our inspections of the septic system installed at the above subject site. We previously designed a mound type sewage disposal system for this site (dated 4/2/14) and this was approved by your office.

No notable changes in the installed septic system from the original design were found during construction inspection; therefore, the original design plans can be considered as the as-built plans. Note that the septic tank and pump tank were moved to the south of the mound instead of above the mound. After our 10/30/14 inspection the monitoring wells were placed and inspected along with the control box and seeding of the construction area. The elec. #189 inspection may still need to be done along with payment of the operational permit fee.

Based on our inspections, it appears that the septic system was installed in conformance with the intent of the approved plan and Sonoma County Public Health accepted standards and should function properly under normal loading conditions.

If there are any questions regarding the above, please call.

Very truly yours,

PEARSON & ASSOCIATES

John Pearson, R.C.E.

copy: client 1
file 1

PEARSON & ASSOCIATES

PROJECT: 9141 GREEN VALLEY RD - GRATON OFFICE REPLACEMENT. JOB NO.: 8.2581

DATE: 4-2-14

CALCULATIONS FOR MOUND SEWAGE DISPOSAL SYSTEM

SEE "DESIGN AND CONSTRUCTION MANUAL FOR WISCONSIN MOUNDS, BY JAMES C. CONVERSE , 1978 AND "SITING, DESIGN, CONSTRUCTION AND PERFORMANCE FOR WISCONSIN MOUNDS" BY JAMES C. CONVERSE / E. JERRY TYLER, 1984

I. SYSTEM DESIGN DATA:

AVERAGE SLOPE = 4 % 15 WORKERS x 15 GPD/w. = 225 GPD ✓

~~___ BEDROOMS;~~ WASTE LOAD = ~~___ x120 G.P.D.~~ = 225 G.P.D.

AVERAGE PERCOLATION RATE: 40 M.P.I. (BASED ON PITS & 5/4/07 PERCS)

USE DESIGN LOAD RATE OF: 0.487 GAL/S.F./DAY ✓

DEPTH TO GROUND WATER = 3'+* ~~TO ___ INCHES~~. ✓

* NO INDICATION OF GR. WATER 3/27/13.

II. DESIGN:

GRAVEL BED ABSORPTION AREA USING MED. TEXTURE SAND (0.8 G.P.D./S.F.) AND 225 G.P.D.

AREA = 225 G.P.D. / 0.8 G.P.D./S.F. = 282 S.F. ✓

BED SIZE: USING WIDTH (A) = 5 FEET, ✓

LENGTH = 282 S.F. / 5 FT. = 56.2 FT.: USE: 57

BED = 5 FEET X 57 FEET. ✓

MOUND SIZE (BASED ON 4 % AVERAGE SLOPE), SEE PAGE 2.

LINEAR LOADING RATE = 225 GPD ÷ 57 (L) = 3.94 GPD/L.F. ✓

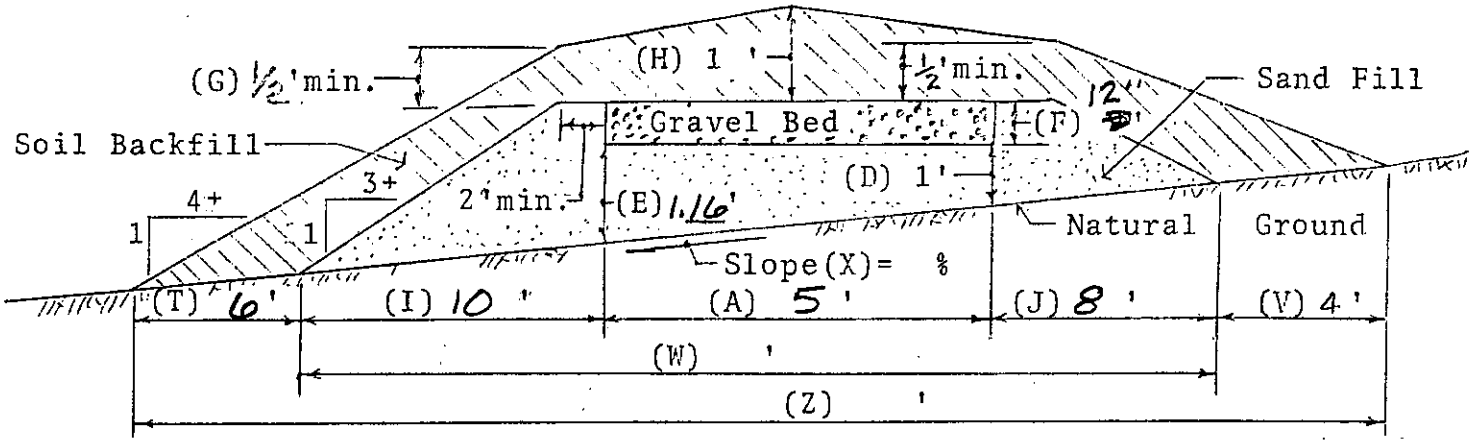
Peterson & Associates

SHEET 2 OF 10

PROJECT: JOB NO.:

SUBJECT: MOUND SIZE CALCS DATE:

CHKD. BY: PG:



Gravel Bed Length (B) = 57'

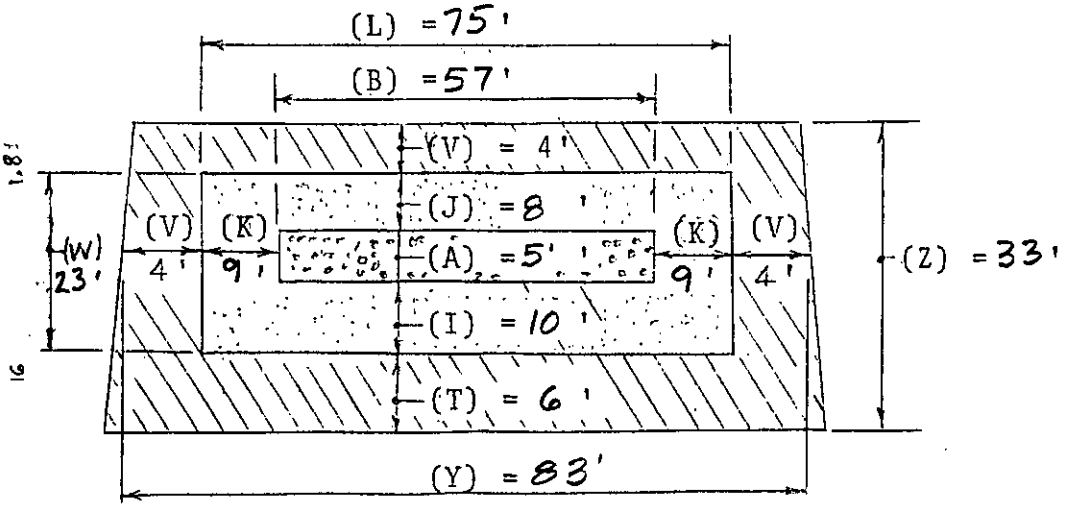
E = D + A x X	= 1' + 4' x .04	= 1.16'
T = 0-2%: 4'; 2-4%: 6'; 4-6%: 8'; 6-8%: 10'; 8-12%: 12' (SCPH)		= 6
I = 2' + (E + F) x 3 x downslope (f)	= 2' + (1.16' + 1') 3 x 1.14	= 9.4' (USE 10')
J = 2' + (F + D) x 3 x upslope (f)	= 2' + (1' + 1') 3 x .89	= 7.3' (USE 8'
K = (~~D~~ + E)~~3~~ + F) x 3 +2	= (1.16' + 1') 3 + 2'	= 8.5 (USE 9'
L = B + 2 K	=	= 75'
W = I + A + J	=	= 23'
Y = L + 2 V	=	= 83'
Z = W + V + T	=	= 33'

Downslope and Upslope Width Corrections for Mounds on Sloping Sites (f)

SLOPE %	DOWNSLOPE (I) CORRECTION FACTOR	UPSLOPE (J) CORRECTION FACTOR
0	1.00	1.00
2	1.06	.94
(4)	(1.14)	(.89)
6	1.22	.86
8	(1.32)	.80
10	1.44	.77
12½	1.57	.73

1.8'

1.6'



BASAL AREA:

SAND AREA UNDER BED AND DOWN SLOPE OF BED

= 57 FT. X (5 FT. + 10 FT.)

= 855 SQ. FT. AVAILABLE SAND BASE AREA

MINIMUM SAND BASE AREA NEEDED

= 225 G.P.D. / .487 G.P.D./ S.F.

= 462 S.F. NEEDED ✓

MORE THAN ENOUGH BASAL AREA WILL BE PROVIDED. ✓

DISTRIBUTION SYSTEM:

TOTAL 3/16 INCH HOLES IN SYSTEM DISTRIBUTION:

USE 1 LINE (2 LATERALS) AT 3 FOOT SPACING AS SHOWN ON PLAN (NUMBER OF 3/16" HOLES/LINE WITH 36 INCH SPACING PER HOLE = _____ HOLES PER LINE.)

TOTAL HOLES = 1 LINES X 19 HOLES/LINE = 19

TOTAL FLOW = 19 HOLES X 0.~~60~~ 94 G.P.M./HOLE* = 18 G.P.M.

* FLOW BASED ON ATTACHED ~~FIG. 13~~ TBL 2 & ~~5~~ 5 FEET HEAD.

MANAFOLD SIZE:

WITH 1 1/2 INCH P.V.C. PIPE AND A TOTAL FLOW OF 18 G.P.M., FRICTION LOSS = 2.1 FT./ 100 FT OF PIPE (SEE TABLE 9): USE 1 1/2 INCH P.V.C. SCH. 40 PIPE

LATERAL SIZE: USE 1 1/4 INCH P.V.C. SCH. 40 PIPE FOR LATERALS

PUMP / SUMP SIZING:

PUMP: USE HYDROMATIC SHGF 40, OR = _____ (SEE SHEET 4)

DOSE: USE 75* GALLONS (TABLE 5) OR TEN X PIPE VOLUME.

PIPE VOLUME = 25 FEET X .092 GAL/FT. OF 1 1/2 INCH PIPE + 56 FEET X .064 GAL/FT. OF 1 1/4 INCH PIPE = 5.89 GALLONS. TEN X PIPE VOL. = 59 GALLONS

* USE 100 GALLONS PER DOSE.

Pearson & Associates

SHEET 4 OF 10

PROJECT: JOB NO.:

SUBJECT: SEPTIC SYSTEM PUMP CALCULATIONS DATE:

BY: J M P

I. TOTAL DESIGN HEAD (T.D.H.):

A. STATIC HEAD (H_S):

1. PUMP SET AT ELEVATION = 100
2. HIGHEST ~~LEACH~~ LINE INVERT = 106
3. H_S = 106 - 100 = 6'

B. FRICTION HEAD LOSS(H_F) AT 19 G.P.M.:

1. 1½" P.V.C. FRICTION LOSS (F_L) = 2.1 / 100'
2. LENGTH PIPE = 20' + EQUIVALENT LENGTH FOR BENDS, ETC.
   = 20' +32'(4 90° BENDS) + 1'(UNION) + 1'(GATE V.) +9(TEE)
   +13'(CHECK V.) =
3. H_F = (2.1 '/100') X 76' = 1.6

C. T.D.H. = H_S + H_F = 6 + 1.6'+5'SAT. = 12.6 USE 15 FEET

II. USE PUMP: _____ (SEE ATTACHED CURVE), OR EQUAL.

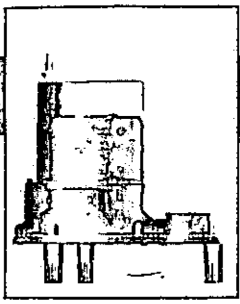
Table 1

Friction losses Through Plastic Fittings in terms of Equivalent Lengths of Plastic Pipe

Type of Fitting	Nominal Size Fitting and Pipe			
	1-1/4"	1-1/2"	2"	2-1/2"
	Equivalent Length of Pipe (feet)			
90° STD. Elbow	7.0	8.0	9.0	10.0
45° Elbow	3.0	3.0	4.0	4.0
STD. Tee (Diversion)	7.0	9.0	11.0	14.0
Check Valve	11.0	13.0	17.0	21.0
Coupling or Quick Disconnect	1.0	1.0	2.0	3.0
Gate Valve	0.9	1.1	1.4	1.7

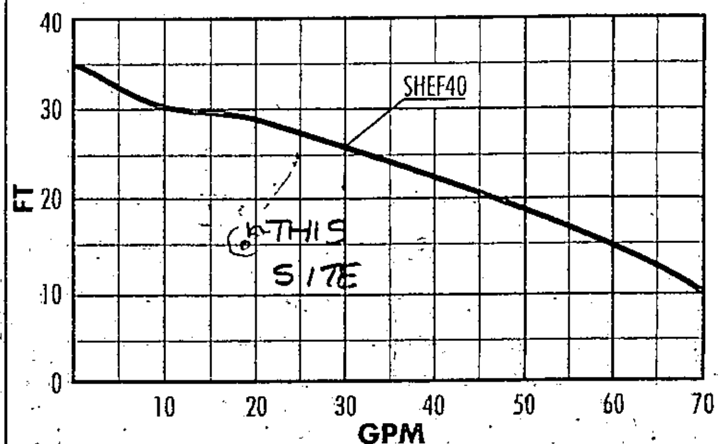
SMALL FLOWS-Winter 1998; Vol.12, No. 1

51



Engineering Details - SHEF40

Performance Data



Total Head (feet)	10	14	17	21	25	28	30	35
(m)	3.0	4.3	5.2	6.1	7.6	8.5	8.8	10.7
GPM (US GPM)	70	60	50	40	30	20	10	0
(liters/sec)	4.4	3.8	3.2	2.5	1.9	1.3	.63	0

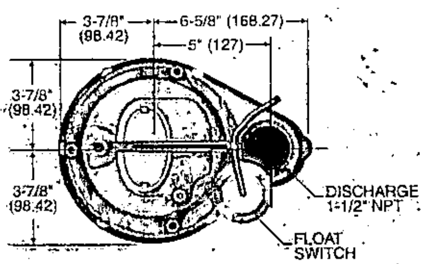
Pump Characteristics

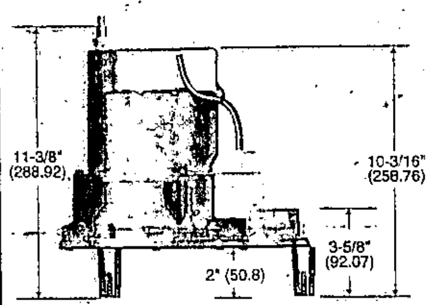
Pump/Motor Unit	Submersible	
Manual Models	SHEF40M1	SHEF40M2
Automatic Models	SHEF40A1	SHEF40A2
Horsepower	4/10	
Full Load Amps	12	6.5
Motor Type	Shaded Pole (4 Pole)	
R.P.M.	1550	
Phase	1Ø	
Voltage	115	230
Hertz	60	
Temperature	120° F Max. Fluid Temp.	
NEMA Design	A	
Insulation	Class A	
Discharge Size	1 1/2" NPT	
Solids Handling	3/4"	
Weight	28 lbs.	
Power Cord	18/3, SJTW, 20' std. (30' optional)	

Materials of Construction

Handle	Stainless Steel
Lubricating Oil	Dielectric Oil
Motor Housing	Cast Iron
Pump Casing	Cast Iron
Shaft	Steel
Mechanical Shaft Seal	Seal Faces: Carbon/Ceramic Seal Body: Anodized Steel Spring: Stainless Steel Bellows: Buna-N
Impeller	Engineered Thermoplastic
Upper Bearing	Bronze Sleeve Bearing
Lower Bearing	Single Row Ball Bearing
Bottom Plate	Polyester Coated Steel
Fasteners	Stainless Steel
Legs	Engineered Thermoplastic

Dimensional Data





1. All dimensions in inches. (Metric for international use).
2. Component dimensions may vary ± 1/8 inch.
3. Not for construction purpose unless certified.
4. Dimensions and weights are approximate.
5. We reserve the right to make revisions to our product and their specifications without notice.

HYDROMATIC®

PENTAIR PUMP GROUP

1840 Baney Road Ashland, Ohio 44805 Tel: 419-289-3042 Fax: 419-281-4087
Web Site: www.pentairpump.com

SALES OFFICES IN ALL MAJOR CITIES AND COUNTRIES

Refer to "Pumps" in the yellow pages of your phone directory for your local Distributor

– Your Authorized Local Distributor –

SSPMA Certified PUMP

Item#: W-02-6680 999 8M

TABLE 5. Recommended Dosing Quantity for Various Sized Homes

Home Size No. Bedrooms	Dosing Quantity* Gal/Dose
1	50
2	75
3	115
4	150
5	200

TABLE 6. Void Volume for Various Diameter Pipes

Diameter inch	Volume gal/ft length
1	.041
1 1/4	.064
1 1/2	.092
2	.164
3	.368
4	.655
6	1.47

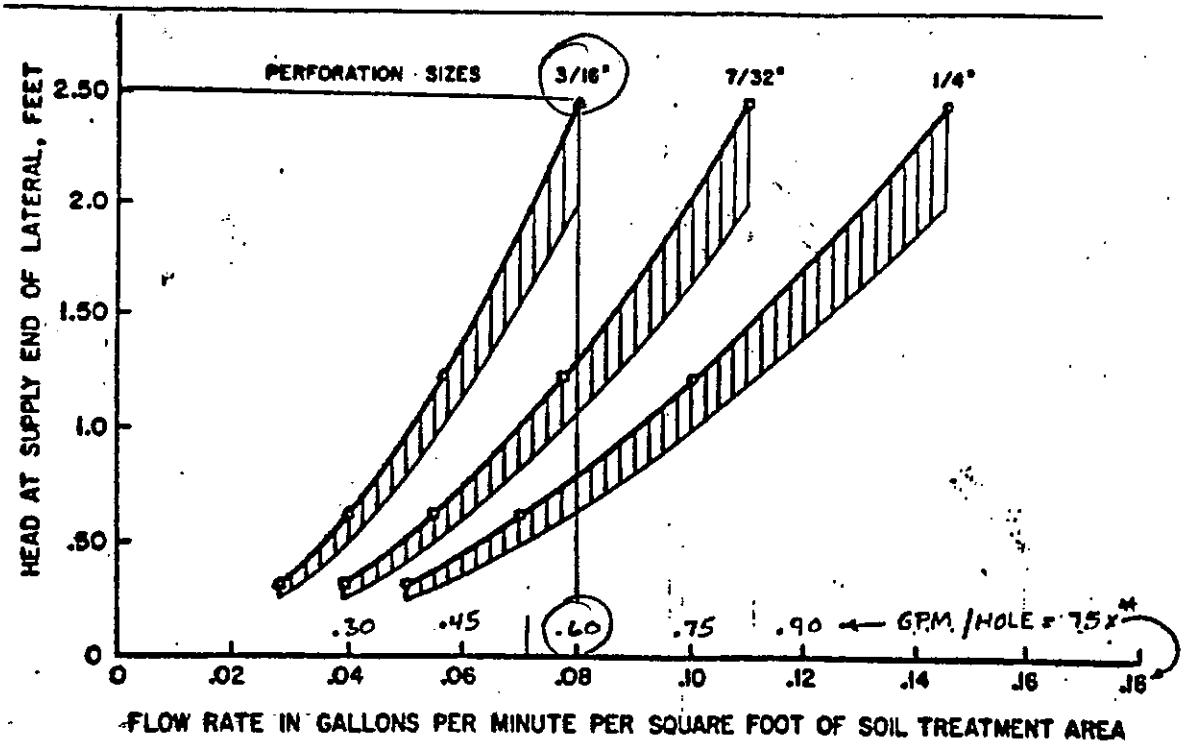


Fig. 13 Flow rate vs. head for perforation spacing of 30* in. and lateral spacing of 3* ft. The lower curve for each perforation represents the head at the distal end of lateral (Machmeier 1975).

* CHART IS BASED ON 30"(2.5') x 3' AREA / PERFORATION (7.5 S.F.) & 7.5 S.F./PERFORATION x FLOW RATE = FLOW / PERFORATION

Pearson & Associates

SHEET 1 OF 10

PROJECT: _____ JOB NO.: _____

SUBJECT: SYSTEM DISTRIBUTION DATE: _____

LATERAL HOLE DISCHARGE CHKD. BY: _____ BY: JMP

Table 2.* Flow rate as a function of pressure head and hole diameter in drilled PVC pipe

Pressure Head		Hole diameter (in.)				
		3/32	1/8	5/32	3/16	7/32
ft	*psi*	– *Flow rate (gpm)* –				
1	0.43	0.10	0.18	0.29	0.42	0.56
2	0.87	0.15	0.26	0.41	0.59	0.80
3	1.30	0.18	0.32	0.50	0.72	0.98
4	1.73	0.21	0.37	0.58	0.83	1.13
5	2.16	0.23	0.41	0.64	0.94	1.26

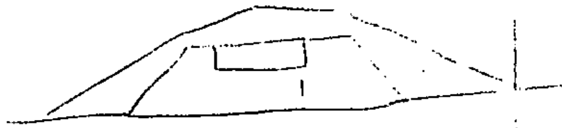
* FROM "DESIGN & INSTALLATION OF LOW PRESSURE, PIPE WASTE & TREATMENT SYSTEMS" BY CRAIG COGGER, ET AL. 1982 N.C.S.U.

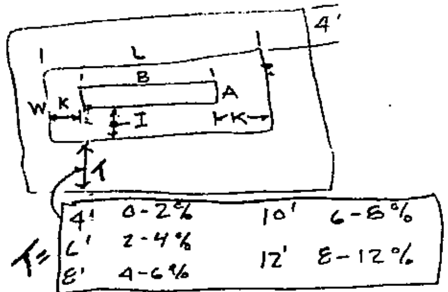
TABLE 9. Friction Loss in Schedule 40 Plastic Pipe (C = 150)

Flow	Pipe Diameter (in)								
	1	1 1/4	1 1/2	2	3	4	6	8	10
gpm	ft/100 ft								
1	0.07								
2	0.28	0.07							
3	0.60	0.16	0.07						
4	1.01	0.25	0.12						
5	1.52	0.39	0.18						
6	2.14	0.55	0.25	0.07					
7	2.89	0.76	0.36	0.10					
8	3.63	0.97	0.46	0.14					
EACH LAT. 9	4.57	1.21	0.58	0.17					
10	5.50	1.46	0.70	0.21					
11		1.77	0.84	0.25					
12		2.09	1.01	0.30					
13		2.42	1.17	0.35					
14		2.74	1.33	0.39					
15		3.06	1.45	0.44	0.07				
16		3.49	1.65	0.50	0.08				
17		3.93	1.86	0.56	0.09				
PUMP TO LAT. 18		4.37	2.07	0.62	0.10				
19		4.81	2.28	0.68	0.11				
20		5.23	2.46	0.74	0.12				
25			3.75	1.10	0.16				
30			5.22	1.54	0.23				
35				2.05	0.30	0.07			
40				2.62	0.39	0.09			
45				3.27	0.48	0.12			
50				3.98	0.58	0.16			
60					0.81	0.21			
70					1.08	0.28			
80					1.38	0.37			
90					1.73	0.46			
100					2.09	0.55	0.07		
125						0.85	0.12		
150						1.17	0.16		
175						1.56	0.21		
200							0.28	0.07	
250							0.41	0.11	
300							0.58	0.16	
350							0.78	0.20	0.07
400							0.99	0.26	0.09
450							1.22	0.32	0.11
500								0.38	0.14
600								0.54	0.18
700								0.72	0.24
800									0.32
900									0.38
1000									0.46

Velocities in this area become to great for the various flow rates and pipe diameter.

MOUND SIZING CHART





Upslope width (J)*

no variation with bed width

Bed Width	Downhill side sand depth (E) 3	4	5	6	7	8	9	10	Downslope width (I)* 3	4	5	6	7	8	9	10	Upslope width (J)*	End width (K)* SHOULD BE LESS THAN I 3	4	5	6	7	8	9	10
% Slope																									
0	1	1	1	1	1	1	1	1	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.25	9.75							
1	1.03	1.04	1.05	1.06	1.07	1.08	1.09	1.1	8.6	8.6	8.7	8.7	8.7	8.7	8.8	8.8	8	9.8	9.8	9.8	9.8	9.9	9.9	9.9	9.9
2	1.06	1.08	1.1	1.12	1.14	1.16	1.18	1.2	8.9	8.9	9.1	9.1	9.2	9.3	9.3	9.4	7.8	9.8	9.9	9.9	9.9	10	10	10	10.1
3	1.09	1.12	1.15	1.18	1.21	1.24	1.27	1.3	9.4	9.5	9.6	9.7	9.8	9.9	10	10.1	7.5	9.9	9.9	10	10	10.1	10.1	10.2	10.2
4	1.12	1.16	1.2	1.24	1.28	1.32	1.36	1.4	9.8	10	10.1	10.2	10.4	10.5	10.6	10.8	7.3	9.9	10	10	10.1	10.2	10.2	10.3	10.4
5	1.15	1.2	1.25	1.3	1.35	1.4	1.45	1.5	10.2	10.4	10.6	10.8	11	11.2	11.3	11.5	7.2	10	10	10.1	10.2	10.3	10.4	10.4	10.5
6	1.18	1.24	1.3	1.36	1.47	1.48	1.54	1.6	10.7	10.5	11.2	11.4	11.8	11.8	12	12.3	7.1	10	10.1	10.2	10.3	10.5	10.5	10.6	10.7
7	1.21	1.28	1.35	1.42	11.5	1.56	1.63	1.7	11.3	11.5	11.8	12.1	12.3	12.6	12.9	13.1	6.8	10.1	10.1	10.3	10.4	10.5	10.6	10.7	10.8
8	1.24	1.32	1.4	1.48	1.56	1.64	1.72	1.8	11.8	12.2	12.5	12.8	13.1	13.4	13.7	14.4	6.6	10.1	10.2	10.4	10.5	10.6	10.7	10.8	11
9	1.27	1.36	1.45	1.54	1.63	1.72	1.81	1.9	12.5	12.9	13.2	13.6	14	14.4	14.9	15.5	6.5	10.2	10.3	10.4	10.6	10.7	10.9	11	11.1
10	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	13.2	13.6	14	14.5	14.9	15.3	15.8	16.2	6.4	10.2	10.4	10.5	10.7	10.8	11	11.1	11.3
11	1.33	1.44	1.55	1.66	1.77	1.88	1.99	2.1	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.4	6.2	10.2	10.4	10.6	10.7	10.8	11.1	11.2	11.4
12	1.36	1.48	1.6	1.72	1.84	1.96	2.03	2.2	14.6	15.2	15.8	16.3	16.9	17.5	17.5	18.6	6	10.3	10.5	10.7	10.8	11	11.2	11.4	11.6

* THIS IS SOMEWHAT OVER SIZED OF 3:1 SLOPE.

SHT: 9 OF 10

COUNTY OF SONOMA
PUBLIC HEALTH DEPARTMENT

3313 CHANATE ROAD • SANTA ROSA • CALIFORNIA 95404-1795

TABLE I PERK RATE CONVERTED TO GAL/SQ FT/DAY

1-3 MPI = 1.2 GAL/SQ FT/DAY
4 MPI = 1.143 GAL/SQ FT/DAY
5 MPI = 1.086 GAL/SQ FT/DAY
6 MPI = 1.029 GAL/SQ FT/DAY
7 MPI = .971 GAL/SQ FT/DAY
8 MPI = .914 GAL/SQ FT/DAY
9 MPI = .857 GAL/SQ FT/DAY
10 MPI = .8 GAL/SQ FT/DAY
11 MPI = .786 GAL/SQ FT/DAY
12 MPI = .771 GAL/SQ FT/DAY
13 MPI = .757 GAL/SQ FT/DAY
14 MPI = .743 GAL/SQ FT/DAY
15 MPI = .729 GAL/SQ FT/DAY
16 MPI = .714 GAL/SQ FT/DAY
17 MPI = .7 GAL/SQ FT/DAY
18 MPI = .686 GAL/SQ FT/DAY
19 MPI = .671 GAL/SQ FT/DAY
20 MPI = .657 GAL/SQ FT/DAY
21 MPI = .643 GAL/SQ FT/DAY
22 MPI = .629 GAL/SQ FT/DAY
23 MPI = .614 GAL/SQ FT/DAY
24 MPI = .6 GAL/SQ FT/DAY
25 MPI = .593 GAL/SQ FT/DAY
26 MPI = .587 GAL/SQ FT/DAY
27 MPI = .58 GAL/SQ FT/DAY
28 MPI = .573 GAL/SQ FT/DAY
29 MPI = .567 GAL/SQ FT/DAY
30 MPI = .56 GAL/SQ FT/DAY
31 MPI = .553 GAL/SQ FT/DAY
32 MPI = .545 GAL/SQ FT/DAY
33 MPI = .538 GAL/SQ FT/DAY
34 MPI = .531 GAL/SQ FT/DAY
35 MPI = .523 GAL/SQ FT/DAY
36 MPI = .516 GAL/SQ FT/DAY
37 MPI = .509 GAL/SQ FT/DAY
38 MPI = .501 GAL/SQ FT/DAY
39 MPI = .494 GAL/SQ FT/DAY
40 MPI = .487 GAL/SQ FT/DAY
41 MPI = .479 GAL/SQ FT/DAY
42 MPI = .472 GAL/SQ FT/DAY
43 MPI = .465 GAL/SQ FT/DAY
44 MPI = .457 GAL/SQ FT/DAY
45 MPI = .45 GAL/SQ FT/DAY
46 MPI = .443 GAL/SQ FT/DAY
47 MPI = .437 GAL/SQ FT/DAY
48 MPI = .43 GAL/SQ FT/DAY
49 MPI = .423 GAL/SQ FT/DAY
50 MPI = .417 GAL/SQ FT/DAY
51 MPI = .41 GAL/SQ FT/DAY
52 MPI = .403 GAL/SQ FT/DAY
53 MPI = .397 GAL/SQ FT/DAY
54 MPI = .39 GAL/SQ FT/DAY
55 MPI = .383 GAL/SQ FT/DAY
56 MPI = .377 GAL/SQ FT/DAY
57 MPI = .37 GAL/SQ FT/DAY
58 MPI = .363 GAL/SQ FT/DAY
59 MPI = .357 GAL/SQ FT/DAY
60 MPI = .35 GAL/SQ FT/DAY
61 MPI = .345 GAL/SQ FT/DAY
62 MPI = .34 GAL/SQ FT/DAY
63 MPI = .335 GAL/SQ FT/DAY
64 MPI = .33 GAL/SQ FT/DAY
65 MPI = .325 GAL/SQ FT/DAY
66 MPI = .32 GAL/SQ FT/DAY
67 MPI = .315 GAL/SQ FT/DAY
68 MPI = .31 GAL/SQ FT/DAY
69 MPI = .305 GAL/SQ FT/DAY
70 MPI = .3 GAL/SQ FT/DAY
71 MPI = .295 GAL/SQ FT/DAY
72 MPI = .29 GAL/SQ FT/DAY
73 MPI = .285 GAL/SQ FT/DAY
74 MPI = .28 GAL/SQ FT/DAY
75 MPI = .275 GAL/SQ FT/DAY
76 MPI = .27 GAL/SQ FT/DAY
77 MPI = .265 GAL/SQ FT/DAY
78 MPI = .26 GAL/SQ FT/DAY
79 MPI = .255 GAL/SQ FT/DAY
80 MPI = .25 GAL/SQ FT/DAY
81 MPI = .245 GAL/SQ FT/DAY
82 MPI = .24 GAL/SQ FT/DAY
83 MPI = .235 GAL/SQ FT/DAY
84 MPI = .23 GAL/SQ FT/DAY
85 MPI = .225 GAL/SQ FT/DAY
86 MPI = .22 GAL/SQ FT/DAY
87 MPI = .215 GAL/SQ FT/DAY
88 MPI = .21 GAL/SQ FT/DAY
89 MPI = .205 GAL/SQ FT/DAY
90+ MPI = .2 GAL/SQ FT/DAY

Non-Standard/Innovative Sewage Disposal System Operational Permit Application

WLS-009

Purpose:
This application is used to apply for a Nonstandard/Innovative Sewage Disposal System Operation Permit and is submitted to the Sonoma County Permit and Resource Management Department (PRMD) Well and Septic Division. If an operational permit has been issued and the property has been sold, the permit is transferable upon change of ownership.

The applicant must complete, sign and date below, retain pink copy, and submit top copies with payment to the Sonoma County Permit and Resource Management Department. See the current Well and Septic Division fee schedule for filing fees.

☒ Original Application ☐ Change of Ownership: _____ Date of Change

☐ Applicant ☒ Owner ☐ Architect ☐ Engineer

MANZANA PRODUCTS CO. INC.
Name

9141 GREEN VALLEY RD.
Mailing Address

SEBASTOPOL, CA 95472
City/Town State/Zip

707-823-5313
Phone Fax

Project Site Information

9141 GREEN VALLEY RD
Address(es)

City/Town State/Zip

130-090-020
Assessor's Parcel Number(s)

SEP
File Number

I (we) understand that the permit is valid from the date of issuance to the end of the current fiscal year (June 30) thereafter, the permit is valid for one year and must be renewed annually. Permits are transferable upon change of ownership. I (we) agree to comply with all applicable State and County codes, and the rules and regulations set forth by PRMD. Including, but not limited to, performance of self-monitoring inspections on the sewage disposal system.

MANZANA PRODUCTS CO. INC.
Owner's Name

Mark Fitzgerald 4-4-14
Signature Date

SAME
Mailing Address

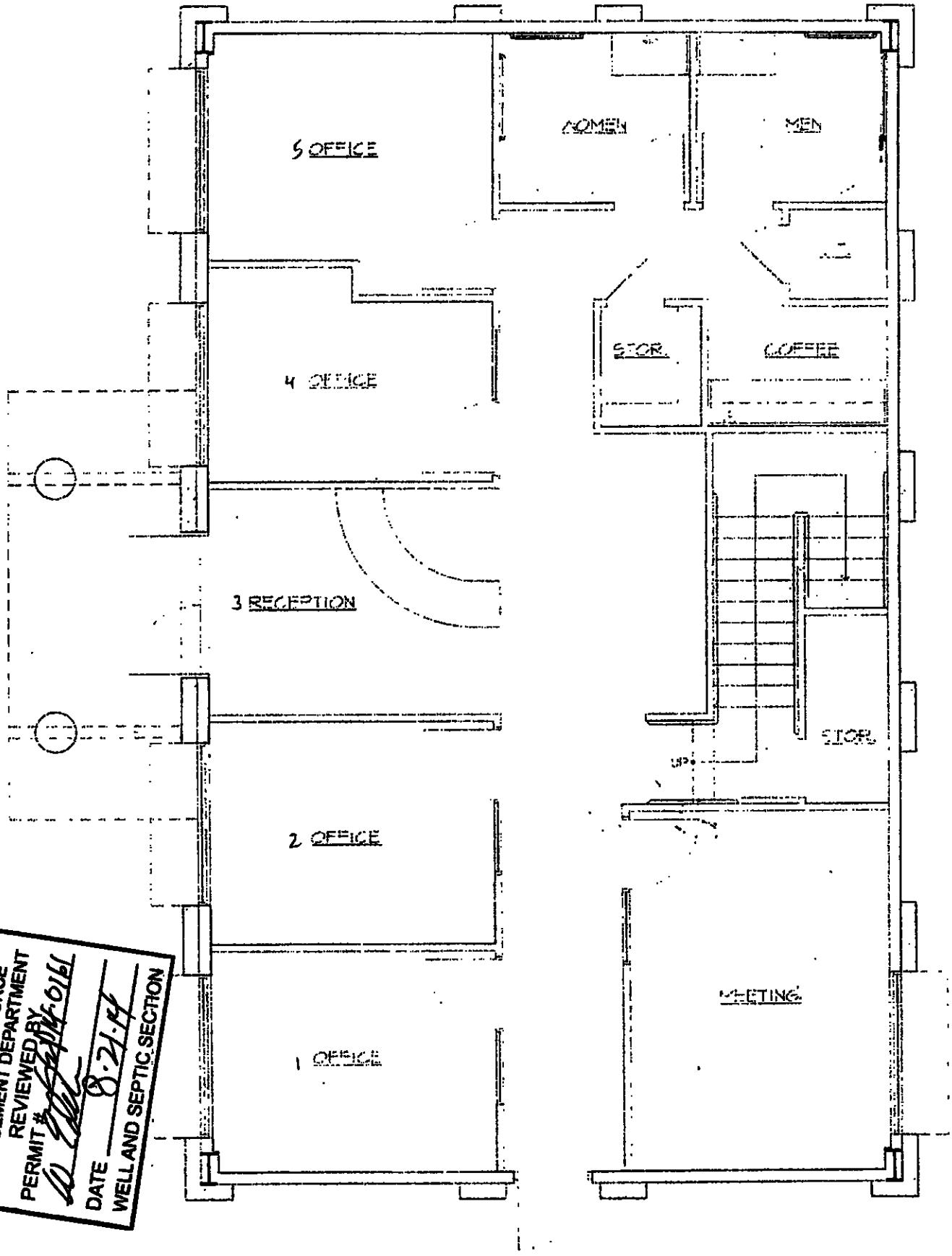
City/Town State/Zip

Owner's Name

Signature Date

SIGN THIS (3 ITEM)

Filing Fee: See the current PRMD Fee Schedule



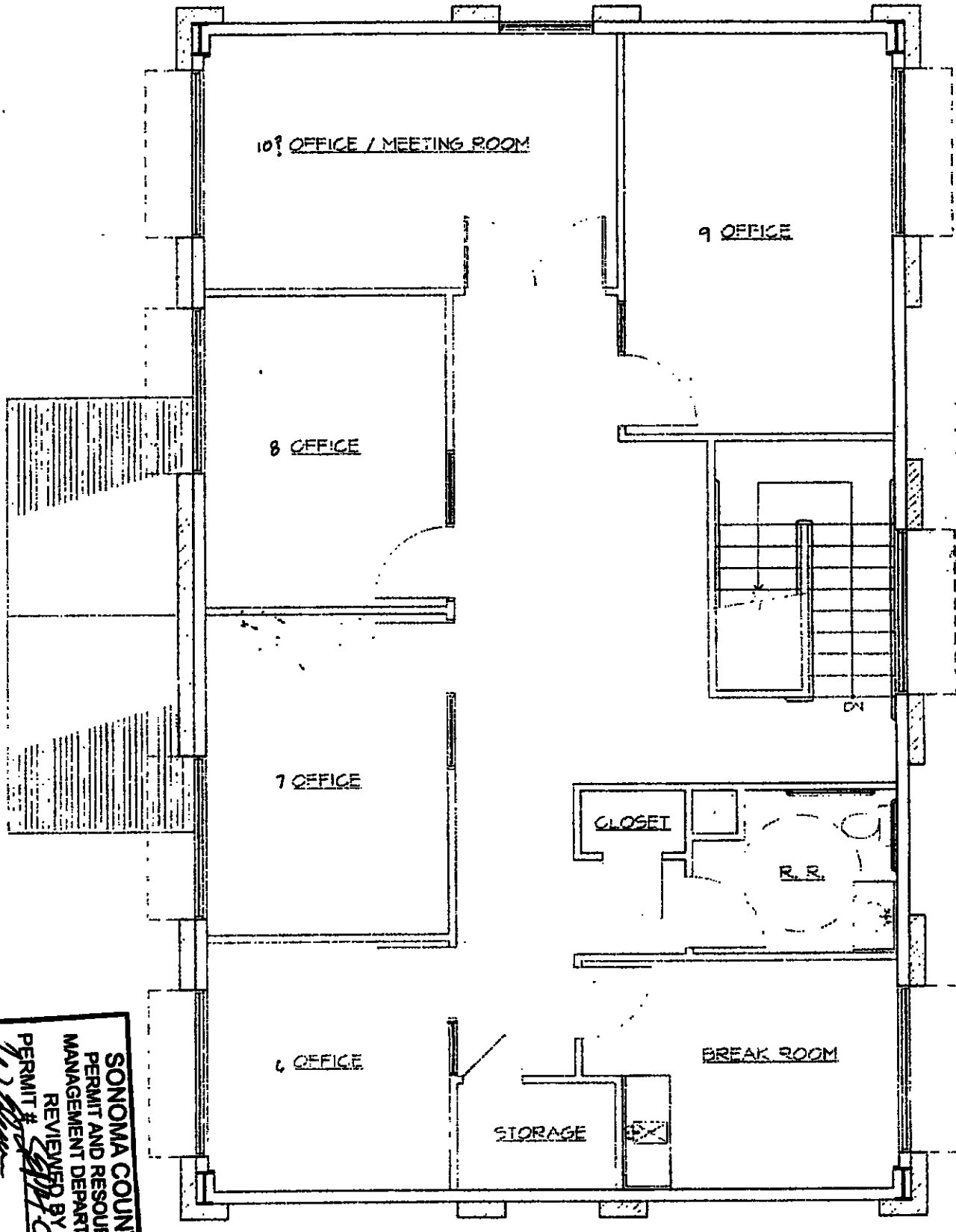
SONOMA COUNTY
PERMIT AND RESOURCE
MANAGEMENT DEPARTMENT
REVIEWED BY
PERMIT # 20146161
DATE 8.21.14
WELL AND SEPTIC SECTION

1st FLOOR PLAN

NO SCALE

N

REC. 3/13/14



SONOMA COUNTY
PERMIT AND RESOURCE
MANAGEMENT DEPARTMENT
REVIEWED BY
PERMIT # 2011-0161
DATE 8-21-14
WELL AND SEPTIC SECTION

2nd FLOOR PLAN

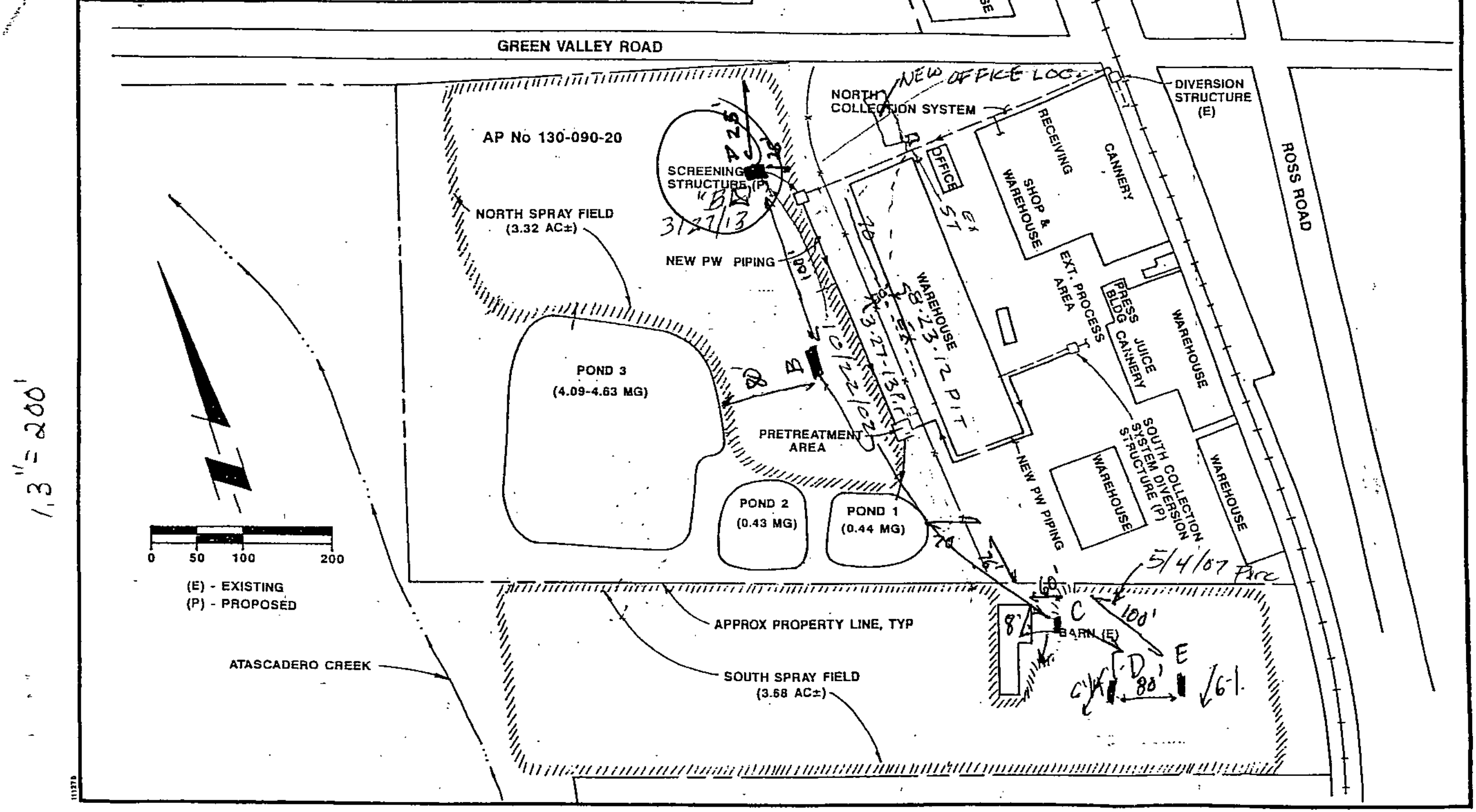
NO SCALE

N

SUMMIT ENGINEERING, INC.
Consulting Civil Engineers

MANZANA PRODUCTS CO., INC
GRATON, SONOMA CO., CA
SCHEMATIC SITE PLAN

PROJECT NO. 94112.8
DATE 2-23-95
BY MW CHK BP
SHEET NO. ____ OF ____


AP No 130-090-02
WAREHOUSE
GREEN VALLEY ROAD
ROSS ROAD
DIVERSION STRUCTURE (E)
NEW OFFICE LOC.
NORTH COLLECTION SYSTEM
RECEIVING
CANNERY
SHOP & WAREHOUSE
OFFICE
EX ST
EXT. PROCESS AREA
PRESS BLDG
JUICE CANNERY
WAREHOUSE
8-23-12 PIT
3-27-13 P.T.
10/22/02
AP No 130-090-20
SCREENING STRUCTURE (P)
3/27/13
NORTH SPRAY FIELD (3.32 AC±)
NEW PW PIPING
POND 3 (4.09-4.63 MG)
PRETREATMENT AREA
POND 2 (0.43 MG)
POND 1 (0.44 MG)
SOUTH COLLECTION SYSTEM DIVERSION STRUCTURE (P)
5/4/07
APPROX PROPERTY LINE, TYP
SOUTH SPRAY FIELD (3.68 AC±)
BARN (E)
100'
80'
ATASCADERO CREEK
0 50 100 200
(E) - EXISTING
(P) - PROPOSED
1.3" = 200'

1400 North Dutton Avenue #22 Santa Rosa, California 95401. (707) 527-0775

Contact