5/8/96 AM
5/23/96 [illegible] 5/31/96

PERMIT

SEWAGE DISPOSAL SYSTEM

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

P 56513

A REPAIR

DISTRICT ______

If experience operating problems see; Manufacturer! American Mfg see Tom Ashton 1-800-345-3132

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
~~XXXXXXXX~~ 313-2640

DATE 03/21/96

DATE SYSTEM APPROVED 6/11/96

INSPECTOR [illegible signature]

INDEXED

Fogle's Septic Clean, Inc. IS PERMITTED TO INSTALL ______ ALTER X

ADDRESS 558-R Obrecht Road, Sykesville, Maryland 21784 PHONE 795-5674

SUBDIVISION ______ LOT ______ ROAD 2605 North Rogers Avenue

PROPERTY OWNER ~~New owner: Tom Glorioso~~ (Buyer) ~~Richard Huettel~~ (Seller) · 465-2121 James Myers

ADDRESS 2605 North Rogers Avenue
Ellicott City, Maryland 21043

SEPTIC TANK CAPACITY 1500 GALLONS TOP SEAM

NUMBER OF BEDROOMS 3

*Per Jean Reed, Bureau of Engineering, this property is served by public water; but, not public sewer.

______ SQUARE FEET PER BEDROOM

LINEAR FEET OF TRENCH REQUIRED ______

REPAIR - PURPOSE - SEPTIC SYSTEM HAS FAILED.

INSTALL: "Pump chamber, control mechanism, alarms, pumps and drip irrigation system." (2 fields = 2200 linear feet of drip tubing) to be installed as per accompanying plans which were reviewed and approved by MDE/Individual Wells & Septic Program.

Set up rate zone 1 is 6.0 gpm
[illegible] 302 — " 2 is 5.0 gpm "

PLANS APROVED BY ______ DATE ______

COVER NO WORK UNTIL INSPECTED AND APPROVED

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM

NOTE: CLEANOUT REQUIRED EVERY 70 FEET OF SEWER LINE AND/OR AT 90° SWEEPS IN LINES FROM HOUSE TO DRAIN FIELDS, 90° ELBOWS NOT ACCEPTABLE.

NOTE: ALL PARTS OF SEPTIC SYSTEMS (I.E. TANK, DISTRIBUTION BOX TRENCHES) TO BE 100 FEET FROM WELL (UNLESS OTHERWISE SPECIFICALLY AUTHORIZED)

NOTE: IF DEEP TRENCH(ES) ARE USED CALL FOR INSPECTION BEFORE AND AFTER PLACING GRAVEL IN TRENCH(ES)

NOTE: NO DRY WELL SHALL EXCEED 15 FOOT IN DIAMETER NO ABSORPTION TRENCH TO EXCEED 100 FEET IN LENGTH

NOTE: ALL PIPE FROM HOUSE TO SEPTIC TANK MUST BE CAST IRON OR SCHEDULE 35/40 PVC OR ABS

PERMIT VOID AFTER TWO YEARS

NOTE: INSTALL STAND PIPE ON SEPTIC TANK AND DRY WELL STAND PIPES MUST BE 6 INCHES IN DIAMETER CAST IRON. CONCRETE OR TERRA COTTA OR PVA OR ABS ACCEPTED. IF TOP OF SEPTIC TANK IS DEEPER THAN 3 FEET. MANHOLE TO GRADE REQUIRED.

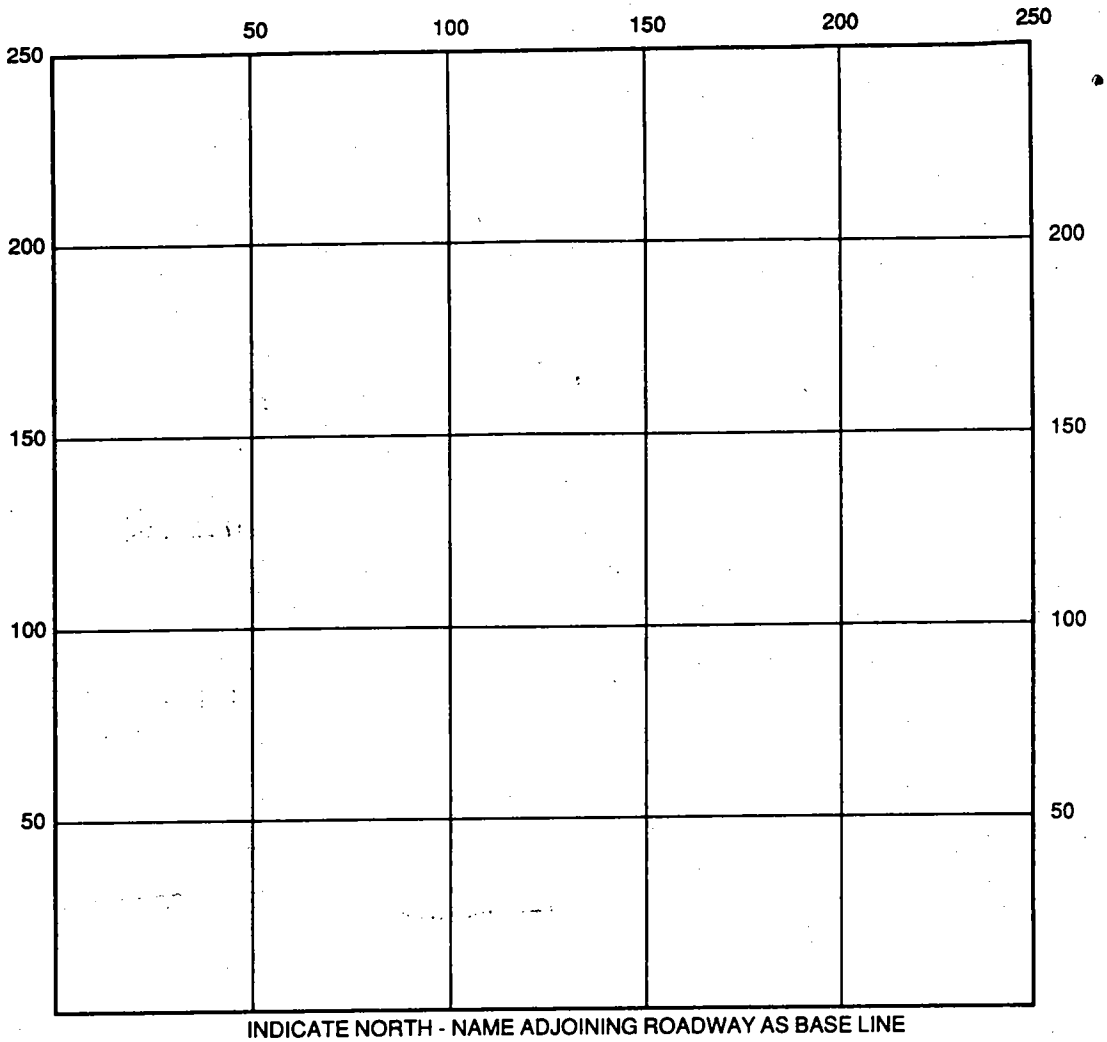
NOTE: DISTRIBUTION BOXES MUST HAVE BAFFLES

#56513

***INSTALLER IS RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT**

*CALL 461-9933 FOR INSPECTION OF SEPTIC SYSTEM.

HD-260(6-90)



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE

SEPTIC TANK LEVEL _____ CLEANOUTS _____

DISTRIBUTION BOX LEVEL _____

DRAIN FIELD/TITLE DEPTH _____ FT. TRENCH WIDTH _____ FT. INLET DEPTH _____ FT.

EFFECTIVE GRAVEL DEPTH _____ FT. TOTAL LENGTH _____ FT.

NUMBER OF TRENCHES _____ ONE SIDEWALL/BOTTOM AREA _____ SQ. FT.

DRYWALL INSIDE DIAMETER _____ FT. EFFECTIVE DEPTH BELOW INLET _____ FT.

ABSORBENT AREA _____ SQ. FT.

REMARKS: _____

_____

_____

_____

_____

_____

DATE SYSTEM APPROVED _____ INSPECTOR _____

3/22/96
10:30 cld

PERMIT

SEWAGE DISPOSAL SYSTEM

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

P 56513

A REPAIR

DISTRICT

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
~~461-9933~~ 313-2640

DATE 3/21/96

DATE SYSTEM APPROVED 6/11/96

INSPECTOR

Fogle's Septic Clean, Inc. IS PERMITTED TO INSTALL X ALTER

ADDRESS 558-R Obrecht Road, Sykesville, MD 21784 PHONE 795-5674

SUBDIVISION LOT ROAD 2605 North Rogers Avenue

PROPERTY OWNER Richard Huettel

ADDRESS

HOLDING TANK CAPACITY 1500 Gallons

NUMBER OF BEDROOMS 3

*Top seamed, 2 compartmented plus, an alarm system to notify occupants whenever tank needs pumping.

"Provisional" Holding tank permit until such time as plans for subsurface sewage disposal have been reviewed, approved and the system installed. Contract with a licensed sewage scavenging contractor for routine pumping and proper disposal of holding tanking contents is a corequisite of this permit. RP 3/19/96

PLANS APROVED BY Ronald Pinkney DATE 3/19/96

COVER NO WORK UNTIL INSPECTED AND APPROVED

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM

NOTE: CLEANOUT REQUIRED EVERY 70 FEET OF SEWER LINE AND/OR AT 90° SWEEPS IN LINES FROM HOUSE TO DRAIN FIELDS. 90° ELBOWS NOT ACCEPTABLE.

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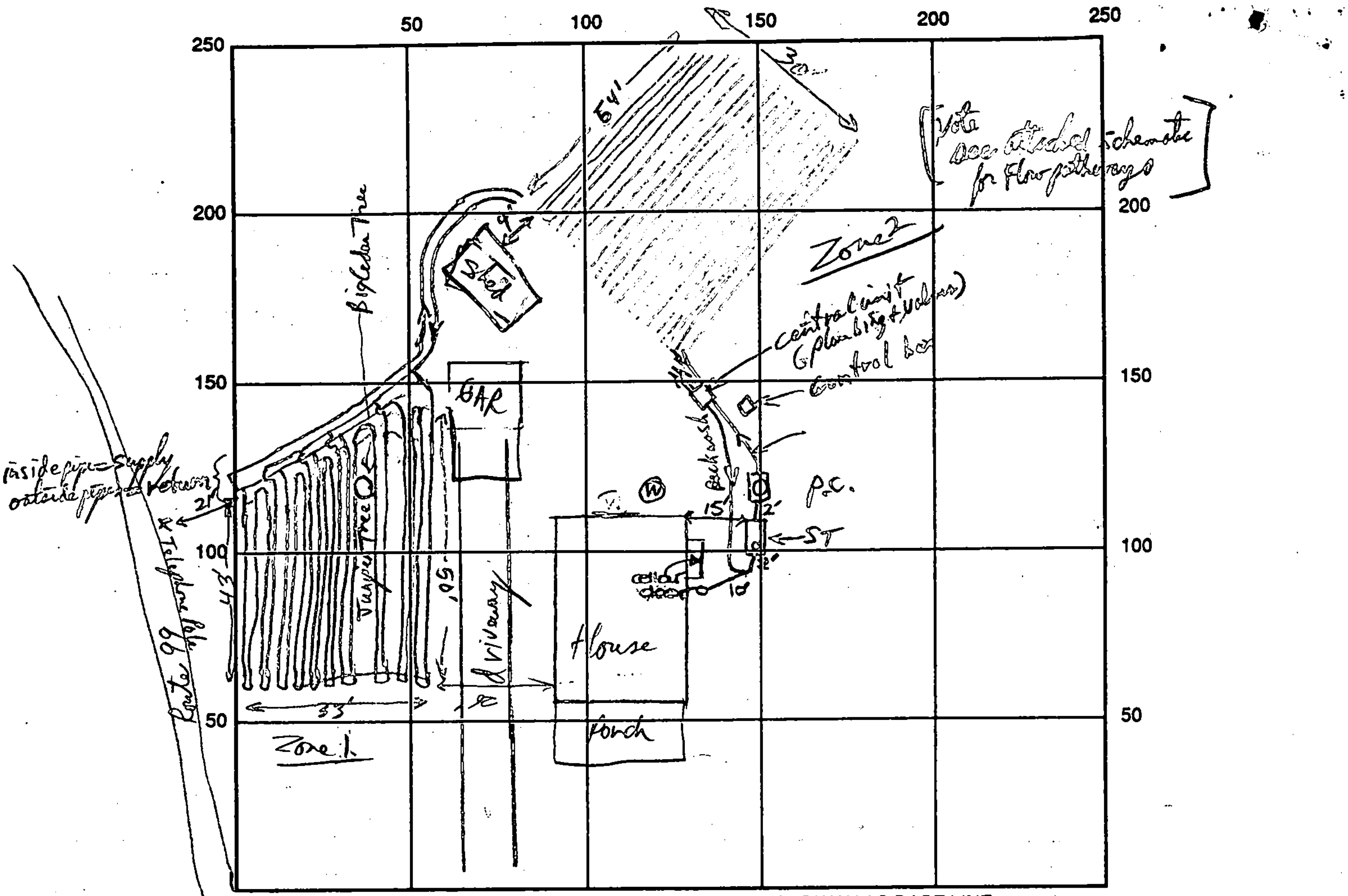
HD-260(6-90)

*CALL 461-9933 FOR INSPECTION OF SEPTIC SYSTEM.

A



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE

North Rogers Avenue

SEPTIC TANK LEVEL OK – 1500 gal s.t. (both top-seam) 1500 gal pump pit CLEANOUTS one on s.t., manhole on pump pit

ALARM SYSTEM

REMARKS:

3/22/96 septic tank and pump pit OK to cover. DKS

5/23/96 Both fields of drip irrigation were laid as per plans. RJP

5/24/96 piping + connections being made; Zone one almost done, Zone 2 will be ready by Tuesday. Pump Test scheduled for Wed. RJP 5/24/96

6/7/96 Pump Test — three days discovered several leaks, which were fixed but for end of Day. Schematic Computer Control Diagnostic Tests still system pumping rates other than as predicted [i.e. getting 8-9 gpm vs predicted 6 gpm per Zone] B6 and others on site, C.W. visited >5 PM] RJP 6/7/96

Existing Dug well Not connected — 15 ft deep, water level at 5½ ft below Grade RJP/CW 6/7/96

Larry Walker was American Representative handling Diagnostic Test on 6/7.

6/11/96 — Control Mechanism is Running OK — see Operation Manual. RJP

DATE SYSTEM APPROVED 6/11/96 INSPECTOR [signature]

MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway ● Baltimore, Maryland 21224
(410) 631-3000

Parris N. Glendening
Governor

Jane T. Nishida
Secretary

March 20, 1996

Mr. Frank Skinner, Director
Environmental Health
Howard County Health Department
3525 Ellicott Mills Drive, Suite H
Ellicott City MD 21043

Re: Richard Huetell Property
2605 N. Rogers Avenue

Dear Mr. Skinner:

I have reviewed the plans for the innovative drip irrigation system proposed for the above referenced property. I am attaching a signed approval block that can be transferred to the plans. If the existing septic tank is to be used as a part of any system, I would recommend that the tank be checked for watertightness.

I received plans for the drip irrigation system prior to conducting an evaluation of the lot. The results of my site evaluation indicate that the site is suitable for the drip system and is also suitable for the installation of an alternative at-grade bed or a conventional sand mound sewage disposal system. A copy of the site evaluation data is attached. The following sections summarize requirements necessary for proceeding with the project.

Plans and Specifications

If the property owner wishes to pursue the sand mound or at-grade bed option, he must notify the Groundwater Permits Program of his intention to pursue either of these options and preliminary specifications for designing the system will be provided. As a conventional system, the mound represents the lowest risk of the above listed options in terms of system performance. However, a construction easement might be required to deliver the materials necessary to construct the mound or at-grade bed, to the backyard. A consultant should be retained by the property owner to prepare final plans for the project. Two sets of plans must be submitted to the Groundwater Permits Program and the local Approving Authority for review before final approval to construct the system can be given. Plans for the drip system have already been submitted and approved.

Existing Well Abandonment

There is an existing well at the back of the house. It will not be possible to maintain an adequate separation distance as specified in COMAR between this well and the proposed septic system. Therefore, this well should be abandoned and sealed before a permit to construct the septic system is issued.

Agreement

An Agreement and Easement must be signed by the property owner and recorded in the land records before permits to construct the drip system or at-grade bed can be issued. The Agreement and Easement establishes the regulatory conditions associated with the experimental project and provides monitoring access for State and County personnel.

If you have questions regarding this matter please call me immediately, otherwise please forward a copy of this letter to the property owner within five working days after receipt of this letter.

Sincerely,

Barry Glotfelty/je

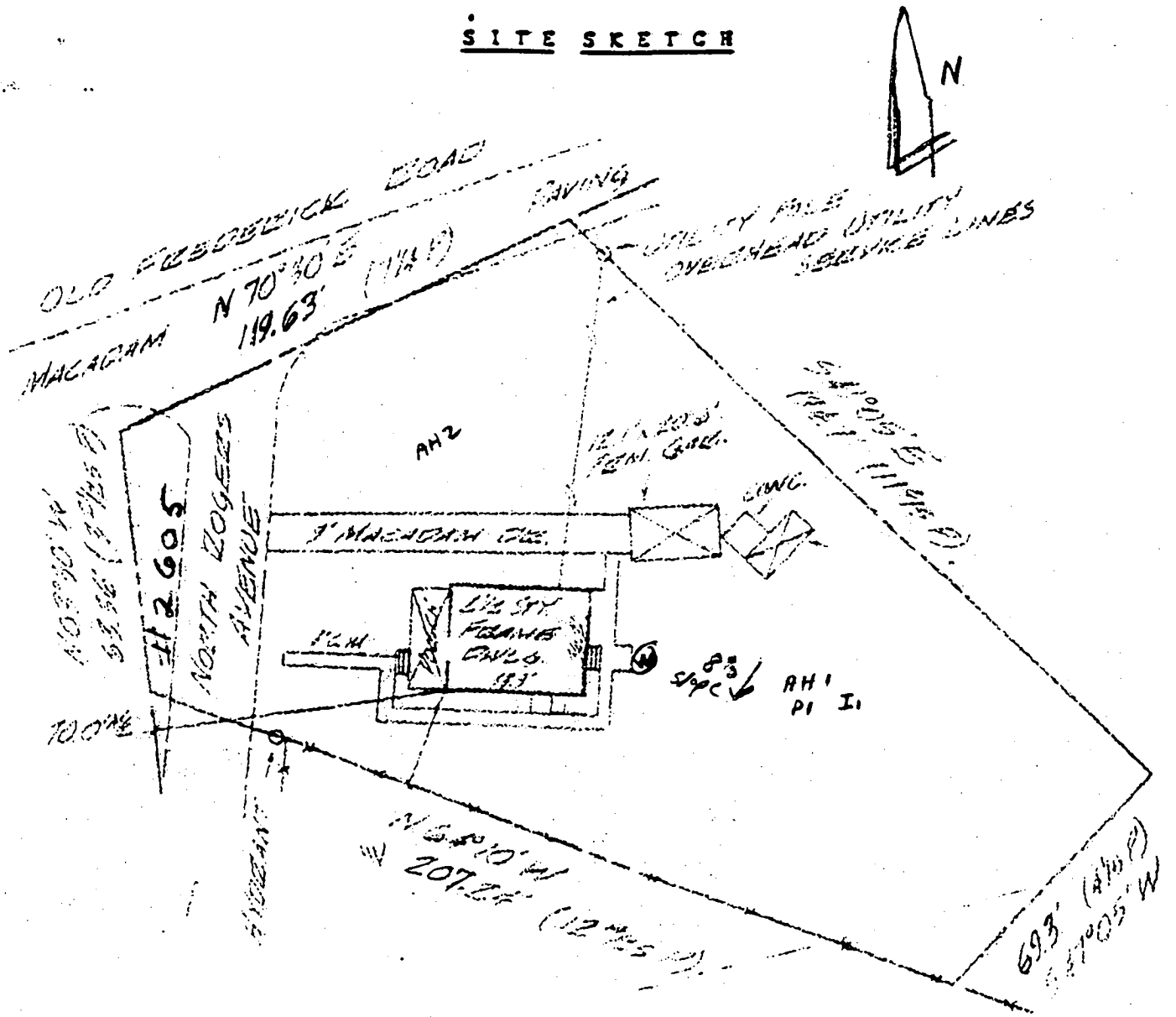
Barry Glotfelty
Innovative & Alternative Septic System Division
Groundwater Permits Program

BG:je

Attachments

cc: Ms. Jane Gottfredson
Mr. Jay Prager
Mr. David Kerr

SITE SKETCH



NAME: Richard Huetell COUNTY: Howard DATE: 3-15-96

Note: Show the following items:

1. Property boundaries and dimensions.
2. Hand auger holes (AH), testpits (TP), boring (B) and tests (T).
3. Slope percent and direction.
4. Existing and proposed buildings, driveway, swimming pool, easements and right of ways on property.
5. Existing and proposed wells, septic systems, sewage disposal areas, ditches, water bodies and permanent stormwater control structures on property and within 150 feet of property lines.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
DIVISION OF RESIDENTIAL SANITATION

Reviewed by: BWG Date: 3-20-96

Hartzell Property, Drip System

Approved by: Barry Glotfelty Date: 3-20-96

NOTE

Approval of final field layout is required by the Division of Residential Sanitation at least 48 hours prior to system installation

Approved By_____

Date_____

NOTE

Transfer approval blocks to plans to facilitate the approval process.

This approval is not valid for more than 2 years from the date of issuance, but may be renewed at the discretion of the Approving Authority.

PLAN APPROVAL BLOCK

SCALE:		DRAWN BY
DATE:		REVISED

DEPARTMENT OF THE ENVIRONMENT

	DRAWING NUMBER

MARYLAND DEPT. OF THE ENVIRONMENT
ONSITE SEWAGE DISPOSAL PERMIT
SITE EVALUATION REPORT

Richard Huefft

SOIL PROFILE DESCRIPTION

LOT SECTION

FILE NO.
MD. GRID:
COUNTY:
TAX MAP/B/P:
SUBDIVISION:

DEPTH ft		TEXTURE	MATRIX COLOR	MOTTLES DESCRIPTION	STRUCTURE	CONSISTENCE	REMARKS (R.F.%, Cavin
HOLE AH 1						BY:	
0-1.2'		1	10YR 5/4	—		mv fr - mfr	
1.2-2.0		h 1	10YR 5/6	—		mfr very moist	15-20% ei
2.0-3.0		h 1	10YR 5/6	—			
3.0-3.5		g 1	7.5YR 5/8 10YR 6/4	some black mottles			
3.5-4.0		g s 1	7.5YR 5/8 10YR 6/4	10YR 8/2 few fine prominent			
4.0-4.6		si l - l	variegated 7.5YR 7/6 10YR 6/4	Black, white & grey, fine			micaceous
4.6-5.0		s	reddish yellow,	streaked with black & dark grey			micaceous sand

Slope%– EL.(ft)– Drainage– Water BLS–
Landscape Position– Chroma 2– Limiting Zone–
Additional Remarks–

HOLE AH 2						BY:	
0-0.4'		1	dark brown	—			
0.4-1.4		1	reddish brown				
1.4-2.5		g 1	variegated reddish yellow				
1.5-3.4		1 - s l		7.5YR 8/2			feldspar gravel
3.4-4.2		1	variegated dark brown, black				
4.2-5		si l - l	grey				few gravels

Slope%– EL.(ft)– Drainage– Water BLS–
Landscape Position– Chroma 2– Limiting Zone–
Additional Remarks–

NAME Richard Huetell — FILE NO

LOCATION 2605 N. Rogers Ave. — COUNTY Howard

DATE 3-15-96

GRID — E

RECORDED BY B. Clotfelty — N

HOLE NO.	TEST NO.	DEPTH	CLOCK TIME	ELAPSED TIME	MEASUREMENT	REMARKS (Method, Moisture, Biopores)
I,	1	12"-19"	10:26		10 15/16	Infiltrometer test
			10:45		13 -	
			10:50		13 6/16	
			11:00		14 4/16	~ 11 mpi
			11:02		11 11/16	Refill to 6"
			12:17		Empty	empty refill to 6"
	2		12:19		10 7/16	
			12:29		11 3/16	~ 13 mpi
			12:39		11 13/16	~ 16 mpi
P1		27"				open hole perk test
	1		10:49		39 -	with hook guage
			10:54		37 7/16	
			11:02		36 11/16	- 10 mpi
	2		11:03		39"	refill
			12:16		≈ 35	
	3		12:17		39"	refill
			12:20		38 5/16	
			12:27		37 5/16	7 mpi
			12:40		36 13/16	26 mpi

HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

December 14, 1995

Richard Huettel
2605 N. Rogers Avenue
Ellicott City, Maryland 21043

RE: Percolation testing to support repair of a failing septic system at 2605 N. Rogers Avenue

Dear Mr. Huettel:

In response to your telephoned inquiry of December 13, 1995, enclosed is a copy of the percolation test notes from the recent unsuccessful attempt at septic system repair.

The shallow depth to groundwater combined with the small lot size makes this a very difficult situation. Groundwater penetrating septic systems are not eligible for consideration in this jurisdiction.

As described in our test response letter of November 29, 1995, the option of last resort would be a septic holding tank. A holding tank is not particularly costly to install , but can be extremely costly to maintain. All other options for on-site disposal should be considered before making this choice.

A meeting in this office would be the most effective means to review options for further evaluation of the property and to discuss implications of a septic holding tank if that becomes a necessity.

I regret that the news is not more promising and certainly pledge to consider every legitimate option for resolution of this difficult matter.

Please contact me at 313-2640 to schedule a conference or discuss any questions you may have prior to agreeing to the conference.

Very truly yours,

Craig Williams

Craig Williams, Program Director
Water and Sewerage Program

CW:rc
Enclosure
cc: Jack Fyock
Dave Kerr
File

Bureau of Environmental Health
3525-H Ellicott Mills Drive Ellicott City, Maryland 21043-4544
Water and Sewerage, Permits (410) 313-2640 Community Environmental Health (410) 313-2644
Food Protection Program (410) 313-2642 TDD (410) 313-2323

APPLICATION

REPAIR

PERCOLATION TESTING

A _____

P _____

HOWARD COUNTY HEALTH DEPARTMENT
BUREAU OF ENVIRONMENTAL HEALTH
3525-H ELLICOTT MILLS DRIVE/ELLICOTT CITY, MARYLAND 21043
TELEPHONE: 313-2640

DISTRICT _____

DATE 11/17/95

TO: THE COUNTY HEALTH OFFICER
ELLICOTT CITY, MARYLAND

I HEREBY APPLY FOR THE NECESSARY TEST PRIOR TO APPLICATION FOR PERMIT TO CONSTRUCT (OR RECONSTRUCT) A SEWAGE DISPOSAL SYSTEM.

PROPERTY OWNER RICHARD HUGETELL

ADDRESS 2605 N. ROGERS AVE PHONE _____

AGENT OR PROSPECTIVE BUYER _____

ADDRESS _____ PHONE _____

PROPERTY LOCATION:

SUBDIVISION _____ LOT NO. _____

ROAD AND DESCRIPTION _____

_____

currently has Public water service

TAX MAP _____ PARCEL # _____

SIZE OF LOT _____ TYPE BLDG. _____
(SINGLE FAMILY DWELLING OR COMMERCIAL)

THE SYSTEM INSTALLED UNDER THIS APPLICATION IS ACCEPTABLE ONLY UNTIL PUBLIC FACILITIES BECOME AVAILABLE. I FULLY UNDERSTAND THE FEE CONNECTED WITH THE FILING OF THIS PERC TEST APPLICATION IS NON-REFUNDABLE UNDER ANY CIRCUMSTANCES. I ALSO AGREE TO COMPLY WITH ALL M.O.S.H.A. REQUIREMENTS IN TESTING THIS LOT. _____
(SIGNATURE OF APPLICANT)

APPROVED BY _____ FOR _____ DATE _____

DISAPPROVED BY _____ FOR _____ DATE _____

HOLD PENDING FURTHER TESTS _____

REASONS FOR REJECTION OR HOLDING _____

PERCOLATION TEST PLAT/PRELIMINARY PLAT - TITLE OR I.D. # _____ DATE _____

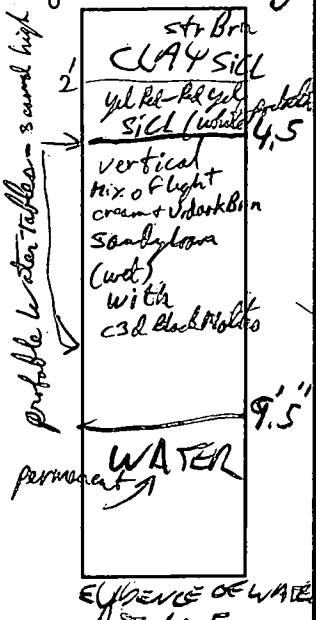
SITE DEVELOPMENT PLAN/FINAL PLAT - TITLE OR I.D. # _____ DATE _____

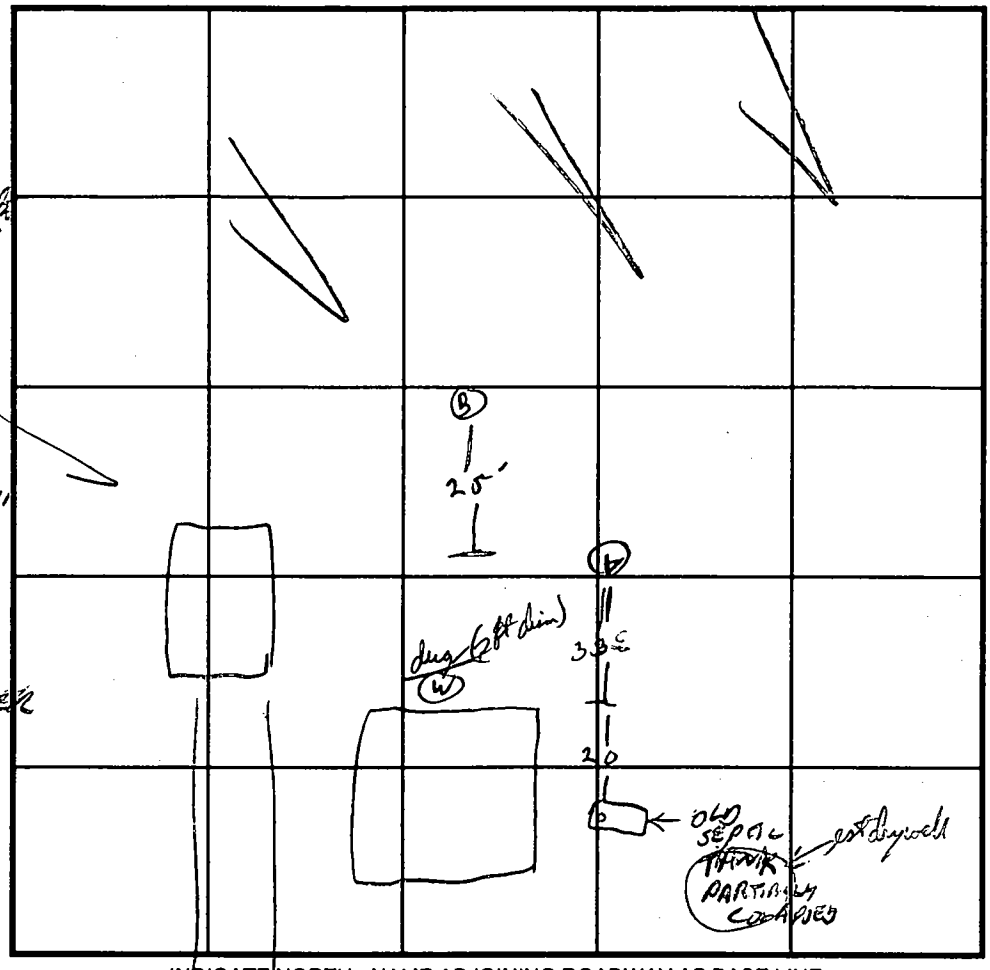
THIS IS NOT A PERMIT

HD-216 (3/92)

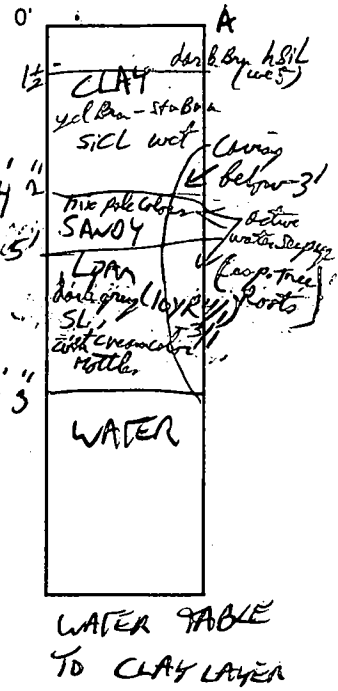
REPAIR
COUNTY #

SOIL PROFILE





SOIL PROFILE



WATER TABLE TO CLAY LAYER

INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE

N. ROGERS AVE

DATE	TEST NO.	DEPTH	PRE-WET START	PRE-WET STOP	TEST - 1" DROP START	TEST - 1" DROP STOP	TIME
11/17/95	A	NOT SUITABLE - WATER TABLE AT 4' 2" (SEEPAGE, MOTTLES)					
	B	NOT SUITABLE - WATER TABLE AT 4' 5" (SEEPAGE					
		MOTTLES)					
	RE-SCHEDULE	REQUIRED, TO TEST FOR ALTERNATIVE					
OR SANDMOUND SYSTEM,		DUE TO TEST LENGTH.					

REMARKS Standard Unsatisfactory, options (see letter of)

TYPE OF SOIL

TESTED BY G. SAVAGE / witnessed H. Bailey 11/17/95 ALSO PRESENT Evans (Rick), BUYER - G.T. GLORIOSO

TRENCH DESIGN DATA: AVERAGE PERCOLATION TIME _____ TRENCH WIDTH _____

INLET DEPTH _____ MAXIMUM BOTTOM DEPTH _____ SQ. FT/BEDROOM _____

HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D., County Health Officer

November 29, 1995

Richard Huettel
2605 N. Rogers Avenue
Ellicott City, Maryland 21043

RE: Percolation testing to support repair of a failing septic system at 2605 N. Rogers Avenue

Dear Mr. Huettel:

Percolation testing conducted November 11, 1995 indicated unsatisfactory soil conditions. A copy of the test results are enclosed.

The primary limiting factor consisted of unacceptably high water table in both areas tested. The small size of the lot prevented testing additional areas.

These conditions do not appear to offer a conventional septic system repair solution for this property. In order to consider your property for innovative or alternative septic system designs, additional testing will be required.

As public sewer does not appear to be available at your location, another option to consider is an off site easement. The solution of last resort would be a holding tank, due to the frequency that it would require pumping to prevent sewage overflow. Frequent pumping becomes cost prohibitive on a long term basis.

If you have any questions please feel free to contact me at 313-2640.

Very truly yours,

Glen Savage, Sanitarian
Water and Sewerage Program

GS:rs
Enclosure
cc: Fyock Septic Service
Century 21
File

Bureau of Environmental Health
3525-H Ellicott Mills Drive Ellicott City, Maryland 21043-4544
Water and Sewerage, Permits (410) 313-2640 Community Environmental Health (410) 313-2644
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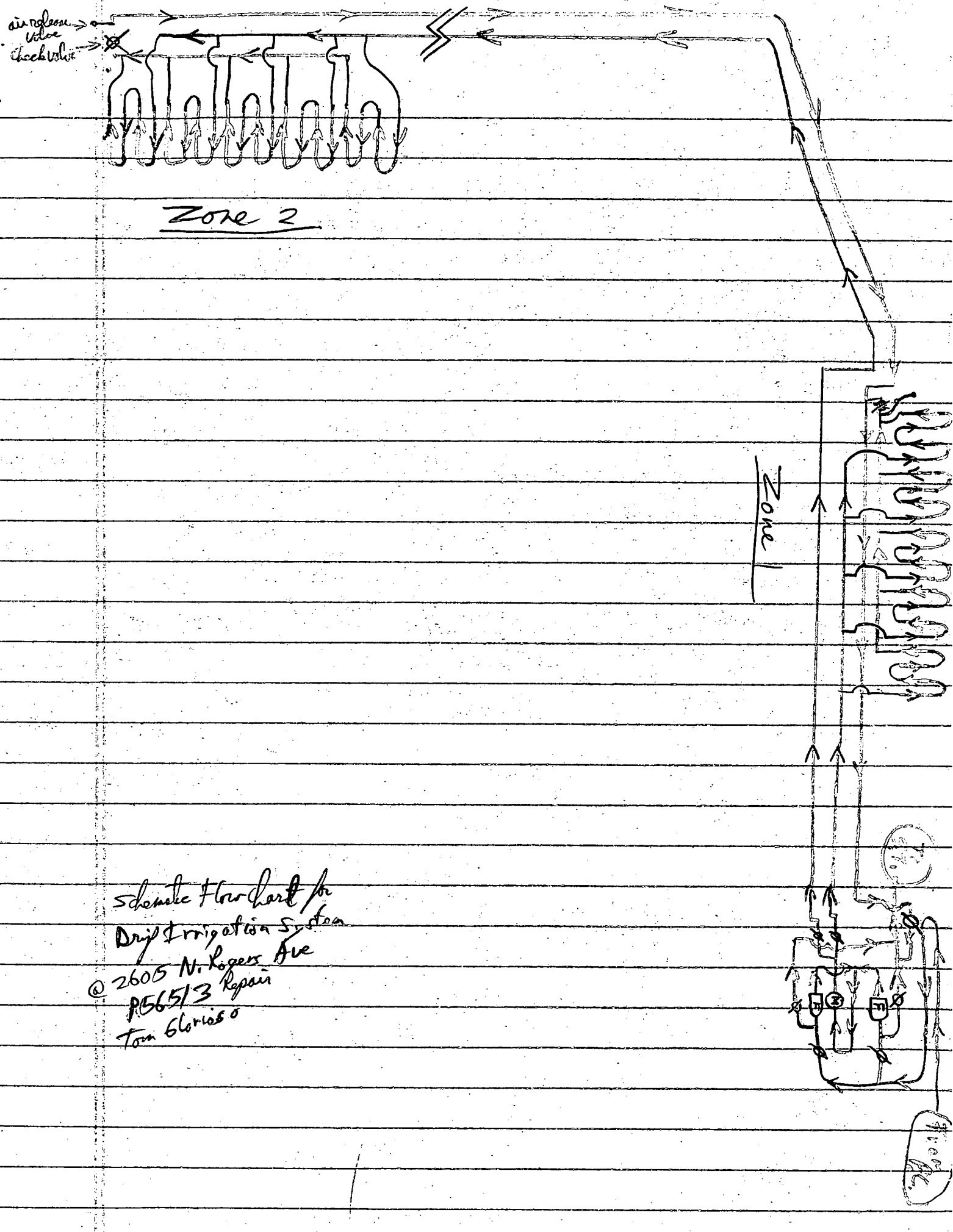
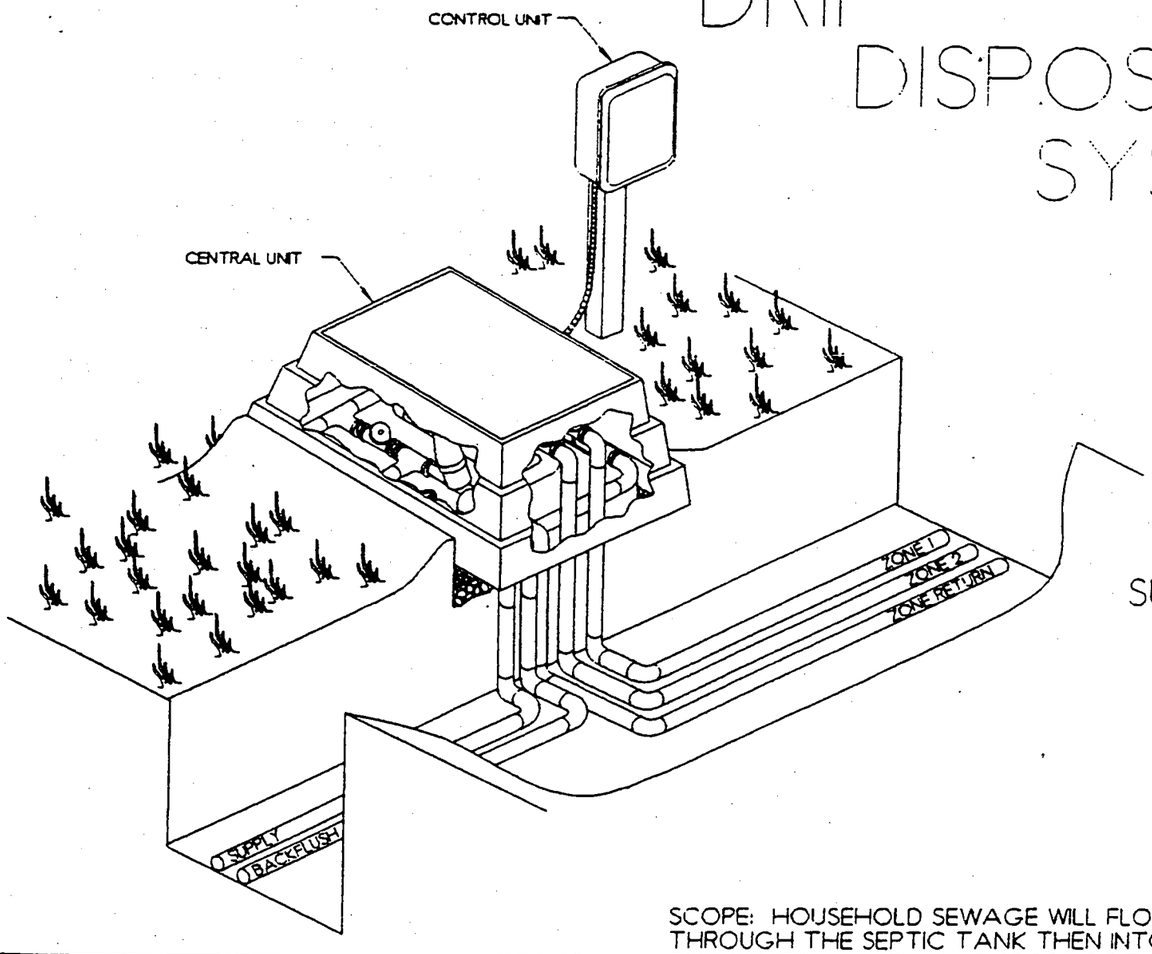
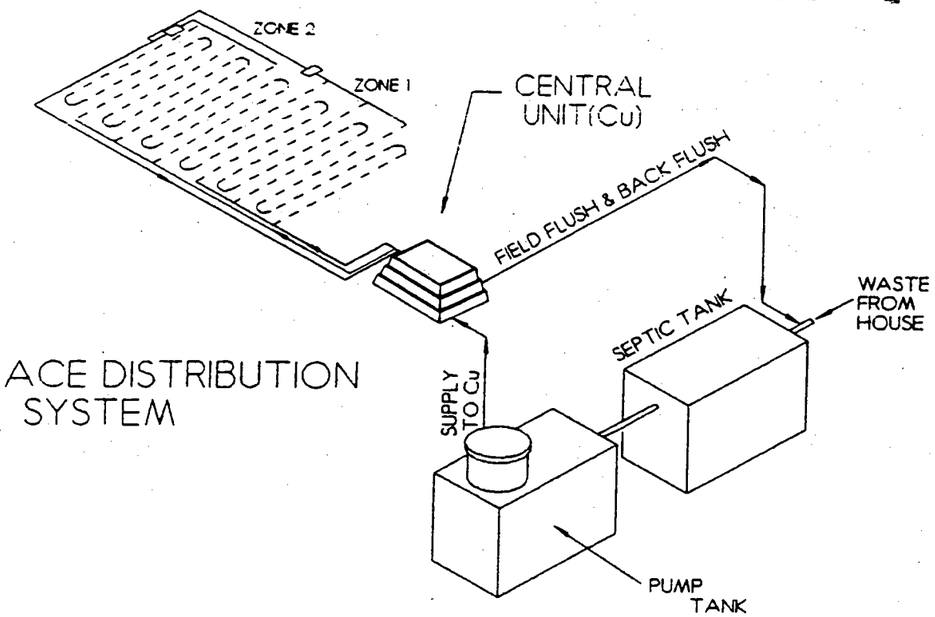


Schematic Flowchart for
Drip Irrigation System
@ 2605 N. Rogers Ave
P56513 Repair
Tom Glorioso

DRIP DISPOSAL SYSTEM



SUBSURFACE DISTRIBUTION SYSTEM



SCOPE: HOUSEHOLD SEWAGE WILL FLOW BY GRAVITY THROUGH THE SEPTIC TANK THEN INTO A FINAL DOSING TANK. THE CENTRAL UNIT WILL DISPOSE OF THE EFFLUENT BY ALTERNATELY DOSING MULTIPLE ZONES IN THE SOIL ADSORBTION AREA.
THE CENTRAL UNIT COMPRISES BOTH THE HYDRAULIC AND THE CONTROL UNITS.

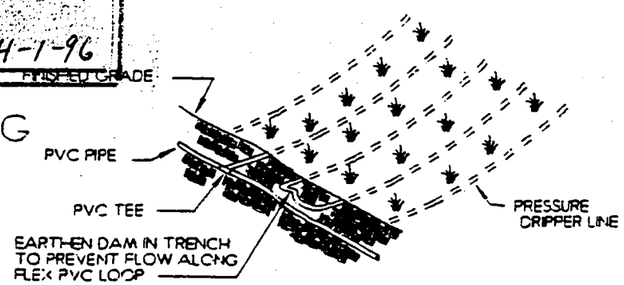
INDEX

MARYLAND DEPARTMENT OF THE ENVIRONMENT
DIVISION OF RESIDENTIAL SANITATION

Reviewed by: BWG Date:

Approved by: Date: 4-1-96

PRESSURE COMPENSATING "DRIP DISPOSAL"



(DRIPPER LINE TO FOLLOW CONTOURS & PVC MANIFOLD PERPENDICULAR TO GRADE)

AMERICAN MANUFACTURING COMPANY INC.
5517 WELLINGTON ROAD, GAINESVILLE VA22065 PHONE:- 703-754-0077

PROJECT NAME: 2605 North Rodgers	DRAFTER DATE
COUNTY: Howard	CHECKED DATE
DESIGNED BY: TW Ashton	APPROVED DATE
	TITLE: COVER SHEET

REVISION	FILE: L\ECAD\PACKTEMP\TEMPSH1A	SCALE: NONE	SHEET 1 OF 6

OLD FREDRICK RD.

UTILITY POLE

OVERHEAD UTILITY LINES

x106.3

ZONE 1

NORTH ROGERS AVE.

DRIVEWAY

DWELLING

SEPTIC TANK

x100.00

PUMP TANK

HYDRANT

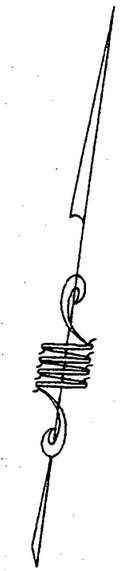
backwash CENTRAL UNIT

Control unit

Control Box

x102.0

ZONE 2



SCALE: 1" = 25'

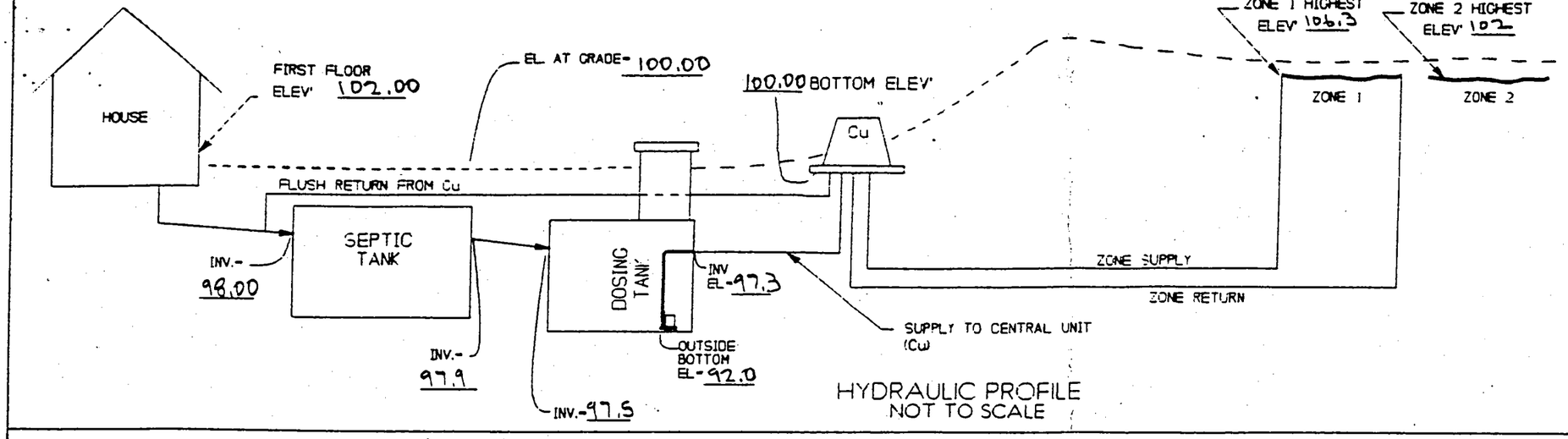
0 12.5' 25' 50'

AMERICAN MANUFACTURING COMPANY INC.

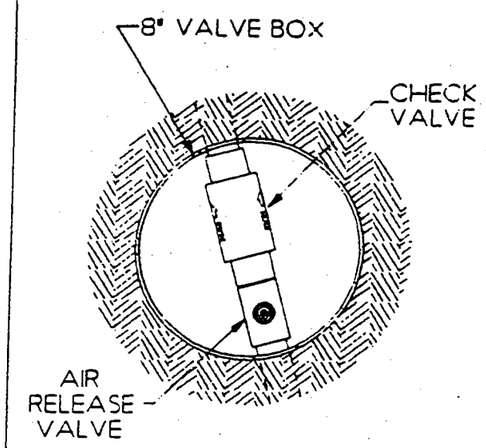
5517 WELLINGTON ROAD, GAINESVILLE VA22065 PHONE :- 703-754-0077

PROJECT NAME : 2605 North Rodgers	DRAFTER	DATE
	CHECKED	DATE
	APPROVED	DATE
COUNTY ; Howard	TITLE : SITE PLAN	
DESIGNED BY: TW Ashton		

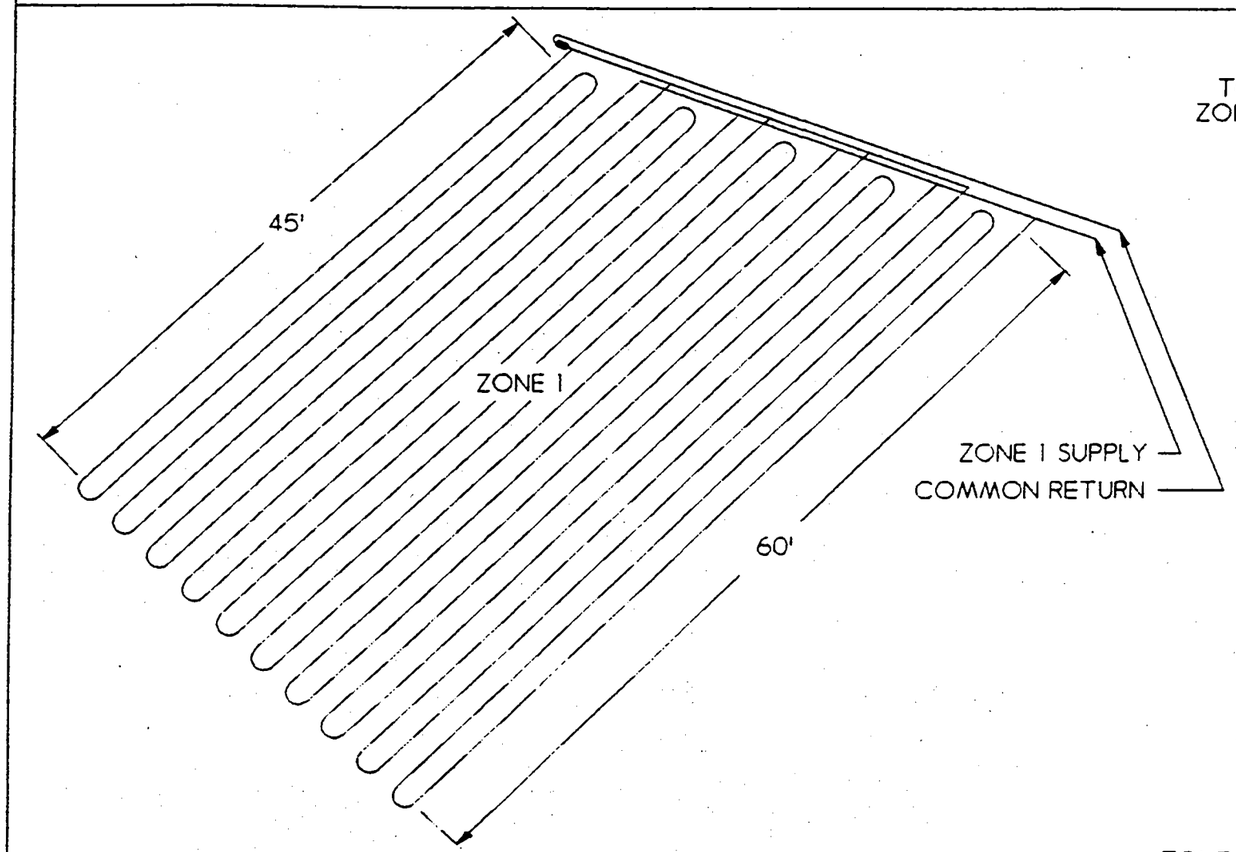
			REVISION	FILE: L\ECAD\PACKTEMP\TEMPSHT2	SCALE : NONE	SHEET 2 OF 6



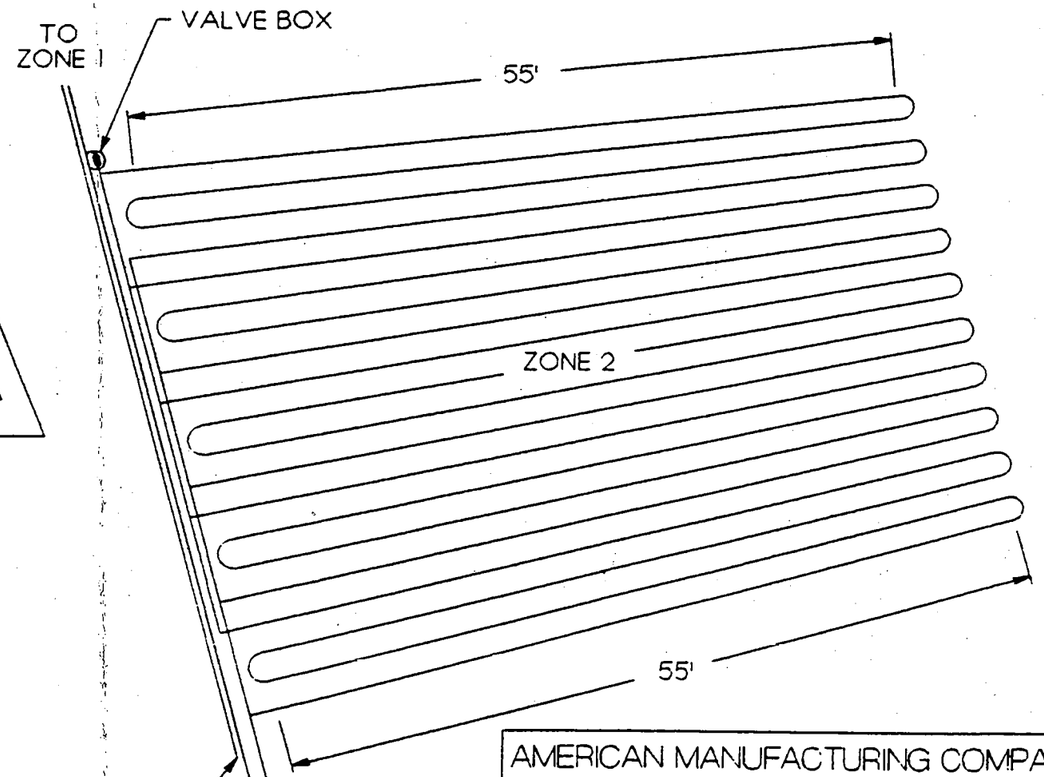
HYDRAULIC PROFILE
NOT TO SCALE



VALVE BOX DETAIL



ZONE 1
FIVE LATERALS
FOUR RUNS PER LATERAL
TOTAL DRIPPER TUBING 1100 LF
SPACING ON CENTER 1.5'
NUMBER OF RUNS 20
INSTALLATION DEPTH 18"



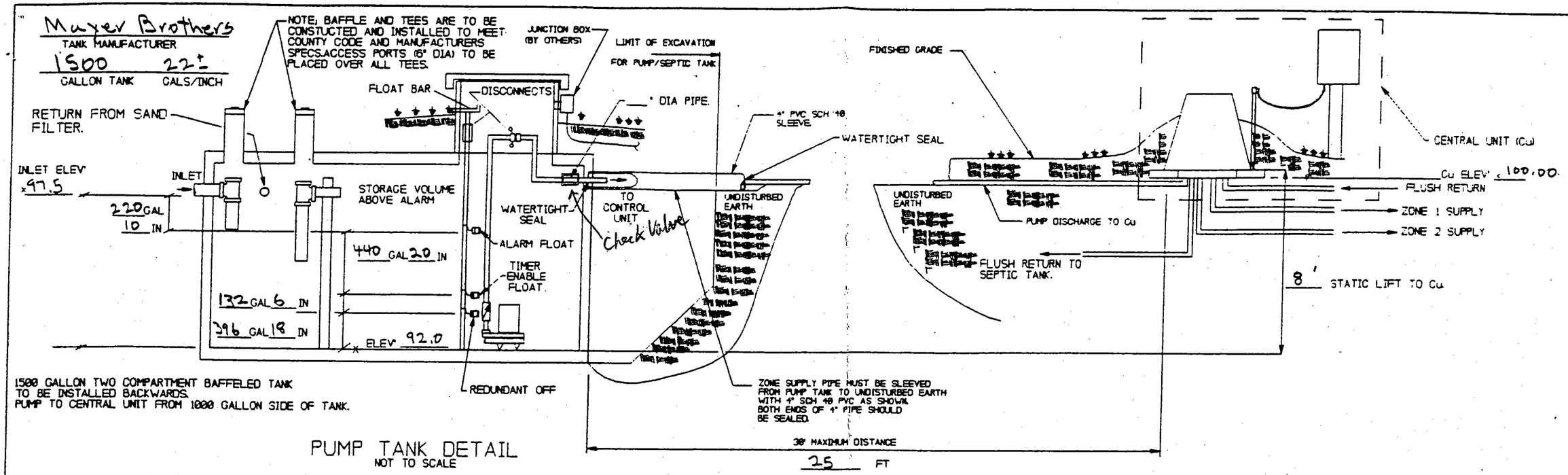
ZONE 2
FIVE LATERALS
FOUR RUNS PER LATERAL
TOTAL DRIPPER TUBING 1100 LF
SPACING ON CENTER 1.5'
NUMBER OF RUNS 20
INSTALLATION DEPTH 18"

AMERICAN MANUFACTURING COMPANY INC.
5517 WELLINGTON ROAD, GAINESVILLE VA22065 PHONE :- 703-754-0077

PROJECT NAME : 2605 North Rodgers	DRAFTER DATE
COUNTY ; Howard	CHECKED DATE
DESIGNED BY: TW Ashton	APPROVED DATE
TITLE : ZONE DETAIL & HYDRAULIC PROFILE	
REVISION	FILE: L\ECAD\PACKTEMP\TEMPSH21 SCALE : NONE SHEET 3 OF 6

Muyer Brothers
TANK MANUFACTURER

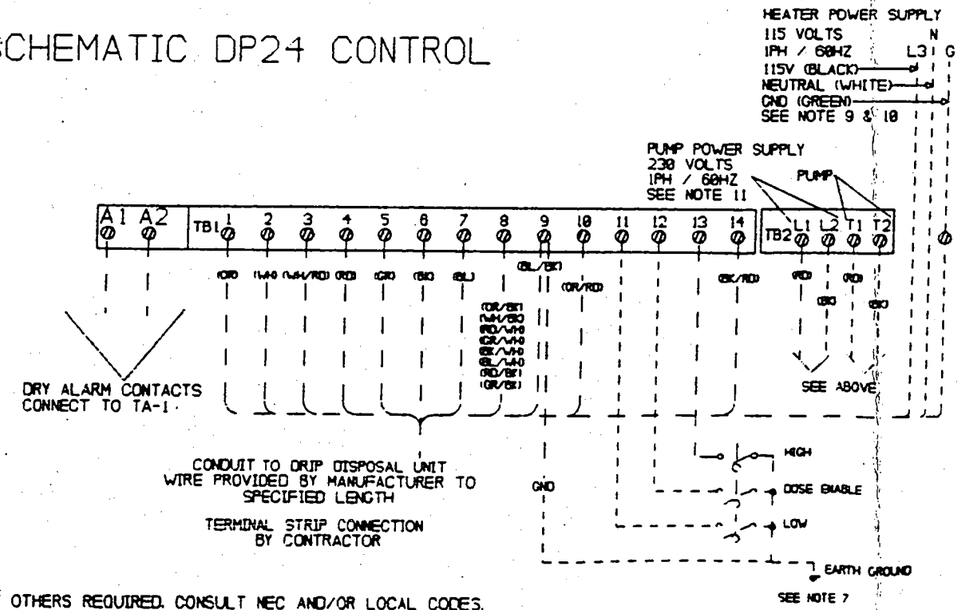
1500 GALLON TANK — 22± GALS/INCH



1500 GALLON TWO COMPARTMENT BAFFELED TANK
TO BE INSTALLED BACKWARDS.
PUMP TO CENTRAL UNIT FROM 1000 GALLON SIDE OF TANK.

PUMP TANK DETAIL
NOT TO SCALE

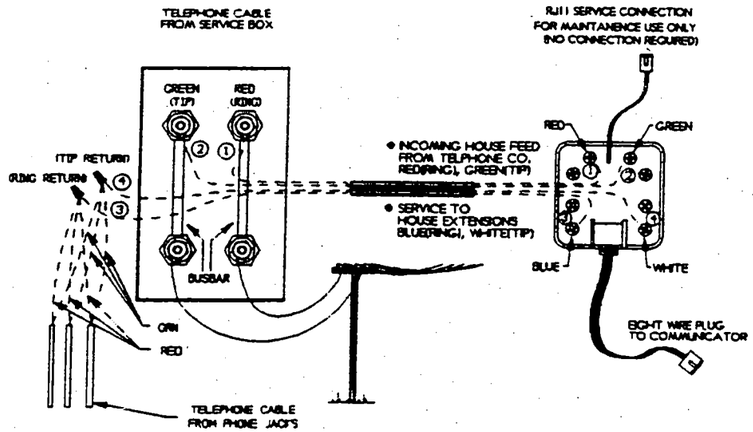
INSTALLATION SCHEMATIC DP24 CONTROL



INSTALLER CONNECTION - - - - -

INSTALLER NOTES:
1 AN ADDITIONAL DISCONNECT BY OTHERS REQUIRED. CONSULT NEC AND/OR LOCAL CODES.
2 SINGLE (1) PHASE PUMP MOTORS MUST HAVE INTEGRAL THERMAL OVERLOAD PROTECTION.
3 TEMPERATURE RATING OF FIELD INSTALLED COPPER CONDUCTORS MUST BE AT LEAST 140 DEGRESS F. (60 DEG. C.).
4 TERMINAL BLOCK (TB1) TORQUE 9 IN/LBS.
5 TERMINAL BLOCK (TB2) TORQUE 12 IN/LBS.
6 (000) DENOTES BILL OF MATERIALS ITEM NO.
7 MUST BE CONNECTED TO SEPARATE EARTH GROUND.
8 MUST BE 4 CONDUCTOR WIRE IF ONLY 1 SERVICE, OTHERWISE, SEPERATE SERVICE REQIRED.
9 L1 & L2 PUMP SUPPLY VOLTAGE, 2 POLE BREAKER REQUIRED.
10 L3 HEATER SUPPLY VOLTAGE, 1 POLE BREAKER REQUIRED.
11 POWER SUPPLY MUST MATCH PUMP AND TRANSFORMER VOLTAGE.

INSTALLATION SCHEMATIC RJ31 JACK (SINGLE LINE)



AMERICAN MANUFACTURING COMPANY INC.
5517 WELLINGTON ROAD, GAINESVILLE VA22065 PHONE :- 703-754-0077

PROJECT NAME : 2605 N. Rodgers	DRAFTER DATE
	CHECKED DATE
	APPROVED DATE
COUNTY : Howard	TITLE : PUMP DETAIL
DESIGNED BY: TW Ashton	

REVISION	FILE: L\ECAD\PACKTEMP\TEMPSH4M	SCALE : NONE	SHEET 4 OF

DRIP DESIGN WORKSHEET

1. 3 BEDROOMS @ 150 GPD,WATER CONSERVATION YES( ) NO(X)
2. 450 GALLONS PER DAY
3. II-III TEXTURE GROUP SOIL CLASSIFICATION
4. .15 GPD/FT2 TARGET SOIL LOADING RATE
5. / FT. X / FT. AREA FOR DISPOSAL LAYOUT a) 3805 FT2
6. .12 GPD/FT2 SOIL LOADING RATE PROVIDED (#2 / # 5a)
7. 2 ZONES
8. 2200 TOTAL DRIPPER LINE REQUIRED 8.A. (2) LINEAR LOADING RATE (GPD/FT)
9. 1.5+ REQUIRED LINE SPACING 9.A. 18-24 INSTALLATION DEPTH INCHES.
10. 1500 SEPTIC TANK SIZE
11. 1000 DOSING TANK SIZE 1500 gallon two chambers
12. 22 GALLONS PER INCH DOSING TANK Emitter flow .65 gph

13. ZONE ONE
14. 1375 TOTAL ABSORPTION AREA
15. 1100 LINEAR FEET DRIPPER LINE
16. 230 LONGEST LATERAL LENGTH
17. 6 GPM DOSING FLOW RATE
18. 5 # OF FIELD FLUSH CONNECTIONS
19. 8 GPM FIELD FLUSH FLOW RATE
20. 14 GPM TOTAL FLOW REQUIRED
21. ZONE TWO
22. 2030 TOTAL ABSORPTION AREA
23. 1100 LINEAR FEET DRIPPER LINE
24. 220 LONGEST LATERAL LENGTH
25. 6 GPM DOSING FLOW RATE
26. 5 # OF FILED FLUSH CONNECTIONS
27. 8 GPM FIELD FLUSH FLOW RATE
28. 14 GPM TOTAL FLOW REQUIRED
29. ZONE THREE
30. _____ TOTAL ABSORPTION AREA
31. _____ LINEAR FEET DRIPPER LINE
32. _____ LONGEST LATERAL LENGTH
33. _____ GPM DOSING FLOW RATE
34. _____ # OF FIELD FLUSH CONNECTIONS
35. _____ GPM FIELD FLUSH FLOW RATE
36. _____ GPM TOTAL FLOW REQUIRED
37. ZONE FOUR
38. _____ TOTAL ABSORPTION AREA
39. _____ LINEAR FEET DRIPPER LINE
40. _____ LONGEST LATERAL LENGTH
41. _____ GPM DOSING FLOW RATE
42. _____ # OF FIELD FLUSH CONNECTIONS
43. _____ GPM FIELD FLUSH FLOW RATE
44. _____ GPM TOTAL FLOW REQUIRED
45. ZONE FIVE
46. _____ TOTAL ABSORPTION AREA
47. _____ LINEAR FEET DRIPPER LINE
48. _____ LONGEST LATERAL LENGTH
49. _____ GPM DOSING FLOW RATE
50. _____ # OF FIELD FLUSH CONNECTIONS
51. _____ GPM FIELD FLUSH FLOW RATE
52. _____ GPM TOTAL FLOW REQUIRED
53. ZONE SIX
54. _____ TOTAL ABSORPTION AREA
55. _____ LINEAR FEET DRIPPER LINE
56. _____ LONGEST LATERAL LENGTH
57. _____ GPM DOSING FLOW RATE
58. _____ # OF FILED FLUSH CONNECTIONS
59. _____ GPM FIELD FLUSH FLOW RATE
60. _____ GPM TOTAL FLOW REQUIRED
61. ZONE SEVEN
62. _____ TOTAL ABSORPTION AREA
63. _____ LINEAR FEET DRIPPER LINE
64. _____ LONGEST LATERAL LENGTH
65. _____ GPM DOSING FLOW RATE
66. _____ # OF FIELD FLUSH CONNECTIONS
67. _____ GPM FIELD FLUSH FLOW RATE
68. _____ GPM TOTAL FLOW REQUIRED
69. ZONE EIGHT
70. _____ TOTAL ABSORPTION AREA
71. _____ LINEAR FEET DRIPPER LINE
72. _____ LONGEST LATERAL LENGTH
73. _____ GPM DOSING FLOW RATE
74. _____ # OF FIELD FLUSH CONNECTIONS
75. _____ GPM FIELD FLUSH FLOW RATE
76. _____ GPM TOTAL FLOW REQUIRED
77. SYSTEM DESIGN
78. 14 GPM MAXIMUM DESIGN FLUSHING FLOW
79. (13.3) FT HD LOSS PERC-RITE UNIT

80. DISCHARGE PIPE CALCULATION
81. 1.5 INCH DIA. DISCHARGE PIPE SIZE
82. 25 LENGTH DISCHARGE PIPE 75 EQUIVALENT LENGTH OF PIPE.
83. 8 FT. STATIC LIFT TO CENTRAL UNIT
84. (9.05) FT HD LOSS TOTAL DISCHARGE LINE @ MAX FLUSH FLOW #78 @ 14 GPM
85. FORCE MAIN SUPPLY LINE PIPE SIZE & LENGTH

86. ZONE	ONE	TWO	THREE	FOUR	FIVE	SIX	SEVEN	EIGHT
87 PIPE SIZE	1.25	1.25	---	---	---	---	---	---
88 PIPE LENGTH	50	100	---	---	---	---	---	---
89 FT LOSS	1.5	2.9	---	---	---	---	---	---

90. RETURN FLUSH LINE SIZE

91. ZONE	ONE	TWO	THREE	FOUR	FIVE	SIX	SEVEN	EIGHT
92 PIPE SIZE	1.25	1.25	---	---	---	---	---	---
93 PIPE LENGTH	140	200	---	---	---	---	---	---
94 FT LOSS	4.06	5.8	---	---	---	---	---	---

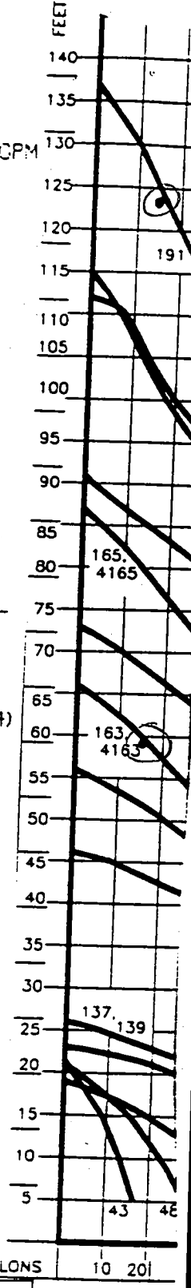
95. (7 FT) HD LOSS TOTAL STATIC (VERTICAL) LIFT TO FIELD.
96. TOTAL PRESSURE LOSS (ADD ITEMS; 79,84,85,90,95,+FLUSHING)

97 . ZONE	ONE	TWO	THREE	FOUR	FIVE	SIX	SEVEN	EIGHT
98. INCLUDES :-								
99 FLUSHING FT	22.9	21.3	---	---	---	---	---	---
100 TOTAL LOSS	(51.81)	(59.35)	---	---	---	---	---	---

101. PUMP SIZING
102. 59.35 FLUSH HD LOSS TOTAL @ 14 GPM ZONE 2 (HIGHEST FT HD)
103. 124.5 BACKFLUSH HD LOSS @ 15 GPM @ 50PSI @ PERC RITE UNIT(INCLUDES #84)
104. (PUMP MODEL 7 191)
106. (15 GPM @ 124.5 FT) HD 230 VOLTS 1 PHASE 2 HP
106. TIME DOSING PER ZONE

107. ZONE	ONE	TWO	THREE	FOUR	FIVE	SIX	SEVEN	EIGHT
108 GPM Dosing Pump Rate	(6)	(6)	---	---	---	---	---	---
109 MIN/DOSE	12.5	12.5	---	---	---	---	---	---
110 CYCLES	3	3	---	---	---	---	---	---
111 GAL/DOSE	750	750	---	---	---	---	---	---

112. 3.4 INCHES DRAWDOWN PER CYCLE.
113. PUMP CHECK FOR RECIRCULATING SAND FILTER (*** IF USED****)
114. _____ TOTAL GPM RECIRCULATING SAND FILTER
115. _____ FEET OF STATIC HEAD
116. _____ INCHES DIAMETER SUPPLY PIPE
117. _____ FEET OF EQUIVALENT LENGTH OF SUPPLY PIPE
118. _____ FT TOTAL HEAD LOSS FOR FILTERS (ADD #'S 79,84,115,117,EMITTERS)
119. ( ) YES ( ) NO : PUMP FOR DRIP FIELD IS OK FOR FILTERS
120. _____ MINUTES_____SECONDS DRAWDOWN TIME SAND FILTERS



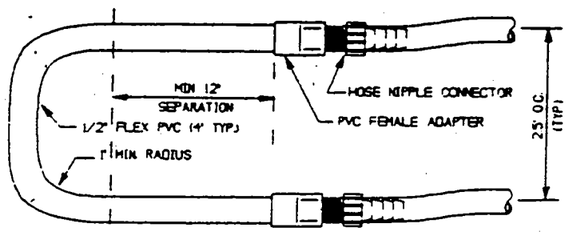
AMERICAN MANUFACTURING COMPANY INC.
5517 WELLINGTON ROAD, GAINESVILLE VA22065 PHONE :- 703-754-0077

PROJECT NAME: 2605 North Rodgers
COUNTY: Howard
DESIGNED BY: TW Ashton

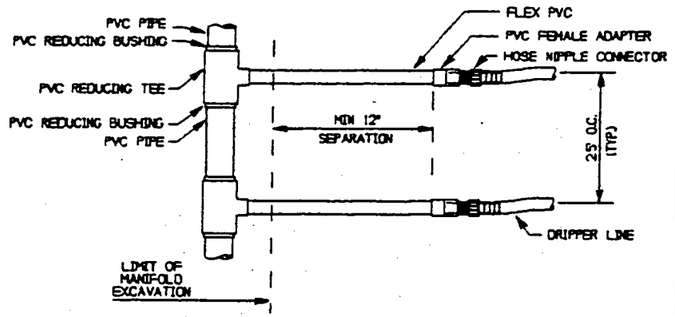
	DRAFTER	DATE
	CHECKED	DATE
	APPROVED	DATE

TITLE: CALCULATION SHEET

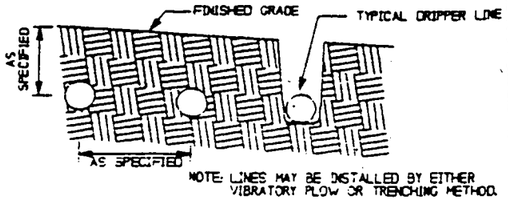
REVISION	FILE: R\ECAD\TEMPLATE\TEMPSHT5	SCALE: NONE	SHEET 5 OF 6



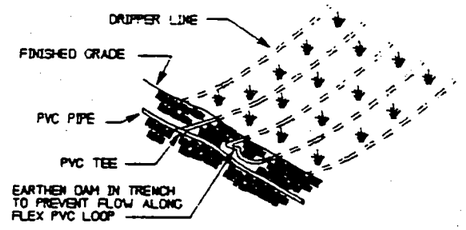
TYPICAL DRIP LINE CONNECTION IN TURN OR LOOP
DETAIL
NOT TO SCALE



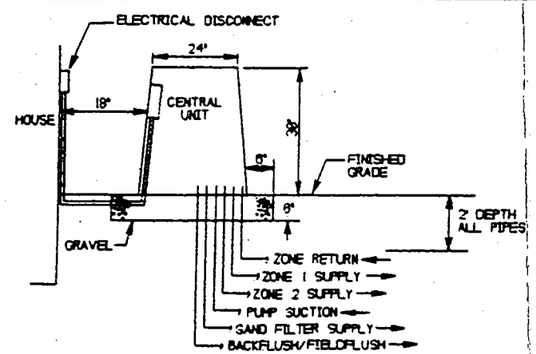
TYPICAL DRIP LINE CONNECTION TO PVC
DETAIL
NOT TO SCALE
(MAY VARY ACCORDING TO MANUFACTURER'S SPECIFICATIONS)



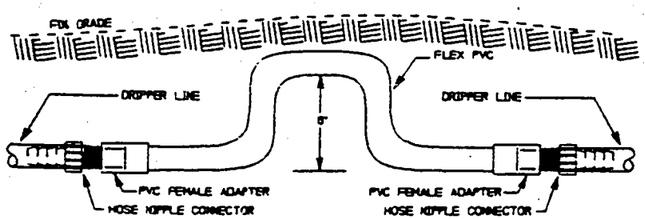
DRIP DISPOSAL LINE INSTALLATION
DETAIL
NOT TO SCALE



SECTION DETAIL
NOT TO SCALE
(DRIP LINE TO FOLLOW CONTOURS
& PVC MANIFOLD PERPENDICULAR TO GRADE)



CENTRAL UNIT
DETAIL
NOT TO SCALE

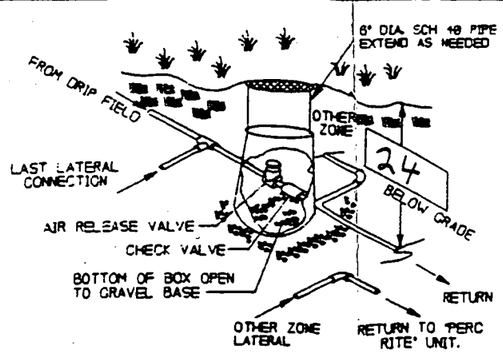


CONTOUR DAM
DETAIL
NOT TO SCALE

DRIP LINE LATERALS MUST BE PLACED ON CONTOUR WITHIN 1.5' OF ELEVATION DIFFERENCE ACROSS THE ENTIRE LATERAL. IN THE EVENT THE CONTOUR CHANGE ALONG THE LATERAL IS GREATER THAN 6" IN 30', CLAY WATER STOP DAMS SHALL BE INSTALLED IN THE LATERAL TO PREVENT WATER IN THE TRENCH FROM FOLLOWING THE PIPE DOWN THE SLOPE MORE THAN 30'.

AIR
RELEASE
& CHECK
VALVE
DETAIL

NOT TO SCALE



NOTE:
1. THE AIR RELEASE VALVE SHALL BE PLACED AT THE HIGHEST POINT ON THE RETURN LINE OF EACH ZONE.
2. EACH ZONE TO HAVE THE SAME VALVE BOX SETUP AND THEREAFTER CONNECTED.

GENERAL NOTES DRIP DISPOSAL

1. ALL INSTALLATION AND CONSTRUCTION TECHNIQUES SHALL CONFORM TO COUNTY CODES AND STATE BOARD OF HEALTH "SEWAGE HANDLING AND DISPOSAL REGULATIONS PERTAINING TO ON SITE SEWAGE SYSTEMS AND THE PERMIT FOR THIS SITE.
2. THE INSTALLATION OF THIS SYSTEM SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND PROCEDURES AS SUPPLIED BY THE MANUFACTURER OF THE EQUIPMENT.
3. ALL PVC PIPE AND FITTINGS SHALL BE PVC SCH 40 TYPE 1 RATED FOR PRESSURE APPLICATIONS. ALL GLUED JOINTS SHALL BE CLEANED AND PRIMED WITH PURPLE (DYED) PVC PRIMER PRIOR TO BEING GLUED.
4. ALL CUTTING OF PVC PIPE, FLEXIBLE PVC AND DRIPPER TUBING SHALL BE ACOMPLISHED WITH PIPE CUTTERS APPROVED BY MANUFACTURER. NO SAWING OF PVC, PVC FLEXIBLE OR DRIPPER TUBING ALLOWED.
5. ALL PVC PIPE, FLEXIBLE PVC AND DRIPPER TUBING IN THE WORK AREA SHALL HAVE THE ENDS COVERED WITH DUCT TAPE TO PREVENT CONSTRUCTION DEBRIS FROM ENTERING THE PIPE. PRIOR TO GLUING ALL JOINTS SHALL BE INSPECTED FOR AND CLEARED OF ANY CONSTUCTION DEBRIS.
6. NO WET WEATHER INSTALLATION IS PERMITTED.
7. NO ACTIVITY ON DRAINFIELD AREA OTHER THAN MINIMUM REQUIRED TO INSTALL SYSTEM. DO NOT PARK EQUIPMENT, DRIVE LARGE EQUIPMENT OVER, OR STORE MATERIALS ON DRAINFIELD SITE.
8. HORIZONTAL SPACING BETWEEN DRIPPER LINES AND THE INSTALLATION DEPTH SHALL BE AS SPECIFIED.
9. PRIOR TO STARTUP OF THE DRIP DISPOSAL SYSTEM THE AIR RELEASE VALVES SHALL BE REMOVED AND EACH ZONE IN THE SYSTEM SHALL BE FLUSHED AS FOLLOWS: a) USING AN APPROPRIATE LENGTH OF FLEXIBLE PVC PIPE WITH A MALE FITTING ATTACHED TO THE AIR RELEASE CONNECTION TO DIRECT THE FLUSHING WATER AWAY FROM THE CONSTRUCTION AREA. b) FLUSH THE ZONE WITH A VOLUME OF WATER (CLEAN WATER TO BE PROVIDED BY CONTRACTOR) EQUAL TO 1.5 TIMES THE VOLUME OF THE PIPES FROM THE CENTRAL UNIT TO THE AIR RELEASE VALVE. c) REPEAT THIS PROCEDURE FOR EACH ZONE (THE FLUSHING OF THE SYSTEM IS ACCOMPLISHED BY MANUAL OVERRIDE OF THE CONTROL PANEL BY THE MANUFACTURER OR ENGINEER.)
10. IF EXISTING SEPTIC TANKS ARE TO BE USED, THEY SHALL BE PUMPED OUT BY A COMMERCIAL SEPTIC TANK CLEANER. AFTER THE THE TANK IS EMPTIED IT SHALL BE RINSED, PUMPED AND REFILLED WITH CLEAN WATER. DEBRIS IN SEPTIC TANK MUST BE KEPT TO A MINIMUM AS IT COULD CLOG THE DISK FILTERS DURING STARTUP. AS DISK FILTERS ARE NOT BACKFLUSHED DURING STARTUP AND ANY CLOGGING COULD CAUSE INCORRECT FLOW RATE READINGS FOR THE CONTROLLER. IF UTILIZED SEPTIC TANKS MUST BE WATERTIGHT.
11. IF TREES ARE TO BE REMOVED FROM SITE, CUTT STUMPS FLUSH WITH GROUND. AT A MINIMUM ALL CEDAR AND MAPLE TREES ARE TO BE REMOVED. THE HOLLY, DOGWOOD AND LARGER TREES MAY REMAIN.
12. GRAVEL BASE UNDER CENTRAL CONTROL UNIT IS TO BE DRAINED VIA 2" PVC PIPE, SCREENED AT INLET AND OUTLET, DISCHARGE TO BE AT GRADE DOWN SLOPE (TO ENSURE DRAINAGE OF SURFACE WATER FROM UNIT)
13. THE CONTRACTOR SHALL BE CERTIFIED TO INSTALL THIS TYPE OF SYSTEM BY THE MANUFACTURER AND SHALL HOLD A PRECONSTRUCTION MEETING WITH THE INDIVIDUALS RESPONSIBLE FOR SOIL EVALUATION, PERMITING AND INSPECTIONS PRIOR TO SITE WORK BEGINNING TO INSURE PROTECTION OF THE SITE CONDITIONS AND TO ENSURE THE SYSTEM IS INSTALLED ACCORDING TO DESIGN.
14. IF SITE CONDITIONS ARE DETERMINED TO REQUIRE THE INSTALLATION OF THE SYSTEM TO DEVIATE FROM THESE PLANS, ALL SITE WORK SHALL STOP IMMEDIATELY AND THE DESIGNER SHALL BE NOTIFIED. ANY ONGOING WORK SHALL BE AT THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
15. SHALLOW PLACED DRIP TUBING SHALL BE COVERED TO A 12" MIN. COVER.

deck to cutter use

AMERICAN MANUFACTURING COMPANY INC.
5517 WELLINGTON ROAD, GAINESVILLE VA 22065 PHONE :- 703-754-0077

PROJECT NAME: 2605 North Rodgers	DRAFTER DATE
COUNTY: Howard	CHECKED DATE
DESIGNED BY:	APPROVED DATE
	TITLE: DRIP SYSTEM CONSTRUCTION DETAILS

REVISION	FILE: R\ECAD\TEMPLATE\TEMPSHT6	SCALE: NONE	SHEET 8 OF 6