



**Howard County
Health Department**

Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

www.hchealth.org

Facebook: www.facebook.com/hocohealth

Maura J. Rossman, M.D., Health Officer

RECEIPT DATE: 9/15/16

ONSITE SEWAGE DISPOSAL SYSTEM

P 557374

APPROVAL DATE: 1/29/16 ^(SEC)

PERMIT: CONSTRUCTION

A _____

PROPERTY ADDRESS: 13602 Mitchells Way

SUBDIVISION: Cloverfield II

LOT: 12

TAX ID: _____

CONTRACTOR: WTC Contractors

EMAIL: _____

CONTRACTOR ADDRESS: 3033 Salem Bottom Road, Westminster, MD 21157

PHONE: 443-458-7024

CONTRACTOR CERTIFIED FOR BAT INSTALLATION:



MDE



MANUFACTURER:

PROPERTY OWNER: Catonsville Homes

EMAIL: _____

OWNER ADDRESS: 11175 Stratfield Court, Marriottsville, MD 21104

PHONE: _____

Norweco TNTLP-

BAT UNIT MODEL: 500/600

PUMP SIZE: _____

PUMP TANK CAPACITY: 1500

OPERATION & MAINTENANCE AGREEMENT

DATE SIGNED: 10/4/13

DATE RECORDED: 11/4/13

DISTRIBUTION SYSTEM:



GRAVITY



PRESSURE DOSED

BEDROOMS: 5

APPLICATION RATE: _____

TRENCHES:	LINEAR FEET REQUIRED: <u>104</u>	INLET DEPTH: <u>3</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>6</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>4</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	Set distribution box at west SDA boundary. Install on contour per plan in upper SDA	

ISSUED BY: Dana Bernard

ISSUE DATE: 9/15/15

EXPIRATION DATE: 9/15/16

NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION

NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING

NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.

NOTE: WATERTIGHT SEPTIC TANKS REQUIRED

NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADIENT FROM ANY WATER WELL

NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS

NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM



ELECTRICAL PERMIT ISSUED

E _____

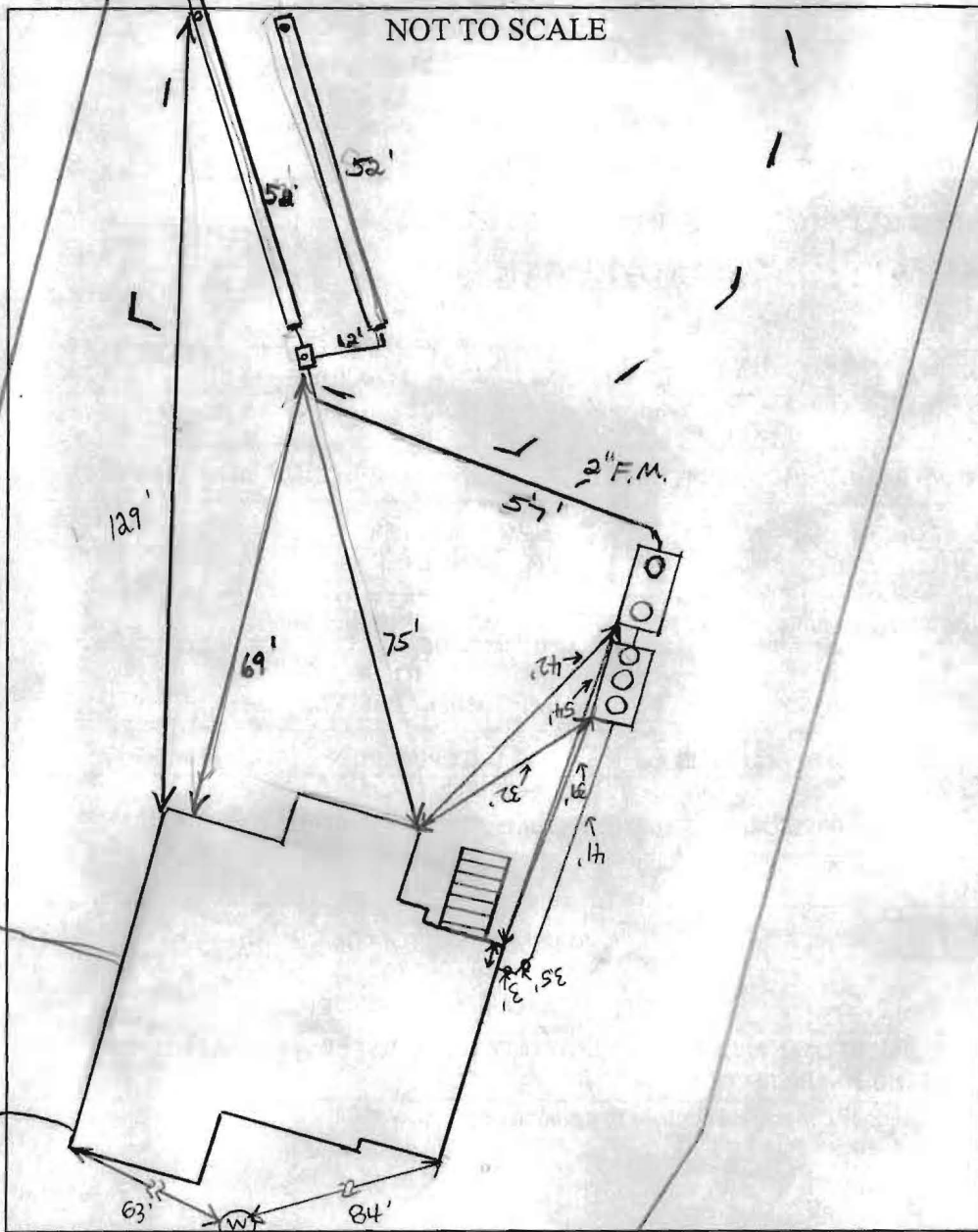
NOTE: AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.

NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

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

PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.

CALL 410-313-1771 TO SCHEDULE INSPECTIONS.



NOT TO SCALE

TRENCH/DRAINFIELD DATA		
WIDTH	INLET	BOTTOM
<u>3'</u>	<u>3'</u>	<u>6'</u>
NUMBER OF TRENCHES		<u>2</u>
TOTAL LENGTH		<u>104'</u>
ABSORPTION AREA		<u>312'±SW</u>
DISTRIBUTION BOX LEVEL		<u>Yes</u>
DISTRIBUTION BOX BAFFLE		<u>Yes</u>
DISTRIBUTION BOX PORT		<u>Yes</u>

NORWECO SINGULAIR TNT	
CAPACITY	<u>1300</u> GAL
SEAM LOC	<u>TOP</u>
TANK LID DEPTH	<u>1'-2'</u>
BAFFLES	<u>NO</u>
BAFFLE FILTER	<u>NO</u>
MANHOLE LOC	<u>FRONT, MID, REAR</u>
6" PORT LOC	<u>NONE</u>
WATERTIGHT TEST	<u>NO</u>
BLOWER TEST	<u>1/20/16</u>
BLOWER ALARM TEST	<u>1/20/16</u>
DATE ON	<u>LID: 8/15/15</u>
PUMP TANK LEVEL	<u>YES</u>
CAPACITY	<u>1500</u> GAL
SEAM LOC	<u>TOP</u>
TANK LID DEPTH	<u>6"</u>
BAFFLES	<u>YES</u>
MANHOLE LOC	<u>FRONT + REAR</u>
6" PORT LOC	<u>NONE</u>
WATERTIGHT TEST	<u>NO</u>
PUMP TEST	<u>1/20/16</u>
PUMP ALARM TEST	<u>1/20/16</u>
DATE ON	<u>LID: 8/15/15</u>

PRE-CONSTRUCTION:

9/29/15 Met WTC on site for layout. SDA stakes present - tank stakes maybe there, not labeled. A few ft. farther from house than on BAT plan. Okay to set tanks at stakes.

INSTALLATION: Laid out 2x52' trenches on contour. (SC)

9/29/15 House connection made. On site while tanks were set. Pipe laid from house to tanks. 9/30/15 Trenches complete. OK to cover. Aired p/A

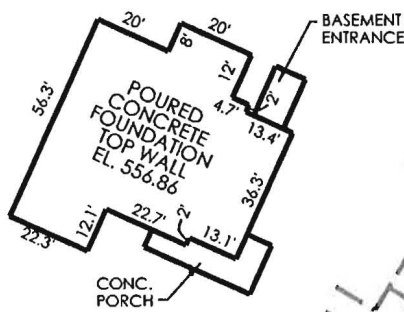
test and BAT start-up for final approval. (KAW) 10/6/15 BAT startup certification received. (SC) 1/20/16 Met WTC on site for pump + alarm and Norweco startup. Pump pumps effluent to D-box, alarm sounds. Pump + alarm on separate circuits inside the house. Norweco aerator runs + alarm sounds. Need 6" risers on all 3 manholes of Norweco tank. (SC) 1/29/16 Risers all above grade. (SC)

FINAL INSPECTOR Sarah Collins

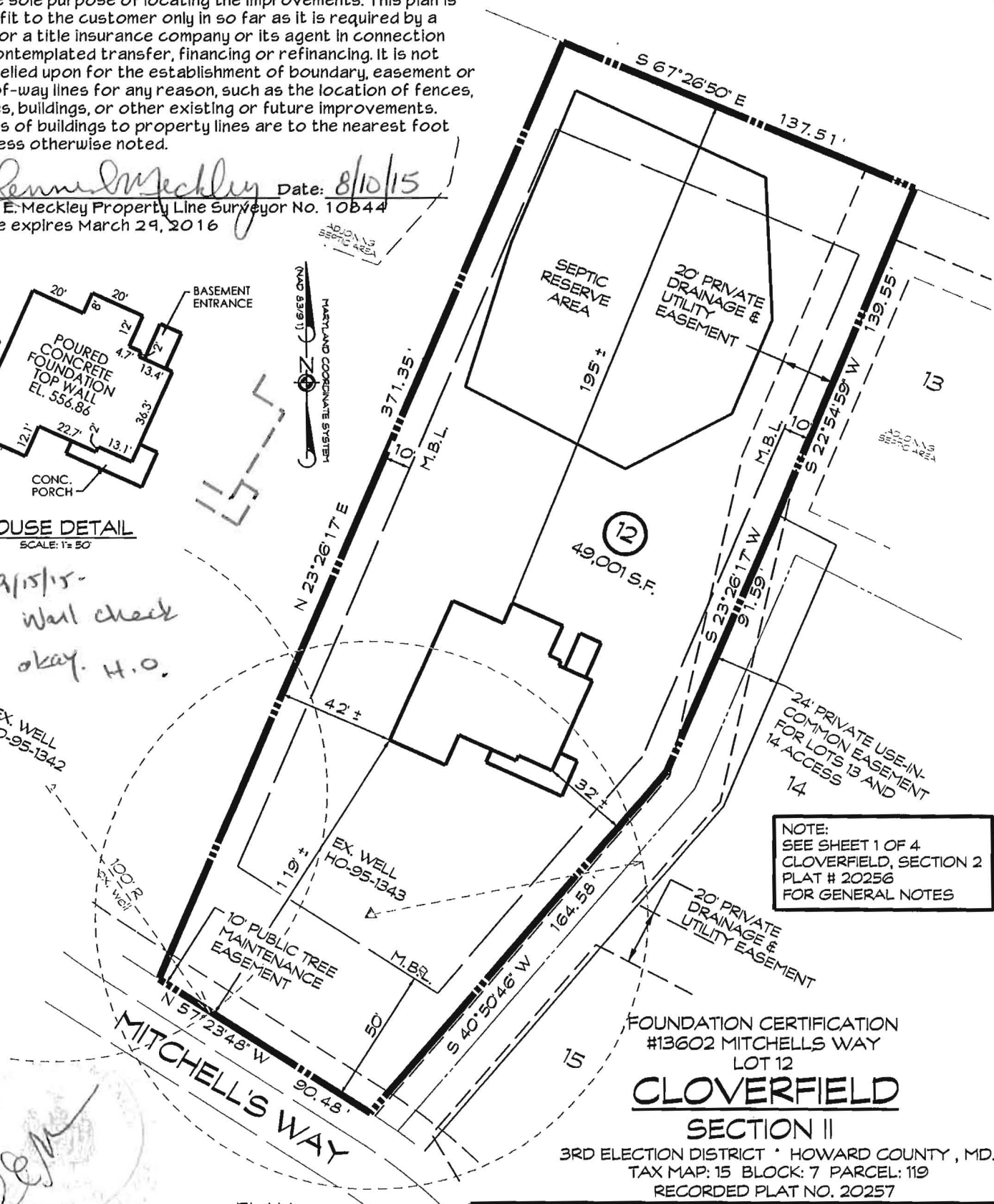
DATE OF APPROVAL 1/29/16

I hereby certify that I have surveyed the property shown hereon For the sole purpose of locating the improvements. This plan is A benefit to the customer only in so far as it is required by a lender or a title insurance company or its agent in connection with Contemplated transfer, financing or refinancing. It is not to be relied upon for the establishment of boundary, easement or right-of-way lines for any reason, such as the location of fences, garages, buildings, or other existing or future improvements. Offsets of buildings to property lines are to the nearest foot (1') unless otherwise noted.

By: *Dennis E. Meckley* Date: *8/10/15*
 Dennis E. Meckley Property Line Surveyor No. 10B44
 License expires March 29, 2016



*9/15/15 -
 Wall check
 okay. H.O.*



NOTE:
 SEE SHEET 1 OF 4
 CLOVERFIELD, SECTION 2
 PLAT # 20256
 FOR GENERAL NOTES

FOUNDATION CERTIFICATION
 #13602 MITCHELLS WAY
 LOT 12
CLOVERFIELD
 SECTION II

3RD ELECTION DISTRICT * HOWARD COUNTY, MD.
 TAX MAP: 15 BLOCK: 7 PARCEL: 119
 RECORDED PLAT NO. 20257

PLAN
 SCALE: 1" = 50'

A licensed Maryland Surveyor either personally prepared this Location Drawing, or was in responsible charge over its preparation and the surveying work reflected in it, in compliance with the Maryland Minimum Standards of Practice for Land Surveyors. (COMAR 09-13-06.06 AND .12)



439 East Main Street Westminster, MD 21157-5539
 (410) 848-1790 FAX (410) 848-1791

DRAWN BY:	KMB
DESIGN BY:	
REVIEW BY:	DEM
DATE:	08-04-15
SCALE:	1" = 50'
JOB NO:	2013039
SHEET:	1 OF 1

Back River Pre-Cast, LLC

PO BOX 329
Glyndon, MD 21071
Phone # 410-833-3394
Fax # 410-833-4116

Letter of Certification

This is to certify that the Norweco Singulair TNT 600 GPD Septic Tank installed at 13602 Mitchells Way, West Friendship, MD 21794 on September 29, 2015 was installed according to the manufacture's specifications.

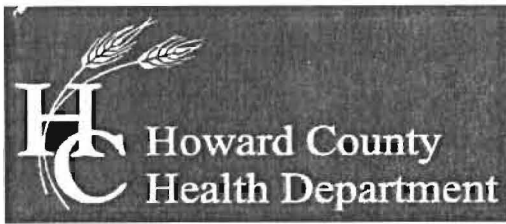
Installer: Walter Coon

Property Owner: Catonsville Homes

Permit #



MATTHEW GECKLE
Vice-President



Bureau of Environmental Health
7178 Columbia Gateway Drive, Columbia, MD 21046-2147
Main: 410-313-2640 | Fax: 410-313-2648
TDD 410-313-2323 | Toll Free 1-866-313-6300
www.hchealth.org
Facebook: www.facebook.com/hocohealth
Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

**OPERATION AND MAINTENANCE AGREEMENT
FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM
HAVING AN ADVANCED PRE-TREATMENT SYSTEM**

THIS AGREEMENT is made this 4 day of October 2013, among Spring Mill LLC, hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County".

WHEREAS, Owner is the owner or contract owner of a parcel of land located at 13602 Mitchells Way, W. Friendship, MD 21794 (Lot 12), in the 03 Election District of Howard County, Maryland, and the deed to same is recorded or shall be recorded among the Land Records of Howard County, Maryland in Liber 11285 Folio 00664.

WHEREAS, The Lot is suitable for the installation of a conventional on-site sewage disposal system with an advanced pre-treatment system, utilizing best available technology to perform nitrogen reduction, in accordance with the Code of Maryland Regulations 26.04.02.07, effective January 1, 2013.

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the County the right to enter upon the Lot at any reasonable time for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County to develop accurate and thorough test results.
- B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.
- C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.
- D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.
- E. This agreement shall run with the land and upon Owner's taking title to the Lot shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as

long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Lot that the system shall require maintenance or other attention. Upon taking title to the Lot, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.

G. This agreement may be voided at any time at the discretion of the County.

H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

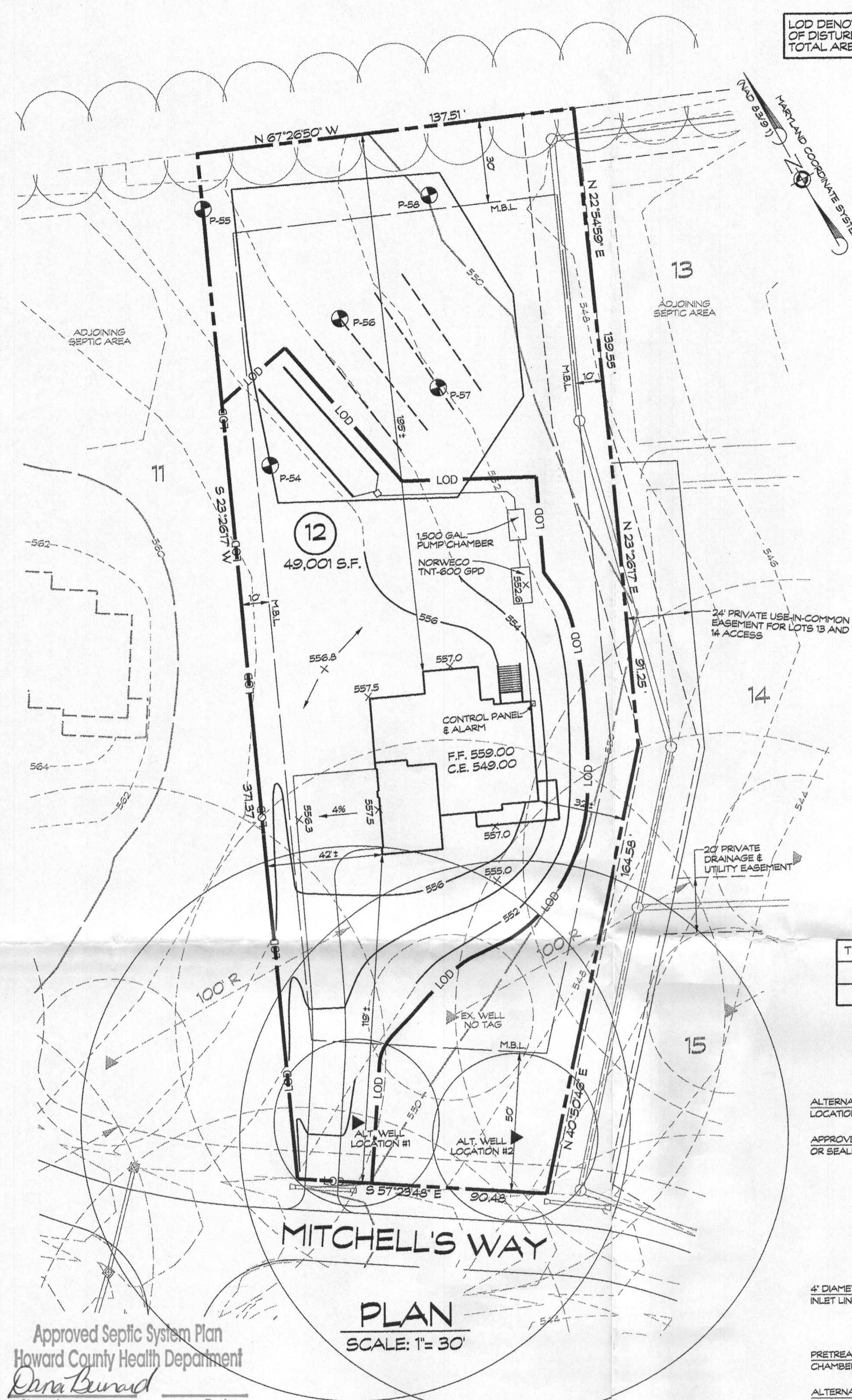
IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.

Spring Mill LLC

James R. Maxley III 10/4/13
Owner James R. Maxley, III Date

Owner Date

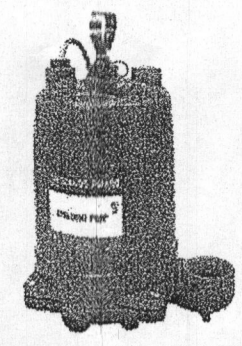
Bert Rifon 11/4/2013
Howard County Health Department



LOD DENOTES LIMIT OF DISTURBANCE TOTAL AREA = 24,422 S.F.

LEGEND:
 X 502.5 SPOT ELEVATION
 2.5% FLOW PATH & SLOPE
 ▲ EX. WELL
 ● PERC TEST LOCATION

GOULDS PUMPS

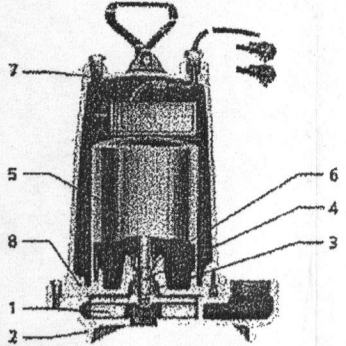


Submersible Effluent Pump
MODEL 3885
WE Series
 PROSURES AVAILABLE FOR RESIDENTIAL APPLICATIONS.

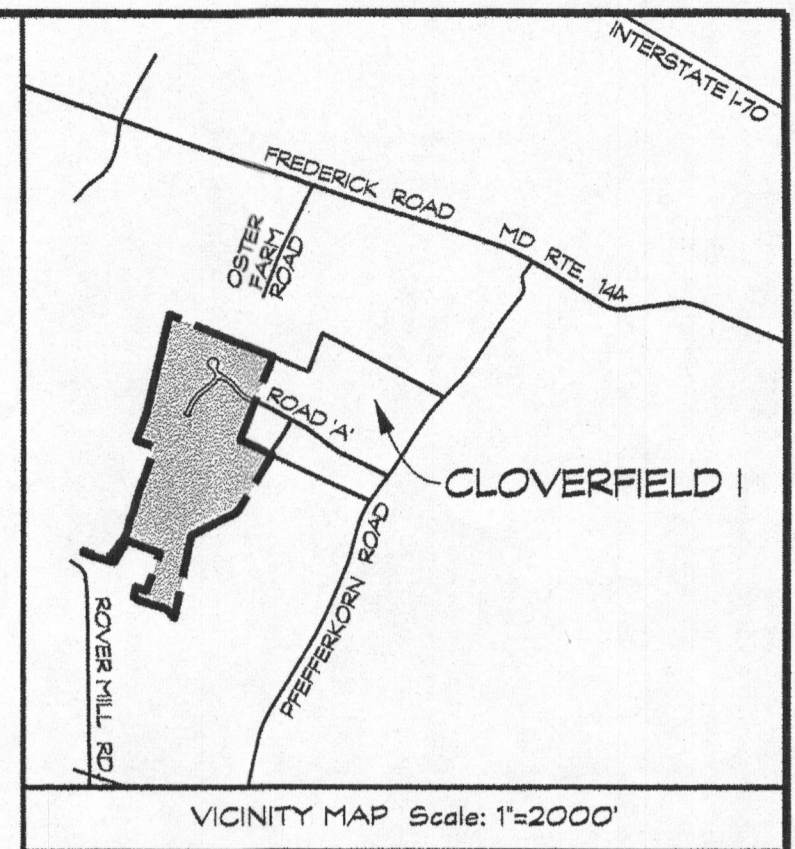
GOULDS PUMPS

COMPONENTS

Item No.	Description
1	Impeller
2	Casing
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casting O-Ring



Submersible Effluent Pump
MODEL 3885
WE Series

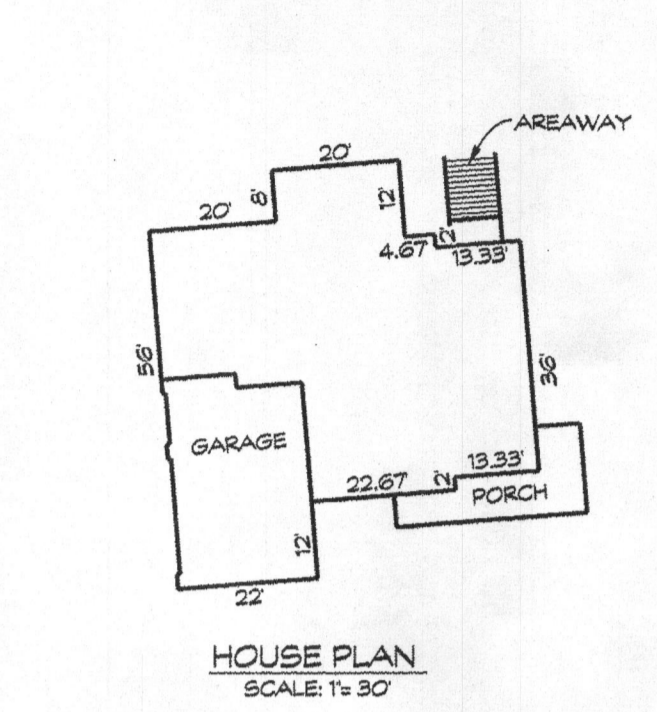


SEPTIC TANK NOTES

- SINGULAR® AERATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 60 MINUTES ON / 60 MINUTES OFF.
- FALL THROUGH SINGULAR® PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
- ON DEEPER INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXCEED AERATOR MOUNTING CASTING AND BIO-KINETIC® SYSTEM MOUNTING CASTING TO GRADE.
- TANK REINFORCED PER AGI STD. 318-05.
- REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
- CONTACT THE LOCAL, LICENSED SINGULAR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

NOTE: SEPTIC DISPOSAL AREA AND PERCOLATION TEST LOCATIONS ARE FROM REVISED PERCOLATION CERTIFICATION PLAN DATED OCTOBER 2007 AND SIGNED BY HOWARD COUNTY HEALTH DEPARTMENT OCTOBER 5, 2007.

NOTE: PUMP CHAMBER SIZE AND FLOATS BASED ON GOULDS WE SERIES SUBMERSIBLE PUMP. IF A PUMP SUBSTITUTION OCCURS, CHAMBER SIZE AND FLOATS WILL NEED TO BE RECALCULATED TO ENSURE THAT PUMP IS COVERED.



- PUMP/SYSTEM DESIGN:**
- DESIGN FLOW: 600 GPD
 - DESIGN HEAD: STATIC HEAD: 55.1' - 545.05' = 6.13' FRICTION HEAD: 2' - 4.5' BEND = 12' 56' OF 3\"/>
- CAST-IN-PLACE RECEIVING FLANGE:**
- 1/8\"/>
- PUMP SYSTEM:**
- 1/8\"/>

APPLICATIONS
 Specifically designed for the following uses:
 • Homes
 • Farms
 • Trailer courts
 • Mobiles
 • Schools
 • Hospitals
 • Industry
 • Effluent systems

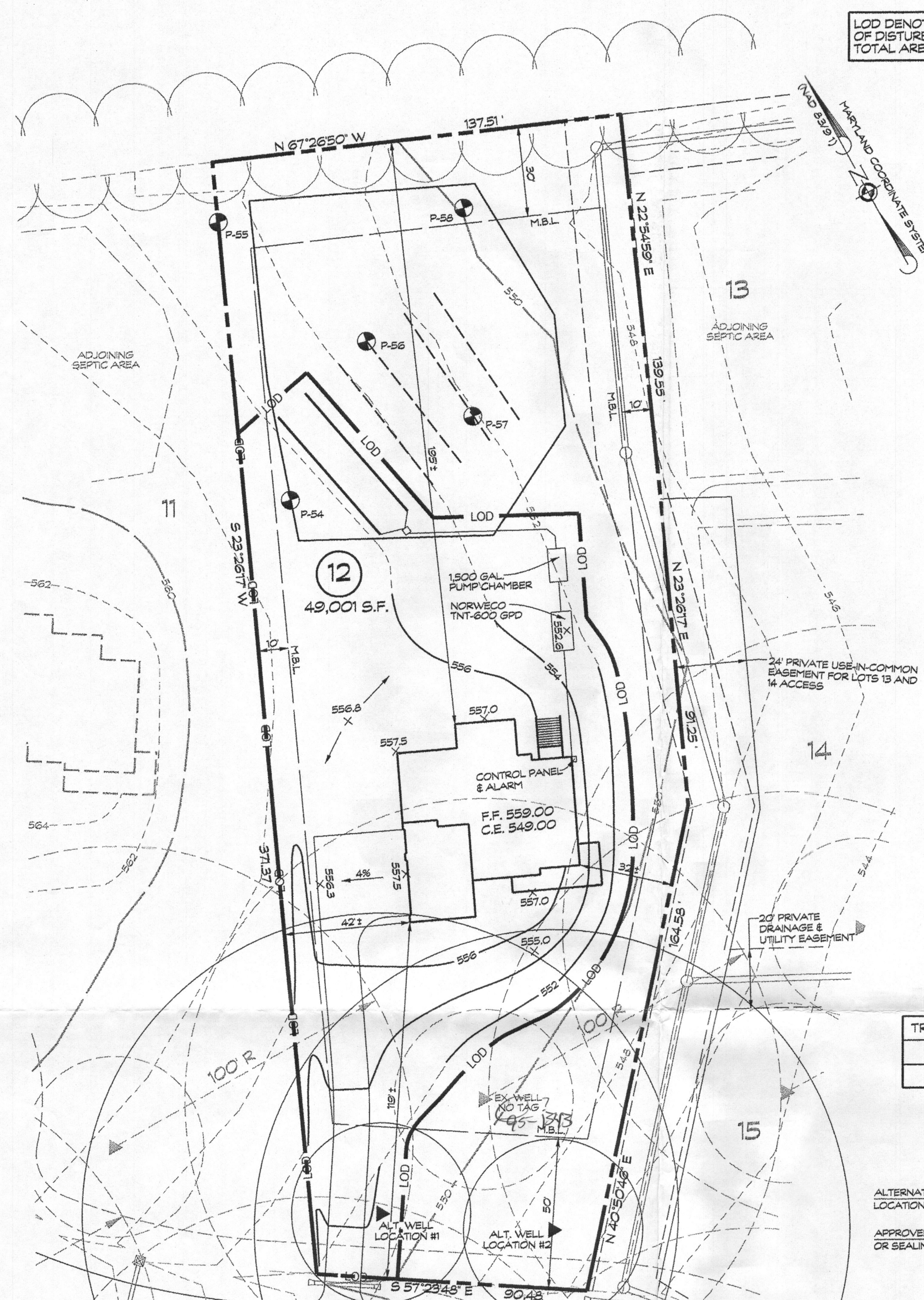
SPECIFICATIONS
 Pump
 • Sinks handling capabilities: 3/4\"/>

AGENCY LISTINGS
 Tested to UL 779 and CSA 22.2 File #48384
 Goolds Pumps is ISO 9001 Registered.

FEATURES
 • Impeller: Cast iron, semi-open, non-dog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.
 • Casing: Cast iron volute type for maximum efficiency.
 • Mechanical Seal: SILICON CARBIDE VS. SILICON CARBIDE sealing faces. Stainless steel metal parts, BLINA-W distormers.

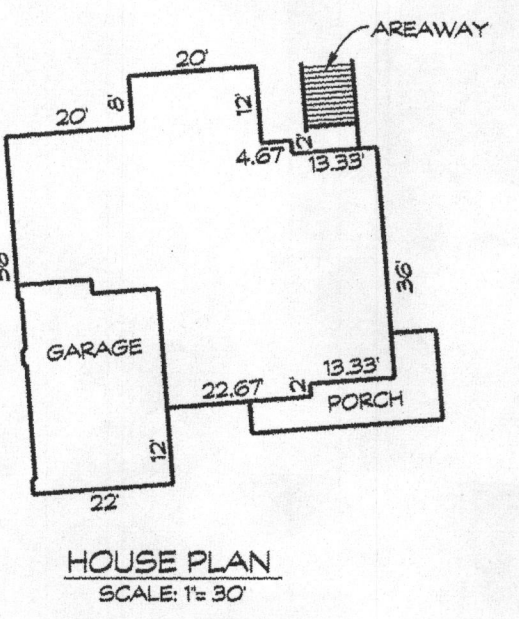
MODELS

Order No.	HP	Volts	Phase	Max. Amps.	RPM	Solids (Wt. lbs.)
WE0312L	1/2	115	1	1.7	1750	56
WE0312	1/2	230	1	3.4	1750	56
WE0314	3/4	115	1	2.5	1750	60
WE0314L	3/4	230	1	5.0	1750	60
WE0316	1	115	1	3.4	1750	60
WE0316L	1	230	1	6.8	1750	60
WE0318	1 1/2	115	1	5.1	1750	60
WE0318L	1 1/2	230	1	10.2	1750	60
WE0320	2	115	1	6.8	1750	60
WE0320L	2	230	1	13.6	1750	60
WE0322	2 1/2	115	1	8.1	1750	60
WE0322L	2 1/2	230	1	16.2	1750	60
WE0324	3	115	1	9.4	1750	60
WE0324L	3	230	1	18.8	1750	60
WE0326	3 1/2	115	1	10.7	1750	60
WE0326L	3 1/2	230	1	21.4	1750	60
WE0328	4	115	1	12.0	1750	60
WE0328L	4	230	1	24.0	1750	60
WE0330	4 1/2	115	1	13.3	1750	60
WE0330L	4 1/2	230	1	26.6	1750	60
WE0332	5	115	1	14.6	1750	60
WE0332L	5	230	1	29.2	1750	60
WE0334	5 1/2	115	1	15.9	1750	60
WE0334L	5 1/2	230	1	31.8	1750	60
WE0336	6	115	1	17.2	1750	60
WE0336L	6	230	1	34.4	1750	60
WE0338	6 1/2	115	1	18.5	1750	60
WE0338L	6 1/2	230	1	37.0	1750	60
WE0340	7	115	1	19.8	1750	60
WE0340L	7	230	1	39.6	1750	60
WE0342	7 1/2	115	1	21.1	1750	60
WE0342L	7 1/2	230	1	42.2	1750	60
WE0344	8	115	1	22.4	1750	60
WE0344L	8	230	1	44.8	1750	60
WE0346	8 1/2	115	1	23.7	1750	60
WE0346L	8 1/2	230	1	47.4	1750	60
WE0348	9	115	1	25.0	1750	60
WE0348L	9	230	1	50.0	1750	60
WE0350	9 1/2	115	1	26.3	1750	60
WE0350L	9 1/2	230	1	52.6	1750	60
WE0352	10	115	1	27.6	1750	60
WE0352L	10	230	1	55.2	1750	60
WE0354	10 1/2	115	1	28.9	1750	60
WE0354L	10 1/2	230	1	57.8	1750	60
WE0356	11	115	1	30.2	1750	60
WE0356L	11	230	1	60.4	1750	60
WE0358	11 1/2	115	1	31.5	1750	60
WE0358L	11 1/2	230	1	63.0	1750	60
WE0360	12	115	1	32.8	1750	60
WE0360L	12	230	1	65.6	1750	60
WE0362	12 1/2	115	1	34.1	1750	60
WE0362L	12 1/2	230	1	68.2	1750	60
WE0364	13	115	1	35.4	1750	60
WE0364L	13	230	1	70.8	1750	60
WE0366	13 1/2	115	1	36.7	1750	60
WE0366L	13 1/2	230	1	73.4	1750	60
WE0368	14	115	1	38.0	1750	60
WE0368L	14	230	1	76.0	1750	60
WE0370	14 1/2	115	1	39.3	1750	60
WE0370L	14 1/2	230	1	78.6	1750	60
WE0372	15	115	1	40.6	1750	60
WE0372L	15	230	1	81.2	1750	60
WE0374	15 1/2	115	1	41.9	1750	60
WE0374L	15 1/2	230	1	83.8	1750	60
WE0376	16	115	1	43.2	1750	60
WE0376L	16	230	1	86.4	1750	60
WE0378	16 1/2	115	1	44.5	1750	60
WE0378L	16 1/2	230	1	89.0	1750	60
WE0380	17	115	1	45.8	1750	60
WE0380L	17	230	1	91.6	1750	60
WE0382	17 1/2	115	1	47.1	1750	60
WE0382L	17 1/2	230	1	94.2	1750	60
WE0384	18	115	1	48.4	1750	60
WE0384L	18	230	1	96.8	1750	60
WE0386	18 1/2	115	1	49.7	1750	60
WE0386L	18 1/2	230	1	99.4	1750	60
WE0388	19	115	1	51.0	1750	60
WE0388L	19	230	1	102.0	1750	60
WE0390	19 1/2	115	1	52.3	1750	60
WE0390L	19 1/2	230	1	104.6	1750	60
WE0392	20	115	1	53.6	1750	60
WE0392L	20	230	1	107.2	1750	60
WE0394	20 1/2	115	1	54.9	1750	60
WE0394L	20 1/2	230	1	109.8	1750	60
WE0396	21	115	1	56.2	1750	60
WE0396L	21	230	1	112.4	1750	60
WE0398	21 1/2	115	1	57.5	1750	60
WE0398L	21 1/2	230	1	115.0	1750	60
WE0400	22	115	1	58.8	1750	60
WE0400L	22	230	1	117.6	1750	60
WE0402	22 1/2	115	1	60.1	1750	60
WE0402L	22 1/2	230	1	120.2	1750	60
WE0404	23	115	1	61.4	1750	60
WE0404L	23	230	1	122.8	1750	60
WE0406	23 1/2	115	1	62.7	1750	60
WE0406L	23 1/2	230	1	125.4	1750	60
WE0408	24	115	1	64.0	1750	60
WE0408L	24	230	1	128.0	1750	60
WE0410	24 1/2	115	1	65.3	1750	60
WE0410L	24 1/2	230	1	130.6	1750	60
WE0412	25	115	1	66.6	1750	60
WE0412L	25	230	1	133.2	1750	60
WE0414	25 1/2	115	1	67.9	1750	60
WE0414L	25 1/2	230	1	135.8	1750	60
WE0416	26	115	1	69.2	1750	60
WE0416L	26	230	1	138.4	1750	60
WE0418	26 1/2	115	1	70.5	1750	60
WE0418L	26 1/2	230	1	141.0	1750	60
WE0420	27	115	1	71.8	1750	60
WE0420L	27	230	1	143.6	1750	60
WE0422	27 1/2	115	1	73.1	1750	60
WE0422L	27 1/2	230	1	146.2	1750	60
WE0424	28	115	1	74.4	1750	60
WE0424L	28	230	1	148.8	1750	60
WE0426	28 1/2	115	1	75.7	1750	60
WE0426L	28 1/2	230	1	151.4	1750	60
WE0428	29	115	1	77.0	1750	60
WE0428L	29	230	1	154.0	1750	60
WE0430	29 1/2	115	1	78.3	1750	60
WE0430L	29 1/2	230	1	156.6	1750	60
WE0432	30	115	1	79.6	1750	60
WE0432L	30	230	1	159.2	1750	60
WE0434	30 1/2	115	1	80.9	1750	60
WE0434L	30 1/2	230	1	161.8	1750	60
WE0436	31	115	1	82.2	1750	60
WE0436L	31	230	1	164.4	1750	60
WE0438	31 1/2	115	1	83.5	1750	60
WE0438L	31 1/2	230	1	167.0	1750	60
WE0440	32	115	1	84.8	1750	60
WE0440L	32	230	1	169.6	1750	60
WE0442	32 1/2	115	1	86.1	1750	60
WE0442L	32 1/2	230	1	172.2	1750	60
WE0444	33	115	1	87.4	1750	60
WE0444L	33	230	1	174.8	1750	60
WE0446	33 1/2	115	1	88.7	1750	60
WE0446L	33 1/2	230	1	177.4	1750	60
WE0448	34	115	1	90.0	1750	60
WE0448L	34	230	1	180.0	1750	60
WE0450	34 1/2	115	1	91.3	1750	60
WE0450L	34 1/2	230	1	182.6	1750	60
WE0452	35	115	1	92.6	1750	60
WE0452L	35	230	1	185.2	1750	60
WE0454	35 1/2	115	1	93.9	1750	60
WE0454L	35 1/2	230	1	187.8	1750	60
WE0456	36	115	1	95.2	1750	60
WE0456L	36	230	1	190.4	1750	60
WE0458	36 1/2	115	1	96.5	1750	60
WE0458L	36 1/2	230	1	193.0	1750	60
WE0460	37	115	1	97.8	1750	60
WE0460L	37	230	1	195.6	1750	60
WE0462	37 1/2	115	1	99.1	1750	60
WE0462L	37 1/2	230	1	198.2	1750	60
WE0464	38	115	1	100.4	1750	60
WE0464L	38	230	1	200.8	1750	60
WE0466	38 1/2	115	1	101.7	1750	60
WE0466L	38 1/2	230	1	203.4	1750	60
WE0468	39	115	1	103.0	1750	60
WE0468L	39	230	1	206.0	1750	60
WE0470	39 1/2	115	1	104.3	1750	60
WE0470L	39 1/2	230	1	208.6	1750	60
WE0472	40	115	1	105.6	1750	60
WE0472L	40	230	1	211.2	1750	60
WE0474	40 1/2	115	1	106.9	1750	60
WE0474L	40 1/2	230	1	213.8	1750	60



LOD DENOTES LIMIT OF DISTURBANCE
TOTAL AREA = 24,422 S.F.

- LEGEND:**
- X 582.5 SPOT ELEVATION
 - FLOW PATH & SLOPE
 - ▲ EX. WELL
 - PERC TEST LOCATION

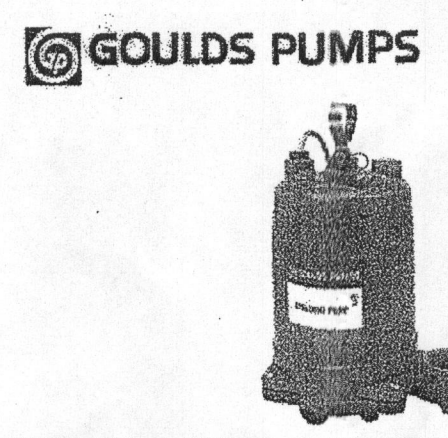


- PUMP/SYSTEM DESIGN:**
- DESIGN FLOW: 600 GPD
 - DESIGN HEAD:
 - STATIC HEAD: 55.18 - 545.05 = 6.13
 - FRICITION HEAD: 2.45'
 - 56' X 12" = 6.8'
 - 68' X 1.08' / 100 = 0.73
 - TOTAL HEAD: 6.13 + 0.73 = 6.86 @ 30 GPM
 - CAST-IN-PLACE RECEIVING FLANGE
 - PUMP SYSTEM:
 - 1/8" DESIGN FLOW: 100 GAL. MINIMUM DOSE
 - MINIMUM DOSE CALCULATIONS:
 - 56' OF 2" PVC X 3.84 = 100 = 21.50
 - 36' OF 4" PVC X 66.1 = 100 = 25.12
 - TOTAL DOSE = 46.62
 - DOSE VOLUME: USE MINIMUM DOSE: 100 GAL.
 - PUMP CHAMBER CAPACITY: ONE DAY STORAGE CAPACITY: 600 GPD + DOSE: 100 GPD = TOTAL STORAGE: 700 GPD
 - PUMP ON TO PUMP OFF: 100 X 23 1/7.552 = 3.05'
 - HIGH WATER ALARM SWITCH TO PUMP CHAMBER: 600 X 23 1/7.552 = 18.35'

TRENCH CHART

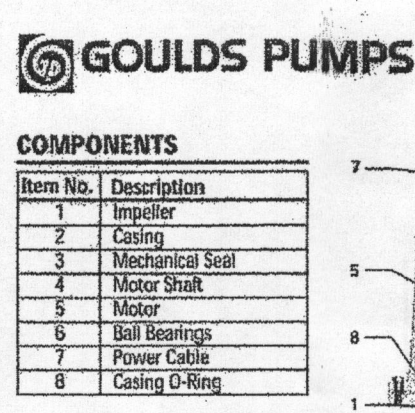
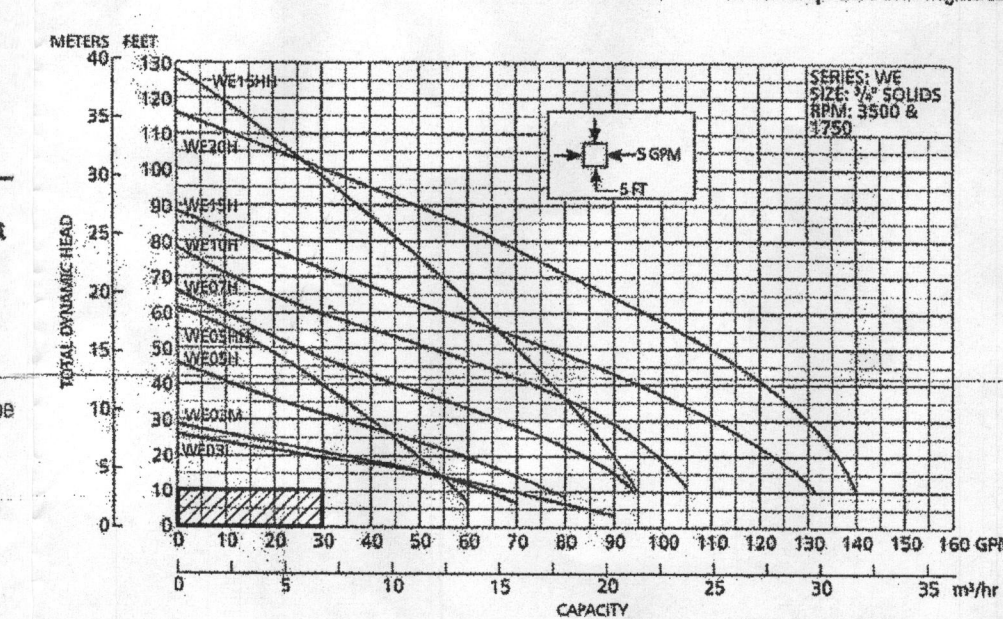
TRENCH	EX. GROUND	INV. ELEV.	BOTTOM OF TRENCH
1	555.8	552.8	549.8
2	554.9	551.9	548.9

NOTE: SEPTIC DISPOSAL AREA AND PERCOLATION TEST LOCATIONS ARE FROM REVISED PERCOLATION CERTIFICATION PLAN DATED OCTOBER 2007 AND SIGNED BY HOWARD COUNTY HEALTH DEPARTMENT OCTOBER 5, 2007.



Submersible Effluent Pump
MODEL 3885
WE Series
PROBANCE AVAILABLE FOR RESIDENTIAL APPLICATIONS.

- APPLICATIONS**
Specifically designed for the following uses:
• Homes
• Farms
• Trailer courts
• Motels
• Schools
• Hospitals
• Industry
• Effluent systems
- SPECIFICATIONS**
• Siles handling capabilities: 3/4" maximum
• Discharge size: 2" NPT
• Capacities: up to 140 GPM
• Total heads: up to 128 feet TDH
• Temperature: 104°F (40°C) continuous 140°F (60°C) intermittent
• See order numbers on reverse side for specific HP, voltage, phase and RPM's available.
- FEATURES**
• Impeller: Cast iron, semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.
• Casting: Cast iron volute type for maximum efficiency.
• NPT discharge.
• Mechanical Seal: SILICON CARBIDE VS. SILICON CARBIDE sealing faces. Stainless steel metal parts, BUNA-N elastomers.
- AGENCY LISTINGS**
Tested to UL 779 and CSA 22.2 108 Standards By Canadian Standards Association File #6242626
Goolds Pumps is ISO 9001 Registered.



Submersible Effluent Pump
MODEL 3885
WE Series

COMPONENTS

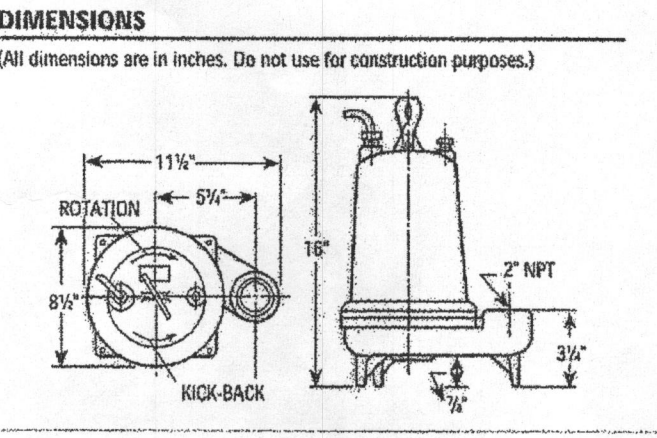
Item No.	Description
1	Impeller
2	Casting
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casting O-Ring

MODELS

Order No.	HP	Volts	Phase	Max. Amps.	RPM	Solids	Wt. (lbs.)
WE0311L	1/2	115	1	1.7	1750	56	
WE0312L	3/4	115	1	2.5	1750	56	
WE0314L	1	115	1	3.3	1750	56	
WE0316L	1 1/2	115	1	4.9	1750	56	
WE0318L	2	115	1	6.6	1750	56	
WE0320L	2 1/2	115	1	8.3	1750	56	
WE0322L	3	115	1	10.0	1750	56	
WE0324L	3 1/2	115	1	11.7	1750	56	
WE0326L	4	115	1	13.4	1750	56	
WE0328L	4 1/2	115	1	15.1	1750	56	
WE0330L	5	115	1	16.8	1750	56	
WE0332L	5 1/2	115	1	18.5	1750	56	
WE0334L	6	115	1	20.2	1750	56	
WE0336L	6 1/2	115	1	21.9	1750	56	
WE0338L	7	115	1	23.6	1750	56	
WE0340L	7 1/2	115	1	25.3	1750	56	
WE0342L	8	115	1	27.0	1750	56	
WE0344L	8 1/2	115	1	28.7	1750	56	
WE0346L	9	115	1	30.4	1750	56	
WE0348L	9 1/2	115	1	32.1	1750	56	
WE0350L	10	115	1	33.8	1750	56	
WE0352L	10 1/2	115	1	35.5	1750	56	
WE0354L	11	115	1	37.2	1750	56	
WE0356L	11 1/2	115	1	38.9	1750	56	
WE0358L	12	115	1	40.6	1750	56	
WE0360L	12 1/2	115	1	42.3	1750	56	
WE0362L	13	115	1	44.0	1750	56	
WE0364L	13 1/2	115	1	45.7	1750	56	
WE0366L	14	115	1	47.4	1750	56	
WE0368L	14 1/2	115	1	49.1	1750	56	
WE0370L	15	115	1	50.8	1750	56	
WE0372L	15 1/2	115	1	52.5	1750	56	
WE0374L	16	115	1	54.2	1750	56	
WE0376L	16 1/2	115	1	55.9	1750	56	
WE0378L	17	115	1	57.6	1750	56	
WE0380L	17 1/2	115	1	59.3	1750	56	
WE0382L	18	115	1	61.0	1750	56	
WE0384L	18 1/2	115	1	62.7	1750	56	
WE0386L	19	115	1	64.4	1750	56	
WE0388L	19 1/2	115	1	66.1	1750	56	
WE0390L	20	115	1	67.8	1750	56	
WE0392L	20 1/2	115	1	69.5	1750	56	
WE0394L	21	115	1	71.2	1750	56	
WE0396L	21 1/2	115	1	72.9	1750	56	
WE0398L	22	115	1	74.6	1750	56	
WE0400L	22 1/2	115	1	76.3	1750	56	
WE0402L	23	115	1	78.0	1750	56	
WE0404L	23 1/2	115	1	79.7	1750	56	
WE0406L	24	115	1	81.4	1750	56	
WE0408L	24 1/2	115	1	83.1	1750	56	
WE0410L	25	115	1	84.8	1750	56	
WE0412L	25 1/2	115	1	86.5	1750	56	
WE0414L	26	115	1	88.2	1750	56	
WE0416L	26 1/2	115	1	89.9	1750	56	
WE0418L	27	115	1	91.6	1750	56	
WE0420L	27 1/2	115	1	93.3	1750	56	
WE0422L	28	115	1	95.0	1750	56	
WE0424L	28 1/2	115	1	96.7	1750	56	
WE0426L	29	115	1	98.4	1750	56	
WE0428L	29 1/2	115	1	100.1	1750	56	
WE0430L	30	115	1	101.8	1750	56	
WE0432L	30 1/2	115	1	103.5	1750	56	
WE0434L	31	115	1	105.2	1750	56	
WE0436L	31 1/2	115	1	106.9	1750	56	
WE0438L	32	115	1	108.6	1750	56	
WE0440L	32 1/2	115	1	110.3	1750	56	
WE0442L	33	115	1	112.0	1750	56	
WE0444L	33 1/2	115	1	113.7	1750	56	
WE0446L	34	115	1	115.4	1750	56	
WE0448L	34 1/2	115	1	117.1	1750	56	
WE0450L	35	115	1	118.8	1750	56	
WE0452L	35 1/2	115	1	120.5	1750	56	
WE0454L	36	115	1	122.2	1750	56	
WE0456L	36 1/2	115	1	123.9	1750	56	
WE0458L	37	115	1	125.6	1750	56	
WE0460L	37 1/2	115	1	127.3	1750	56	
WE0462L	38	115	1	129.0	1750	56	
WE0464L	38 1/2	115	1	130.7	1750	56	
WE0466L	39	115	1	132.4	1750	56	
WE0468L	39 1/2	115	1	134.1	1750	56	
WE0470L	40	115	1	135.8	1750	56	
WE0472L	40 1/2	115	1	137.5	1750	56	
WE0474L	41	115	1	139.2	1750	56	
WE0476L	41 1/2	115	1	140.9	1750	56	
WE0478L	42	115	1	142.6	1750	56	
WE0480L	42 1/2	115	1	144.3	1750	56	
WE0482L	43	115	1	146.0	1750	56	
WE0484L	43 1/2	115	1	147.7	1750	56	
WE0486L	44	115	1	149.4	1750	56	
WE0488L	44 1/2	115	1	151.1	1750	56	
WE0490L	45	115	1	152.8	1750	56	
WE0492L	45 1/2	115	1	154.5	1750	56	
WE0494L	46	115	1	156.2	1750	56	
WE0496L	46 1/2	115	1	157.9	1750	56	
WE0498L	47	115	1	159.6	1750	56	
WE0500L	47 1/2	115	1	161.3	1750	56	
WE0502L	48	115	1	163.0	1750	56	
WE0504L	48 1/2	115	1	164.7	1750	56	
WE0506L	49	115	1	166.4	1750	56	
WE0508L	49 1/2	115	1	168.1	1750	56	
WE0510L	50	115	1	169.8	1750	56	
WE0512L	50 1/2	115	1	171.5	1750	56	
WE0514L	51	115	1	173.2	1750	56	
WE0516L	51 1/2	115	1	174.9	1750	56	
WE0518L	52	115	1	176.6	1750	56	
WE0520L	52 1/2	115	1	178.3	1750	56	
WE0522L	53	115	1	180.0	1750	56	
WE0524L	53 1/2	115	1	181.7	1750	56	
WE0526L	54	115	1	183.4	1750	56	
WE0528L	54 1/2	115	1	185.1	1750	56	
WE0530L	55	115	1	186.8	1750	56	
WE0532L	55 1/2	115	1	188.5	1750	56	
WE0534L	56	115	1	190.2	1750	56	
WE0536L	56 1/2	115	1	191.9	1750	56	
WE0538L	57	115	1	193.6	1750	56	
WE0540L	57 1/2	115	1	195.3	1750	56	
WE0542L	58	115	1	197.0	1750	56	
WE0544L	58 1/2	115	1	198.7	1750	56	
WE0546L	59	115	1	200.4	1750	56	
WE0548L	59 1/2	115	1	202.1	1750	56	
WE0550L	60	115	1	203.8	1750	56	

PERFORMANCE RATINGS (gallons per minute)

Order No.	1750	1750	3500	3500	3500	3500	3500	3500	3500
HP	1/2	3/4	1	1 1/2	2	2 1/2	3	3 1/2	4
1	86	116	146	176	206	236	266	296	326
2	79	109	139	169	199	229	259	289	319
3	72	102	132	162	192	222	252	282	312
4	65	95	125	155	185	215	245	275	305
5	58	88	118	148	178	208	238	268	298
6	51	81	111	141	171	201	231	261	291
7	44	74	104	134	164	194	224	254	284
8	37	67	97	127	157	187	217	247	277
9	30	60	90	120	150	180	210	240	270
10	23	53	83	113	143	173	203	233	263



SEPTIC TANK NOTES

- SINGULAR® AERATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 60 MINUTES ON / 60 MINUTES OFF.
 - FALL THROUGH SINGULAR® PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
 - ON DEEPER INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXTEND AERATOR MOUNTING CASTING AND BIO-KINETIC® SYSTEM MOUNTING CASTING TO GRADE.
 - TANK REINFORCED PER ACI STD. 318-05.
 - REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
 - CONTACT THE LOCAL, LICENSED SINGULAR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.
- NOTE: SEPTIC DISPOSAL AREA AND PERCOLATION TEST LOCATIONS ARE FROM REVISED PERCOLATION CERTIFICATION PLAN DATED OCTOBER 2007 AND SIGNED BY HOWARD COUNTY HEALTH DEPARTMENT OCTOBER 5, 2007.

Approved Septic System Plan
Howard County Health Department
Dana Benard
Signature Date

MITCHELL'S WAY
PLAN
SCALE: 1" = 30'

- GENERAL NOTES**
- THE STORM-WATER MANAGEMENT FOR THIS LOT IS PROVIDED OFF-SITE IN THE TWO MICROPOOL EXTENDED DETENTION FACILITIES AND GRASSED SWALES PER THE RECORDED PLAN NO. 202356.
 - THERE ARE NO STREAMS, PONDS, FLOODPLAINS, OR WETLANDS ON THIS LOT.
 - THERE ARE NO 20% OR GREATER SLOPES ON THIS LOT.
 - EXISTING WELL LOCATION IS FIELD LOCATED.

SEPTIC SYSTEM TRENCH DESIGN:

PROPOSED NUMBER OF BEDROOMS = 4
AVERAGE PERCOLATION TEST TIME = 3
APPLICATION RATE = 1.2
DESIGN FLOW: 150 GALS. X 4 BEDROOMS = 600 GAL/DAY
600 GAL/DAY / 12 GAL./DAY/SQ. FT. = 50 SQ. FT.
500 SQ. FT. / 3 FT. = 167 LF. OF