

VICINITY MAP  
NTS

OWNER: TIMOTHY SCOTT FAIRCLOTH  
SITE ADDRESS: 836 BUNNLEVEL ERWIN RD.  
BUNNLEVEL, NC 28834  
PIN: 0566-99-7229  
AREA: 22.37 AC  
FIRM MAP: 3720056600J  
APPLICANT: TJ BANKS



Know what's below.  
Call before you dig.

CONSTRUCTION PLANS

FOR

MOUND SEPTIC SYSTEM  
836 BUNNLEVEL ERWIN RD  
BUNNLEVEL, NC 28334

IN

HARNETT COUNTY,  
NORTH CAROLINA

SHEET INDEX

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34 CASTLEWOOD DRIVE  
CLAYTON, NC 27520  
(919) 624-8825  
FIRM # C-5206

PNTA ENGINEERING, PC

TIMOTHY SCOTT FAIRCLOTH PROPERTY  
836 BUNNLEVEL ERWIN RD  
BUNNLEVEL, NC 28334

COVER PAGE
FILE 25531
DRAWN JBG
CHECKED JBG
DESIGNED N/A
PERMITTED N/A
DATE 11/12/2025
BY JBG
C0.1

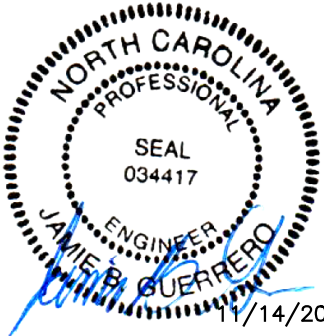
Design Specifications

Daily Waste Flow	480 gpd
Septic Tank Type	Double chamber
Septic Tank Size	Min. 1000 gal
Pumping Tank Size	500 gal
Loading rate for mound fill	0.6 gal/ft <sup>2</sup> /day
Distribution area	800 ft <sup>2</sup>
Loading rate for in-situ soil	0.4 gal/ft <sup>2</sup> /day
Basal Area	1,200 ft <sup>2</sup>
Height of mound	2.5 ft
Volume of fill	146 yd <sup>3</sup>
Volume of topsoil	48.7 yd <sup>3</sup>
Volume of gravel	20.7 yd <sup>3</sup>
Total length of laterals	260 ft
Lateral diameter	1 1/4 in
Lateral configuration	5 lines x 3 ft spacing
Supply line length	245 ft
Supply line diameter	2 in
Manifold placement	Side
Hole size	5/32 in
Hole spacing	3 ft
Number of holes	85
Pressure head	1.3 psi (3 ft)
Flow rate per hole	0.5 gpm
Total flow	42.5 gpm
Elevation head	6.35 ft
Friction head	10.7 ft
Pressure head	3.0 ft
Total head	20.0 ft
Pump requirements	42.5 gpm at 20.0 ft head
Storage volume in supply line	39.7 gal
Storage volume in laterals	16.64 gal
Total storage volume in lines	56.34 gal
Check valve required*	No

\* Check valve is required if the total volume of storage in supply and distribution lines exceeds 25% of the total daily waste flow

Materials

Type	Size	Quantity	Description
Septic Tank (2-Chambers)	1,000 gal min.	1	Two chamber septic tank
Pumping Tank	500 gal	1	500 gallon fiberglass lfit station tank Septic Solutions, Inc. <a href="http://www.septicsolutions.com">www.septicsolutions.com</a>
Pump	1/2 HP	1	Liberty Pumps FL50 Series or equivalent
Switch		1	Sealed level controls adjustable to 9.6-in drawdown
Alarm		1	Sealed mercury float switch and alarm light
Control Panel		1	50A006 Model Simplex or equivalent
Wiring		1	Approved outdoor recepticle, wire, and conduit for 110V service
Risers		As needed	Concrete or PVC riser to raise tank lids 6" above final grade
Lids		As needed	Compatible with septic tank and pumping tank
Concrete block		2	Raised support for pump
Nylon Rope		As needed	To remove pump from tank
Mortor			To seal around supply line and riser
Pipe (Sch 40 PVC)	2 in	245 ft	Supply line
Pipe (Sch 40 PVC)	1 1/2 in.	15 ft	Supply manifold
Pipe (Sch 40 PVC)	1 1/4 in.	~300 ft	Lateral lines plus extra length for turn-ups and tee risers
Tee	1 1/2 x 1 1/2 x 1 1/4 in.	3	For joining manifold to middle laterals
Elbow	1 1/2 x 1 1/4 in.	2	For joining manifold to end laterals
Elbow	1 1/4 in.	10	5 for joining laterals to manifold 5 for turn-ups
Male adapter	1 1/4 in.	5	For turn-ups
Threaded cap	1 1/4 in.	5	For turn-ups
Gate valve	2"	1	PVC or brass
Threaded union	2"	1	For quick removal of pump
PVC glue			
PVC primer			
Mound fill		146 yd <sup>3</sup>	80-90% sand, 10-20% fines
Topsoil		49 yd <sup>3</sup>	To support good grass cover
Gravel		20.6 yd <sup>3</sup>	Washed stone
Geotextile Fabric		~1000 ft <sup>2</sup>	Barrier between the gravel and topsoil
Grass / Sod			Locally available Bermuda
Fertilizer/Lime			Apply per toposoil test results



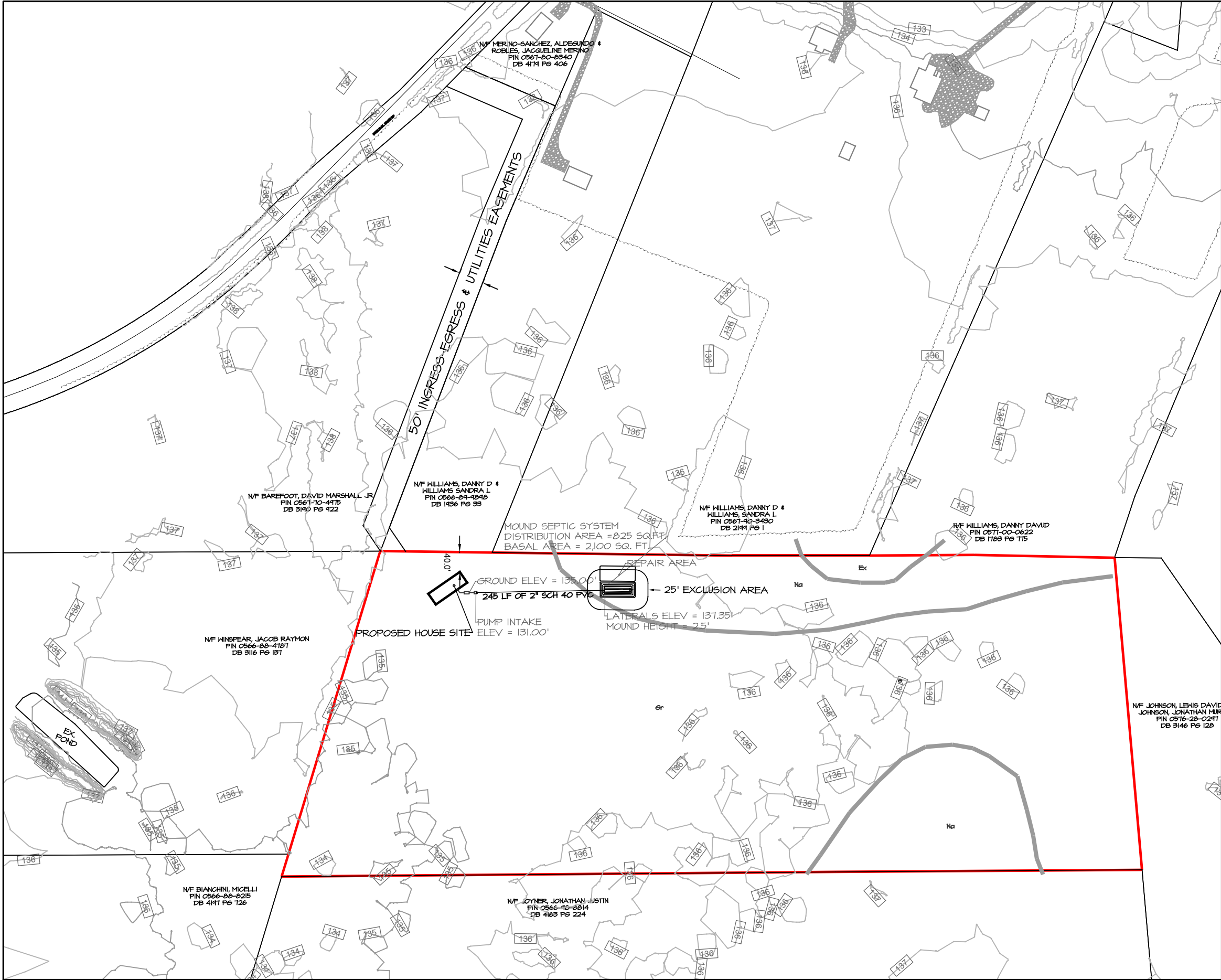
34 CASTLEWOOD DRIVE  
CLAYTON, NC 27520  
(919) 624-8825  
FIRM # C-5206

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TIMOTHY SCOTT FAIRCLOTH PROPERTY  
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BUNNLEVEL, NC 28334

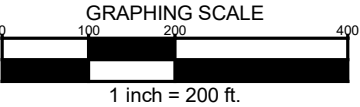
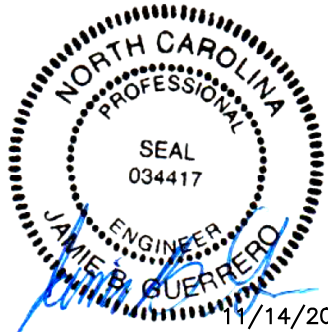
MOUND SYSTEM  
SPECIFICATIONS/MATERIALS

FILE 25531  
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N/A  
11/12/2025  
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- LEGEND**
- SOIL LINE  
Na (Nahunta loam)  
Ex (Exum very fine sandy loam)  
Gr (Grantham loam)
- CONTOUR  
PROP. BOUNDARY  
WOODLINE

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**PNTA ENGINEERING, PC**

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836 BUNNLEVEL ERWIN RD  
BUNNLEVEL, NC 28834

MOUND SYSTEM  
SITE LAYOUT

FILE 25531  
JBG  
JBG  
1" = 200'  
DATE 11/12/2025  
JOB NO.

C3.0



MOUND SEPTIC SYSTEM  
DISTRIBUTION AREA = 825 SQ.FT.  
BASAL AREA = 2,100 SQ. FT.

REPAIR AREA

52' OF 1 1/4" PVC SCH 40  
LATERAL W/ 17-5/32" HOLES  
AT 3' SPACING

1 1/4" PVC SCH 40  
TURN-UP TO GRADE  
W/ THREADED CAP

25' EXCLUSION AREA

2" PVC SCH 40  
SUPPLY LINE

1/2" PVC SCH 40  
MANIFOLD

LATERALS ELEV = 137.35'  
MOUND HEIGHT = 2.5'

137.00 137.85  
136.00 135.35

GRAPHING SCALE



1 inch = 20 ft.

Construction Fabric

Diversion

Gravel

Original Soil  
Chisel Plowed

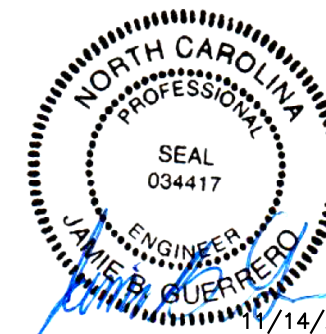
% slope

Sand Fill

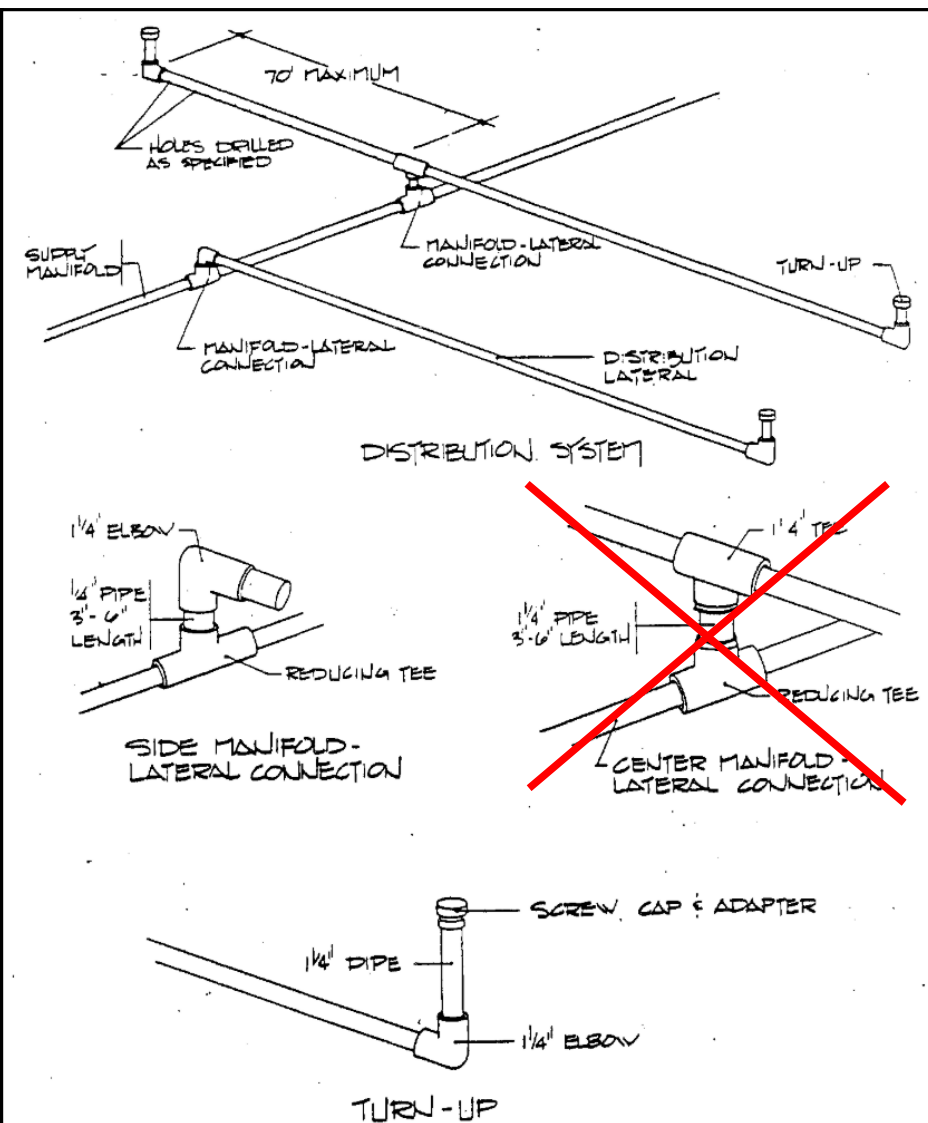
Soil

Suitable Soil

Limiting Zone



11/14/2025



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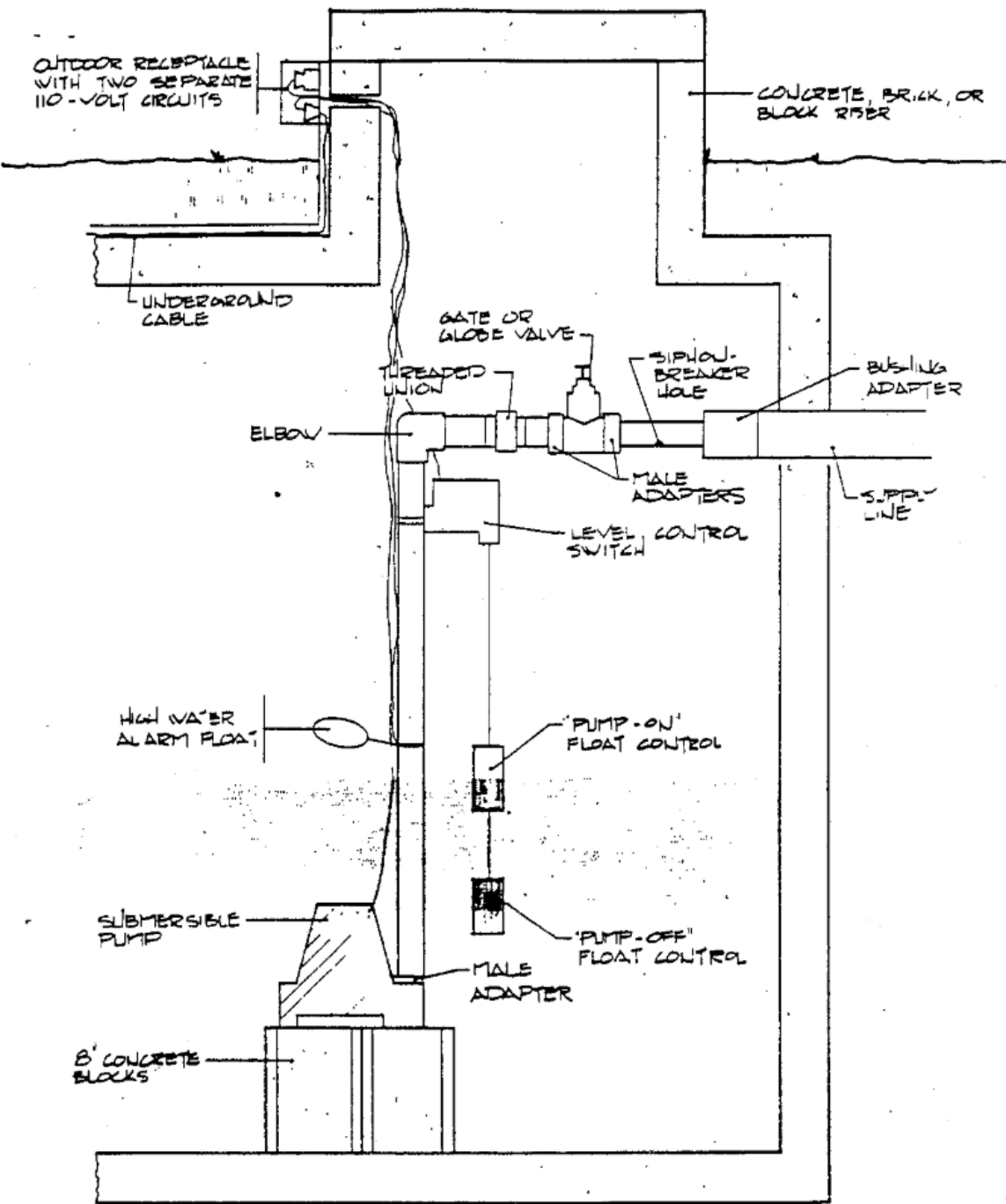
MOUND SYSTEM  
DETAILS

FILE 25531  
JBG  
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1" = 20'  
11/12/2025

C3.1



PUMPING CHAMBER SCHEMATIC



# PUMP STATION

## 500 GALLON FIBERGLASS

### LIFT STATION TANK

#### STRONG FIBERGLASS DESIGN

This 500 gallon fiberglass tank is designed to be directly buried outside of the home. This tank can be used for collection of wastewater that will then be pumped using a submersible sewage, effluent, or grinder pump.

#### DEFAULT TANK DIMENSIONS

- 70" Diameter x 67" Tall
- 500 Gallon Capacity
- 4" inlet hole with rubber grommet seal
- 2" or 1-1/2" outlet PVC hub (based on pump size)
- 47" from tank bottom to bottom of inlet
- 20" from tank access lid to bottom of inlet
- 49" from tank bottom to bottom of outlet
- 18" from tank access lid to bottom of outlet

Custom Inlet & Outlet Configurations Available  
Max Burial Depth: 3 ft Above Tank Dome



#### RISERS AND HEAVY DUTY COVERS AVAILABLE



(877)-925-5132  
www.septicsolutions.com



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FIRM # C-5206

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BUNNLEVEL, NC 28334

GROUND SYSTEM  
PUMPING CHAMBER

FILE 25531  
DRAWN JBG  
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DATE 11/12/2025  
JOB NO.

Liberty Pumps®

## LE70-Series

### Sewage Pumps

3/4 hp  
2" Solids-Handling



#### Models:

##### SINGLE PHASE

LE71M 115V, 12a, manual  
LE71A 115V, 12a, automatic  
LE72M 208-230V, 6a, manual  
LE72A 208-230V, 6a, automatic

##### 3-PHASE

LE73M 208-230V, 4.1a, manual\*  
LE74M 440-480V, 2.1a, manual\*

\*NOTE: 3-phase models require control panel for automatic operation. See sewage accessories literature for complete information on all Simplex and Duplex controls.

- Features:**
- Rugged 2 vane, semi-open cast iron impellers
  - Cast iron housings and volute with all stainless and brass fasteners
  - 416 stainless steel rotor shaft
    - Oil-filled, hermetically sealed motors
  - Built-in thermal protection on single phase models
  - 2" or 3" flanged discharge
  - Permanently lubricated upper and lower ball bearings
    - Unitized shaft seals
  - Single float mechanical level control with series plug for manual bypass operation—standard on single-phase automatic models
  - Adjustable pumping range
  - Quick-disconnect 10' standard power cord allows replacement of cord in seconds without breaking seals to motor (25' and 35' length optional)

innovate. evolve.

## LE70-SERIES TECHNICAL SPECIFICATIONS

**ALL MODELS: 3/4 HP, 1725 RPM**

### PUMP

The pump(s) shall be model LE71A2 as manufactured by Liberty Pumps, Bergen, N.Y. or equal. The pump(s) shall have a capacity of 42.5 GPM at a total dynamic head of 20 feet. Motor size shall be 3/4 horsepower, 1 phase, 60 hz. and 115 volt operation.

### MOTOR

The pump motor shall be of the submersible type, oil filled, and hermetically sealed. Single phase motors shall have thermal overload protection embedded in the windings, and shall automatically reset when motor cools. Three-phase motors shall have overloads incorporated into the control panel, properly sized for the horsepower and amperage of the pump(s).

The rotor shaft shall be made of 17-4 PH stainless steel and shall be supported by upper and lower ball bearings.

The power cord shall be of the quick-disconnect design.

The pump impeller shall be cast iron, 2 vane, semi-open, and shall be capable of passing a 2" spherical solid.

### SEAL

The shaft seal shall be of the carbon/ceramic unitized design, with BUNA N elastomers and stainless housings.

### EXTERNAL CONSTRUCTION

The pump volute, legs and motor housing shall be heavy gray iron castings, class 25 or better. All castings shall be powder coated before assembly.

All fasteners shall be of 300-series stainless steel.

### LEVEL CONTROL

The pump shall be controlled by an adjustable mechanical switch sealed in a PVC float, and shall have a series plug for manual bypass operation.

### IMPELLER

	MODELS	VOLTS	PHASE	AMPS	DISCHARGE	AUTOMATIC
SINGLE PHASE	LE71M2	115	1	12	2" FLANGED	NO
	LE71A2	115	1	12	2" FLANGED	YES
	LE72M2	208-230	1	6	2" FLANGED	NO
	LE72A2	208-230	1	6	2" FLANGED	YES
	LE71M3	115	1	12	3" FLANGED	NO
	LE71A3	115	1	12	3" FLANGED	YES
	LE72M3	208-230	1	6	3" FLANGED	NO
3-PHASE	LE72A3	208-230	1	6	3" FLANGED	YES
	LE73M2-2	208-230	3	4.1	2" FLANGED	NO
	LE74M2-2	440-480	3	2.1	2" FLANGED	NO
	LE73M3-2	208-230	3	4.1	3" FLANGED	NO
	LE74M3-2	440-480	3	2.1	3" FLANGED	NO

10' cord standard on single phase models. For 25' cord option, add a "-2" suffix to model number. Example: LE71A2-2  
For 35' cord option, add a "-3" suffix to model number. Example: LE71A2-3.

NOTE: 3-Phase models require panel for automatic operation. See sewage accessories literature for complete information on all simplex and duplex controls.

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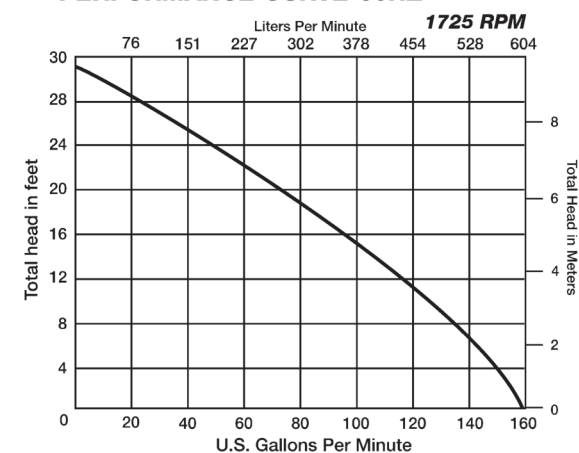
Weight: LE71M: 62 LBS.

Height: 18.9"

Major Width: 12.5"

Maximum fluid temperature 140° F.

### PERFORMANCE CURVE 60HZ



Dual Safety certification for the United States and Canada.



Specifications are subject to change without notice.

Liberty Pumps • 7000 Apple Tree Avenue • Bergen, New York 14416 • Phone 800-543-2550 Fax (585) 494-1839  
www.libertypumps.com

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FIRM # C-5206

PNTA ENGINEERING, PC

TIMOTHY SCOTT FAIRCLOTH PROPERTY  
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BUNNLEVEL, NC 28334

MOUND SYSTEM  
PUMP

FILE 25531

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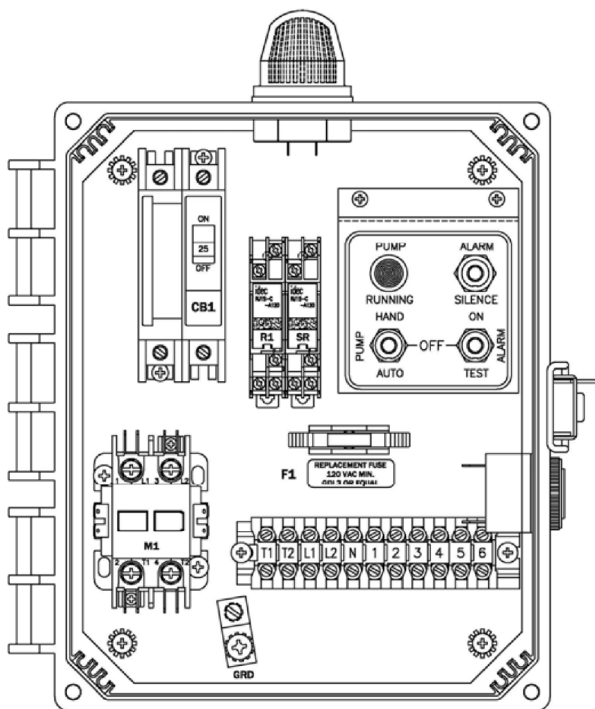


## CONTROL PANEL

### “50A006” Model Simplex 115/208/230V 1 Phase Control Panel

#### Features & Benefits

- Circuit Breakers for Pump Circuit
- Definite Purpose Contactor
- Easy to Access Terminal Block
- Usable with 115, 208 or 230 VAC
- Alarm Silence & On-Off-Test Switches
- Externally Mounted Audible Alarm
- Pump Hand-Off-Auto Switch
- Pump Running Light
- External Alarm Light
- Control Circuit Fuse Protection
- Ground Lugs
- Color Coded Internal Wiring
- Rugged Weather Resistant Hinged Poly Enclosure w/Sst Latch
- Built and Labeled to UL 508A Standard w/Nema 4x Rating
- Provided with Wiring Schematic and Detailed Connection Diagram for Installer
- Mounting Feet for Enclosure



(Standard 50A006 Shown)



#### Available Options(\*)

- Fiberglass Enclosure
- IEC Motor Contactor
- Flasher
- Dead Front Inner Door
- Auxiliary Alarm Contacts
- Elapsed Time Meter
- Event or Cycle Counter
- Mercury or Mechanical Float Switches for the Pumps and High Water Alarm Circuits

\*Note: Consult the factory for other available options. Also some options may require an increase in the enclosure size.

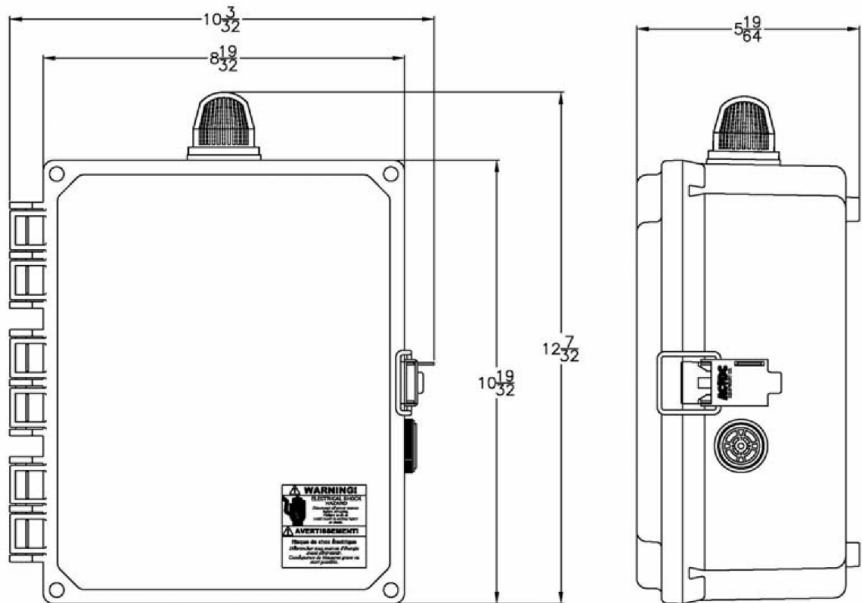
Septic Products, Inc. 1378 Twp Rd Ashland, Ohio 44805 Ph: (419)282-5933 Fax: (419)282-5943



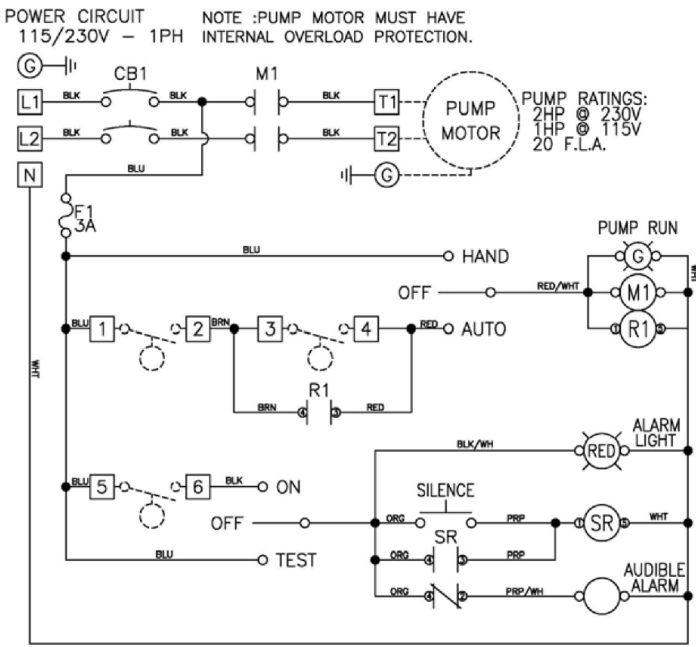
## CONTROL PANEL

### “50A006” Model Simplex 115/208/230V 1 Phase Control Panel

#### Panel Dimensions



#### Panel Schematic



Septic Products, Inc. 1378 Twp Rd 743 Ashland, Ohio 44805 Ph: (419)282-5933 Fax: (419)282-5943

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MOUND SYSTEM  
CONTROLS 1

FILE 25531  
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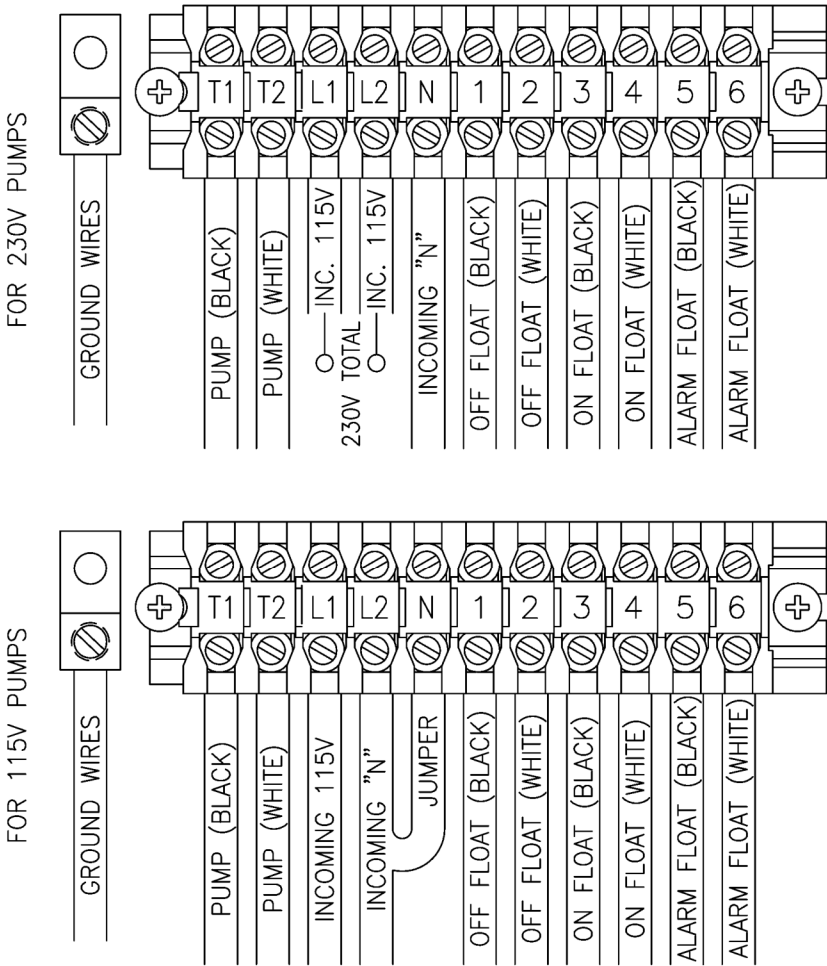


CONNECTION DIAGRAM

MODEL NO. SSC12B

PAGE 1

REQUIRED TORQUE FOR TERMINAL BLOCK SCREWS IS 16 in-lbs.



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CHANGES	TOLERANCES	DRAWN BY	DATE
F	DECIMALS .XXX = ±.005 .XX = ±.010	C. BARRICK	05/28/09
E	FRACTIONAL X/X = ±.1/64	MATERIAL SPECIFICATION:  AS NOTED	SCALE: PART NO. FULL 50A006
D	ANGLES X° = ±1/2°		
C			
B			
A			



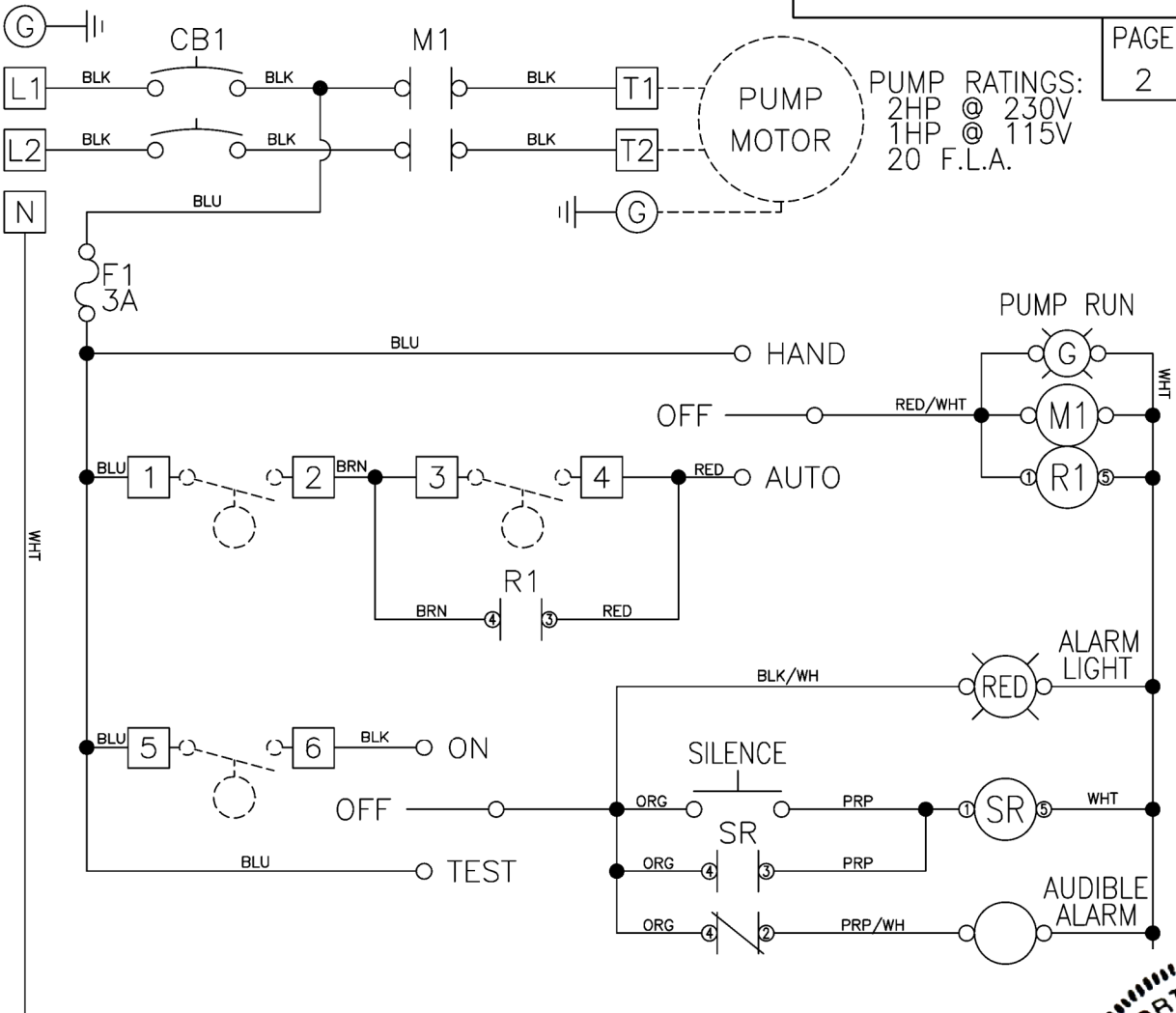
115/230V SIMPLEX  
TERMINAL CONNECTIONS

SCALE: PART NO.  
FULL 50A006

POWER CIRCUIT 115/230V – 1PH NOTE :PUMP MOTOR MUST HAVE  
INTERNAL OVERLOAD PROTECTION.

MODEL NO. SSC12B

PAGE 2



NOTES: FLOAT SWITCH TO BE RATED 2 AMP AT 120V MINIMUM.  
MAIN PANEL DISCONNECT MUST BE PROVIDED BY INSTALLER.  
DASHED LINES INDICATE ITEMS NOT CONTAIN IN THE PANEL.  
REQUIRED TORQUE FOR TERMINAL BLOCK SCREWS IS 16 in-lbs.  
FIELD WIRING MUST BE A MINIMUM OF 60°C COPPER WIRE.



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CHANGES	TOLERANCES	DRAWN BY	DATE
F	DECIMALS .XXX = ±.005 .XX = ±.010	C. BARRICK	09/21/2016
E	FRACTIONAL X/X = ±.1/64	MATERIAL SPECIFICATION:  AS NOTED	SCALE: PART NO. FULL 50A006
D	ANGLES X° = ±1/2°		
C			
B			
A			

SCHEMATIC, ELECTRICAL  
115/230V, SIMPLEX

SCALE: PART NO.  
FULL 50A006



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MOUND SYSTEM  
CONTROLS -2

25531  
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JBG  
NA  
NA  
11/12/2025  
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C3.5

THE ACTUAL INSTALLATION OF A MOUND SYSTEM IS STRAIGHTFORWARD AND CAN USUALLY BE DONE BY THREE OR FOUR PEOPLE IN TWO TO THREE DAYS.

- A BACKHOE IS RECOMMENDED FOR MOVING FILL AND GRAVEL TO THE MOUND AND FOR EXCAVATING FOR THE TWO TANKS. A TRANSIT OR LASER LEVEL IS RECOMMENDED TO KEEP THE MOUND LEVEL AS IT IS BUILT. OTHER TOOLS NEEDED FOR INSTALLATION ARE:

- ## SITE PREPARATION

AFTER THE LOCATION IS STAKED OUT AND THE SOIL IS DRY, THE SITE SHOULD BE CLEARED OF BRUSH AND TREES. LARGE TREES SHOULD BE CUT OFF RATHER THAN UPROOTED IN ORDER TO AVOID CREATING DEPRESSIONS AND DAMAGING THE SOIL-PORE NETWORK.

FILL, GRAVEL, AND TOPSOIL

GRAVEL IS PLACED ON THE DISTRIBUTION AREA (NOT THE SIDE SLOPES) USING EITHER A FRONT-END LOADER OR WHEELBARROWS. IF A FRONT-END LOADER IS USED, THE EASIEST METHOD IS TO COVER THE ENTIRE DISTRIBUTION AREA WITH FOUR INCHES OF GRAVEL. WHEN USING A WHEELBARROW, IT IS EASIER TO COVER THE STRIPS 18 INCHES WIDE WHERE THE DISTRIBUTION LATERALS WILL BE PLACED. IF THE FILL IS FINE TEXTURED AS A SANDY LOAM, A COURSE SAND MAY BE ADDED BETWEEN THE LATERAL AND GRAVEL. THE SAND WILL ACT AS A PRELIMINARY FILTER TO REDUCE EXCESSIVE CLOGGING OF THE UNDERLYING FILL.

WHEN A MOUND WITH A LARGE BASAL AREA IS BEING BUILT, IT IS OFTEN IMPOSSIBLE TO MOVE ALL THE MATERIAL INTO PLACE WITHOUT SOME TRAFFIC AROUND THE SIDE SLOPES. IF THIS IS THE CASE, THE MOUND CAN BE BUILT IN TWO STAGES, PROVIDED EXTREME CARE IS USED. FIRST, THE CORE OF THE MOUND IS BUILT UP WITH FILL, GRAVEL, AND TOPSOIL FOLLOWING THE INSTRUCTIONS ABOVE. THEN THE SOIL AROUND THE CORE IS TILLED AGAIN AND THE SIDE SLOPES ARE COMPLETED. IT IS IMPORTANT THAT TRAFFIC ON THE SIDE SLOPE AREA BE KEPT TO AN ABSOLUTE MINIMUM WHEN THE CORE IS BEING BUILT, AND THAT THIS PROCEDURE IS USED ONLY WHEN THE SOIL IS DRY AND RESISTANT TO STRUCTURAL DAMAGE.

THE TWO-COMPARTMENT SEPTIC TANK IS INSTALLED IN THE SAME WAY AS A CONVENTIONAL SYSTEM. WASTEWATER FROM THE HOUSE FLOWS DIRECTLY INTO THE LARGE COMPARTMENT OF THE TANK. THE PUMPING CHAMBER IS INSTALLED NEXT TO THE SEPTIC TANK, BUT ITS DIRECTION MUST BE REVERSED SO THAT THE TEE END BECOMES THE INLET END ADJACENT TO THE SEPTIC TANK. THE LOWER INVERT OF THE TEE END ENSURES PROPERTY GRAVITY FLOW FROM THE SEPTIC TANK OUTLET INTO THE PUMPING CHAMBER. THE TANKS ARE CONNECTED WITH AN APPROPRIATE LENGTH OF SOLID, FOUR-INCH PVC PIPE. INLET AND OUTLET OPENINGS AROUND THE PIPE MUST BE SEALED WITH MORTAR. ALWAYS FOLLOW THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE TANKS.

IF A MOUND IS INSTALLED TO REPLACE A CONVENTION SEPTIC SYSTEM, ONLY ONE ADDITIONAL TANK (THE PUMP CHAMBER) MUST BE INSTALLED. HOWEVER, THE EXISTING SEPTIC TANK MUST BE PUMPED OUT BEFORE INSTALLING THE MOUND.

THE SUPPLY MANIFOLD CONVEYS EFFLUENT FROM THE PUMP TO THE DISTRIBUTION LATERALS. ANY EFFLUENT REMAINING IN THE LATERAL LINES WHEN THE PUMP SHUTS OFF SHOULD DRAIN BACK TO THE PUMPING CHAMBER THROUGH THE SUPPLY MANIFOLD (UNLESS THE SYSTEM IS LARGE ENOUGH TO REQUIRE A CHECK VALVE). THE MANIFOLD JOINS EACH LATERAL THROUGH A SHORT RISER-PIPE CONNECTING A REDUCING TEE ON THE MANIFOLD TO A 1¼-INCH ELBOW OR TEE ON THE LATERAL. THIS ASSEMBLY PLACES EACH LATERAL A FEW INCHES HIGHER THAN THE SUPPLY MANIFOLD AND HELPS MAINTAIN UNIFORM DISTRIBUTION AMONG THE LATERALS. THE INDIVIDUAL RISER UNITS MAY BE ASSEMBLED EARLIER AND GLUED IN PLACE AFTER THE MANIFOLD IS CUT INTO SEGMENTS BETWEEN THE LATERALS.

THE LATERAL LINES ARE ASSEMBLED ON THE DISTRIBUTION AREA. THE 1 ¼-INCH PVC PIPES SHOULD BE LAID OUT AND CUT TO PROPER LENGTHS FOR THE LATERAL LINES. HOLES ARE DRILLED (IN A STRAIGHT LINE) ACCORDING TO THE DESIGN SPECIFICATIONS AFTER THE LATERALS HAVE BEEN CUT TO THEIR PROPER LENGTH. THE FIRST HOLE IN EACH LATERAL SHOULD BE DRILLED TWO TO THREE FEET FROM THE MANIFOLD; THE LAST HOLE SHOULD BE DRILLED TWO TO THREE FEET FROM THE END OF THE LATERAL. HOLES ARE ONLY DRILLED THROUGH ONE SIDE OF THE PIPE. IF THE DRILL BIT SHOULD GO THROUGH BOTH SIDES, OR IF A HOLE IS DRILLED IN THE WRONG PLACE, IT CAN BE SEALED BY WRAPPING WITH DUCT TAPE. LATERAL PIPES ARE PLACED WITH HOLES DOWN ON THE GRAVEL. A SHORT TURN-UP WITH A CAPPED END IS AT THE END OF EACH LATERAL. THE CAPPED END MUST BE BROUGHT UP ABOVE OR FLUSH WITH THE FINAL GRADE. THE TURN-UP MAY BE PLACED INSIDE A SHORT LENGTH OF FOUR-INCH OR SIX-INCH PVC PIPE TO PROTECT IT FROM LAWNMOWER DAMAGE, WHILE STILL PROVIDING EASY ACCESS. WHEN INSTALLING EACH LATERAL, CARE MUST BE TAKEN TO ENSURE THAT THE HOLES ARE ORIENTED DOWNWARD, AND THE TURN-UP POINTED UPWARD BEFORE THE QUICK-DRYING PVC GLUE HARDENS. AFTER THE LATERAL LINES ARE PLACED AND LEVELED, THEY ARE COVERED WITH GRAVEL, FABRIC, AND TOPSOIL AS DESCRIBED EARLIER.

THE PUMP MUST BE PLACED ON TWO CONCRETE BLOCKS SET NEXT TO EACH OTHER ON THE BOTTOM OF THE TANK. THIS PREVENTS THE PUMPING OF ANY SOLID PARTICLES WHICH CAN CLOG THE MOUND SYSTEM. A PIECE OF NYLON ROPE OR OTHER CORROSION-RESISTANT MATERIAL SHOULD BE ATTACHED TO THE PUMP AND TO THE OUTLET PIPE FOR LIFTING THE PUMP IN AND OUT OF THE CHAMBER. THE PVC OUTLET PIPE IS TOO FRAGILE TO SUPPORT THE PUMP.

THE OUTLET PIPE SHOULD BE CONNECTED TO THE SUPPLY MANIFOLD WITH A THREADED PVC UNION TO ALLOW QUICK REMOVAL. THE GATE OR GLOBE VALVE MUST ALSO BE INSTALLED IN THE SUPPLY LINE (WITHIN THE PUMP CHAMBER) TO ALLOW FINAL ADJUSTMENT OF THE PRESSURE. IF EFFLUENT WILL BE PUMPED DOWNHILL, A ¼-INCH SIPHON-BREAKER HOLE MUST BE DRILLED IN THE BOTTOM OF SUPPLY LINE BEFORE IT LEAVES THE PUMP TANK. THIS BREAKS ANY VACUUM IN THE SYSTEM AND PREVENTS THE INADVERTENT SIPHONING OF THE EFFLUENT OUT OF THE TANK.

THE PUMP AND HIGH-WATER ALARM MUST BE PLACED ON SEPARATE ELECTRICAL CIRCUITS. IF THE PUMP CIRCUIT FAILS, THE ALARM MUST STILL BE ABLE TO OPERATE. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROPER FUSES OR CIRCUIT BREAKERS.

ALL ELECTRICAL CONNECTIONS MUST BE MADE OUTSIDE THE PUMPING CHAMBER. POWER CORDS FROM THE PUMP AND CONTROLS SHOULD BE PLUGGED INTO A NEMA-APPROVED OUTDOOR RECEPTACLE MOUNTED OUTSIDE OF THE PUMPING CHAMBER. THE RECEPTACLE MUST NOT BE LOCATED INSIDE THE PUMPING CHAMBER DUE TO CORROSIVE AND EXPLOSIVE GASES THAT MAY FORM FROM THE SEWAGE.

ELECTRICAL CONNECTIONS MAY BE MADE INSIDE THE PUMPING TANK ONLY IF WIRED INSIDE A SEALED, WATER-TIGHT BOX. SOME LEVEL-CONTROL SWITCHES HAVE SUCH A BOX BUILT INTO THE HOUSING BUT ARE MORE EXPENSIVE THAN THE PLUG-IN DEVICES.

WIRING BETWEEN THE PUMPING CHAMBER AND THE HOUSE SHOULD MEET STATE AND LOCAL CODE REQUIREMENTS. A LIGHTNING ARRESTOR IS RECOMMENDED TO PROTECT THE PUMP AND CONTROLS FORM ELECTRICAL SURGES.



PROPER OPERATION CHECK

AFTER ALL COMPONENTS HAVE BEEN INSTALLED AND CONNECTED, THE SYSTEM SHOULD BE CHECKED FOR PROPER OPERATION. WITH ELECTRICAL POWER TURNED OFF, FILL THE PUMPING CHAMBER WITH WATER UNTIL THE LIQUID RISES TO THE LEVEL OF THE HIGH-WATER ALARM FLOAT.

TURN ON THE ELECTRICAL POWER. THE ALARM LIGHT SHOULD GO ON IN THE HOUSE, AND THE PUMP SHOULD START OPERATING. THE ALARM LIGHT SHOULD GO OFF WHEN THE LIQUID LEVEL FALLS BELOW THE HIGH-WATER FLOAT. THE PUMP SHOULD TURN OFF WHEN THE LIQUID REACHES THE LOWEST FLOAT CONTROL. BE SURE THE PUMP IS STILL COMPLETELY SUBMERGED.

PRESSURE HEAD ADJUSTMENT

THE PRESSURE HEAD MUST BE ADJUSTED TO MATCH THE SPECIFIED DESIGN PRESSURE. THE PRESSURE HEAD IS MEASURED AS THE HEIGHT LIQUID WILL RISE ABOVE THE TURN-UP ELBOW WHEN THE PUMP IS RUNNING. TO ADJUST THE HEAD, GLUE A FOUR-FOOT LENGTH OF PIPE (PREFERABLY CLEAR) TO A THREADED ADAPTER THAT WILL SCREW ONTO THE TURN-UP ADAPTER. THEN TURN THE POWER ON TO ALLOW LIQUID TO RISE IN THE PIPE AND ADJUST THE GATE OR GLOVE VALVE IN THE PUMPING TANK UNTIL THE EFFLUENT REACHES THE DESIRED HEIGHT IN THE PIPE. REMEMBER TO INCLUDE THE DISTANCE BELOW THE MOUND SURFACE TO THE LATERAL LINE WHEN MEASURING HEIGHT. ALTERNATIVELY, A PRESSURE GAUGE CAN BE FITTED TO THE TURN-UP ADAPTER, AND THE PRESSURE CAN BE ADJUSTED TO THE SPECIFIED PARAMETER.

FINAL LANDSCAPING

AFTER THE MOUND SYSTEM IS INSTALLED, THE FOLLOWING SHOULD BE CHECKED TO ENSURE THE SYSTEM WILL NOT BE OVERLOADED WITH EXCESS RAINWATER AND RUNOFF:

- THE MOUND IS LEVEL AND FREE OF LOW AREAS.
  - CURTAIN DRAINS, GRASSY SWALES OR DITCHES FOR DIVERTING GROUND AND SURFACE WATER ARE PROPERLY INSTALLED.
  - GUTTER AND DOWNSPOUT DRAINS ARE DIRECTED AWAY FROM THE SYSTEM.

ANY PROBLEMS SHOULD BE CORRECTED BEFORE APPROVING THE SYSTEM. FINALLY, THE ENTIRE AREA MUST BE PLANTED WITH GRASS IN ORDER TO PREVENT EROSION. THE MOUND SHOULD BE LIMED AND FERTILIZED IN ACCORDANCE WITH THE SOIL TEST RESULTS. AFTER APPLYING AN APPROPRIATE GRASS SEED, THE AREA SHOULD BE HEAVILY MULCHED WITH STRAW OR OTHER SUITABLE MATERIALS.

INSPECTION AND MAINTENANCE

INSTALLATION INSPECTION

THE SUCCESSFUL PERFORMANCE OF A MOUND RELIES ON PROPER DESIGN AND INSTALLATION. THE DETAILS FOR A GIVEN SYSTEM, FROM SITE PREPARATION TO FINAL LANDSCAPING, SHOULD BE CAREFULLY SPECIFIED ON THE IMPROVEMENTS PERMIT. THIS HELPS CLARIFY THE RESPONSIBILITIES OF THE PROPERTY OWNER, CONTRACTOR, AND PERMITTING AGENCY AND HELPS AVOID LAST-MINUTE SURPRISES WHEN ISSUING A CERTIFICATE OF COMPLETION. A CHECKLIST SHOULD BE COMPLETED AND FILED EACH TIME A SYSTEM IS INSTALLED TO ENSURE COMPLETION OF THE REQUIREMENTS.

ROUTINE MAINTENANCE

ALL SEPTIC TANKS, WHETHER CONVENTIONAL OR ALTERNATIVE SYSTEMS, REQUIRE OCCASIONAL PUMPING. SLUDGE AND SCUM ACCUMULATION SHOULD BE CHECKED ANNUALLY. VIRTUALLY ALL SOLIDS WILL BE RETAINED IN THE FIRST COMPARTMENT OF THE TWO-COMPARTMENT TANK. LITTLE TO NO ACCUMULATION SHOULD OCCUR IN EITHER THE SECOND COMPARTMENT OF THE SEPTIC TANK OR IN THE PUMPING CHAMBER. THE RATE OF SLUDGE ACCUMULATION WILL VARY WITH INDIVIDUAL LIVING HABITS. MOST SEPTIC TANKS REQUIRE PUMPING ABOUT ONCE EVERY FOUR YEARS.

SOME MOUND SYSTEMS MAY GRADUALLY ACCUMULATE SOLIDS AT THE ENDS OF THE LATERAL LINES. THESE SHOULD BE REMOVED AT LEAST ONCE A YEAR BY UNSCREWING THE CAPS ON EACH OF THE TURN-UPS AND BACK FLUSHING THE LATERALS WITH A GARDEN HOSE.

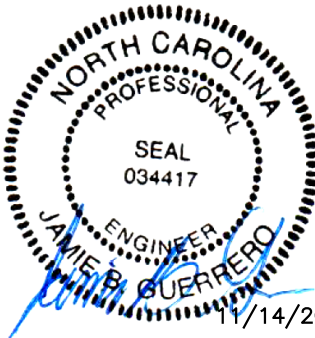
PRESSURE HEAD IN THE LATERALS SHOULD ALSO BE CHECKED AND ADJUSTED ONE MONTH AFTER INSTALLATION AND ANNUALLY THEREAFTER. PROPER PUMP AND FLOAT CONTROL OPERATION SHOULD BE CHECKED DURING ALL ROUTINE INSPECTIONS. IF THE ALARM PANEL HAS A "PUSH-TO-TEST" BUTTON, IT SHOULD BE CHECKED REGULARLY. PUMP MAINTENANCE SHOULD FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.

REPAIR PROCEDURE

THE ALARM LIGHT SHOULD GO ON WHENEVER EFFLUENT IN THE PUMP CHAMBER RISES ABOVE THE PUMP-ON LEVEL CONTROL. THIS CAN OCCUR FOR SEVERAL REASONS:

- POWER FAILURE – IF THERE HAS BEEN A POWER FAILURE, EFFLUENT WILL CONTINUE TO ACCUMULATE IN THE TANK UNTIL POWER IS RESTORED. AT THIS TIME THE ALARM MAY COME ON FOR A BRIEF PERIOD (LESS THAN 30 MINUTES), BUT WILL GO OFF AS SOON AS THE PUMP DRAWS DOWN THE EFFLUENT.
- PUMP OR SWITCH FAILURE – IF THE PUMP OR LEVEL CONTROLS MALFUNCTION, THEY CAN BE QUICKLY REPLACED BY UNSCREWING THE PVC UNION AND LIFTING THE ENTIRE ASSEMBLY OUT OF THE PUMP CHAMBER (USE THE NYLON LIFT ROPE). BE SURE TO TURN OFF POWER SUPPLY AND DISCONNECT ALL CORDS BEFORE REMOVING OR REPLACING THE PUMP OR CONTROL ASSEMBLY.
- CLOGGED VALVE OR DISCHARGE HOLES – IF THE DISTRIBUTION SYSTEM BECOMES CLOGGED, THE TANK WILL NOT BE EMPTIED. BACKFLUSH THE LATERALS AND SUPPLY MANIFOLD IF NECESSARY.

BEFORE REPLACING ANY COMPONENTS, MAKE SURE THAT THE LEVEL CONTROLS HAVE NOT SIMPLY BECOME TANGLED. THE PROBLEM CAN USUALLY BE ISOLATED BY CHECKING THE PUMP OPERATION INDEPENDENTLY FROM THE CONTROLS. REPAIR OR REPLACE THE APPROPRIATE COMPONENTS.



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MOUND SYSTEM  
NOTES - 2

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