FILE NUMBER: 7810B Lw004 Revised On: August 31, 2007 APPLICATION NUMBER: 3627

SEPTIC FEE: 200.00 DATE: 6/24/08 2C

MECKLENBURG COUNTY GROUNDWATER & WASTEWATER SERVICES
APPLICATION FOR A RESIDENTIAL SITE IMPROVEMENT PERMIT/ CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER SYSTEM, NEW WELL INSTALLATION, OR REPAIR OF EXISTING WELL

WELL FEE: _____ DATE: _____

1. SEPTIC / TYPE APPLICATION: ☐ NONE ☑ NEW SYSTEM ☐ ALTERATION ☐ REPAIR ☐ MODIFIED PLOT PLAN

2. WELL / TYPE APPLICATION: ☐ NONE ☐ NEW WELL ☐ MAJOR REPAIR ☐ ABANDONMENT

3. JOB LOCATION INFORMATION:
TAX PARCEL NUMBER: 19502201
STREET ADDRESS: 13103 Belle Grove Manor Ln
CITY: Mint Hill
STATE: NC ZIP: 28227
SUBDIVISION NAME: Belle Grove Manor
LOT #: 1 LOT SIZE (acres): 0.69
TOWNSHIP:
☐ 0-MECKLENBURG ☐ 3-CORNELIUS ☐ 6-HUNTERSVILLE
☐ 1-CHARLOTTE ☐ 4-PINEVILLE ☑ 7-MINT HILL
☐ 2-DAVIDSON ☐ 5-MATTHEWS

4. BUILDING INFORMATION:
BUILDING TYPE:
☐ SINGLE MOBILE HOME ☐ MODULAR HOME
☐ DOUBLE WIDE ☐ MULTIPLE FAMILY
☑ HOUSE ☐ OTHER _____
HEATED SQUARE FOOTAGE: 4,000
NUMBER OF BEDROOMS: 4
NUMBER OF OCCUPANTS:
FOUNDATION TYPE:
☐ CONCRETE SLAB ☐ BASEMENT WITH PLUMBING
☑ CRAWL SPACE ☐ BASMENT WITH NO PLUMBING

5. IF PLANNING TO EXPAND OR ALTER THE EXISTING SYSTEM PLEASE COMPLETE THE FOLLOWING SECTION: ☐ N/A
NUMBER OF BEDROOMS TO BE ADDED: _____ NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE: _____

6. WATER SUPPLY: ☑ MUNICIPAL ☐ PUBLIC WELL ☐ PRIVATE WELL ☐ SHARED WELL ☐ SPRING

7. PROPOSED USE OF WELL: ☐ N/A ☐ IRRIGATION ☐ POTABLE ☐ GEOTHERMAL ☐ OTHER

8. PLEASE INDICATE AND RANK DESIRED SEPTIC SYSTEM TYPE(S) IN ORDER OF PREFERENCE *(1-MOST DESIRED 5-LEAST DESIRED)*:

8A. RANK: ☑ ANY TYPE ____ ☐ CONVENTIONAL ____ ☐ ACCEPTED ____ ☐ INNOVATIVE ____ ☐ ALTERNATIVE ____ ☐ OTHER ____

9. DO ANY OF THE FOLLOWING APPLY TO THE PROPERTY IN QUESTION? IF "YES" PLEASE ATTACH SUPPORTING DOCUMENTATION.

BURIED CABLES, LANDFILLS, STUMPHOLES	☐ YES	☑ NO	GRADING/SOIL REMOVAL PERFORMED	☐ YES	☑ NO
EXISTING WASTEWATER (SEPTIC) SYSTEMS	☐ YES	☑ NO	JURISDICTIONAL WETLANDS	☐ YES	☑ NO
WELLS, SPRINGS, OR WATER LINES	☐ YES	☑ NO	APPROVAL REQUIRED BY ANY OTHER PUBLIC AGENCY	☐ YES	☑ NO
EASEMENTS OR RIGHT-OF-WAYS	☑ YES	☐ NO	WASTEWATER OTHER THAN DOMESTIC SEWAGE	☐ YES	☑ NO

10. PROPERTY OWNER:
NAME: Nottaway Plantation LLC
ADDRESS: 8041 Corporate Center Dr Suite 200
CITY: Charlotte
STATE: NC ZIP: 28226
HOME PHONE: N/A WORK PHONE: 704 540 4706
MOBILE PHONE: 704 578-7801 FAX: 704 540 4708

11. OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:
NAME:
ADDRESS:
CITY:
STATE: ZIP:
HOME PHONE: WORK PHONE:
MOBILE PHONE: FAX:

12. WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? _____
13 WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? _____

14. SEPTIC SYSTEM PERMIT APPLICATION SIGNATURE SECTION:
If the information in this application is falsified, changed, or the site is altered, then the Improvement Permit and Authorization to Construct shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for either 60 months or is non-expiring depending upon the documentation submitted: complete site plan = 60 months, complete plat = non-expiring.

Property Owner's or Owner's Legal Representative Signature 6.23.08 Date

15. WELL PERMIT APPLICATION SIGNATURE SECTION:
If the information in this application is falsified, changed, or the site is altered, then the Well Permit shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for a period of 12 months from the date of issuance.

Property Owner's or Owner's Legal Representative Signature Date

☐ SURVEY PLAT TO SCALE SUBMITTED ☒ SCALED SITE PLAN SUBMITTED ☐ UN-SCALED SITE PLAN SUBMITTED

MECKLENBURG COUNTY-GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST., SUITE 211, CHARLOTTE, NC 28202 PHONE: (704) 336-5103 FAX: (704) 336-6894

2008007804 MAP BOOK 49 PAGE 703

Approved in accordance with the provisions of the Subdivision Ordinance of the Town of Mint Hill, North Carolina.

MINT HILL PLANNING BOARD
William A. Long
Planning Board Chairman
Date

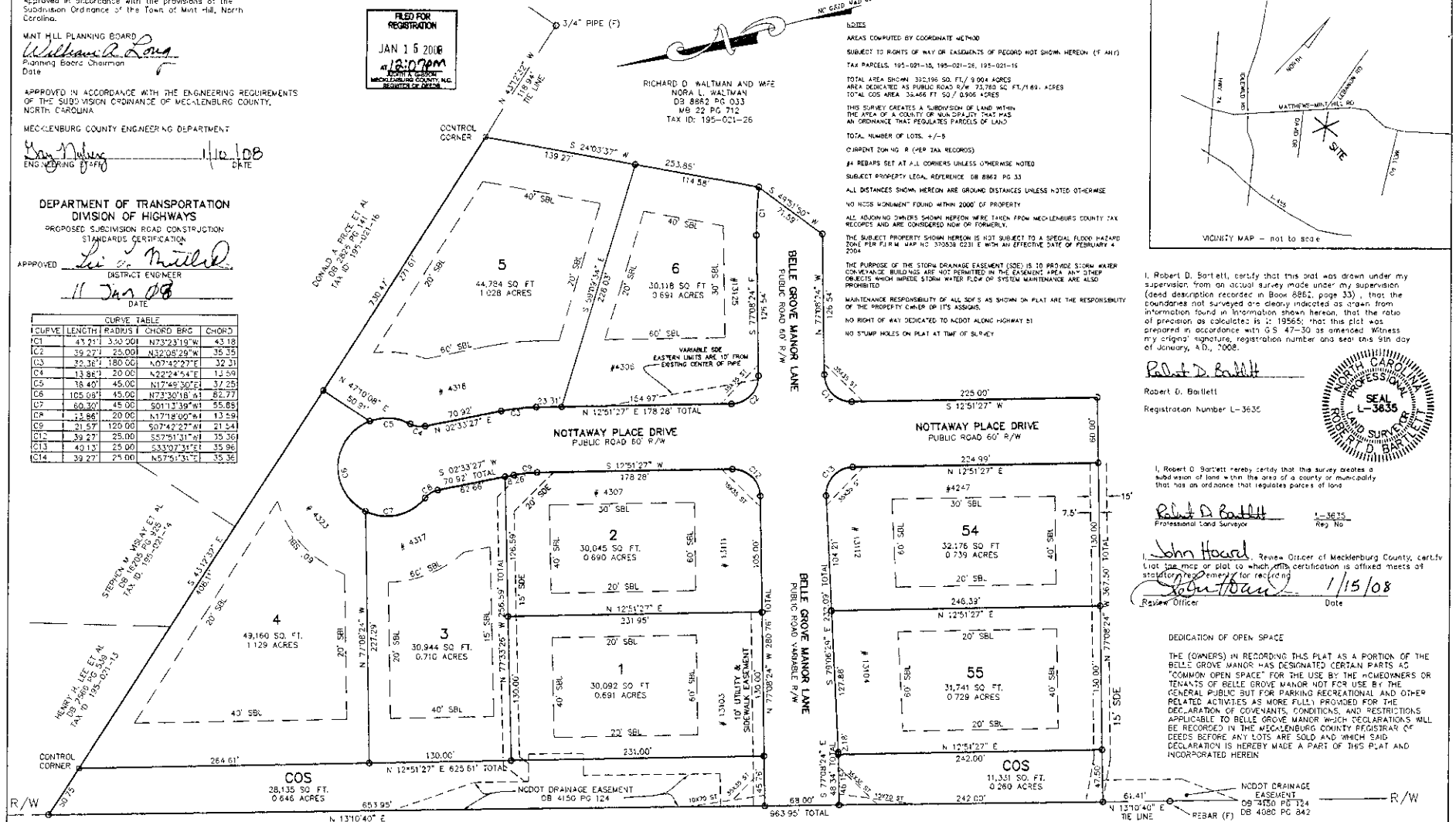
APPROVED IN ACCORDANCE WITH THE ENGINEERING REQUIREMENTS OF THE SUBDIVISION ORDINANCE OF MECKLENBURG COUNTY, NORTH CAROLINA

MECKLENBURG COUNTY ENGINEERING DEPARTMENT
Dan Nelms 1/16/08
ENGINEERING STAFF DATE

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED SUBDIVISION ROAD CONSTRUCTION STANDARDS CERTIFICATION
APPROVED Lisa S. Mullis
DISTRICT ENGINEER
11 Jan 08
DATE

FILED FOR REGISTRATION
JAN 15 2008
at 12:07pm
JUDITH A. GIBSON
MECKLENBURG COUNTY, N.C.
REGISTER OF DEEDS

CURVE TABLE				
CURVE	LENGTH	RADIUS	CHORD BRG	CHORD
C1	47.25'	30.00'	N73°23'19"W	42.18
C2	39.27'	25.00'	N32°08'29"W	35.35
C3	32.36'	180.00'	N07°42'27"E	32.31
C4	13.86'	20.00'	N22°24'54"E	13.59
C5	18.40'	45.00'	N17°49'30"E	37.25
C6	105.08'	45.00'	N73°30'18"W	82.77
C7	60.30'	45.00'	S01°13'39"W	55.85
C8	13.86'	20.00'	N17°18'00"W	13.59
C9	21.57'	120.00'	S07°42'27"W	21.54
C12	39.27'	25.00'	S57°51'31"W	35.36
C13	49.13'	25.00'	S33°07'31"E	35.96
C14	39.27'	25.00'	N57°51'31"E	35.36



NOTES

AREAS COMPUTED BY COORDINATE METHOD

SUBJECT TO RIGHTS OF WAY OR EASEMENTS OF RECORD NOT SHOWN HEREON (IF ANY)

TAX PARCELS: 195-021-18, 195-021-26, 195-021-16

TOTAL AREA SHOWN 392,196 SQ. FT./ 9.004 ACRES
AREA DEDICATED AS PUBLIC ROAD R/W 73,780 SQ. FT./1.69 ACRES
TOTAL COS AREA 39,466 FT SQ./ 0.906 ACRES

THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND

TOTAL NUMBER OF LOTS: +/-8

CURRENT ZONING R (PER TAX RECORDS)

#4 REBARS SET AT ALL CORNERS UNLESS OTHERWISE NOTED

SUBJECT PROPERTY LEGAL REFERENCE DB 8862 PG 33

ALL DISTANCES SHOWN HEREON ARE GROUND DISTANCES UNLESS NOTED OTHERWISE

NO NCGS MONUMENT FOUND WITHIN 2000' OF PROPERTY

ALL ADJOINING OWNERS SHOWN HEREON WERE TAKEN FROM MECKLENBURG COUNTY TAX RECORDS AND ARE CONSIDERED NOW OR FORMERLY.

THE SUBJECT PROPERTY SHOWN HEREON IS NOT SUBJECT TO A SPECIAL FLOOD HAZARD ZONE PER F.I.R.M. MAP NO. 3706382231 E WITH AN EFFECTIVE DATE OF FEBRUARY 4, 2004

THE PURPOSE OF THE STORM DRAINAGE EASEMENT (SDE) IS TO PROVIDE STORM WATER CONVEYANCE. BUILDINGS ARE NOT PERMITTED IN THE EASEMENT AREA. ANY OTHER OBJECTS WHICH IMPEDE STORM WATER FLOW OF SYSTEM MAINTENANCE ARE ALSO PROHIBITED

MAINTENANCE RESPONSIBILITY OF ALL SDE'S AS SHOWN ON PLAT ARE THE RESPONSIBILITY OF THE PROPERTY OWNER OR ITS ASSIGNS.

NO RIGHT OF WAY DEDICATED TO NCDOT ALONG HIGHWAY 51

NO STUMP HOLES ON PLAT AT TIME OF SURVEY

I, Robert D. Bartlett, certify that this plat was drawn under my supervision from an actual survey made under my supervision (deed description recorded in Book 8862, page 33); that the boundaries not surveyed are clearly indicated as drawn from information found in information shown hereon; that the ratio of precision as calculated is 1: 19565; that this plat was prepared in accordance with G.S. 47-30 as amended. Witness my original signature, registration number and seal this 9th day of January, A.D., 2008.

Robert D. Bartlett

Robert D. Bartlett

Registration Number L-3635

NORTH CAROLINA PROFESSIONAL SEAL L-3635 LAND SURVEYOR ROBERT D. BARTLETT

I, Robert D. Bartlett hereby certify that this survey creates a subdivision of land within the area of a county or municipality that has an ordinance that regulates parcels of land

Robert D. Bartlett — L-3635
Professional Land Surveyor — Reg. No

I, John Hoard, Review Officer of Mecklenburg County, certify that the map or plat to which this certification is affixed meets all statutory requirements for recording.

John Hoard 1/15/08
Review Officer — Date

DEDICATION OF OPEN SPACE

THE (OWNERS) IN RECORDING THIS PLAT AS A PORTION OF THE BELLE GROVE MANOR HAS DESIGNATED CERTAIN PARTS AS "COMMON OPEN SPACE" FOR THE USE BY THE HOMEOWNERS OR TENANTS OF BELLE GROVE MANOR NOT FOR USE BY THE GENERAL PUBLIC BUT FOR PARKING RECREATIONAL AND OTHER RELATED ACTIVITIES AS MORE FULLY PROVIDED FOR THE DECLARATION OF COVENANTS, CONDITIONS, AND RESTRICTIONS APPLICABLE TO BELLE GROVE MANOR WHICH DECLARATIONS WILL BE RECORDED IN THE MECKLENBURG COUNTY REGISTRAR OF DEEDS BEFORE ANY LOTS ARE SOLD AND WHICH SAID DECLARATION IS HEREBY MADE A PART OF THIS PLAT AND INCORPORATED HEREIN

MATTHEWS MINT HILL ROAD
NC HIGHWAY 51
100' PUBLIC ROAD R/W
NCDOT PROJ. NO. 8.1647904

NCDOT RIGHT OF WAY
(FEE SIMPLE)
DB 4150 PG 124

CERTIFIED TO BE A TRUE AND CORRECT COPY OF THE ORIGINAL MAP RECORDED IN BOOK 49 PAGE 703
DATE: January 15 2008
JUDITH A. GIBSON REGISTER OF DEEDS
BY Juanita Byum DEPUTY

JUDITH A. GIBSON REGISTER OF DEEDS MECKLENBURG COUNTY, N.C.

GRAPHIC SCALE
60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

LEGEND

EIP	=	EXISTING IRON	℄	=	CENTERLINE
R/W	=	RIGHT OF WAY	DB	=	DEED BOOK
SBL	=	SETBACK LINE	PG	=	PAGE
SY	=	SIDE YARD	▭	=	CONCRETE MONUMENT
RY	=	REAR YARD	NTS	=	NOT TO SCALE
UE	=	UTILITY EASEMENT	ST	=	SIGHT TRIANGLE
SSE	=	SANITARY SEWER EASEMENT	COS	=	COMMON OPEN SPACE
PSDE	=	PUBLIC STORM DRAINAGE EASEMENT	# XXXX	=	ADDRESS

OWNER
NOTTAWAY PLANTATION, LLC
8041 CORPORATE CENTER DRIVE
SUITE 200
CHARLOTTE, NC 28226

REVISIONS		
NO.	DATE	REMARKS

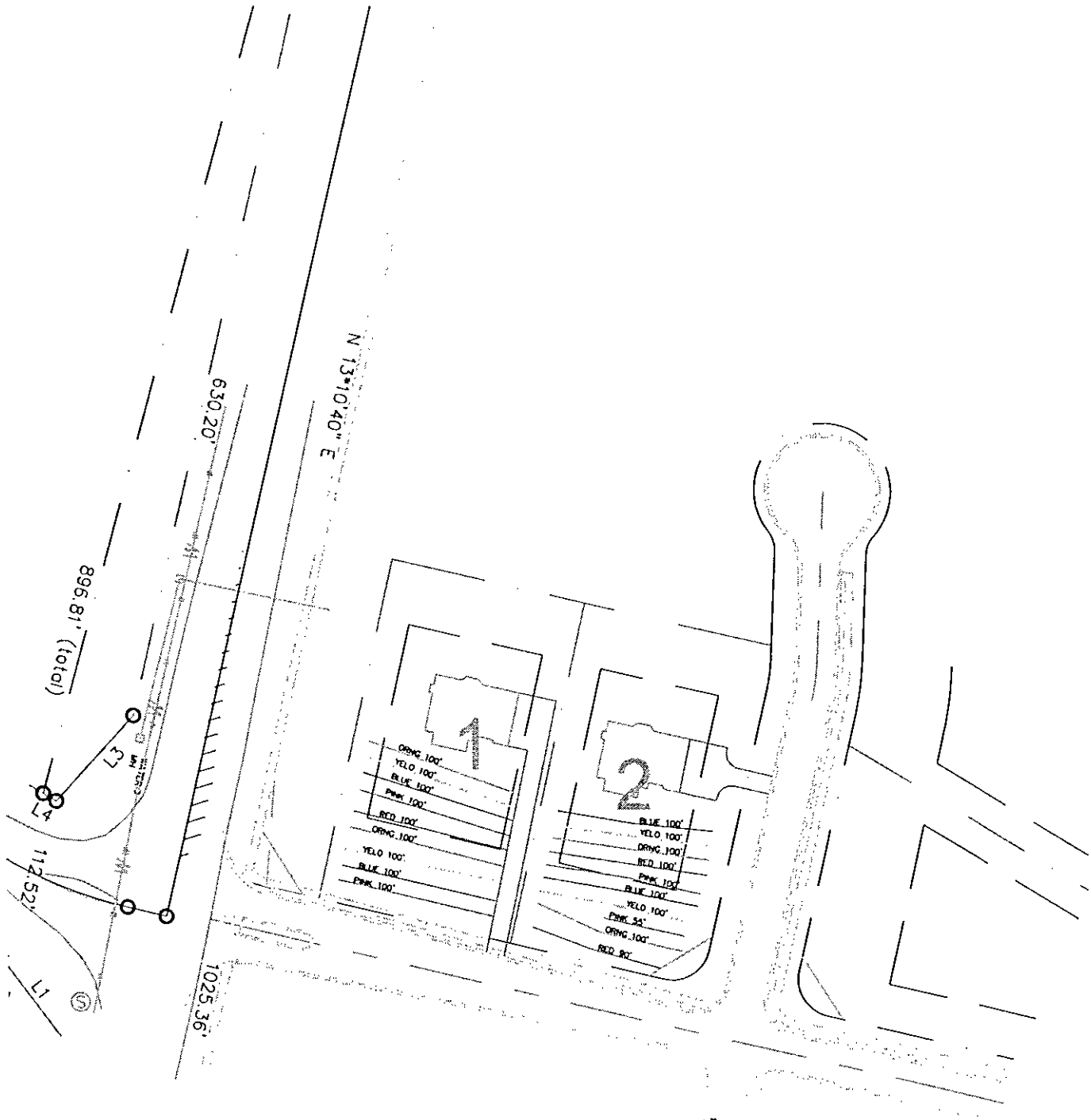
INSITE Engineering & Surveying
8041 Corporate Center Drive
Suite 200
Charlotte, NC 28226
Phone: (704) 540-4706
Fax: (704) 540-4708

RECORD MAP SHOWING BELLE GROVE MANOR PHASE 1, MAP 1 TOWN OF MINT HILL MECKLENBURG COUNTY, NORTH CAROLINA

DATE	January 9, 2008
TECHNICIAN	MFE
CHECKED BY	RDB
SCALE	1" = 60'
PROJECT NO	
DRAWING TITLE:	NOTTAWAY MAPLINE
SHEET NO. 1 OF 1	

78108

7810B


N 13°10'40" E
630.20'
898.81' (totol)
L3
L4
L7
L1
1025.36'
1
2
ORNG 100'
YELO 100'
BLUE 100'
PINK 100'
RED 100'
ORNG 100'
YELO 100'
BLUE 100'
PINK 100'
BLUE 100'
YELO 100'
ORNG 100'
RED 100'
PINK 100'
BLUE 100'
YELO 100'
PINK 54'
ORNG 100'
RED 90'

1" = 100'

Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

Sheet: 1 of 2
Property ID: 195-022-01
Lot #: 1
File #: 7810B
AppID: 3627

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: Nottaway Plantation LLC
Applicant:
Address: 8041 Corporate Center Drive Ste 200, Charlotte, N. C. 28226
Date Evaluated: 7/2/2008
Proposed Facility: Residence Design Flow (.1949) 480gpd
Property Size: .69a
Location of Site: 13103 Belle Grove Manor Lane
Property Recorded:
Water Supply: [x] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [x] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.1941 Consistence Mineralogy	b PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS, 8	0-24	ABK/SBK/C	FI/SEXP/S/P	>43" TO SOIL WETNESS	43	N/A	NONE	PS, IV
		24-43	SBK/CL	FR/SEXP/SS/SP					.275GPD/FT^2
2	"	0-6	GR/CL	"	>48" TO SOIL WETNESS	48	"	"	
		6-40	SBK/ABK/C	FI/SEXP/S/P					"
		40-48	SBK/CL	FR/SEXP/SS/SP					
3	"	0-3	GR/CL	"	>43" TO SOIL WETNESS	43	"	"	
		3-43	SBK/ABK/C	FI/SEXP/S/P					"
4	"	0-8	GR/CL	FR/SEXP/SS/SP	>36" TO SOIL WETNESS	36	"	"	"
		8-36	SBK/ABK/C	FI/SEXP/S/P					
					LTAR- .275GPD/FT^2				

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	Iva	IIIb
Site LTAR	.275	.275

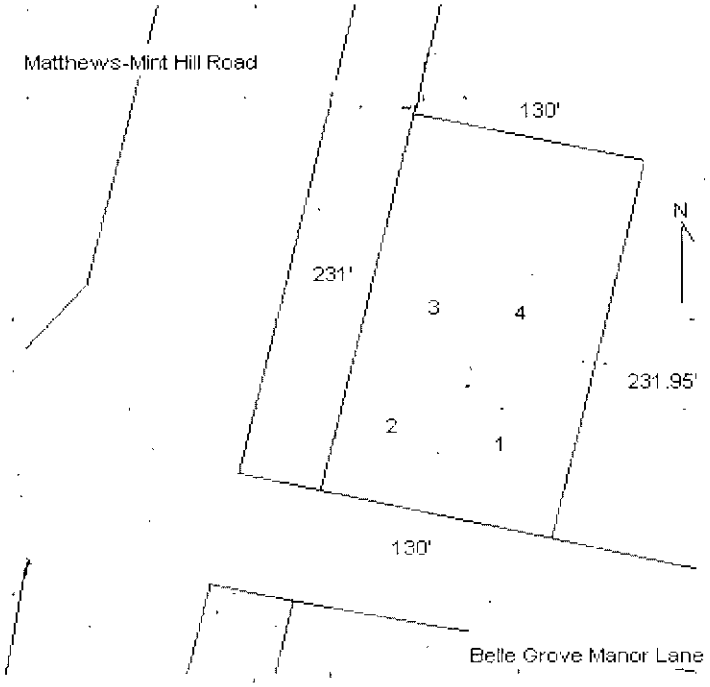
Other Factors (.1946):
Soil Evaluation By: W. R. Marlin, LSS, 7/2/2008,
Others Present: W. Overby
Site Classification (.1948): PS
Site Evaluation By: Jeremy Michael
Others Present: Jeremy Michael

COMMENTS:
100% repair

Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	SG-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		M-Massive
LS-Linear Slope				CR-Crumb
FS-Foot Slope	II	SL-Sandy Loam	0.8 - 0.6	GR-Granular
NS-Nose Slope		L-Loam		SBK-Subangular Blocky
HS-Head Slope				ABK-Angular Blocky
CC-Concave Slope	III	SI-Silt	0.6 - 0.3	PL-Platy
CV-Convex Slope		SICL-Silty Clay Loam		PR-Prismatic
T-Terrace				
FP-Flood Plain		CL-Clay Loam		
		SCL-Sandy Clay Loam		
	IV	SC-Sandy Clay	0.4 - 0.1	
		SIC-Silty Clay		
		C-Clay		

Consistence Moist	Consistence Wet	Mineralogy
VFR-Very Friable	NS-Non-Sticky	SEXP-Slightly Expansive
FR-Friable	SS-Slightly Sticky	EXP-Expansive
FI-Firm	S-Sticky	
VFI-Very Firm	VS-Very Sticky	
EFI-Extremely Firm	NP-Non-Plastic	
	SP-Slightly Plastic	
	P-Plastic	
	VP-Very Plastic	

Sketch of Soil Evaluation Locations



Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30003627** GWS File #: **7810B** Tax Parcel #: **195-022-01**

- This IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be **NO** grading, filling, or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is **NOT** transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

I. This Improvement Permit Shall: Expire in Five (5) Years **Expiration Date (If Applicable):** 8/15/2013

Type of Installation: Residential - New System Lot Number: 1

Structure Type: HOUSE Size (ft^2): 4000 # Bedrooms: 4 # Occupants: 3

Building Foundation: Crawl Space Water Supply: Municipal

II. Initial System Type: PPBPS (pressurized) **System Classification:** IVa

Initial System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.275	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	873	Total Trench Length (ft):	291
Maximum Trench Depth (in):	31	Depth of Media (in):	18	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: Pump to Approved **System Classification:** IIIb

Repair System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0 275	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	1309	Total Trench Length (ft):	436
Maximum Trench Depth (in):	24	Depth of Media (in):	12	Distribution Device:	Pressure Manifold		

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment, and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until an INSTALLATION APPROVAL is granted by the Department.
- The septic system installer shall be a registered septic contractor with Mecklenburg County Health Department.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: Jeremy Michael Owner/Legal Agent: _____
Print Name

Signature: Jeremy Michael Signature: _____

Date Issued: 8/15/2008

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St, Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30003627** GWS File #: **7810B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 years by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- This type of septic system requires a Certified Operator to maintain the system. A system maintenance contract with a Certified Operator must be on file prior to issuance of an Operation Permit.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All components of the septic system must be installed in accordance with the required setbacks listed on the corresponding plot plan.
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- Required 100 ft. minimum setback from Community Well.

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment and Disposal Systems* and is subject to the following provisions:

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- The septic system installer shall be a registered septic contractor with Mecklenburg County Health Department.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: Jeremy Michael

Signature: Jeremy Michael

Date Issued: 8/15/2008

Owner/Legal Agent: _____
Print Name

Signature: _____

Soil & Environmental Consultants, PA

248 LePhillip Court • Concord, North Carolina 28025 • Phone: (704) 720-9405 • Fax: (704) 720-9406
www.SandEC.com

195-022-01
13103 BELLE GROVE MANOR LN.
7810B

Attached is a proposed design for a LPP PPBPS Septic System for a 4 bedroom single family residence on lot 1 of the Belle Grove Manor Subdivision in Mecklenburg County, North Carolina.

Contents: **Page**

Information for the Installer---------- 1

Design Information
- Layout Specifications---------- 2
- System Flow Sheet---------- 3
- Repair Tapsheet---------- 4

Site Plan/System Plan---------- 5

Septic Tank Diagram---------- 6

Pump Tank Diagram---------- 7

LP Panel Drawing---------- 8

Control Panel Specifications---------- 9-12

Pump Specifications---------- 13-14

Calculations---------- 15

Electric Box Specifications---------- 16

Maintenance of Septic Systems---------- 17-19

GWS Septic System Design Review
GWS File #: 7810B
Approved ☒ Disapproved ☐
Design Review: TCT 9/12/08
Field Review: ☐ ☐
*Projects are not considered "APPROVED" until both sections above are completed and indicate an APPROVED status.

August 5, 2008
S & EC Project No. 5-1656
Design By: W. Overby

Greensboro Office:
3817-E Lawndale Drive
Greensboro, NC 27455
Phone: (336) 540-8234
Fax: (336) 540-8235

Raleigh Office:
11010 Raven Ridge Road
Raleigh, NC 27614
Phone: (919) 846-5900
Fax: (919) 846-9467

INFORMATION FOR THE INSTALLER:

- The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.
- Tanks shall be approved by DEHNR, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning trenches.
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as an pressure dosed panel system
- Repair is specified as an innovative installation.
- Trenches designed as 36" wide and should be raked and limed.

Belle Grove Manor Lot 1

Project No. 5-1656

layout for a 4 bedroom home **Jul-08**

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH
TBM		1.0			100.0	
INSTR. 1			101.0			
			SYSTEM			
1	Pink			2.00	99.0	105
2	Blue			3.30	97.7	103
3	Yellow			4.60	96.4	100
			REPAIR			
4	Orange			5.20	95.8	100
5	Red			5.50	95.5	100
6	Pink			5.80	95.2	100
7	Blue			5.90	95.1	100
8	Yellow			6.10	94.9	100
9	Orange			6.30	94.7	100

	LINE LENGTH	LTAR GPD/FT	SYSTEM TYPE	INNOVATIVE TYPE	DISTRIBUTION
* System	300	0.275	PPBPS	N/A	LPP
Repair	600	0.225	Innovative	25%	P. Manifold

Notes:

**PPBPS lines greater than 70' will be center fed.
** TBM located top of cip stake
**TBM is assumed to be 100'
**All measures in feet
**Nitrification lines are demonstrated on contour via colored pin flags
**BS and FS indicate rod readings

Belle Grove Manor Lot 1

System (PPBPS)

DESIGN SPECIFICATIONS

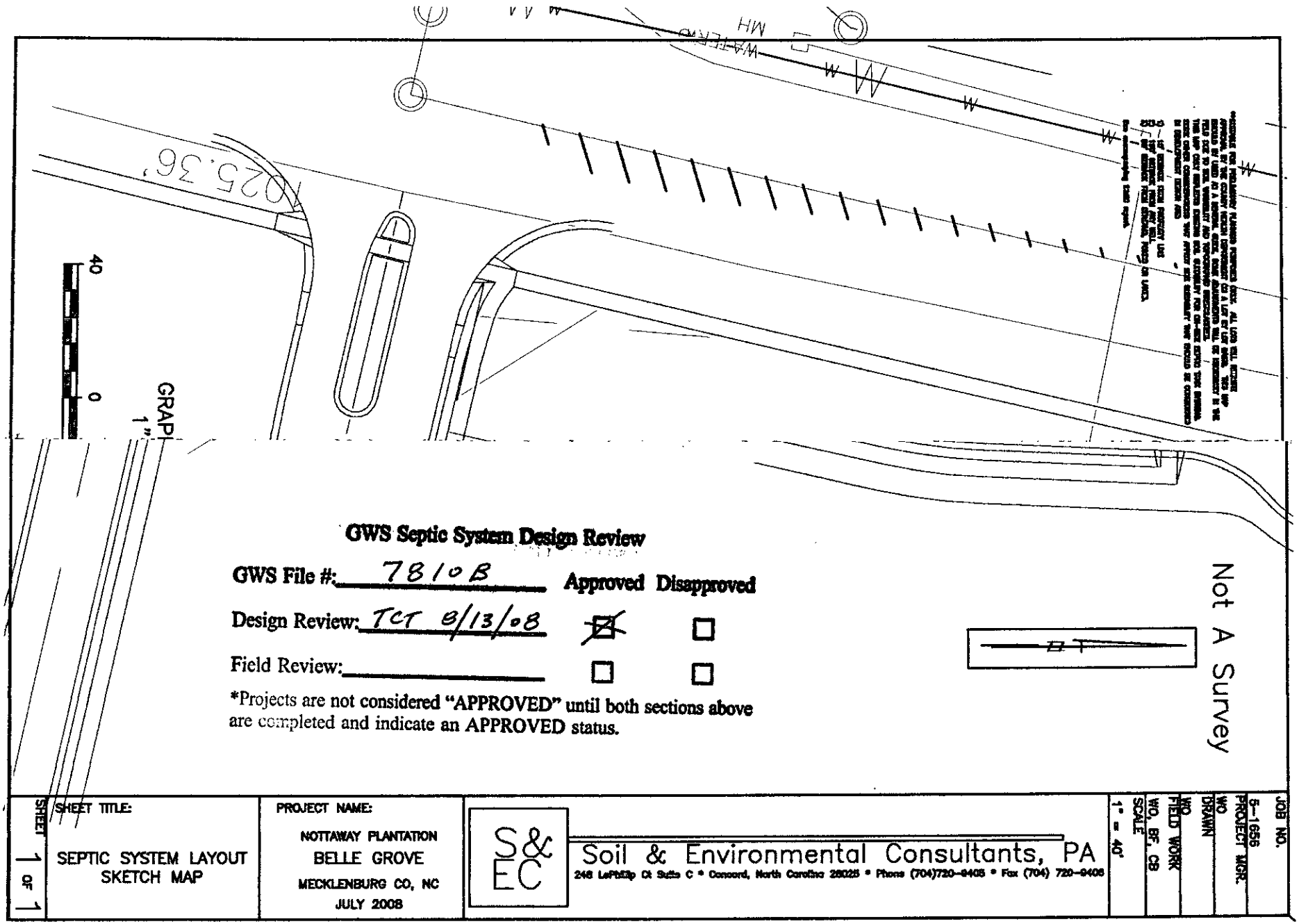
Line #	Color	#Panels	#Holes Panel	Line Length	Hole Size	Line Head	Line Flow
1a	Pink	11	1	50	5/32"	2	4.51
1b	Pink	11	1	50	5/32"	2	4.51
2a	Blue	11	1	50	5/32"	2	4.51
2b	Blue	11	1	50	5/32"	2	4.51
3a	Yellow	11	1	50	5/32"	2	4.51
3b	Yellow	11	1	50	5/32"	2	4.51
		66		300			27.06

~~22.39~~ gpm

Lot 1 Tap Sheet ✓

REPAIR

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	gpd	Trench Area	Line LTAR
4	PINK	99.7	100	SCH 80 1/2	5.48	80.00	300	0.27
5	RED	99.4	100	SCH 80 1/2	5.48	80.00	300	0.27
6	ORANGE	98.9	100	SCH 80 1/2	5.48	80.00	300	0.27
7	YELLOW	98.6	100	SCH 80 1/2	5.48	80.00	300	0.27
8	BLUE	97.9	100	SCH 80 1/2	5.48	80.00	300	0.27
9	BLUE	97.9	100	SCH 80 1/2	5.48	80.00	300	0.27
	total	feet =	600	gal/min =	32.88			
			Des. Flow	480				
			Pump Run=	14.60				
			soil LTAR	0.225				
			LTAR +5%	0.23625				
			LTAR with INNOV.	0.3				
			Innov ltar +5%	0.315				



GWS Septic System Design Review

GWS File #: 7810B **Approved** **Disapproved**

Design Review: TCT 8/13/08 ☒ ☐

Field Review: _____ ☐ ☐

*Projects are not considered "APPROVED" until both sections above are completed and indicate an APPROVED status.

SHEET 1 OF 1	SHEET TITLE: SEPTIC SYSTEM LAYOUT SKETCH MAP	PROJECT NAME: NOTTAWAY PLANTATION BELLE GROVE MECKLENBURG CO, NC JULY 2008	S&EC Soil & Environmental Consultants, PA 248 LePhillip Ct Suite C • Concord, North Carolina 28025 • Phone (704)720-9405 • Fax (704) 720-9406	1" = 40' SCALE; WO, BF, CB FIELD WORK; WO DRAWN; S-1656 PROJECT MGR.; JOB NO.

CALCULATIONS

Location Belle Grove Manor

Project Number 5-1656

Lot No: 1

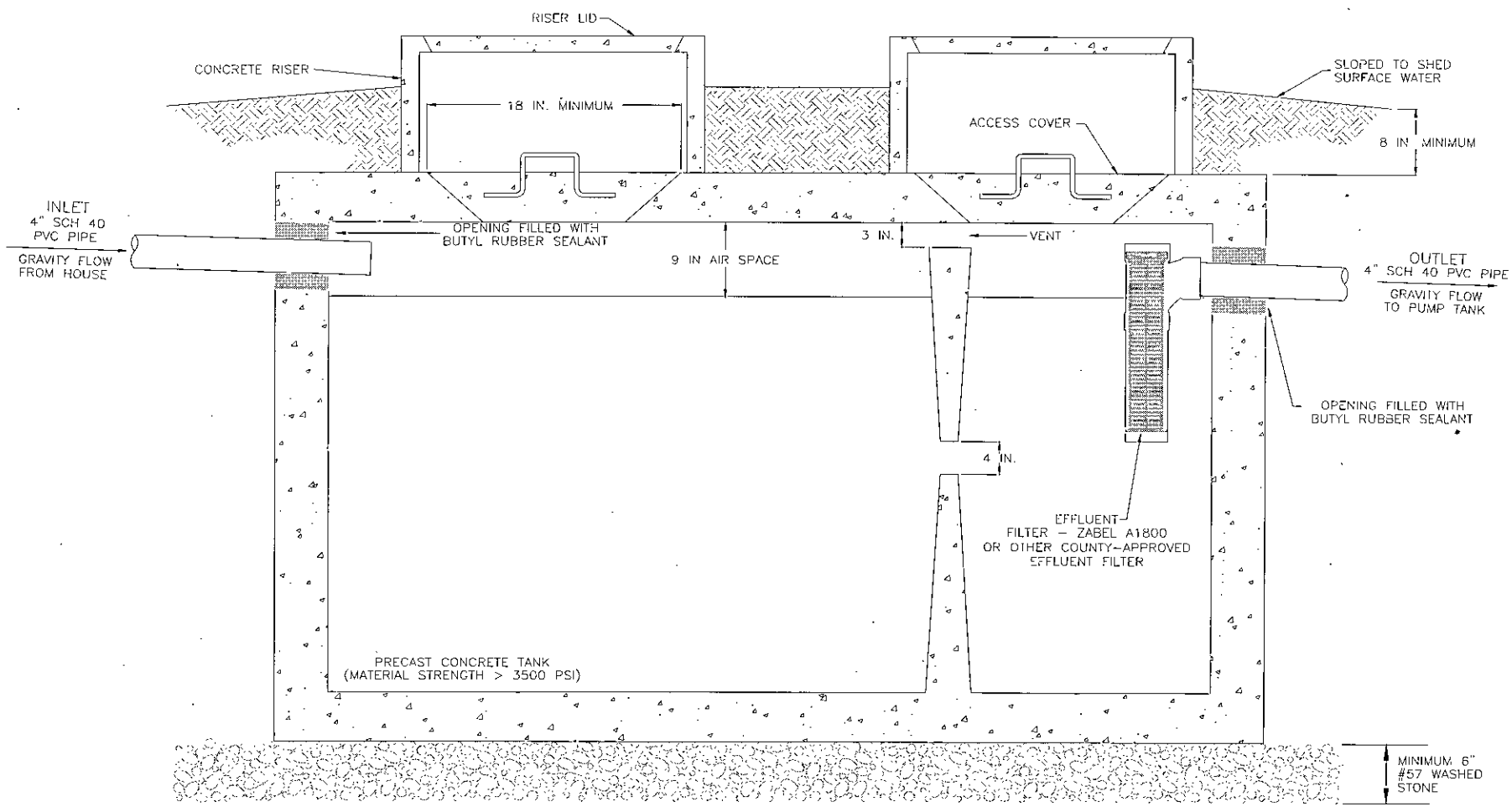
No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.275	$^{gal}/_{ft^2\ day}$
Innovative? (YES OR NO)	no	
Supply Line Length	200	ft.
Supply Line Volume	34.8	gal.
Required Feet of Line	290	ft.
Amount of Line from Layout	300	ft.
Gallons per Minute	27.06	$^{gal}/_{min}$
Required Septic Tank Capacity	1500	gal.
Minimum Standard Tank Size	1500 gal.	
Lateral Line Volume	23.4	gal.
Dosing Volume	237.60	gal.

Note: Dosing Volume based on # panels times 3.6 gallons

Tank Draw Down	8.2	*Generic Draw Down of 29 gal.per in.*
Pump Run Time	8.78	minutes
Elevation Head	13	ft.
Pressure Head	2	ft.
Friction Factor	1.47	ft./100 ft. *(From the interpolater.)*
Friction Head	2.94	ft.
Total Dynamic Head (+15%)	20.63	ft.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
27	1.47
30	1.78
	-1.76
35	2.37
37	2.63
40	3.03
42.4	3.39
45	3.77
48.14	4.28
50	4.58
57.11	5.89
60	6.42



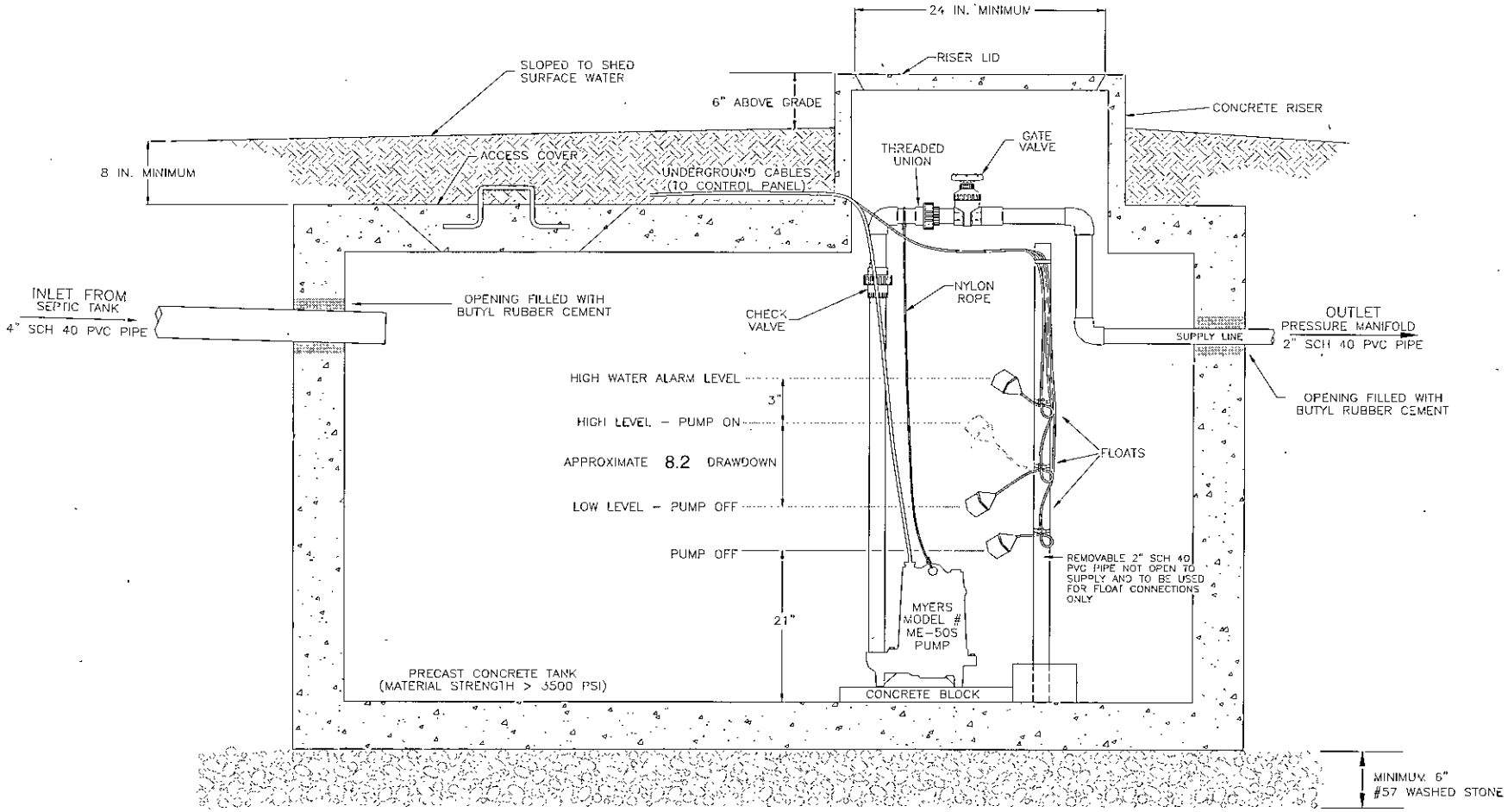
NOTES

1. TANK DIMENSIONS VARY BY MANUFACTURER.

1500 GALLON SEPTIC TANK

PROJECT NO	PROJECT NAME:
PROJECT MGR.	
SCALE: NTS	SHEET TITLE: SEPTIC TANK DIAGRAM

S&EC
Soil & Environmental Consultants, Inc.
11010 Raven Ridge Road Raleigh, North Carolina 27614 Phone: (919) 846-5900 Fax: (919) 846-9467
Web Page: www.SandEC.com



NOTES

1. TANK DIMENSIONS VARY BY MANUFACTURER.
2. DRAWDOWN WILL VARY WITH TANK DIMENSIONS. DRAWDOWN SHOWN BASED ON 21 GALLONS PER INCH.

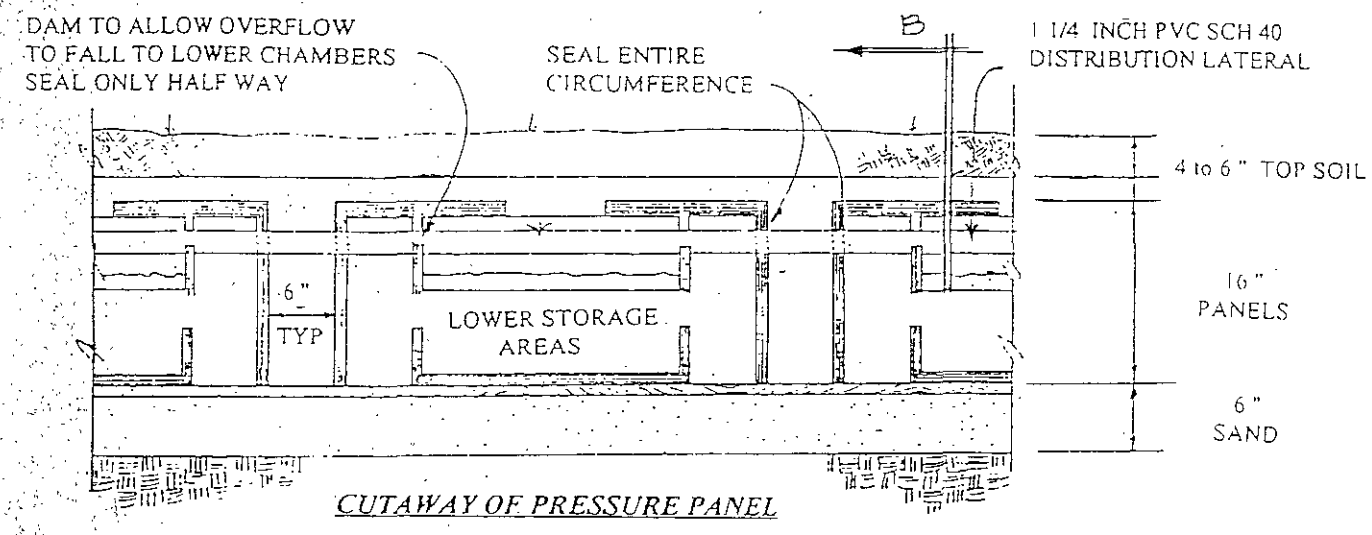
1500 GALLON PUMP TANK

PROJECT NO. 5-1656	PROJECT NAME
PROJECT MGR	
SCALE NTS	SHEET TITLE: PUMP TANK DIAGRAM

S&EC

Soil & Environmental Consultants, Inc.

11010 Raven Ridge Road Raleigh, North Carolina 27614 Phone: (919) 846-5900 Fax: (919) 846-9467
Web Page: www.SandEC.com

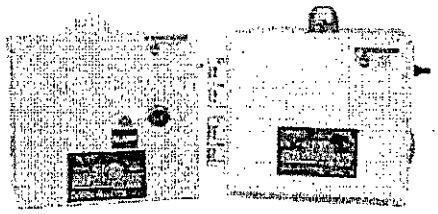


CUTAWAY OF PRESSURE PANEL

MODEL 112 Control Panel

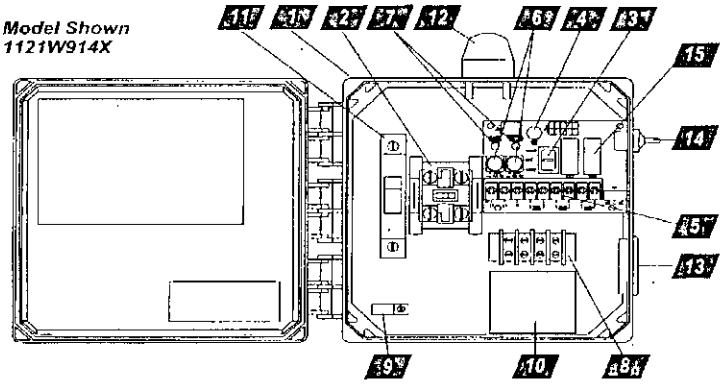
Single phase, simplex motor contactor control.

The Model 112 control panel provides a reliable means of controlling one 120, 208, or 240 VAC single-phase pump in pump chambers, sump pump basins, irrigation systems and lift stations. Two control switches activate a magnetic motor contactor to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system.



indoor *indoor/outdoor*

Model Shown
1121W914X



1. **Enclosure** measures 8 x 8 x 4 inches (20.32 X 20.32 X 10.16 cm). Choice of NEMA 1 (steel for indoor use), or NEMA 4X (ultraviolet stabilized thermoplastic with removable flanges for outdoor or indoor use).

   * Options selected may increase enclosure size and change component layout.

2. **Magnetic Motor Contactor** controls pump by switching hot electrical lines.
3. **HOA Switch** for manual pump control (mounted on circuit board).
4. **Green Pump Run Indicator Light** (mounted on circuit board).
5. **Float Switch Terminal Block** (mounted on circuit board).
6. **Alarm and Control Fuses** (mounted on circuit board).
7. **Alarm and Control Power Indicators** (mounted on circuit board).
8. **Pump Input Power and Pump Connection Terminal Block**
9. **Ground Lug**
10. **Terminal Block Installation Label**
11. **Circuit Breaker** (optional) provides pump disconnect and branch circuit protection.

STANDARD ALARM PACKAGE (other options available)

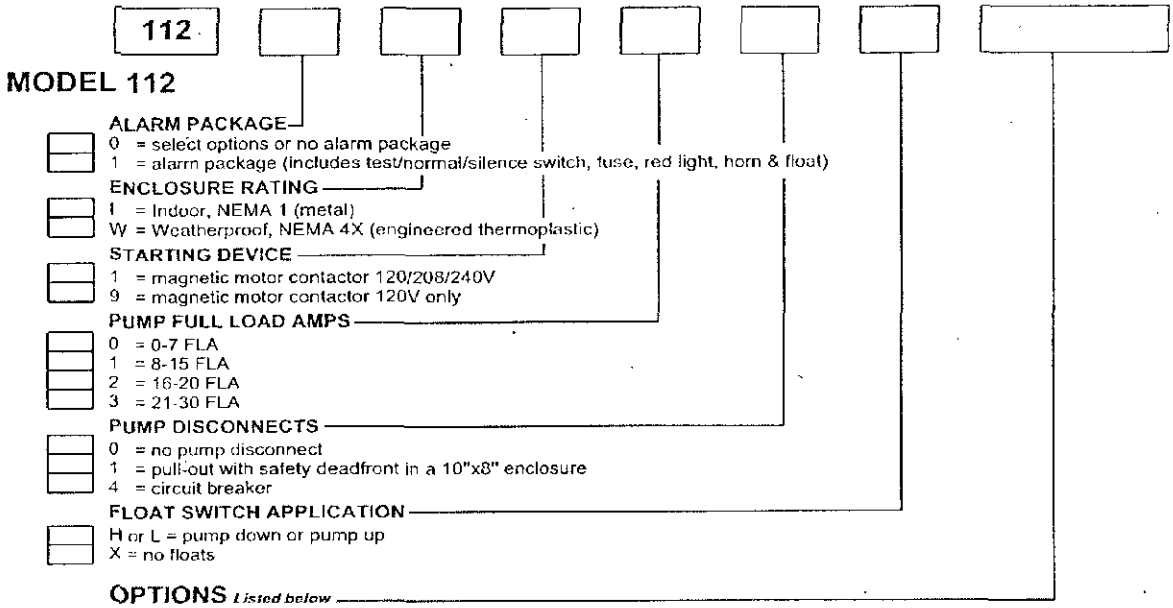
12. **Red Alarm Beacon** provides 360° visual check of alarm condition. **Note:** NEMA 1 style utilizes a door mounted indicator in lieu of a beacon.
13. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating). **Note:** NEMA 1 style utilizes an internally mounted buzzer (83 to 85 decibel) in lieu of horn.
14. **Exterior Horn Test/Normal/Silence Switch** allows alarm horn to be silenced and testing of horn and light to ensure proper operation of alarm system.
15. **Horn Silence Relay** automatically resets alarm after alarm condition has been resolved (mounted on circuit board).

FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes three 20' Sensor Float® control switches
- Complete with step-by-step installation instructions
- Three-year limited warranty

c UL us
LISTED

SJE-Rhombus CONTROLS
SJ Electro Systems, Inc.
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE 1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com



★ Options selected may increase enclosure size and change component layout.

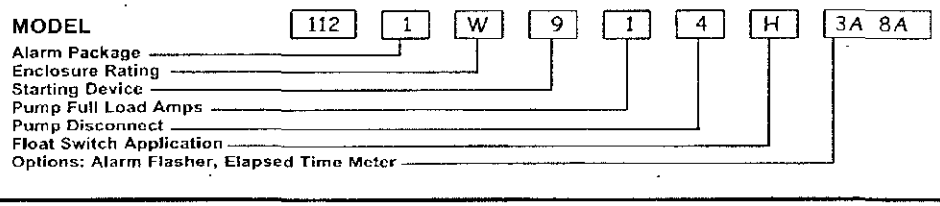
If additional features are required, call the factory for a quote on either a Pro-Line or Engineered Custom control panel system.

	CODE	DESCRIPTION
☐	1A	Red beacon only / no audio *must select 1E if floats included*
☐	1C	Horn only / no visual *must select 1E if floats included*
☐	1E	Alarm float
☐	3A	Alarm flasher
☐ ★	4A	Low level cutout *select option 4D if floats included*
☐ ★	4B	Red low-level indicator & alarm *must select 4A also*
☐	4D	Low-level float
☐	6A	Auxiliary alarm contact, form C type
☐ ★	8A	Elapsed time meter
☐ ★	8C	Event (cycle) counter
☐	10E	Lockable latch - NEMA 4X
☐	10E	Lockable latch - NEMA 1
☐ ★	10F	Lightning arrester
☐ ★	10K	Anti-condensation heater

	CODE	DESCRIPTION
☐	11C	NEMA 1 alarm panel *must select option 6A*
☐	11D	NEMA 4X alarm panel *must select option 6A*
☐	15A	Control / alarm circuit breaker *Does not include the circuit board as in standard.*
☐	16A	10' cord in lieu of 20'
☐	16B	15' cord in lieu of 20'
☐	16C	30' cord in lieu of 20'
☐	16D	40' cord in lieu of 20'
☐	17A	SJE SignalMaster® / mounting strap ●
☐	17B	SJE SignalMaster® / externally weighted ●
☐	17C	Sensor Float® / internally weighted ▲
☐	17D	Sensor Float® / externally weighted ▲
☐	17E	Sensor Float® Mini / pipe clamp ▲
☐	17F	Sensor Float® Mini / externally weighted ▲
☐	19X	Door mounted pump run indicator
☐	21A	Pumpmaster® in lieu of on/off switches ●
☐	21B	PumpMaster® Plus in lieu of on/off switches ●
☐	21C	Super Single® in lieu of on/off switches ▲
☐	21D	Double Float™ in lieu of on/off switches ▲

● Mechanically-activated ▲ Mercury-activated

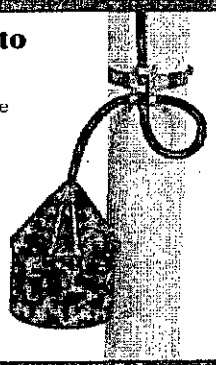
SAMPLE



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SENSOR FLOAT® control switch

Mercury-activated, narrow-angle float switch designed to activate pump control panels and alarms.



This narrow-angle sensing device is used to accurately monitor liquid levels in sewage and non-potable water applications. The Sensor Float® control switch is not sensitive to rotation and is suitable for use with intrinsically safe circuits. Contact SJE-Rhombus regarding specific intrinsically safe applications.

Normally Open Model (high level)
The control switch turns on (closes) when the float tips slightly above horizontal signaling a high level, and turns off (opens) when the float drops slightly below horizontal.

Normally Closed Model (low level)
The control switch turns on (closes) when the float drops slightly **below** horizontal signaling a low level, and turns off (opens) when the float tips slightly above horizontal.

FEATURES

- Suitable for use with intrinsically safe circuits.
- Not sensitive to rotation.
- Control differential of .5 inches (1 cm) above or below horizontal.
- UL Listed for use in non-potable water and sewage.
- CSA Certified.
- Three-year limited warranty.

LR54245 LISTED 83N2

Hydraulic

OPTIONS

This switch is available:

- for normally open (high level) applications or normally closed (low level) applications.
- in standard cable lengths of 10, 15, 20, or 30 feet and 3, 5, 6, or 10 meters.
- with three mounting options that allow for flexibility in installation:

  Mounting Clamp: for applications where the switch can be attached to a discharge pipe or similar mounting device.

  Internally Weighted: for applications where the switch can be suspended from above.

  Externally Weighted: for applications where the switch can be suspended from above.

SPECIFICATIONS

CABLE: flexible 18 gauge, 2 conductor (UL,CSA) SJOW, water-resistant (CPE) jacket

FLOAT: 3.38 inch diameter x 4.55 inch long (8.58 cm x 11.56 cm), high-impact, corrosion resistant, PVC housing for use in sewage and non-potable water up to 140°F (60°C)

MAXIMUM WATER DEPTH: 30 feet (9 meters), 13 psi

MERCURY TILT SWITCH: single pole, single throw, mercury-to-mercury contacts, hermetically sealed in a steel capsule and epoxy sealed in the float housing

ELECTRICAL: 5 amp, 120/230 VAC, 50/60 Hz

SJE-Rhombus CONTROLS
SJ ELECTRO SYSTEMS, INC.
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE | 1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com

Sensor Float® control switch installation instructions

⚠WARNING ELECTRICAL SHOCK HAZARD
Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

⚠WARNING EXPLOSION OR FIRE HAZARD
Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

MOUNTING THE SWITCH

1. Place the cord into the clamp as shown in Figure B.
2. Locate clamp at desired activation level and secure the clamp to the discharge pipe as shown in Figures A and B. **Note:** Do not install cord under hose clamp.
3. Tighten the hose clamp using a screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
4. Bring cable leads back to control device and wire according to Figure C.
5. Check installation. Allow system to cycle to insure proper operation.

Note: All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus supplier for replacements.

Figure A

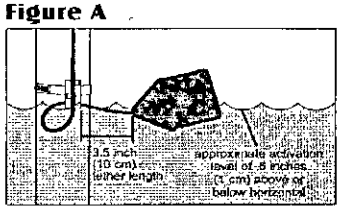
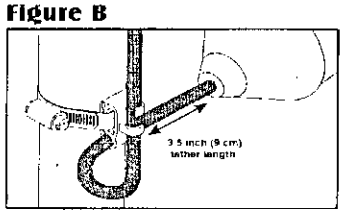


Figure B



INTERNAL WEIGHT

1. Determine desired activation level.
2. Suspend switch 7 inches (18 cm) below desired activation level as shown in Figure D. Switch remains partially submerged during the "on" tipping action. Switch can be totally submerged and still continue to operate properly.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Figure C - Wiring Diagram

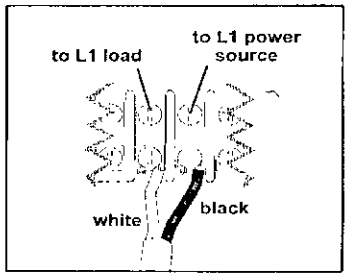
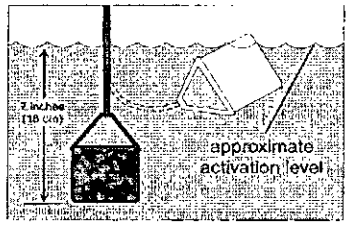


Figure D



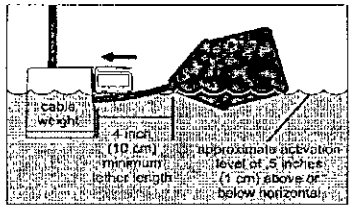
CABLE WEIGHT

1. Determine desired activation level.
2. Suspend switch and cable weight at desired activation level as shown in Figure E.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Cable weight is attached to switch cable at the factory. To adjust:

1. Release clip.
2. Adjust cable weight to desired position.
3. Lay switch cable in weight channel.
4. Align clip with weight channel and slide towards switch cable as shown in Figure E.
5. Snap clip snugly up to cable, moving clip to tightest possible position.

Figure E



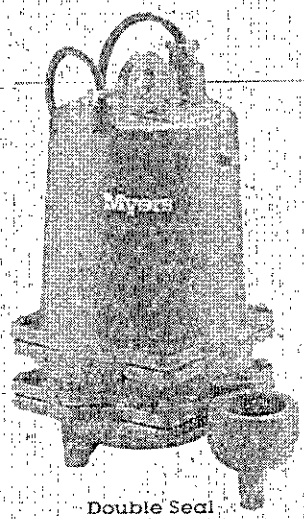
CONTROLS
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1-888-DIAL-SJE (1-888-342-5753) ■ Phone: 218-847-1317 ■ Fax: 218-847-4617
E-mail: sje@sjerhombus.com

Instl Instr PN 1009646A
Cat. Page PN 1009509A

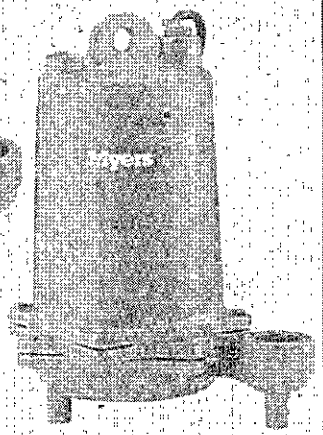
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ME SERIES

1/2 through 1-1/2 HP
Effluent Pumps



Double Seal



Single Seal

THE MYERS ME SERIES EFFLUENT PUMPS ARE DESIGNED SPECIFICALLY FOR TODAY'S EFFLUENT PRESSURE DISTRIBUTION MOUNDS, TRENCHES AND HIGH FLOW DRAINAGE APPLICATIONS. The ME Series effluent pumps with their efficient two vane, enclosed impellers, provide the ideal performance for optimum dosing. ME Series pumps are constructed of only corrosion resistant materials like cast iron, stainless steel and thermoplastics to assure that they will perform for years to come in the harsh effluent environment and drainage applications. For more information, call your Myers distributor today or the Myers Ashland, Ohio sales office at 419/289-1144.

ADVANTAGES BY DESIGN

IDEAL FOR USE IN MOUND AND TRENCH PRESSURE DISTRIBUTION SYSTEMS

- High efficiency, two vane, enclosed impeller provides ideal performance for most efficient dosing.
- Impeller passes full ¾ inch solids.
- Enclosed impeller design eliminates possibility of jamming or corrosion between impeller and volute.

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- High torque, permanent split capacitor (PSC) single phase motors. No starting switches or relays to wear out.
- Optional seal leak probe warns of seal leak condition. (Dual seal motors only.) Helps prevent costly motor damage.
- Motors have on winding current and temperature sensitive overload. (Single phase only.)

THE ME SERIES EFFLUENT PUMPS ARE DESIGNED FOR YEARS OF MAINTENANCE FREE OPERATION

- Volute seal ring is replaceable. Restores pump to original performance if wear should occur.
- Motor is held in place by 4 screws. Easily removed if service is ever needed.

PRODUCT CAPABILITIES

Capacities To	140 GPM	464 LPM
Heads To	95 ft.	28.9 m
Max. Spherical Solids	¾ in.	19 mm
Liquids Handled	domestic effluent & drain water	
Intermittent Liquid Temp.	up to 140° F.	up to 60° C.
Motor Electrical Data	1/2 HP, 115 volts, 1 ph 1/2 to 1 1/2 HP 230 volts, 1 ph 208, 230, 460, 575 volts, 3 ph Oil-filled, permanent split capacitor type, 1 ph, 3450 rpm, 60 Hz	
Motor Insulation	Class F (130° C)	
Third Party Approvals	UL, CSA	
Acceptable pH Range	6-9	
Specific Gravity	1-1.1	
Viscosity	28-35 SSU	
Discharge, NPT	2 in.	50.8 mm
Min. Sump Dia. Simplex	24 in.	61 cm
Duplex	36 in.	91.4 cm

Construction Materials	
Motor Housing, Volute	cast iron, Class 30, ASTM A48-76
Enclosed Two Vane Impeller, Standard	engineered thermoplastic
Optional	bronze
Impeller Wear Ring	304 SS
Volute Sealing Ring	Buna-N
Shaft	416 SS
Power Cord 1/2 HP, 1 Ph	20 ft. 16/3 SJOW/SJOW-A
3/4 - 1 1/2 HP, 1 Ph	20 ft. 14/3 SJOW/SJOW-A
All 3 Ph	20 ft. 14/4 SOW/SOW-A
Shaft Seals, Standard	single carbon & ceramic
Optional	tandem carbon & ceramic
Opt. Lower	tungsten carbide
Fasteners	300 Series SS

WHERE INNOVATION MEETS TRADITION

ISO 9001 Certified Company

Myers
PENTAIR PUMP GROUP

ME SERIES

1/2 through 1-1/2 HP
Effluent Pumps

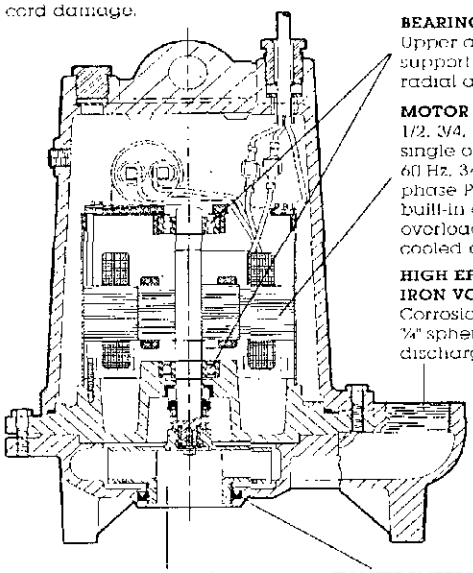
POWER CORD
Jacket sealed with compression fittings. Individual wires potted with epoxy to prevent wicking in case of cord damage.

MOTOR HOUSING
Cast iron for efficient heat transfer and corrosion resistance.

BEARINGS
Upper and lower ball support rotor. Take radial and thrust loads.

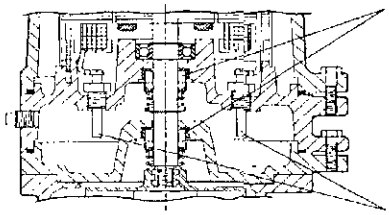
MOTOR
1/2, 3/4, 1 and 1-1/2 HP single or three phase. 60 Hz, 3450 RPM. Single phase PSC motors have built-in on winding overload protection, oil-cooled and lubricated.

HIGH EFFICIENCY CAST IRON VOLUTE
Corrosion resistant. Passes ⅜" spherical solids. 2" NPT discharge.



ENCLOSED TWO VANE IMPELLER
high efficiency. Passes ⅜" spherical solids with stainless steel wear ring. Optional bronze construction available.

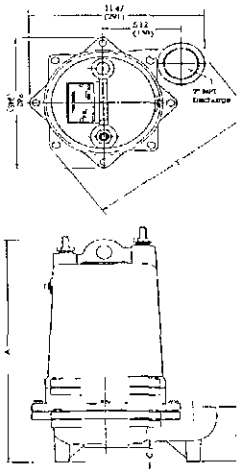
VOLUTE/IMPELLER SEAL RING
Maintains high efficiency and reduces recirculation. Replaceable



SHAFT SEAL(S)
Carbon and ceramic faces. Optional dual tandem seals. Extends motor life.

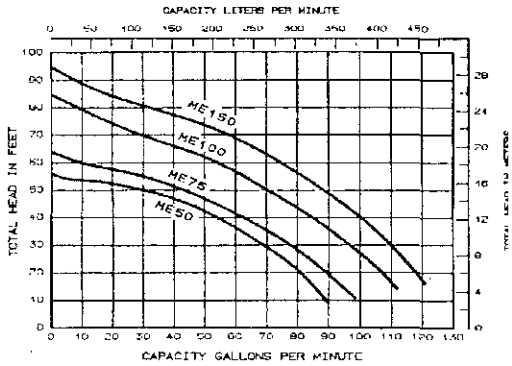
SEAL LEAK PROBES
Optional probes (dual seal only) detect water leakage in seal housing. Activates warning light

DIMENSIONS



Model Series	Inches (millimeters) A	B	C	F
ME50S	16.8 (427)	4.09 (104)	1.03 (26)	12.13 (309)
ME50D	18.6 (472)	4.09 (104)	1.03 (26)	12.13 (309)
ME75S, ME100S, ME150S	16.8 (427)	4.0 (102)	1.06 (27)	12.5 (318)
ME75D, ME100D, ME150D	18.6 (472)	4.0 (102)	1.06 (27)	12.5 (318)

PERFORMANCE CURVE

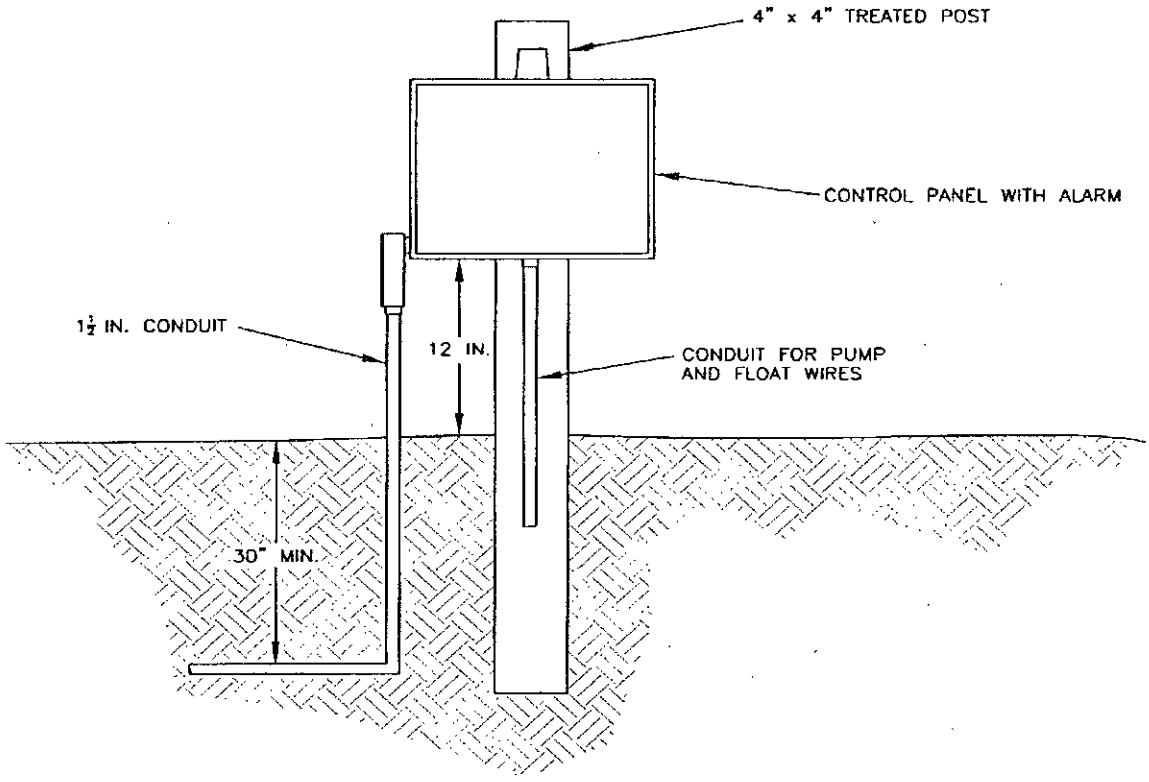


K3320 9/98
Printed in U.S.A.

Myers
PENTAIR PUMP GROUP

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419/289-1144, FAX: 419/289-6658, www.femyers.com
Myers (Canada), 269 Trillium Drive, Kitchener, Ontario N2G 4W5
519/748-5470, FAX: 519/748-2553

ELECTRIC BOX



NOTES: ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED TO MEET OR EXCEED MINIMUM REQUIREMENTS SPECIFIED IN THE ELECTRICAL COME. ALL WIRING SHALL BE #12 MINIMUM, AND RATED FOR DIRECT BURY. PROVIDE GROUNDING AS REQUIRED, AND PROVIDE 30" MINIMUM BURY ON CABLES. PROVIDE ONE 20 AMP, DOUBLE POLE, 230 VOLT CIRCUIT BREAKER (FOR PUMP), AND ONE 20 AMP, SINGLE POLE, 115 VOLT CIRCUIT BREAKER (FOR ALARM) IN MAIN PANEL.

(5) Ashes, garbage, and trash shall be kept out of the pit.

History Note: *Authority G.S. 130A-335(e) and (f);*
Eff. July 1, 1982;
Amended Eff. January 1, 1990.

15A NCAC 18A .1961 MAINTENANCE OF SEWAGE SYSTEMS

(a) Any person owning or controlling the property upon which a ground absorption sewage treatment and disposal system is installed shall be responsible for the following items regarding the maintenance of the system:

(1) Ground absorption sewage treatment and disposal systems shall be operated and maintained to prevent the following conditions:

(A) a discharge of sewage or effluent to the surface of the ground, the surface waters, or directly into groundwater at any time; or

(B) a back-up of sewage or effluent into the facility, building drains, collection system, or freeboard volume of the tanks; or

(C) a free liquid surface within three inches of finished grade over the nitrification trench for two or more observations made not less than 24 hours apart. Observations shall be made greater than 24 hours after a rainfall event.

The system shall be considered to be malfunctioning when it fails to meet one or more of these requirements, either continuously or intermittently, or if it is necessary to remove the contents of the tank(s) at a frequency greater than once per month in order to satisfy the conditions of Parts (A), (B), or (C) of this Paragraph. Legal remedies may be pursued after an authorized agent has observed and documented one or more of the malfunctioning conditions and has issued a notice of violation.

(2) Ground absorption sewage treatment and disposal systems shall be checked, and the contents of the septic tank removed, periodically from all compartments, to ensure proper operation of the system. The contents shall be pumped whenever the solids level is found to be more than 1/3 of the liquid depth in any compartment.

(b) System management in accordance with Tables V(a) and V(b) of this Rule shall be required for all systems installed or repaired after July 1, 1992. After July 1, 1992, system management in accordance with Tables V(a) and V(b) shall be required for all existing Type V and Type VI systems.

(c) No Improvement Permit or Construction Authorization shall be issued for Type IV, Type V, or Type VI systems, unless a management entity of the type specified in Table V(b) is specifically authorized, funded, and operational to carry out this management program in the service area where the proposed system is to be located.

(d) A local health department may be the public management entity only for systems classified Type IV, V(a) and V(b) and only when specifically authorized by resolution of the local board of health.

(e) A contract shall be executed between the system owner and a management entity prior to the issuance of an Operation Permit for a system required to be maintained by a public or private management entity, unless the system owner and certified operator are the same. The contract shall include the specific requirements for maintenance and operation, responsibilities of the owner and system operator, provisions that the contract shall be in effect for as long as the system is in use, and other requirements for the continued proper performance of the system. It shall also be a condition of the Operation Permit that subsequent owners of the system execute such a contract.

(f) Inspections of the system shall be performed by a management entity at the frequency specified in Table V(b). The management entity shall report the results of their inspections to the local health department at the specified reporting frequency. However, where inspections indicate the need for system repairs, the management entity shall notify the local health department within 48 hours in order to obtain a Construction Authorization for the repairs.

(g) The management entity shall be responsible for assuring routine maintenance procedures and monitoring requirements in accordance with the conditions of the Operation Permit and the contract.

(h) Sewage systems with multiple components shall be classified by their highest or most complex system type in accordance with Table V to determine local health department and management entity responsibilities.

(i) Sewage systems not identified in this Rule shall be classified by the Division of Environmental Health after consultation with the appropriate commission governing operators of pollution control facilities.

(j) The local health department shall routinely review the performance and operation reports submitted in accordance with Table V(b) of this Rule and shall perform an on-site inspection of the systems as required in Table V(a).

(k) The certified operator shall hold a valid and current certificate from the appropriate commission, and nothing in this Section shall preclude any requirements for system operators, in accordance with Article 3 of G.S. 90A.

TABLE V(a)

LOCAL HEALTH DEPARTMENT RESPONSIBILITIES

System Classification	System Description	Permits Required	Minimum System Review Frequency
Type I	a. Privy b. Chemical toilet c. Incinerating toilet d. Other toilet system e. Grease trap	Improvement Permit, Construction Authorization, and Operation Permit	N/A
Type II	a. Conventional septic system (single-family or 480 GPD or less) b. Conventional septic system with 750 linear feet of nitrification line or less c. Conventional system with shallow placement	Improvement Permit, Construction Authorization, and Operation Permit	N/A
Type III	a. Conventional septic system > 480 GPD (excluding single-family residence) b. Septic system with single effluent pump or siphon c. Gravity fill system d. Dual gravity field system e. PPBPS system, gravity dosed f. Large diameter pipe system g. Other non-conventional trench systems	Improvement Permit, Construction Authorization, and Operation Permit	5 yrs. (IIIb only)
Type IV	a. Any system with LPP distribution b. System with more than 1 pump or siphon	Improvement Permit, Construction Authorization, and Operation Permit	3 yrs.
Type V	a. Sand filter pretreatment system b. Any > 3,000-GPD septic tank system with a nitrification field designed for > 1500 GPD c. Aerobic Treatment Unit (ATU) d. Other mechanical, biological, or chemical pretreatment plant (< 3000 GPD)	Improvement Permit, Construction Authorization, and Operation Permit	12 mos.

Type VI	a. Any > 3,000 GPD system with mechanical, biological, or chemical pretreatment system plant b. Wastewater reuse/recycle	Improvement Permit, Construction Authorization, and Operation Permit	6 mos.

TABLE V(b)

MANAGEMENT ENTITY RESPONSIBILITIES

System Classification	Management Entity	Minimum System Inspection/Maintenance Frequency	Reporting Frequency
Type I	Owner	N/A	N/A
Type II	Owner	N/A	N/A
Type III	Owner	N/A	N/A
Type IV	Public Management Entity with a Certified Operator or a private Certified Operator	2/yr.	12 mos.
Type V	Public Management Entity With a Certified Operator or a private Certified Operator	a. 2/yr (0-1500 GPD) 4/yr (1500-3000 GPD) 12/yr (3000-10000 GPD) 1/wk (> 10000 GPD) b. 12/yr (3000-10000 GPD) 1/wk (> 10000 GPD) c. 4/yr. d. 12/yr.	6 mos.
Type VI	Public Management Entity With a Certified Operator	a. 1/wk(3000-10000 GPD) 2/wk(10000-25000 GPD) 3/wk(25000-50000 GPD) 5/wk(> 75000 GPD) b. 12/yr.	3 mos.

(l) A sewage collection, treatment, and disposal system that creates or has created a public health hazard or nuisance by surfacing of effluent or discharge directly into groundwater or surface waters, or that is partially or totally destroyed shall be repaired within 30 days of notification by the state or local health department unless the notification otherwise specifies a repair period in writing. If a system described in the preceding sentence has for any reason been disconnected, the system shall be repaired prior to reuse. The state or local health department shall use its best professional judgement in requiring repairs that will reasonably enable the system to function properly. If, for any reason, a sewage collection, treatment, and disposal system is found to be nonrepairable, or is no longer required, the system shall not be used, and may be required to have any contents removed, collapse any components and backfill, or otherwise secured as directed by the authorized agent to protect the public health and safety.

(m) When necessary to protect the public health, the state or local health department may require the owner or controller of a malfunctioning system to pump and haul sewage to an approved wastewater system during the time needed to repair the system.

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	06/23/08	**Amount:**	400.00
Receipt #:	57922	**Tendered:**	0.00
Check / Auth #:	VISA 012006	**Returned:**	0.00
Received By:	CRAIGGY		

Account Information

Account #: 200000
Contractor: HAGOPIAN MELISSA
Attn:
Address: 8041 CORPORATE CENTER DR
Address: SUITE 200
City/State/Zip: CHARLOTTE, NC 28226

Item	Description	Permit#	Quantity	Unit Price	Total Price
0701	Improvment Permit App-Residen LOTS 1'&2 BELLE GROVE MANOR SUBDIVISION		1	400.00	400.00

Outstanding Balances

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
25.00					