NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Olivia farms lot #1

Permit/File #: 45104

OLIVIA FARMS MINOR
LOT 1 GRAHAM SHERRON RD

This Section for Local Health Department Use Only

Initial submittal received: 3-20-25 (Date) by WTB (Initials)

G.S. 130A-335(a3) states the following:

When an applicant for an Improvement Permit submits to a local health department an Improvement Permit application, the permit fee charged by the local health department, the common form developed by the Department, and a soil evaluation pursuant to subsection (a2) of this section, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Improvement Permit includes all of the required components. If the local health department determines that the Improvement Permit is incomplete, the local health department shall notify the applicant of the components needed to complete the Improvement Permit. The applicant may submit additional information to the local health department to cure the deficiencies in the Improvement Permit. The local health department shall make a final determination as to whether the Improvement Permit is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The Department shall develop a common form for use as the Improvement Permit.

The review for completeness of this Improvement Permit was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

☐ Incomplete (If box is checked, information in this section is required.)

The following items are missing:

_____

_____

Copies of this were sent to the LSS and the Applicant on _____ (Date)

State Authorized Agent: _____ Date: _____

☑ Complete

State Authorized Agent: [signature] RENS Date: 3/26/25

OF

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. *This permit is subject to revocation if the site plan, plat, or the intended use changes.* The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of 15A NCAC 18E and to the conditions of this permit.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to evaluations, submittals, or actions from a licensed soil scientist or licensed geologist pursuant to GS 130A-335(a2).

Improvement Permit Expiration Date: 3/26/30

See attached site sketch

Permit/File #: 45014

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • Chief Deputy Secretary for Health
SUSAN KANSAGRA • Assistant Secretary for Public Health
Division of Public Health

Submittal Includes: ☒ (a2) Improvement Permit ☒ (a2) Construction Authorization ☐ Fee $_____

IMPROVEMENT PERMIT FOR G.S. 130A-335(a2)

County: GRANVILLE
PIN/Lot Identifier: LOT 1 AS SHOWN ON PLAT MAP BOOK 54 PAGE 76; SEE ATTACHED PLAT MAP
Issued To: MATT BALDWIN HOMES INC
Property Location: GRAHAM SHERRON ROAD; 36.053662, -78.562953
Subdivision (if applicable) OLIVIA FARMS LLC MINOR SUBDIVISION Lot #: 1 Block: _____ Section: _____
LSS Report Provided: Yes ☒ No ☐
If yes, name and license number of LSS: CORY A. CONNELL NCLSS #1343

New ☒ Expansion ☐ System Relocation ☐ Change of Use ☐
Facility Type: 5-BEDROOM SINGLE FAMILY HOME
Number of bedrooms: 5 Number of Occupants: 10 Other: _____
Design Wastewater Strength: ☒ Domestic ☐ High Strength ☐ Industrial Process Wastewater
Proposed Design Daily Flow: 600 GPD Proposed LTAR (Initial): 0.3 Proposed LTAR (Repair): 0.275
Proposed Wastewater System Type*: ACCEPTED 25% REDUCTION IIIbg (Initial) Pump Required: ☒ Yes ☐ No ☐ May be required
Proposed Wastewater System Type*: HORIZONTAL PANEL BLOCK IIIbe (Repair) Pump Required: ☒ Yes ☐ No ☐ May be required
**Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII*
Effluent Standard: ☒ DSE ☐ HSE ☐ NSF/ANSI 40 ☐ TS-I ☐ TS-II ☐ RCW
Saprolite System (Initial): ☒ Yes ☐ No Saprolite System (Repair): ☒ Yes ☐ No
Fill System (Initial): ☐ Yes ☒ No If yes, specify: ☐ New ☐ Existing (when adding more than 6 inches of fill to system area provide a fill plan)
Fill System (Repair): ☐ Yes ☒ No If yes, specify: ☐ New ☐ Existing (when adding more than 6 inches of fill to system area provide a fill plan)
Usable Depth to LC (Initial)ˣ: 43 Usable Depth to LC (Repair)ˣ: 28 *ˣ Limiting Condition*
Max. Trench Depth (Initial)ǂ: 27 Max. Trench Depth (Repair)ǂ: 14 *ǂ Measured on the downhill side of the trench*
Artificial Drainage Required: ☐ Yes ☒ No If yes, please specify details: _____
Type of Water Supply: ☒ Private well ☐ Public well ☐ Shared well ☐ Municipal Supply ☐ Spring ☐ Other: _____
Drainfield location meets requirements of Rule .0508: Yes ☒ No ☐ Drainfield location meets requirements of Rule .0601: Yes ☒ No ☐
Permit valid for: ☒ Five years [site plan submitted pursuant to GS 130A-334(13a)] ☐ No expiration [plat submitted pursuant to GS 130A-334(7a)]

Permit conditions:
THE DRAIN LINE TRENCH SIDE WALLS SHOULD BE RAKED
WHERE EVER TRENCH SIDE WALLS HAVE BEEN SLICKED OVER
FROM TRENCH EXCAVATION.

Licensed Soil Scientist Print Name: CORY A. CONNELL
Licensed Soil Scientist Signature: Cory Connell 3/20/2025

LICENSED SOIL SCIENTIST CORY A. CONNELL STATE OF NORTH CAROLINA 1343

The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2).
See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Olivia Farms 1

Permit/File #: 45104

OLIVIA FARMS MINOR
LOT 1 GRAHAM SHERRON RD

This Section for Local Health Department Use Only

Initial submittal received: 3/20/25 (Date) by WTB (Initials)

G.S. 130A-335(a5) states the following:

When an applicant for a Construction Authorization, or an Improvement Permit and Construction Authorization together, submits a Construction Authorization, or an Improvement Permit and Construction Authorization application together, the permit fee charged by the local health department, the common form developed by the Department, and any necessary signed and sealed plans or evaluations conducted by a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Construction Authorization or Improvement Permit and Construction Authorization includes all of the required components. If the local health department determines that the Construction Authorization or Improvement Permit and Construction Authorization is incomplete, the local health department shall notify the applicant of the components needed to complete the Construction Authorization or Improvement Permit and Construction Authorization. The applicant may submit additional information to the local health department to cure the deficiencies in the Construction Authorization or Improvement Permit and Construction Authorization. The local health department shall make a final determination as to whether the Construction Authorization or Improvement Permit and Construction Authorization is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The applicant may apply for the building permit for the project upon the decision of completeness of the Construction Authorization or Improvement Permit and Construction Authorization by the local health department or if the local health department fails to act within five business days. The Authorized On-Site Wastewater Evaluator or licensed engineer submitting the evaluation pursuant to this subsection may request that the local health department revoke or suspend the Construction Authorization or Improvement Permit and Construction Authorization for cause. Upon written request of the Authorized On-Site Wastewater Evaluator or licensed engineer, the local health department shall suspend or revoke the Construction Authorization or Improvement Permit and Construction Authorization pursuant to G.S. 130A-23. The Department shall develop a common form for use as the Construction Authorization.

The review for completeness of this Construction Authorization was conducted in accordance with G.S. 130A-335(a5). This Construction Authorization is determined to be:

☐ Incomplete (If box is checked, information in this section is required.)

The following items are missing: _____

_____

Copies of this were sent to the AOWE/PE and the Applicant on _____ (Date)

State Authorized Agent: _____ Date: _____

☑ Complete

State Authorized Agent: [signature] REHS Date of Issuance: 3/26/25

This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here. This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to plans, evaluations, preconstruction conference findings, submittals, or actions from a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator in GS 130A-335(a2), (a5), and (a7). The Department, the Department's authorized agents, and the local health departments shall be responsible and bear liability for their actions and evaluations and other obligations under State law or rule, including the issuance of the operations permit pursuant to GS 130A-337.

Construction Authorization Expiration Date: 3/26/30

See attached site sketch

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: 451014

CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)

County: GRANVILLE **Pre-Construction Conference Required:** Yes ☐ No ■

PIN/Lot Identifier: LOT 1 AS SHOWN ON PLAT MAP BOOK 54 PAGE 76; SEE ATTACHED PLAT MAP

Issued To: MATT BALDWIN HOME INC

Property Location: GRAHAM SHERRON ROAD; 36.053662, -78.562953

AOWE/PE Plans/Evaluations Provided: Yes ■ No ☐ If yes, name and license number of AOWE/PE: CORY A. CONNELL AOWE #10030E

Facility Type: 5-BEDROOM SINGLE FAMILY HOME

Number of bedrooms: 5 Number of Occupants: 10 Other: _____

■ New ☐ Expansion ☐ Repair ☐ System Relocation ☐ Change of Use

Basement? ☐ Yes ■ No Basement Fixtures? ☐ Yes ■ No

Crawl Space? ■ Yes ☐ No Slab Foundation? ☐ Yes ■ No

Type of Wastewater System* ACCEPTED 25% REDUCTION IIIbg (Initial) HORIZONTAL PANEL BLOCK IIIbe (Repair)

**Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII*

Design Daily Flow: 600 GPD Wastewater Strength: ■ Domestic ☐ High Strength ☐ Industrial Process WW

Session Law 2014-120 Section 53, Engineering Design Utilizing Low-flow Fixtures and Low-flow Technologies? ☐ Yes ■ No
(If yes, please provide engineering documentation)

Effluent Standard: ■ DSE ☐ HSE ☐ NSF/ANSI 40 ☐ TS-I ☐ TS-II ☐ RCW

Type of Water Supply: ■ Private well ☐ Public well ☐ Shared well ☐ Municipal Supply ☐ Spring ☐ Other: _____

Installation Requirements/Conditions

Septic Tank Size: 1250 gallons Total Trench/Bed Length: 500 feet Trench/Bed Spacing: 9 feet on center

Trench/Bed Width: 36 inches LTAR: 0.3 gpd/ft² Usable Depth to LC (Initial)[x]: 43 [x] ***Limiting condition***

MINIMUM Soil Cover: 6 inches Slope Corrected Maximum Trench/Bed Depth[†]: 27 inches [†] ***Measured on the downhill side of the trench***

Pump Tank Size (if applicable): 1200 gallons Requires more than 1 pump? ☐ Yes ■ No

Pump Requirements: 19.7 ft. TDH vs. 35.1 GPM Grease Trap Size (if applicable): NA gallons

Distribution Method: ☐ Serial ☐ D-Box or Parallel ■ Pressure Manifold(s) ☐ LPP ☐ Other: _____

Artificial Drainage Required: Yes ☐ No ■ If yes, please specify details: _____

Legal Agreements *(If the answer is "Yes" to any type of legal agreements, please attach a copy of the agreement.)*

Multi-party Agreement Required [.0204(g)]: ☐ Yes ■ No Declaration of Restrictive Covenants: ☐ Yes ■ No

Easement, Right-of-Way, or Encroachment Agreement Required [.0301(b)]: ☐ Yes ■ No

Management Entity Required: ■ Yes ☐ No Minimum O&M Requirements: LHD OR SUBSURFACE OPERATOR INSPECT EVERY 5 YEARS

Permit conditions:
KEEP TANKS >5FT FROM HOUSE & DRAIN LINES, KEEP TANKS >10FT FROM PROPERTY LINE. USE EITHER EZ FLOW OR QUICK4 PLUS STANDARD CHAMBER DRAIN LINE PRODUCTS. THE DRAIN LINE TRENCH SIDE WALLS SHOULD BE RAKED WHERE EVER TRENCH SIDE WALLS HAVE BEEN SLICKED OVER FROM TRENCH EXCAVATION. USE ZOELLER 152 PUMP OR SIMILIAR APPROVED EQUIVALENT SIZED PUMP. LINES 1, 2, & 3 ARE SERIAL OUT OF ONE TAP IN MANIFOLD, SEE MAP & TAP CHART. LINES 4 & 5 WILL BE FLOW DIVIDED OUT OF ONE TAP IN MANIFOLD SO TWO 85 FT LINES, SEE MAP & TAP CHART. LINES 6 & 7 WILL BE FLOW DIVIDED OUT OF ONE TAP IN MANIFOLD SO TWO 95 FT LINES, SEE MAP & TAP CHART. 3 TAP PRESSURE MANIFOLD, SEE DIAGRAM. CONTACT S&EC WITH ANY QUESTIONS

The requirements of 15A NCAC 18E are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached site sketch. *This Construction Authorization is subject to revocation if the site plan/soil, or the intended use changes.* The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of 15A NCAC 18E, or 15A NCAC 18A .1900, as applicable, and to the conditions of this permit.

AOWE/PE Print Name: CORY A. CONNELL

AOWE/PE Signature: Cory Connell Date: 3/20/2025

This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a2a).

See attached site sketch

10030E SITE EVALUATOR Certific. No.

LICENSED SOIL SCIENTIST CORY A. CONNELL 1343 STATE OF NORTH CAROLINA

GRANVILLE VANCE public health

Well Construction Permit

Granville County Health Dept
Environmental Health
101 Hunt Drive
Oxford NC, 27565
Phone: (252) 492-5263 Fax: (252) 492-2361

For Office Use Only

*CDP File Number 451014

PIN Number:

Tax Lot #: 1 Tax Block #:

Evaluated For:

PERMIT VALID UNTIL: 03/26/2030

Property Owner:	OLIVIA FARMS LLC	Applicant:	MB HOMES CONSTRUCTION INC
Address:	4009 GRAHAM SHERRON ROAD	Address:	401 WALT AVE
City:		City:	
State/Zip:	NC	State/Zip:	NC
Phone #:	H: (919) 633-0687	Phone #:	H: (919) 633-0687

Property Location & Site Information

Address/Road #: 3841 GRAHAM SHERRON ROAD

Subdivision: OLIVIA FARMS Phase: Lot: 1

*Proposed use of Well:

If Other:

Applicant Email:

Owner Email:

Directions: GPS

WEST OF 4005 GRAHAM SHERRON ON GRAHAM SHERRO RD

Well Contractor Information

Drilling Contractor:

Driller Registration:

Permit Conditions

*Permit Conditions

Refer to soil scientist site plan for well placement. Grout inspection mandatory by health department. Ensure repair and initial drain lines are flagged prior to install of well (To ensure setbacks). Keep proposed well min. 50' off any part of septic (Including initial/repair as well as neighboring lots). Min. 25' off house foundation. Well driller responsible for maintaining all setbacks.

Well location, construction and protection must meet all state and local regulations and must be inspected and approved by an authorized representative of the Local Health Department. The permit may be revoked at any time for failure to comply with existing regulations. The siting of approved well construction area(s) by the Health Department is to provide protection from the known possible sources of contamination. The approved well area(s) may not be changed without permission from an authorized representative of the Local Health Department. Issuance of this well permit does not guarantee water quality or adequate water production from the well once it is installed or repaired.

*Issued By: Bullock, Will

Authorized State Agent: REHS

Owner/Applicant: Olivia Farms LLC. / MB Homes Const. Inc.

*Date of Issue: 03/26/2025

○ Hand Drawing ✓ Import Drawing

Site Plan/Drawing attached.

5-BEDROOM PRESSURE MANIFOLD INITIAL SYSTEM
LINES 1-7 0.3 LTAR ACCEPTED 25% RED. PRODUCT
5-BEDROOM PRESSURE MANIFOLD REPAIR
LINES 8-13 0.275 LTAR HORIZONTAL PANEL BLOCK

FOUNDATION DRAINS ALLOWED
DIVERT ANY FOUNDATION DRAINAGE
DAYLIGHT POINT(S) AWAY FROM THE SEPTIC

LEGEND
- SYSTEM LINE
- REPAIR LINE
- ST — SEPTIC TANK
- PT — PUMP TANK

NORTH

GRAPHIC SCALE
1" = 50'
50' 0 50'

SPC
N:838949.36
E:2129195.86

SERIAL LINES 1, 2, & 3

S 89°54'29" E 149.29'

148.26'

INITIAL SOILS AREA

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 SB-8 SB-9

1-YELLOW-40'
2-WHITE-60'
3-BLUE-40'
4-RED-85'
5-YELLOW-85'
6-ORANGE-95'
7-PINK-95'

25' MBL

FLOW DIVIDE LINES 4 & 5

FLOW DIVIDE LINES 6 & 7

3 TAP PRESSURE MANIFOLD

289.11'

15' MBL

PROPOSED WELL AREA

>50 FT

124.8'

PT ST

KEEP TANKS >10FT FROM PROPERTY LINE, >5FT FROM HOUSE, & >5FT FROM DRAIN LINES

10 FT

>25 FT

WATER LINE

PROPOSED FOUNDATION

LOT 1
44,000 SF
1.0101 ACRES

LOT 2
44,000 SF
1.0101 ACRES

>50 FT

54.4'

15.5'

N 00°05'31" E

8-RED-70'
9-ORANGE-80'
10-BLUE-50'
11-YELLOW-60'
12-WHITE-70'
13-PINK-50'

REPAIR SOILS AREA

98.2'

50'

MBL

PROPOSED DRIVE

303.72'

N 00°05'31" E

EXISTING WELL

PLACE UNDERGROUND POWER AND OTHER BURIED UTILITIES ON THE EAST (RIGHT) SIDE OF THE DRIVEWAY

EXISTING OVERHEAD POWER LINES

L5 N 79°54'29" W

TIE-3 TIE TIE-2

GRAHAM SHERRON ROAD
(SR 1716) (60' PUBLIC R/W)

NOTES:

1) SITE DATA TO INCLUDE PROPERTY BOUNDARIES, STRUCTURE LOCATION, UTILITIES, ROADS, AND OTHER SITE FEATURES WERE PROVIDED BY THOMASON SURVEYING AND ARE SHOWN TO DISPLAY GENERAL SITE CONDITIONS.

2) ALL SEPTIC SYSTEM COMPONENTS TO INCLUDE TANKS, AND SYSTEM AND REPAIR LINES HAVE BEEN GPS LOCATED BY SOIL AND ENVIRONMENTAL CONSULTANTS, INC. ALL LOCATIONS, ELEVATIONS, AND DIMENSIONS ARE APPROXIMATE AND AS SUCH NO SPECIFIC ACCURACY EITHER VERTICAL OR HORIZONTAL IS IMPLIED.

3) THIS MAP AND CORRESPONDING SITE EVALUATION IS CONFORMANT TO THE HYBRID A2 SEPTIC PERMITTING PROCESS.

4) PROPERTY AND EASEMENT BOUNDARIES SHOWN ON THIS SITE SKETCH ARE APPROXIMATE AND ARE NOT INTENDED FOR LOCATING PROPERTY OR IDENTIFYING PROPERTY OR EASEMENT CORNERS. THIS IS NOT A SURVEY.
3-20-2025

S&EC
Soil & Environmental Consultants, Inc.
8412 Falls of Neuse Rd., Suite 104 • Raleigh, North Carolina 27615 • www.SandEC.com
Phone: (919) 846-5900 • Fax: (919) 846-9467

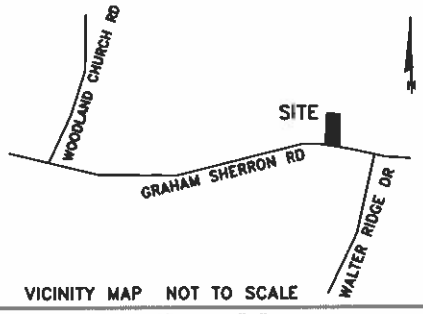
Project: OLIVIA FARMS MINOR SUBDIVISION LOT 1, GRAHAM SHERRON ROAD			Project No.: 16021.55
		Project Manager: CC	Drawn: CC
Location: GRANVILLE CO., NC	Client: MATT BALDWIN HOMES	Scale: 1" = 50'	Field Work: CC,MB
Sheet Title: SEPTIC LAYOUT & SOILS MAP FOR A2 IP/CA		Sheet No.: 1 of 1	

Book of maps 54 Vol. — Page 76 Book — Page — County GRANVILLE

Block — Lot 1 Subdivision OLIVIA FARMS, LLC

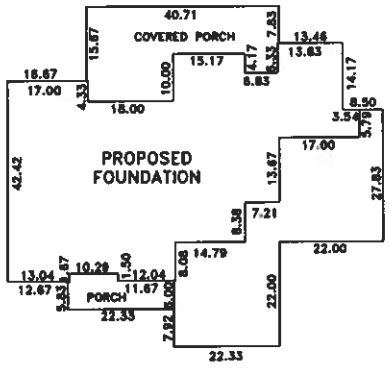
◉IPF=Iron Pipe Found ○IPS=Iron Pipe Set
▣ECM=Existing Concrete Monument PP=Power Pole
▲PK=PK Nail • CP=Calculated Point LP=Light Pole

SCALE 1"=50'
0' 50' 100'



VICINITY MAP NOT TO SCALE

INSERT "A"



OLIVIA FARMS, LLC
DB 1983 PG 237
PB 26 PG 1

PB 54 PG 76

S 89°54'29" E 149.29'

25' MBL

124.8'

289.11'

15' MBL

LOT
1
44000 SF

15' MBL

S 00°05'31" W

SEE
INSERT "A"

PROPOSED
FOUNDATION

LOT
2

15.5'

54.4'

N 00°05'31" E

303.72'

98.2'

50' MBL

PROPOSED DRIVE

C1 C2 L2 L1

GRAHAM SHERRON ROAD
(SR 1716) (60' PUBLIC R/W)

OLIVIA FARMS, LLC
DB 1983 PG 237
PB 26 PG 1

MAP NOT FOR RECORDATION

PROPOSED
IMPERVIOUS SURFACE TABLE
HOUSE - 3544 SF
PORCH - 149 SF
COV. PORCH - 617 SF
DRIVEWAY - 2039 SF
TOTAL - 6349 SF

ZONE: AR-40
FRONT - 50'
SIDE - 15'
REAR - 25'

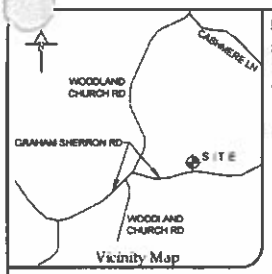
LINES		
Id	Bearing	Distance
L1	N 80°48'26" W	8.42'
L2	N 82°20'26" W	47.03'

CURVES				
Id	Radius	Arc Length	Chord	Ch Bear
C1	830.00'	29.42'	29.42'	N 87°51'39" W
C2	830.00'	65.25'	65.23'	N 84°35'36" W

Drawn By JLT Surveyed By — Date 02-06-25 rev: 03-12-25 Dwg.# TLS-5479

PROPERTY OF:
MATT BALDWIN HOMES
LOT 1 GRAHAM SHERRON ROAD
WAKE FOREST, NC 27587

THOMASON LAND SURVEYING, PLLC
P-3122
127 Fishing Rock Road Castalia, NC 27816
Email: thomasonlandsurveying@gmail.com
Phone: 919-556-3307



Notes
1) Area by Coordinate Method
2) Distances are horizontal ground in U.S. Survey Feet
3) No title reported provided. This property may be subject to easements and rights of others not shown hereon.
4) Surface and subsurface utilities depicted hereon are based on visible evidence only. Utility companies should be contacted for information regarding utilities and any associated easements.
5) Parent parcel residual area: 43.37 acres±

Legend (unless otherwise noted)

1/2" Iron Pipe Found	●
#4 Rebar Set	○
Nail Set	△
Calculated Point	▲
Concrete Monument	■
Right of Way	R/W
Centerline	C/L
Property Line	P/L
Overhead Utilities	OHU
Total Distance	(T)
Property Line Surveyed	———
Property Line Tie	– – – –
Deed or Plat Line	– – – –
Right of Way Line	———
Overhead Utility Line	———
Utility Pole	⌀
Pole mounted area light	☒
State Plane Coordinates	SPC

Stormwater Note:
This property is subject to a Stormwater Plan. Contact the Granville County Planning Department prior to conducting any land disturbing activity

I hereby certify that I am the owner of the property shown and described hereon which was conveyed to me by deed recorded in the Granville County Register of Deeds office in (references), and that we hereby adopt this plan of subdivision with my free consent. Further, we hereby certify that the land as shown hereon is within the subdivision regulation jurisdiction of Granville County, North Carolina.

Owner/Developer — Date: 11/15/2024

State of North Carolina, County of Granville

I, Angela D. Bloant, Review Officer of Granville County, certify that the map or plat to which this certification is affixed meets all statutory requirements for recording.

Review Officer — Date: 11-22-24

I, hereby certify that the subdivision plat as depicted hereon has been granted final approval pursuant to the Granville County Subdivision Regulations.

Land Development Administrator — Date: 11-22-24

I, Stephen M. Puckett, certify that the State Plane Coordinates and bearing base was determined from an actual GNSS survey made under my supervision and the following information was used to perform the survey:
Class of Survey: A
Positional accuracy: 0.08'
Type of GNSS field procedure: RTK
Date of survey: September 20, 2024
Datum/Epoch: NAD 83(2011)/2010.00
Published/fixed control: CORS(NC RTN)
Geoid Model: GEOID18
Units: U.S. Survey Feet

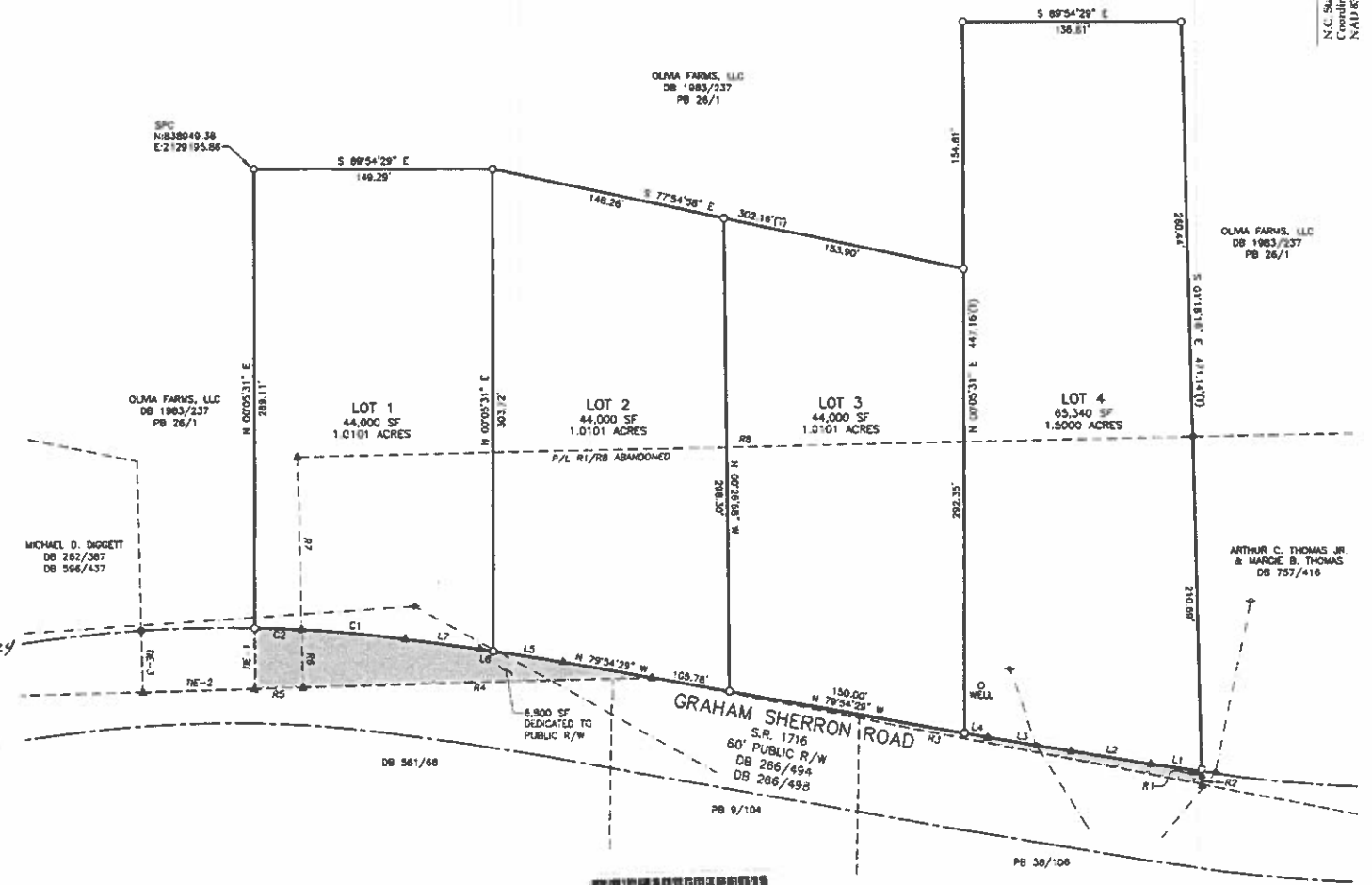
NORTH CAROLINA PROFESSIONAL LAND SURVEYOR SEAL L-3991 STEPHEN M. PUCKETT

Surveyor's Certificate
I, Stephen M. Puckett, 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.

I, Stephen M. Puckett, certify that the plat was drawn under my supervision from an actual survey made under my supervision (deed description recorded in (references)), that the boundaries not surveyed are indicated as drawn from information in N/A; that the positional accuracy does not exceed 0.15' plus 150 ppm; that this plat was prepared in accordance with G.S. 47-30 as amended. Witness my original signature, license number and seal this 5th day of November, A.D., 2024.

Professional Land Surveyor, License Number L-3991

Puckett Surveyors, PLLC
Professional Land Surveyors
FIRM LICENSE NO. (P-1168)
PO Box 2351
Oxford, NC 27565
P. 919.528.8900
File 21041-8



Doc ID: 003888420001 Type: CRP
Recorded: 11/22/2024 at 02:30:00 PM
Fee Amt: $21.00 Page 1 of 1
Granville County, NC
Kathy H. Taylor Reg of Deeds
BK 54 PG 76

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	830.00'	85.25'	N 84°35'36" W	85.23'
C2	830.00'	29.42'	N 87°51'39" W	29.42'

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 81°44'42" W	32.12'
L2	N 80°43'27" W	50.71'
L3	N 80°26'46" W	92.58'
L4	N 79°54'29" W	14.59'
L5	N 80°45'26" W	44.23'
L6	N 80°45'26" W	6.42'
L7	N 82°20'28" W	47.03'

LINE TABLE

LINE	BEARING	DISTANCE
R1	S 01°18'15" E	0.79'
R2	S 01°18'18" E	7.41'
R3	N 79°00'02" W	350.69'
R4	S 86°30'06" W	218.58'
R5	S 88°28'06" W	30.30'
R6	N 01°17'19" W	36.73'
R7	N 01°17'19" W	108.39'
R8	N 88°43'03" E	561.18'

LINE TABLE

LINE	BEARING	DISTANCE
TIE-1	S 00°05'31" W	38.82'
TIE-2	S 88°28'06" W	69.62'
TIE-3	N 01°18'48" W	39.13'

Site Data
1) PIN: 182300985334, 182300985701
Record No.: 40240, 15888
2) Watershed: Falls Lake / WS-IV-GW
3) River Basin: Neuse
4) Zone: AR-40
5) Setbacks: Street 50', Side 15', Rear 25'

References
DB 1983/237
DB 1984/510
PB 26/1

Owner
Olivia Farms, LLC
4009 Graham Sherron Rd
Wake Forest, NC 27587

N.C. State Plane Coordinate System NAD 83(2011)

Recombination & Minor Subdivision Plat
Survey for:
Olivia Farms, LLC
September 20, 2024
Brassfield Township, Granville Co., N.C.

50 0 25 50 100
Graphic Scale (1"=50')

S&EC

Soil & Environmental Consultants, Inc.

8412 Falls of Neuse Road, Suite 104, Raleigh, NC 27615 • Phone (919) 846-5900 • Fax (919) 846-9467
sandec.com

Private Consultant Septic Permit Cover Sheet

Issue Date by S&EC: March 20, 2025 Expiration Date: 5 YEARS Permit Transferable from Applicant: ☑ YES ☐ NO

APPLICANT INFORMATION:

Applicant Name and Contact Person: MATT BALDWIN HOMES; ATTN: MATT BALDWIN

Phone:_____ Email address: _____

Mailing Address. _____

SITE INFORMATION:

Property Address: GRAHAM SHERRON RD Wastewater Design Daily Flow [DDF](GPD): 600

County: GRANVILLE Tax Parcel #/PIN: MAP BK 54 PG 76 Acres: 1.01

Subdivision: OLIVIA FARM LLC MINOR Lot #: 1 Date property was deeded and/or recorded on plat: 2024

☑ **SINGLE FAMILY HOME** # of Bedrooms: 5 ☐ **MULTI FAMILY** Daily GPD: _____

☐ **BUSINESS/COMMERCIAL** Daily GPD: _____ ☐ **OTHER** Daily GPD:_____

DESIGN WASTEWATER STRENGTH: ☑DSE ☐HSE ☐INDUSTRIAL ☐TO BE DETERMINED BY ENGINEER

WATER SUPPLY: ☑PRIVATE WELL ☐PUBLIC WELL ☐SHARED WELL ☐MUNICIPAL SUPPLY ☐SPRING ☐OTHER

PROJECT INFORMATION:

☑NEW BUILDING ☐EXPANSION TO EXISTING FACILITY ☐SEPTIC SYSTEM REPAIR

☐CHANGE OF USE/PERMIT REVISION ☐SUBDIVISION/RECOMBINATION OF PROPERTY ☐SYSTEM RELOCATION

SEPTIC PERMIT TYPE: G.S. 130A-335(a2) Hybrid

☑ IMPROVEMENT PERMIT (IP) ☑ CONSTRUCTION AUTHORIZATION (CA) ☐ OPERATION PERMIT (OP)

☐ NOTICE OF INTENT (NOI) ☐ AUTHORIZATION TO OPERATE (ATO)

SEPTIC SYSTEM COMPONENTS:

INITIAL SEPTIC DRAIN LINE TYPE: ACCEPTED 25% REDUCTION IIIBG

INITIAL SEPTIC DRAIN LINE TOTAL LENGTH (FT): 500 **TRENCHES:** ☑INDIVIDUAL ☐ BED ☐ MOUND/AERIAL FILL

INITIAL SEPTIC LTAR (GPD/FT²): 0.3 INITIAL TRENCH DEPTH MIN. (IN.): 18 INITIAL TRENCH DEPTH MAX. (IN.): 27

TRENCH WIDTH (IN.): 36 SEPTIC TANK MINIMUM LIQ. CAP. (GAL.): 1250 PUMP TANK MINIMUM LIQ. CAP. (GAL.): 1200

INITIAL SEPTIC DISTRIBUTION TYPE: PRESSURE MANIFOLD IIIBG

SEPTIC PUMP: ☑YES☐ NO ☐ TO BE DETERMINED

IF PUMP IS NEEDED: Total Dynamic Head [TDH] (feet) 19.7 Flow Per Minute (GPM) 35.1 Pressure Head (feet) 2

PROJECT DESCRIPTION/NOTES: _____

_____

SEPTIC MAINTENANCE/LEGAL AGREEMENTS/OTHER:

FOUNDATION TYPE: CRAWLSPACE **PRE-CONSTRUCTION CONFERENCE:** ☐YES ☑ NO **ARTIFICIAL DRAINAGE:** ☐YES ☑ NO

MANAGEMENT ENTITY REQUIRED: ☑ YES ☐ NO **MINIMUM O&M REQUIREMENTS:** LHD OR SUB. OPERATOR INSPECT EVERY 5YEARS

WASTEWATER ENGINEER NEEDED: ☐YES ☑ NO **DECLARATION OF RESTRICTIVE COVENANTS:** ☐ YES ☑ NO

EASEMENT, R.O.W., OR ENCROCHMENT AGREEMENT: ☐YES ☑ NO **MULTI-PARTY AGREEMENT:** ☐YES ☑ NO

S&EC Contact Name CORY CONNELL Date March 20, 2025

Project Number 16021.S5

Project Name OLIVIA FARM LLC MINOR LOT1

REPAIR SYSTEM COMPONENTS:

REPAIR SEPTIC DRAIN LINE TYPE & DISTRIBUTION: HORIZONTAL PANEL BLOCK PRESSURE MANIFOLD IIIBE

REPAIR LTAR (GPD/FT^2): 0.275 REPAIR TRENCH DEPTH MINIMUM (IN): 14 REPAIR TRENCH DEPTH MAXIMUM (IN): 14

REPAIR DESCRIPTION/NOTES:

S&EC recommends the septic installer and/or applicant calls 811 to locate any buried utilities prior to any site work. Any and all subsurface utilities (water, sewer, cable, irrigation, power, telephone, etc.) were located by the applicant and/or applicant's legal representative before Soil & Environmental Consultants, Inc. (S&EC) conducted any site work. The applicant assumes all responsibility for any damage that occurs if the locations of utilities are not clearly marked and/or any inaccurately marked utilities prior to any commencement of work. Applicant/client understands that they are solely responsible for the proper identification and labeling of all property lines & corners and making the site accessible so that a complete soils/site evaluation, field septic layout(s), and septic installation can be performed.

The attached septic site plan for this lot must ensure that adequate soil area for septic initial and repair systems are unaffected by site elements (building placement, driveway, parking lots, wells, patios, decks, sidewalks, etc.) on this or adjacent lots. The septic area ultimately designated by S&EC on the attached septic site plan for the septic initial and repair area(s) (before or after installation) must remain undisturbed (no mechanical clearing, excavation, heavy traffic, or other significant site disturbing activities) until authorized to install the septic system. An area with initially adequate usable soil may be rendered unusable as a result of improper site planning and/or disturbance. The use of a small loader (i.e. Bobcat skid steer) and/or a mini-excavator (CAT 309 CR) or similar machinery may be used for the septic installation. Buildings, structures, footings, driveways, parking areas, wells, porches, patios, and/or pools should NOT be placed in the septic areas after installation.

The site plan was provided to S&EC by the applicant and/or applicant's representative. If included with this document, the declaration of restrictive covenants for this property was provided to S&EC by the applicant and/or applicant's representative. It is the responsibility of the client to have the site plan approved by the local county and/or city zoning/building department(s). S&EC's work associated with the private septic permit process does not constitute the approval of any zoning, planning, building, and/or well approvals necessary by county agencies and/or state permitting agencies. The site plan for this lot shows all the proposed improvements to the lot as provided by the client/applicant. If the information in this permit is falsified, changed, or if the site is altered, then the permit and any authorization to construct shall become invalid. S&EC recommends that anyone making financial commitments on a property be fully aware of the individual permit requirements on the property prior to final action.

Any septic installer/contractor working on this project must have a valid septic installer certification from the North Carolina Onsite Wastewater Contractor Inspector Certification Board (NCOWCICB). All septic tanks must have a NC approved septic tank filter that can support the wastewater flow from this facility. Do not install septic drain lines or components under wet or unfavorable conditions. Final landscaping of the septic area(s) shall be constructed to divert surface water away from septic areas and establish a vegetative cover.

A garbage disposal is not permitted on this septic system unless indicated by a wastewater engineer in writing and provided to S&EC. Do not dispose of fats, oils, greases, feminine hygiene products, "flushable" wipes, paper towels, condoms, HVAC condensate, dehumidifier condensate, crawlspace/foundation drainage, gutter drainage, or stormwater drainage into this septic system. Any crawlspace/foundation drainage, gutter drainage, or stormwater drainage should be discharged away from the septic system.

Soil & Environmental Consultants, Inc. (S&EC) was authorized right of entry to the property by the applicant and/or applicant's representative to conduct necessary soils/site evaluations and field septic layout(s) to determine compliance and prepare the septic permit per 15A NCAC 18E "Wastewater Treatment and Dispersal Systems" and county on-site wastewater regulations. Applicant/client understands that they are solely responsible for S&EC right of entry onto the property if the property is not currently owned by the applicant/client. This septic permit and associated work with this project are for the exclusive use of the addressee and the use or reliance by all others is expressly denied without the written consent of S&EC. This septic permit is not valid until it is submitted and approved by the applicable county health department or NCDHHS through a private consultant septic permitting process.

Applicant Name and Contact Person: MATT BALDWIN HOMES, ATTN: MATT BALDWIN

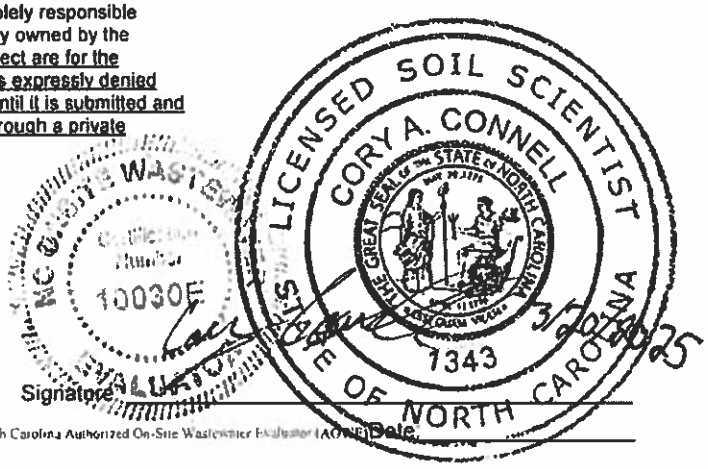
Property Address: GRAHAM SHERRON RD LOT 1

Tax Parcel #/PIN: MAP BK 54 PG 76

County: GRANVILLE Acres: 1.01

Subdivision: OLIVIA FARM LLC MINOR Lot #: 1

Wastewater Design Daily Flow [DDF](GPD): 600



Signature: Date: 3/20/2025

North Carolina Licensed Soil Scientist (LSS), North Carolina Authorized On-Site Wastewater Evaluator (AOWE)

S&EC Contact Name CORY CONNELL

Project Number 16021.S5

Project Name OLIVIA FARM LLC MINOR LOT1

5-BEDROOM PRESSURE MANIFOLD INITIAL SYSTEM
LINES 1-7 0.3 LTAR ACCEPTED 25% RED. PRODUCT
5-BEDROOM PRESSURE MANIFOLD REPAIR
LINES 8-13 0.275 LTAR HORIZONTAL PANEL BLOCK

FOUNDATION DRAINS ALLOWED
DIVERT ANY FOUNDATION DRAINAGE
DAYLIGHT POINT(S) AWAY FROM THE SEPTIC

LEGEND
- SYSTEM LINE
- REPAIR LINE
- ST — SEPTIC TANK
- PT — PUMP TANK

SPC
N:838949.36
E:2129195.86

NORTH

GRAPHIC SCALE
1" = 50'
50' 0 50'

NOTES:

1) SITE DATA TO INCLUDE PROPERTY BOUNDARIES, STRUCTURE LOCATION, UTILITIES, ROADS, AND OTHER SITE FEATURES WERE PROVIDED BY THOMASON SURVEYING AND ARE SHOWN TO DISPLAY GENERAL SITE CONDITIONS.

2) ALL SEPTIC SYSTEM COMPONENTS TO INCLUDE TANKS, AND SYSTEM AND REPAIR LINES HAVE BEEN GPS LOCATED BY SOIL AND ENVIRONMENTAL CONSULTANTS, INC. ALL LOCATIONS, ELEVATIONS, AND DIMENSIONS ARE APPROXIMATE AND AS SUCH NO SPECIFIC ACCURACY EITHER VERTICAL OR HORIZONTAL IS IMPLIED.

3) THIS MAP AND CORRESPONDING SITE EVALUATION IS CONFORMANT TO THE HYBRID A2 SEPTIC PERMITTING PROCESS.

4) PROPERTY AND EASEMENT BOUNDARIES SHOWN ON THIS SITE SKETCH ARE APPROXIMATE AND ARE NOT INTENDED FOR LOCATING PROPERTY OR IDENTIFYING PROPERTY OR EASEMENT CORNERS. THIS IS NOT A SURVEY.
3-20-2025

SERIAL LINES 1, 2, & 3

S 89°54'29" E 149.29'

148.26'

INITIAL SOILS AREA

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6

1-YELLOW-40'
2-WHITE-60'
3-BLUE-40'
4-RED-85'
5-YELLOW-85'
6-ORANGE-95'
7-PINK-95'

25' MBL

3 TAP PRESSURE MANIFOLD

FLOW DIVIDE LINES 4 & 5

FLOW DIVIDE LINES 6 & 7

KEEP TANKS >10FT FROM PROPERTY LINE, >5FT FROM HOUSE, & >5FT FROM DRAIN LINES

289.11'

15' MBL

PROPOSED WELL AREA

>50 FT

124.8

PT ST

10 FT

WATER LINE

>25 FT

PROPOSED FOUNDATION

LOT 1
44,000 SF
1.0101 ACRES

LOT 2
44,000 SF
1.0101 ACRES

>50 FT

54.4'

15.5'

N 00°05'31" E

EXISTING WELL

8-RED-70'
9-ORANGE-80'
10-BLUE-50'
11-YELLOW-60'
12-WHITE-70'
13-PINK-50'

SB-7 SB-8 SB-9

REPAIR SOILS AREA

98.2'

50'

MBL

PROPOSED DRIVE

303.72'

N 00°05'31" E

PLACE UNDERGROUND POWER AND OTHER BURIED UTILITIES ON THE EAST (RIGHT) SIDE OF THE DRIVEWAY

EXISTING OVERHEAD POWER LINES

L5 N 79°54'29" W

TIE-3 TIE TIE-2

GRAHAM SHERRON ROAD
(SR 1716) (60' PUBLIC R/W)

S&EC
Soil & Environmental Consultants, Inc.
8412 Falls of Neuse Rd., Suite 104 • Raleigh, North Carolina 27615 • www.SandEC.com
Phone: (919) 846-5900 • Fax: (919) 846-9467

Project: OLIVIA FARMS MINOR SUBDIVISION LOT 1, GRAHAM SHERRON ROAD			Project No.: 16021.55
		Project Manager: CC	Drawn: CC
Location: GRANVILLE CO., NC	Client: MATT BALDWIN HOMES	Scale: 1" = 50'	Field Work: CC,MB
Sheet Title: SEPTIC LAYOUT & SOILS MAP FOR A2 IP/CA		Sheet No.: 1 of 1	

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sandec.com

SOIL & ENVIRONMENTAL CONSULTANTS, INC. (S&EC) HIGHLY RECOMMENDS TEMPORARY FENCING AROUND THE INITIAL AND REPAIR SEPTIC DRAINFIELD AREAS DURING THE CONSTRUCTION OF THIS FACILITY OR FACILITIES TO PREVENT CONSTRUCTION TRAFFIC FROM ENTERING THE SEPTIC AREAS. TEMPORARY FENCING COULD INCLUDE: ORANGE SAFETY/BARRIER FENCING WITH T-POSTS, TEMPORARY CHAIN LINK PANELS, T-POSTS WITH SILT FENCING & FLAGGING BETWEEN POSTS, ETC.

ANY SEPTIC AREA WITH INITIALLY ADEQUATE USABLE SOIL MAY BE RENDERED UNUSABLE AS A RESULT OF IMPROPER SITE PLANNING AND/OR DISTURANCE. THIS COULD RESULT IN DELAYS IN CONSTRUCTION, MORE EXPENSIVE SEPTIC SYSTEM INSTALLATION, MORE EXPENSIVE SEPTIC DESIGN/PERMITTING, AND/OR SEPTIC AREA(S) THAT CAN NO LONGER SUPPORT THE WASTEWATER DESIGN FLOW FROM THE PROPOSED FACILITY OR FACILITIES.

IF VEGETATION (TREES, BUSHES, ETC) NEED TO BE REMOVED WITHIN THE SEPTIC AREA(S), CONSULT WITH THE SEPTIC INSTALLER PRIOR TO VEGETATION REMOVAL OR HAVE THE SEPTIC INSTALLER REMOVE THE VEGETATION PRIOR TO SEPTIC INSTALLATION.

- FOR SHALLOW PLACED SEPTIC SYSTEMS (≤18 INCH MAX TRENCH DEPTH) WHEN REMOVING VEGETATION PRIOR TO INSTALLATION:
  - TREES AND BUSHES SHOULD BE CUT AS CLOSE TO THE GROUND SURFACE AS POSSIBLE.
  - STUMPS SHOULD BE LEFT IN PLACE. ANY STUMP REMOVAL NEEDED WILL BE DONE AT THE TIME OF THE SEPTIC INSTALL.
  - VEGETATION CLEARING & REMOVAL SHOULD BE DONE BY HAND AND/OR WITH SMALL MACHINERY (SKID STEER, SMALL MINI-EX, ETC).

- FOR DEEPER PLACED SEPTIC SYSTEMS (>18 INCH MAX TRENCH DEPTH) WHEN REMOVING VEGETATION PRIOR TO INSTALLTION:
  - VEGETATION CLEARING & REMOVAL SHOULD BE CAREFULLY MANAGED TO MINIMIZE SOIL DISTURBANCE.
  - STUMPS CAN BE:
    - LEFT IN PLACE AND ANY STUMP REMOVAL NEEDED WILL BE DONE AT THE TIME OF SEPTIC INSTALL
    - GROUND IN PLACE
    - CAREFULLY REMOVED, SOIL SHAKEN OFF THE STUMP AND SOIL ALLOWED TO FALL OFF THE STUMP BACK INTO THE STUMP HOLE. DO NOT COMPACT THE SOIL THAT FALLS BACK INTO THE STUMP HOLE

DO NOT GRADE, COMPACT, OR REMOVE ANY SOIL IN INITIAL OR REPAIR SEPTIC AREAS.

DO NOT CLEAR OR REMOVE ANY VEGETATION IN SEPTIC AREAS DURING WET SITE CONDITIONS.

DO NOT BURN ANY WOODY DEBRIS MATERIAL WITHIN THE SEPTIC AREAS.

DO NOT PLACE IMPORTED SOIL MATERIAL IN SEPTIC SOIL AREAS PRIOR TO SEPTIC INSTALLATION UNLESS OTHERWISE INDICATED WITHIN THE SEPTIC PERMIT CONDITIONS/SEPTIC DESIGN.

DO NOT DRIVE, PARK, OR HAVE HEAVY TRAFFIC IN THE SEPTIC AREAS BEFORE, DURING, OR AFTER THE CONSTRUCTION OF THIS FACILTY OR FACILITIES.

AFTER SEPTIC INSTALLATION, FINAL LANDSCAPING OF THE SEPTIC AREA(S) SHALL BE CONSTRUCTED TO DIVERT SURFACE WATER AWAY FROM THE SEPTIC AREA(S) AND ESTABLISH A VEGETATIVE COVER OVER THE DRAINFIELD.

THIS DISCLAIMER AND SEPTIC INFORMATION ASSOCIATED WITH THIS PROJECT IS FOR THE EXCLUSIVE USE OF THE ADDRESSEE AND THE USE OR RELIANCE BY OTHERS IS EXPRESSLY DENIED WITHOUT THE WRITTEN CONSENT OF S&EC.

INFORMATION FOR THE CONTRACTOR

The permit should be read very carefully prior to bidding. The following are details that must be considered by the contractor prior to and during installation:

- The septic installer for this system must have a valid septic installer certification from the North Carolina Onsite Wastewater Contractor Inspector Board (NCOWCICB).
- Tanks shall be approved by NCDHHS and meet 18E requirements, and certification supplied by the manufacturer.
- The installer shall be responsible to the owner for placement of the tanks and to ensure that final grades are returned to the original grade, with the exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement without damage or displacement of pipe or fittings.
- 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 PVC pipe glue applied to weld all joints.
- Trenches shall be carefully excavated so the bottom is within 2 inches 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 ensure that trenches are not over excavated during initial trenching. All fine grading within the trench will be done by hand with a shovel. No loose material will be left in the trench.
- All pipe openings in the tanks shall be properly filled with press boot seal.
- All tanks shall be properly back filled and compacted to prevent settlement.
- 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 drainfield during or after installation. The use of a small loader (i.e. Bobcat skid steer) or a trencher/ mini excavator (i.e. CAT 309 CR) or similar machinery may be used for septic installation.
- Elevations at pin flag locations should be checked by the contractor prior to beginning trench excavation.
- Pump tank riser shall be 6 inches above grade, control panel shall be 24 inches above grade.
- System uses Accepted 25% Reduction Product drain line.
- Repair uses Horizontal Panel Block (PPBPS) Product drain line.

GRAHAM SHERRON RD, OLIVIA FARM MINOR SUBDIVISION LOT 1
S&EC Project # 16021.S5
Date: 3/19/2025

PRESSURE MANIFOLD SYSTEM FOR WASTEWATER TREATMENT

Owner:	OLIVIA FARMS LLC			
County:	GRANVILLE			
Source of Wastewater Flow:	5 Bedroom Residence			
Estimated Daily Wastewater Production:	600	gpd		
System Flow:	35.1	gpm		

Design Specifications

Number of Drain Lines:	7	3 TAPS IN MANIFOLD		
Drainfield Size:	500	ft		
Loading Rate (LTAR):	0.300	gpd/sq ft		
Distribution Method:	25% REDUCTION			
Gravel Size (if applicable):	NA			
Minimum Trench Depth:	18	in	**Max Trench Depth:**	27 in
Trench Width:	36	in		
Minimum Septic Tank Liquid Capacity:	1250	gal		
Pump Tank:	1200	gal		
Grease Trap:	NA	-		
Supply Line Length:	75	ft		
Supply Line Diameter:	2.0	in. SCH 40 PVC		
Supply Line Volume:	13.05	gal		
Supply Manifold:	4 in. SCH 80 PVC			
Supply Manifold Length:	5.0	ft (minimum)		
Supply Manifold Volume:	NA			
Threaded Union:	In Tank			
Gate Valves:	1 in Pump Tank 1 at Pressure Manifold			
Check Valves:	1 in Pump Tank			
Anti-Siphon Hole:	1 in Pump Tank			
Solenoid Valve:	NA			
Air Release/Vacuum Break Valve:	NA			
Recommended Septic Tank Filter:	PL-68 or County Approved Equivalent			
Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalent			
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.			
Recommended Pump:	Zoeller 152 or County Approved Equivalent			
TDH Capacity:	19.7	ft		
Flow Capacity:	35.1	gpm		
Additional Comments:	Soil suitability was performed by S&EC			

GRAHAM SHERRON RD, OLIVIA FARM MINOR SUBDIVISION LOT 1
S&EC Project # 16021.S5
Date: 3/19/2025

DESIGN CALCULATIONS

Supply line length	75	ft
2.0 in. SCH 40 PVC	0.174	gal/ft
Supply line Volume	*13.05*	*gal*
Total drain field length	500	ft
4.0 in. pipe	0.65	gal/ft
Total drain field volume	325.38	gal
Percent of dose volume	75%	
Dose Volume	*244.04*	*gal*
Dose volume	244.04	gal
Pump tank	19.62	gal/in
Pump tank Drawdown	*12.4*	*in*
Ground Elevation at Pump Tank	96	ft
Pump Tank Installation Depth	3	ft
Pump Tank Elevation	93.0	ft
Pump Elev. Difference	4.8	ft
Pump Elevation	88.2	ft
Manifold Elevation	102.5	ft
	14.3	ft
Elevation Head	*14.3*	*ft*
System flow	35.1	gal/minute
Friction Factor*	2.38	*f*/100ft
Supply Line Length	75	ft
Friction Adjustment for Fittings**	145	ft
Friction Head	*3.4*	*ft*
Pressure Head	*2.0*	*ft*
(TDH) Total Dynamic Head	*19.7*	*ft*
Daily flow	600	gal/day
LTAR	0.300	sqft/day
Max Design LTAR w/ Product Reduction + 5%	0.420	sqft/day
Trench width	3.0	ft
Required drain field length (25% Red. Product)	*500*	*ft*

if using EZ-Flow or Corrugated Pipe

FRICTION FACTOR INTERPOLATER
2.0 in. SCH 40 PVC

GPM	*f*
20	0.84
22	1.01
25	1.27
27.5	1.53
30	1.78
32.5	2.08
35	2.37
37.5	2.70
40	3.03
42.5	3.40
45	3.77
47.5	4.18
50	4.58
55	5.50
60	6.42

* Computed by Hazen Williams Formula, assuming *C*=140

**If supply line is greater than 350ft, then 20% is added to account for fittings. If supply line is less than 350ft, then 70ft is added to account for fittings.

GRAHAM SHERRON RD, OLIVIA FARM MINOR SUBDIVISION LOT 1

S&EC Project # 16021.S5
Date: 3/19/2025

LINE #	FLAG COLOR	BS (ft)	HI (ft)	FS (ft)	ELEVATION (ft)	FLAGGED LINE LENGTH (ft)	DESIGN LINE LENGTH (ft)	
TBM		4.00			100.00			
INSTR. 1			104.00					
1	**YELLOW**			**2.50**	**101.50**	**47**	**140**	**SERIAL 40FT, 60FT, & 40FT LINES**
2	**WHITE**			**3.05**	**100.95**	**61**		
3	**BLUE**			**3.40**	**100.60**	**41**		
4	**RED**			**4.10**	**99.90**	**85**	**170**	**FLOW DIVIDE TWO - 85FT LINES**
5	**YELLOW**			**5.10**	**98.90**	**85**		
6	**ORANGE**			**5.90**	**98.10**	**100**	**190**	**FLOW DIVIDE TWO - 95FT LINES**
7	**PINK**			**6.80**	**97.20**	**96**		
8	RED			3.60	100.40	70	70	
9	ORANGE			4.00	100.00	90	80	
10	BLUE			4.05	99.95	53	50	
11	YELLOW			4.20	99.80	60	60	
12	WHITE			4.20	99.80	75	70	
13	PINK			4.45	99.55	55	50	
					Total	**918**	**880**	

	LINE LENGTH (ft)	LTAR GPD/FT²	SYSTEM TYPE	SOIL LTAR GPD/FT²	SYSTEM DRAIN TYPE	DISTRIBUTION	DESIGN FLOW (GPD)
System	**500**	**0.300**	**ACCEPTED**	**0.300**	**25% REDUCTION PRODUCT**	**PRESSURE MANIFOLD**	**600**
pair	380	0.275	18E 0.0905	0.275	HORIZONTAL PANEL BLOCK	PRESSURE MANIFOLD	600

Notes: **TBM ground @ tree
**TBM is assumed to be 100.00'.
**All measures in feet.
**Nitrification lines are demonstrated on contour via colored pin flags.
**BS, FS indicate rod readings.
**Some flagged lines may be shown longer in the field.
**Accepted 25% Reduction Product can be either EZ-FLOW OR QUICK4 PLUS CHAMBER

GRAHAM SHERRON RD, OLIVIA FARM MINOR SUBDIVISION LOT 1

S&EC Project # 16021.S5

Date: 3/19/2025

SYSTEM TAP CHART

25% REDUCTION PRODUCT (EZ-FLOW 1203H/1203H-GEO OR QUICK4 PLUS STANDARD CHAMBER)

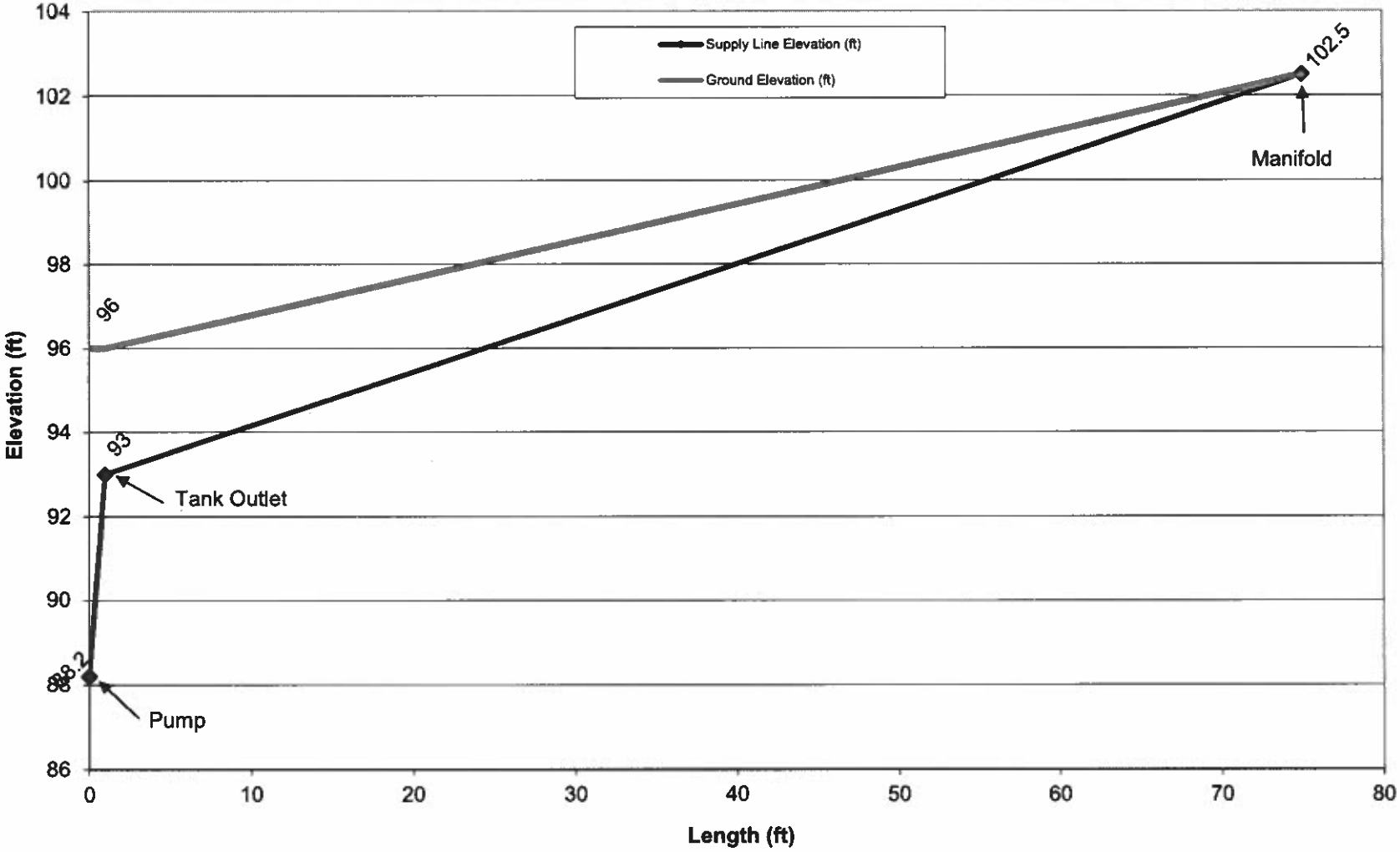
Line #	Color	Field Elev. (ft)	Length (ft)	Hole Size (in)	Flow/Tap (gpm)	gpd	Trench Area (sq ft)	Line LTAR (gpd/sq ft)	
1,2,3	Y,W,B	*101.50*	140	3/4" SCH. 80	10.1	172.65	420	0.411	SERIAL 40FT, 60FT, & 40FT LINES
4 & 5	R & Y	*99.90*	170	3/4" SCH. 40	12.5	213.68	510	0.419	FLOW DIVIDE TWO - 85FT LINES
6 & 7	O & P	*98.10*	190	3/4" SCH. 40	12.5	213.68	570	0.375	FLOW DIVIDE TWO - 95FT LINES

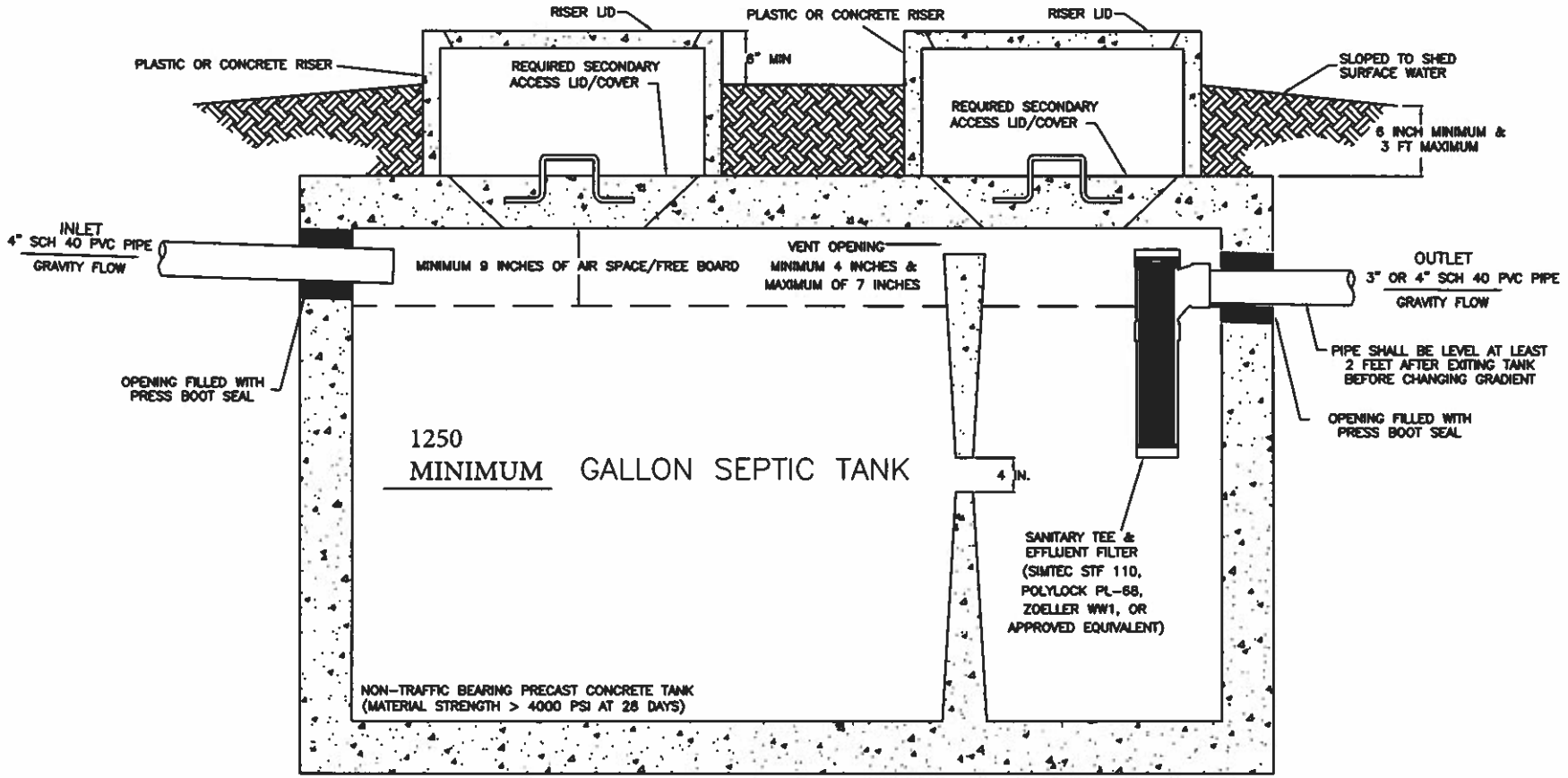
			Flow Capacity	
total	feet =	500	gal/min =	35.10

Des. Flow	600	gpd
Pump Run=	17.09	min
soil LTAR	0.300	gpd/sq ft
Product Reduction	25%	
LTAR with Product Reduction	0.400	gpd/sq ft
LTAR with Product Reduction + 5%	0.420	gpd/sq ft
100% Dose Volume	325.38	gal
Percent Dose Volume	75%	
Total	244.04	gal
Pump Run Time	6.95	min
Pressure Head	*2.0*	*ft*

Minimum Trench Depth: 18 in **Max Trench Depth:** 27 in

Supply Line Profile





NOTES :

1. SEPTIC TANK, RISERS, SANITARY TEE, & EFFLUENT FILTER MUST BE PRODUCTS WITH APPROVAL TO BE USED IN NC BY NCDHHS.
2. SEPTIC TANK SHALL BE INSTALLED ACCORDING TO 15A NCAC 18E.0805 & 18E.1400.
3. SEPTIC TANK SHALL BE LEVEL ACCORDING TO 15A NCAC 18E.0805 (G).
4. SEPTIC TANK COMPARTMENTS MAY VARY FROM THE TANK DIAGRAM BUT SHALL MEET THE CONDITIONS IN 15A NCAC 18E.1402 (D)(11).
5. IF SEPTIC TANK LEAK TESTING IS PERFORMED AT A JOB SITE & VERIFIES THAT THE TANK, PIPE PENETRATIONS, & RISERS ARE WATER TIGHT THEN SOME REDUCED SETBACKS ARE ALLOWED FOR SOME SEPTIC COMPONENTS ACCORDING TO 18E.0601(e).
6. A GRAVEL BED UNDER THE SEPTIC TANK MAY BE NEEDED IF THE BOTTOM OF THE TANK HOLE HAS A ROUGH SURFACE.
7. SANITARY TEE & EFFLUENT FILTER MUST BE SIZED TO ACCOMMODATE THE DESIGN DAILY FLOW (DDF) IN GALLONS PER DAY (GPD).
8. SANITARY TEE & EFFLUENT FILTER CAN VARY FROM PRODUCTS STATED IN DIAGRAM AS LONG AS THE PRODUCTS HAVE APPROVAL TO BE USED IN NC BY NCDHHS.

JOB NO. 16021.S5	PROJECT NAME: GRAHAM SHERRON RD, OLIVIA FARM MINOR SUBDIVISION LOT 1
PROJECT MGR. CC	SHEET TITLE: SEPTIC TANK DIAGRAM
SCALE NTS	

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POLYLOK™ Inc.
Innovations in Precast, Drainage & Wastewater Products
Zabel® A Division of Polylok Inc.

PL-68 Effluent Filter

PL-68 Filter and Tee

PL-68 is much more than just an effluent filter. The housing can also be used as an inlet baffle (tee) or an outlet baffle. The housing is designed to accept Polylok's snap in gas deflector to deflect gas bubbles away from the tee and to keep the solids in the tank.

Features:

- Offers 68 linear feet of 1/16" filter slots, which significantly extends time between cleaning.
- Accepts 3/4" PVC handle.
- Locks in any 360° position when used with PL-68 Tee.
- PL-68 Housing can be used as an inlet or outlet tee.
- Gasket prevents bypass.

PL-68 Installation:

Ideal for residential waste flows up to 800 gallons per day (GPD). Easily installs in any new or existing 4" outlet tee.

1. Locate the outlet of the septic tank.
2. Remove the tank cover and pump tank if necessary.
3. Glue the filter housing to the outlet pipe, or use a Polylok Extend & Lok if not enough pipe exists.
4. Insert the PL-68 filter into tee.
5. Replace and secure the septic tank cover.

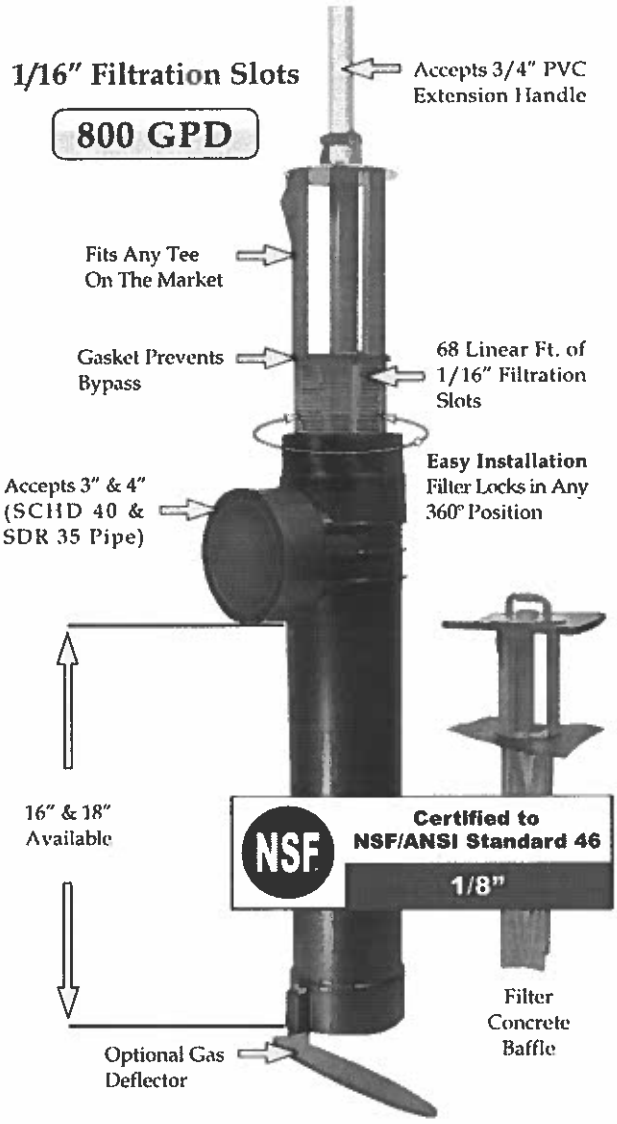
PL-68 Maintenance:

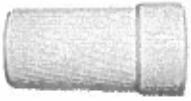
The PL-68 Effluent Filter will operate efficiently for several years under normal conditions before requiring cleaning. It is recommended that the filter be cleaned every time the tank is pumped, or at least every three years.

1. Do not use plumbing when filter is removed.
2. Pull PL-68 out of the tee.
3. Hose off filter over the septic tank. Make sure all solids fall back into septic tank.
4. Insert filter back into tee/housing.

Related Products:

PL-68 Filter Concrete Baffle
Extend & Lok™





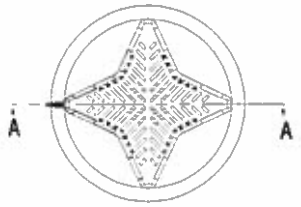
Extend & Lok™ Easily installs into existing tanks.

Spacer Bushing 4" SCHD 40 to SDR 35

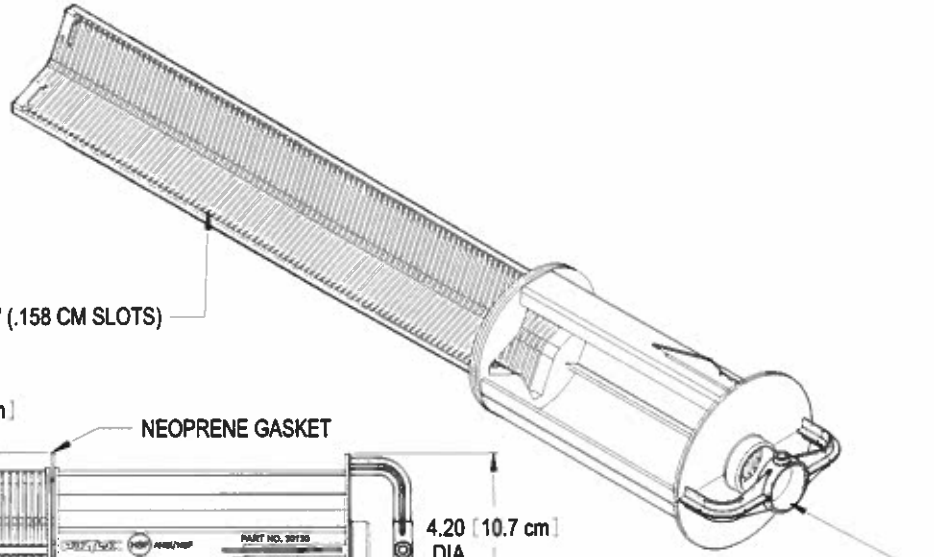
Spacer Bushing 4" SCHD 40 to 110mm Pipe

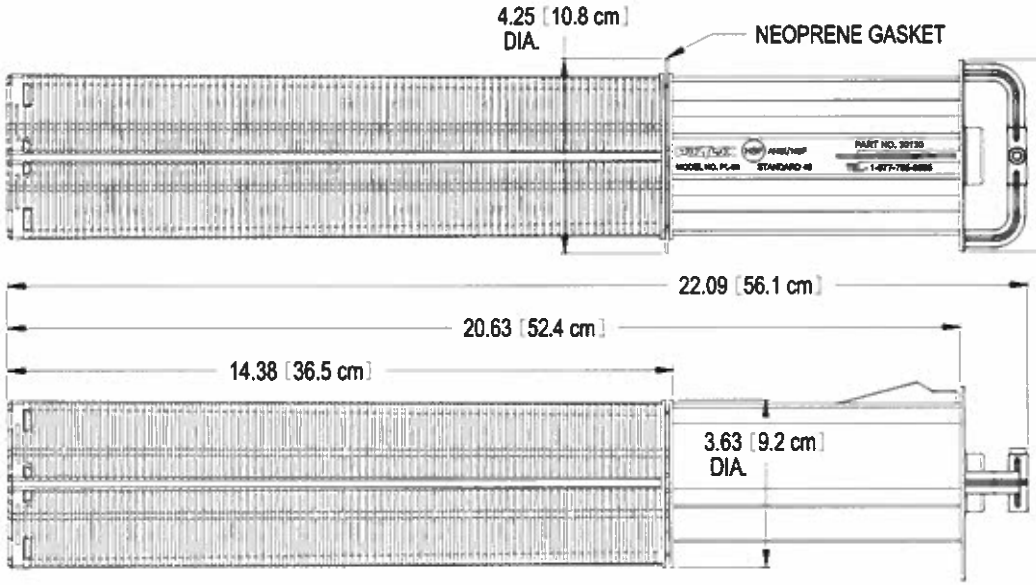
2" Extender

Polylok, Inc. 3 Fairfield Blvd. Wallingford, CT 06492 Toll Free: 877.765.9565 Fax: 203.284.8514 www.polylok.com

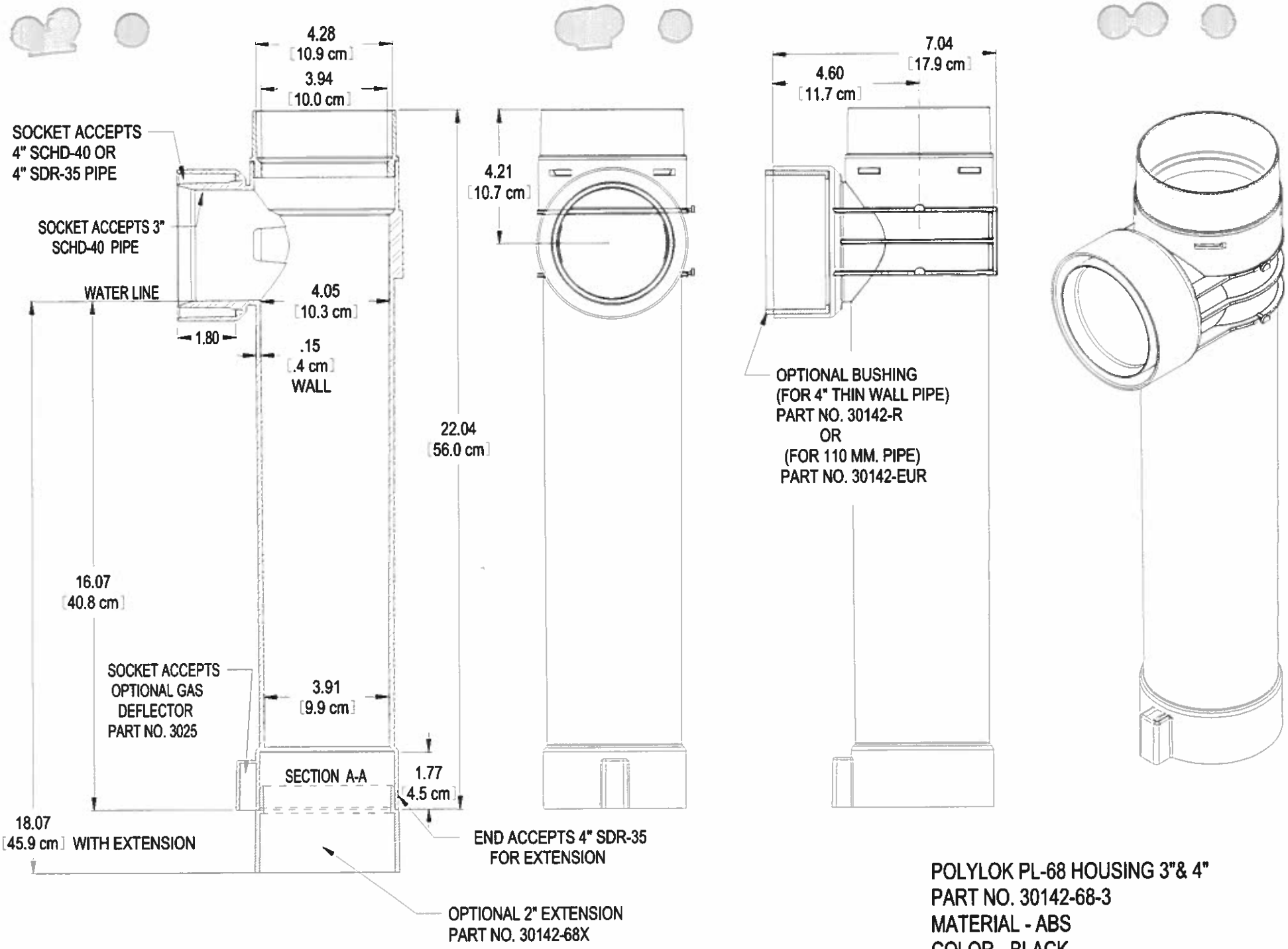


SECTION A-A





PL-68 FILTER CARTRIDGE
PART NO. - 30130
MATERIAL - POLYPROPYLENE
COLOR - RED
TOTAL FILTER AREA - 1.1 SQ. FT.(1021 SQ. CM)



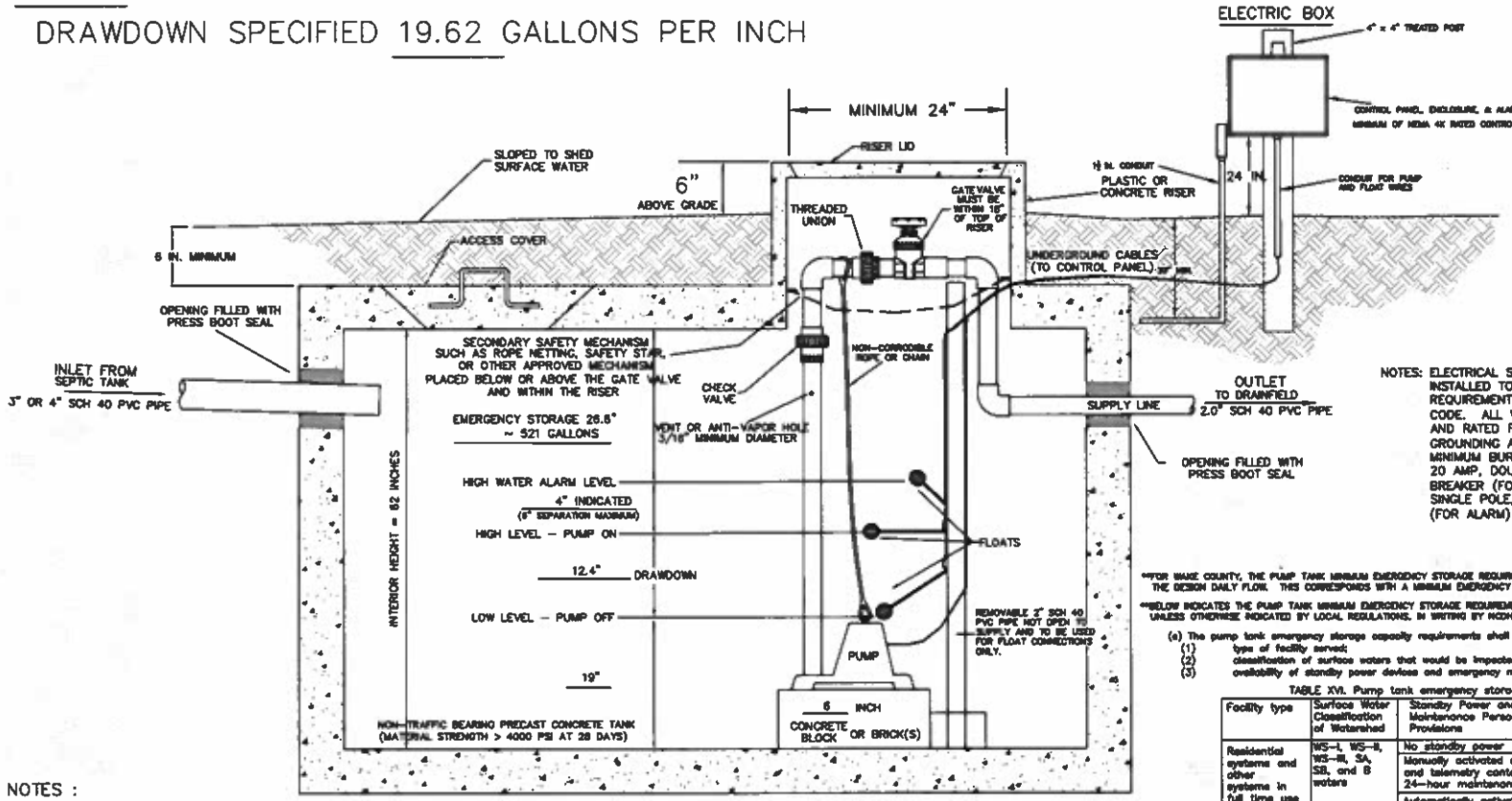
POLYLOK PL-68 HOUSING 3"& 4"
PART NO. 30142-68-3
MATERIAL - ABS
COLOR - BLACK

600 GPD | 12 HOURS | 19.62 GAL/IN | 15.29 INCHES

[DESIGN DAILY FLOW (GPD) x (MINIMUM # OF HOURS EMERGENCY STORAGE NEEDED FOR THIS SYSTEM / 24 HOURS)] / TANK SPECIFIC DRAWDOWN (GALLONS PER INCH) = MINIMUM EMERGENCY STORAGE IN INCHES BETWEEN THE UPPER LIMIT/ACTIVATION LEVEL OF THE HIGH WATER ALARM AND THE INSIDE TOP OF THE PUMP TANK

1,200 GALLON MILLS PT-170 NON-TRAFFIC BEARING PUMP TANK (OR EQUIVALENT)

DRAWDOWN SPECIFIED 19.62 GALLONS PER INCH



NOTES: ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED TO MEET OR EXCEED MINIMUM REQUIREMENTS SPECIFIED IN THE ELECTRICAL CODE. 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.

NOTES :

1. PUMP TANK & ASSOCIATED COMPONENTS SHALL BE INSTALLED ACCORDING TO REGULATIONS: 15A NCAC 18E.0802, 18E.0805, 18E.1102, 18E.1103, & 18E.1400.
2. PUMP TANK, RISER(S), PUMP, CONTROL PANEL, & ASSOCIATED COMPONENTS MUST BE PRODUCTS WITH APPROVAL TO BE USED IN NC BY NCDHHS.
3. A DIFFERENT EQUIVALENT PUMP TANK SIMILAR SIZE OR LARGER CAN BE USED AS LONG AS THE MINIMUM EMERGENCY STORAGE IS MET AND ALL 18E & LOCAL REGULATIONS ARE FOLLOWED.
4. PUMP TANK SHALL BE LEVEL ACCORDING TO 15A NCAC 18E.0805 (C).
5. A GRAVEL BED UNDER THE PUMP TANK MAY BE NEEDED IF THE BOTTOM OF THE TANK HOLE HAS A ROUGH SURFACE.
6. THE PUMP TANK EMERGENCY STORAGE CAPACITY REQUIREMENT FOR THIS SEPTIC SYSTEM SHALL MET OR EXCEED REQUIREMENTS PER 15A NCAC 18E.0802(E) AND LOCAL REGULATIONS.
7. THE SECONDARY SAFETY MECHANISM ON THE OUTLET END OF THE PUMP TANK MUST BE ACCESSIBLE FROM THE TOP OF THE RISER/GROUND SURFACE AND PLACED WITHIN THE RISER.
8. PUMP TANK OUTLET PIPE SHALL BE INSERTED THROUGH THE OUTLET PIPE PENETRATION BOOT, CREATING A WATERTIGHT JOINT (AS SHOWN IN DIAGRAM ABOVE), OR THROUGH A WATERTIGHT RUBBER GROMMET IN THE PUMP TANK RISER. EITHER OUTLET PIPE ROUTING WAY IS ACCEPTABLE.
9. THE PUMP TANK SHALL BE VENTED IF LOCATED MORE THAN 50 FEET FROM THE FACILITY.
10. IF SEPTIC TANK LEAK TESTING IS PERFORMED AT A JOB SITE & VERIFIES THAT THE TANK, PIPE PENETRATIONS, & RISERS ARE WATER TIGHT THEN SOME REDUCED SETBACKS ARE ALLOWED FOR SOME SEPTIC COMPONENTS ACCORDING TO 18E.0601(D).
11. THE CONTROL PANEL SHALL BE INSTALLED ON A TREATED POST A MINIMUM OF 24 INCHES TALL (AS SHOWN) OR MOUNTED A MINIMUM OF 24 INCHES TALL ON THE SIDE OF A STRUCTURE OR BUILDING WITHIN 50 FEET OF AND IN THE LINE OF SIGHT OF THE PUMP TANK. THE MANAGEMENT ENTITY AND LHD SHALL BE ABLE TO ACCESS THE CONTROL PANEL AND OPERATE THE PUMP(S) WHEN THE OWNER IS NOT PRESENT.
12. TELEMETRY SHALL BE DEMONSTRATED TO BE OPERATIONAL TO THE AUTHORIZED AGENT AND THE MANAGEMENT ENTITY PRIOR TO ISSUANCE OF THE OP OR ATO.

**FOR WAKE COUNTY, THE PUMP TANK MINIMUM EMERGENCY STORAGE REQUIREMENT FOR ALL SYSTEMS IS EQUAL TO OR EXCEEDS THE DESIGN DAILY FLOW. THIS CORRESPONDS WITH A MINIMUM EMERGENCY STORAGE CAPACITY PERIOD OF 24 HOURS.

***BELOW INDICATES THE PUMP TANK MINIMUM EMERGENCY STORAGE REQUIREMENTS FOR ALL NC COUNTIES (EXCEPT WAKE COUNTY) UNLESS OTHERWISE INDICATED BY LOCAL REGULATIONS. IN WRITING BY NCDHHS, AND/OR IN WRITING BY A WASTEWATER ENGINEER (PE).

(a) The pump tank emergency storage capacity requirements shall be determined on the following criteria and Table XVI:
(1) type of facility served;
(2) classification of surface waters that would be impacted by a pump tank failure; and
(3) availability of standby power devices and emergency maintenance personnel

TABLE XVI. Pump tank emergency storage capacity requirements

Facility type	Surface Water Classification of Watershed	Standby Power and Emergency Maintenance Personnel Provisions	Emergency Storage Capacity Period Requirement
Residential systems and other systems in full time use	WS-I, WS-II, WS-III, SA, SB, and B waters	No standby power	24 hours
		Manually activated standby power and telemetry contacting a 24-hour maintenance service	12 hours
		Automatically activated standby power and telemetry contacting a 24-hour maintenance service	4 hours
	All other surface waters or no surface waters	No standby power	12 hours
		Manually activated standby power and telemetry contacting a 24-hour maintenance service	8 hours
		Automatically activated standby power and telemetry contacting a 24-hour maintenance service	4 hours
Non-residential systems not in full-time use and all other systems	All surface waters	No standby power	12 hours
		Manually activated standby power and telemetry contacting a 24-hour maintenance service	8 hours
		Automatically activated standby power and telemetry contacting a 24-hour maintenance service	4 hours

Project: OLIVIA FARMS SUBDIVISION LOT 1
Location: DUNVILLE CO., NC
Client: MATT BALDWIN HOMES
Sheet Title: PUMP TANK DIAGRAM
Project No. 16021
Prep. by: CC
Drawn: CC
Scale: NOT TO SCALE (NTS)
Sheet No: 1 OF 1

REVISIONS
NO. | DESCRIPTION: | DATE
1 | PUMP TANK DIAGRAM | 1/2024

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Model 112 - Single phase, simplex motor contactor control.

Part #	Pre-configured Panels for Easy Ordering
1071824	1121W114X6A10E
1071853	1121W124X6A10E
1071823	1121W114H6A10E17G
1071822	1121W124H6A10E17G
1071841	1121W114H6A8AC10E17G
1075046	1121W124H6A8AC10E17G

112	1	W	1	0	4	L	6A10E
CONTROL PANEL	ALARM PACKAGE	ENCLOSURE RATING	STARTING DEVICE	PUMP FULL LOAD AMPS	PUMP DISCONNECTS	FLOAT SWITCH APPLICATION	OPTIONS (LISTED BELOW)

CONTROL PANEL	✓	112	Single Phase Simplex
ALARM PACKAGE	✓	1	Alarm Package (includes test/normal/silence switch, fuse, red light, horn & float)
ENCLOSURE RATING	✓	W	Weatherproof, NEMA 4X (engineered thermoplastic)
STARTING DEVICE	✓	1	Magnetic Motor Contactor 120/208/240V
PUMP FULL LOAD AMPS	✓	0	0 - 7 FLA
		1	7 - 15 FLA
		2	15 - 20 FLA
		3	20 - 30 FLA (Enclosure Upsize Required)
PUMP DISCONNECT	✓	4	Circuit Breaker 120/208/240V
FLOAT SWITCH APPLICATION		H	Floats - Pump Down (select Option 17G below - 3 floats by default when selected)
	✓	L	Floats - Pump Up (select Option 17G below - 3 floats by default when selected)
		X	No Floats

Model 112 Base Price (includes Alarm Package, Enclosure Rating, Starting Device and Pump Disconnect) _____

Pump Full Load Amps _____

Total Options _____

Enclosure Upsize _____

TOTAL LIST PRICE _____

ENCLOSURE UPSIZE: If you selected three or more of the ◆ options or one ◆◆ option, **add a one-time charge** for enclosure upsize.

	OPTIONS	DESCRIPTION	
	5A ◆	Thermal Cutout/Heat Sensor Auto Reset (for pumps with thermal switch leads)	
	5E	Seal Failure Circuit & Red Indicator (2 wire) (Normally Open)	
✓	6A	**Auxiliary Alarm Contact, Form C (included as standard)**	
✓	8A ◆	Elapsed Time Meter	
✓	8C ◆	Event (Cycle) Counter	
	9_A ◆◆	Pump Overload - Specify Amperage after Number 9 Followed by Letter "A" Example: 912A = 12 amp pump	0 - 25 FLA
			25 - 30 FLA
✓	10E	**Lockable Latch - NEMA 4X (included as standard)**	
	10F ◆	Lightning Arrestor	
	10K ◆	Anti-condensation Heater	
	14B ◆◆	Main Disconnect (rotary style, mounted through door, non-fused, padlockable in the OFF position, door interlock in the ON position (must select Circuit Breaker)	0 - 20 FLA
			20 - 30 FLA
✓	15A	Control / Alarm Circuit Breaker	

For additional control panel options, please contact Technical Support at techsupport@sjeinc.com.

	OPTIONS	DESCRIPTION
	17G	20' SJE MilliAmpMaster™ / Pipe Clamp (3 Floats) - Mechanical
	19T	TOA (Test/Off/Automatic) Switch and Pump Run Light through Door Mounted
	19U	HOA (Hand/Off/Automatic) Switch and Pump Run Light through Door Mounted
	19X	Door Mounted Pump Run Indicator

SJE Rhombus recommends the SJE MilliAmpMaster™* control float switch to operate the 112 control panel. For alternative cord lengths or float switch options, select the "X" option (switch application) and select from the float kits below or see our control switch catalog pages to order and ship separately.

ITEMS LISTED BELOW SHIP SEPARATELY.

PART NUMBER	DESCRIPTION
1075005	3 Float Kit. 30' SJE MilliAmpMaster™ Pipe Clamp - Normally Open
1075006	3 Float Kit. 20' Sensor Float®, Mercury Pipe Clamp - Normally Open
1075007	3 Float Kit. 20' Sensor Float® Mini, Mercury Pipe Clamp - Normally Open

***Float Kit pricing and part numbers are only available when ordering with a 112 control panel.**

ZOELLER®
PUMP COMPANY
zoellerpumps.com

Trusted. Tested. Tough.®

150 SERIES

Dose Mate Effluent and Dewatering Pumps

For septic systems, low pressure pipe (LPP) and enhanced flow STEP systems.

FAMILY OWNED
AMERICAN PROUD™

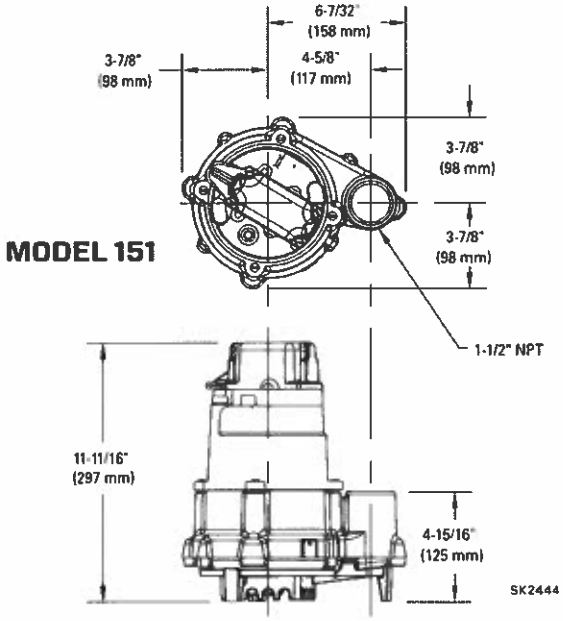
Zoeller Family of Water Solutions™

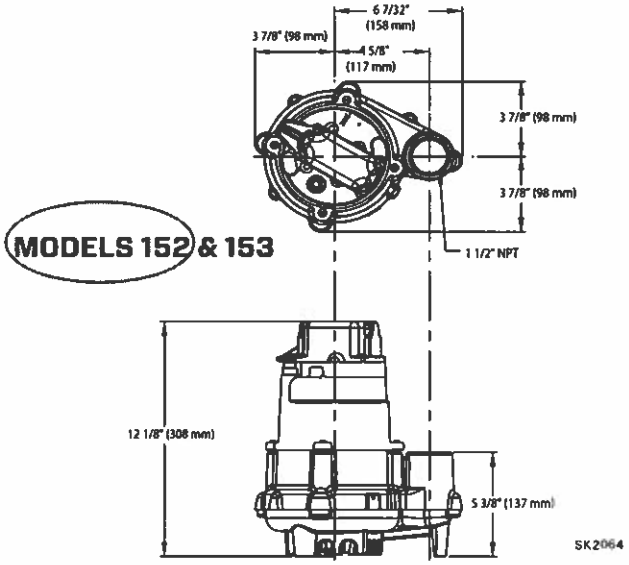
Features:

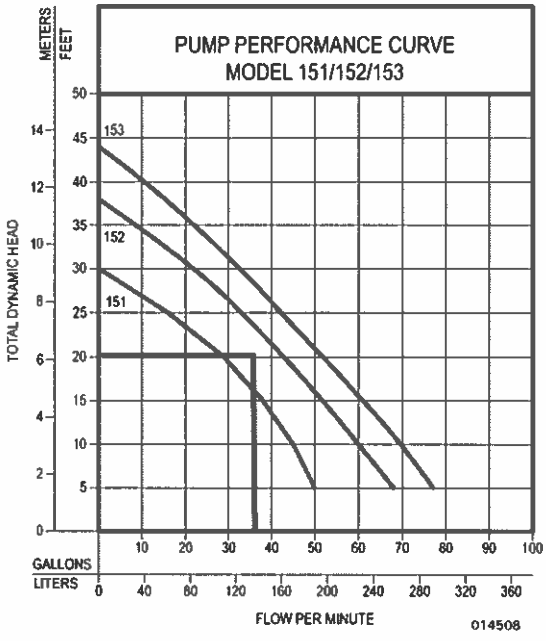
- Model 151 - 1/3 HP, passes 1/2" (13 mm) spherical solids
- Model 152 - 4/10 HP, passes 3/4" (19 mm) spherical solids
- Model 153 - 1/2 HP, passes 3/4" (19 mm) spherical solids
- BN and BE standard models include a 20' (6 m), variable level float switch
- Operates at temperatures to 130 °F (54 °C) in effluent applications
- 3 year limited warranty

MOTOR	Horse Power	1/3 (151), 4/10 (152), 1/2 (153)
	Voltage	115 or 230
	Phase	1 Ph
	Hertz	60 Hz
	RPM	3450
	Type	Permanent split capacitor
	Insulation	Class B
	Amps	3.0 - 10.5
PUMP	Operation	Automatic or nonautomatic
	Discharge Size	1-1/2" NPT
	Solids Handling	1/2" (12 mm), 3/4" (19 mm) spherical solids
	Cord Length	20' (6 m)
	Cord Type	UL listed power cord
	Max. Head	44' (13.4 m)
	Max. Flow Rate	77 GPM (291 LPM)
	Max. Operating Temp.	130 °F (54 °C)
	Cooling	Oil filled
	Motor Protection	Auto reset thermal overload
MATERIALS	Cap	Cast iron
	Motor Housing	Cast iron
	Pump Housing	Cast iron
	Base	Plastic or cast iron
	Upper Bearing	Sleeve bearing
	Lower Bearing	Ball bearing
	Mechanical Seals	Carbon and ceramic
	Impeller Type	Non-clogging vortex
	Impeller	Engineered thermoplastic
	Hardware	Stainless steel
	Motor Shaft	AISI 1215 steel
	Gasket	Neoprene

NOTE: The sizing of effluent systems normally requires variable level float(s) controls and properly sized basins to achieve required pumping cycles or dosing timers with nonautomatic pumps.





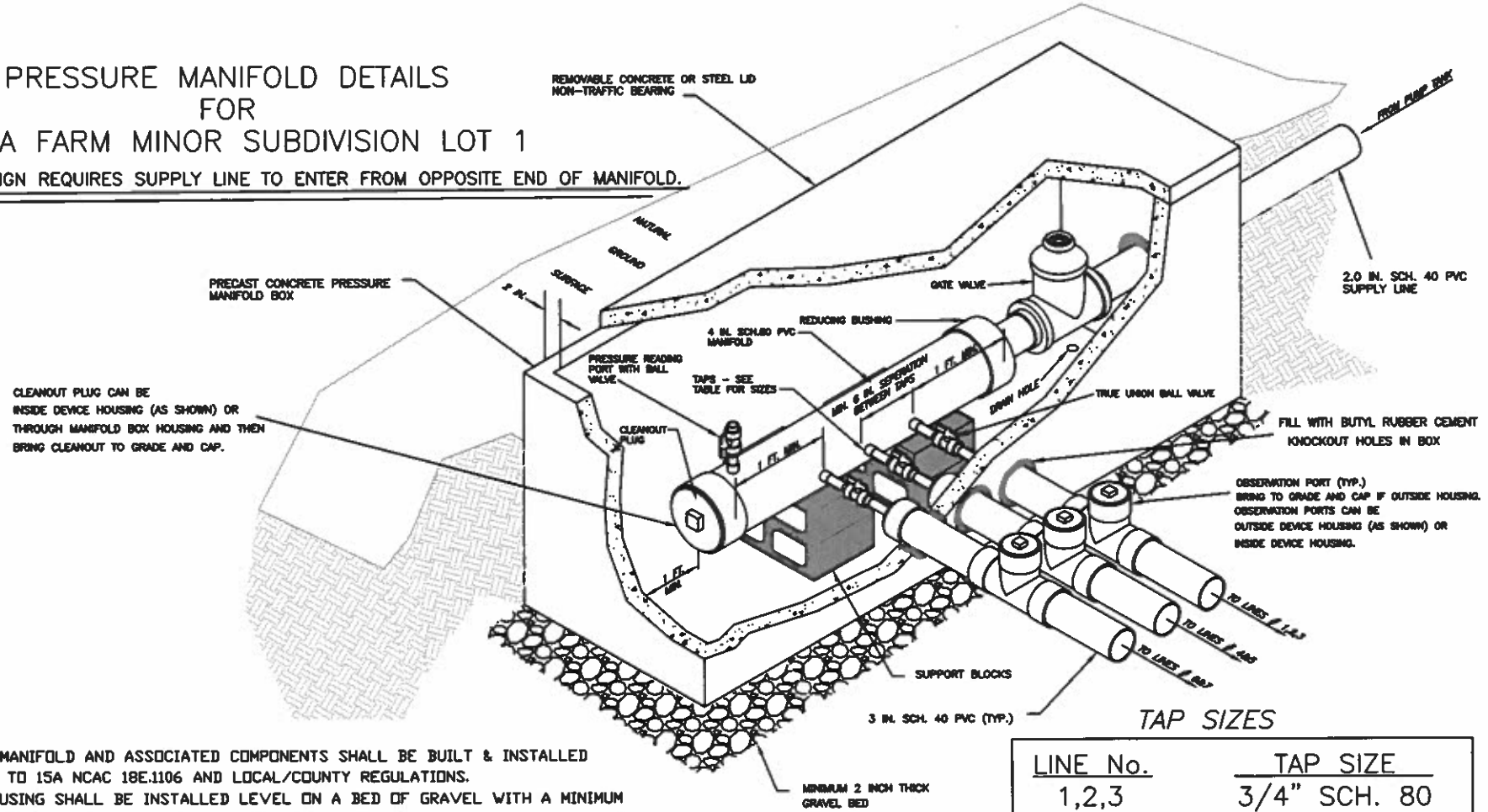


CSA Tested to UL Standard UL778 and Certified to CSA Standard CSA22.2 No. 108

FM3408
0224
Supersedes
0123

PRESSURE MANIFOLD DETAILS
FOR
OLIVIA FARM MINOR SUBDIVISION LOT 1

NOTE: THIS DESIGN REQUIRES SUPPLY LINE TO ENTER FROM OPPOSITE END OF MANIFOLD.



NOTES :

1. PRESSURE MANIFOLD AND ASSOCIATED COMPONENTS SHALL BE BUILT & INSTALLED ACCORDING TO 15A NCAC 18E.1106 AND LOCAL/COUNTY REGULATIONS.
2. DEVICE HOUSING SHALL BE INSTALLED LEVEL ON A BED OF GRAVEL WITH A MINIMUM THICKNESS OF 2 INCHES. THE DEVICE HOUSING SHALL BE INSTALLED SUCH THAT THE DEVICE IS ACCESSIBLE FROM THE GROUND SURFACE.
3. DEVICE HOUSING SHALL HAVE A DRAIN HOLE IN THE BOTTOM.
4. GATE VALVE CAN BE PLACED INSIDE HOUSING (AS SHOWN) OR OUTSIDE DEVICE HOUSING & WITHIN ITS OWN VALVE/IRRIGATION BOX WITH ACCESS FROM THE GROUND SURFACE.
5. DEVICE HOUSING AND SET-UP CAN VARY ACROSS NORTH CAROLINA. IF THE INSTALLER HAS ANY QUESTIONS CONTACT THE LOCAL HEALTH DEPARTMENT AND/OR THE SEPTIC DESIGNER.

TAP SIZES

LINE No.	TAP SIZE
1,2,3	3/4" SCH. 80
4 & 5	3/4" SCH. 40
6 & 7	3/4" SCH. 40

PRESSURE HEAD 2 FEET

JOB NO. 16021	OLIVIA FARM MINOR SUBDIVISION LOT 1
PROJECT MGR. CC	SHEET TITLE: PRESSURE MANIFOLD DIAGRAM
SCALE NTS	

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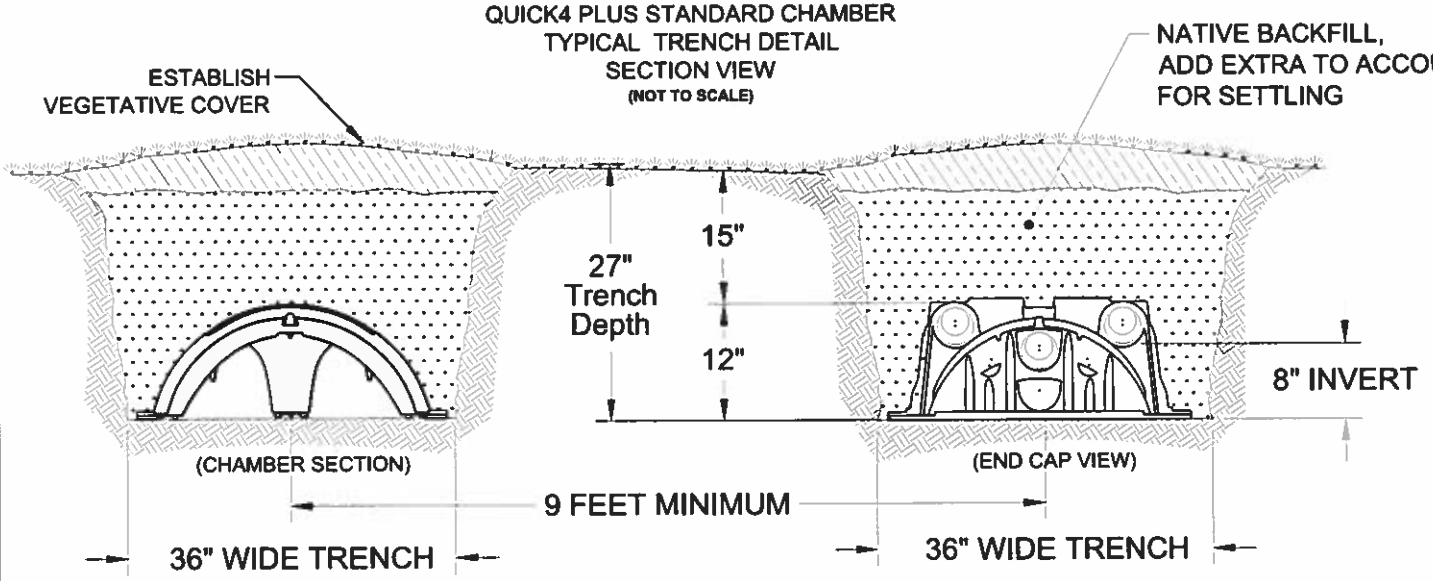
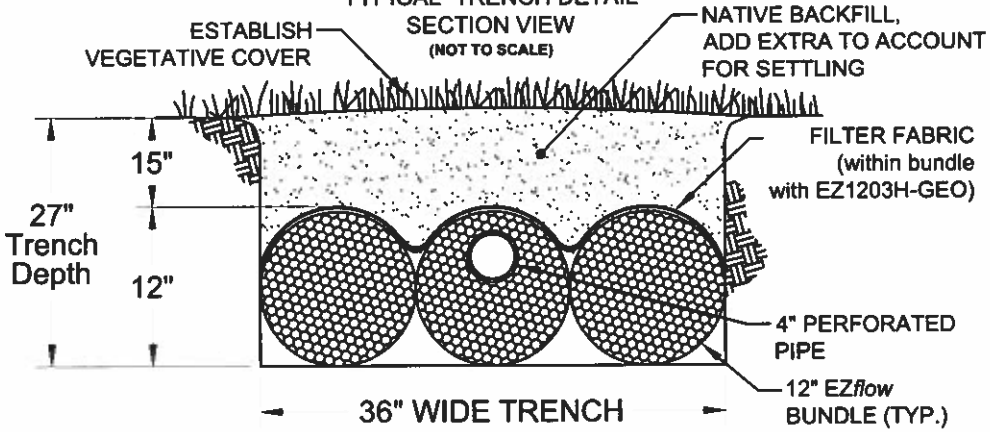
INFILTRATOR WATER TECHNOLOGIES
QUICK4 PLUS STANDARD CHAMBER
TYPICAL TRENCH DETAIL
SECTION VIEW
(NOT TO SCALE)



INFILTRATOR WATER TECHNOLOGIES
EZ1203H/EZ1203H-GEO (EZ-FLOW)
TYPICAL TRENCH DETAIL
SECTION VIEW
(NOT TO SCALE)



NOTES :

1. ALL DRAIN LINE LATERAL PRODUCT FOR THIS DRAINFIELD SHALL ALL BE QUICK4 PLUS STANDARD CHAMBER OR EZ-FLOW PRODUCT, UNLESS OTHERWISE NOTED IN THE PERMIT CONDITIONS AND/OR ON THE MAP.
2. TRENCHES SHALL BE INSTALLED A MINIMUM OF 9 FEET ON CENTERS.
3. TRENCH BOTTOMS SHALL BE CONSTRUCTED LEVEL IN ALL DIRECTIONS WITH A PLUS OR MINUS 1/2 INCH TOLERANCE FROM SIDE-TO-SIDE AS DETERMINED BY A DEVICE THAT MEASURES ELEVATIONS, SUCH AS A LASER LEVEL OR AN ENGINEER'S LEVEL.
4. TRENCH BOTTOMS INDICATED ON THESE DIAGRAMS ARE THE SLOPE CORRECTED MAXIMUM TRENCH BOTTOM MEASURED ON THE DOWNHILL SIDE OF THE TRENCH.
5. END CAP SHALL BE PROVIDED AT END OF ALL DRAIN LINE LATERALS.
6. THIS SEPTIC SYSTEM IS DESIGNED TO HAVE DOMESTIC STRENGTH EFFLUENT (DSE).
7. THE 25% REDUCTION COMPARED TO GRAVEL LATERALS FOR THESE PRODUCTS ONLY APPLIES WHEN DSE OR CLEANER EFFLUENT ENTERS THE LATERALS.

JOB NO. 16021.S5	PROJECT NAME: GRAHAM SHERRON RD OLIVIA FARMS MINOR LOT 1	INITIAL SYSTEM
PROJECT MGR. CC	SHEET TITLE: ACCEPTED 25% REDUCTION DRAIN LINE LATERAL PRODUCTS QUICK4 PLUS STANDARD CHAMBER OR EZ-FLOW TRENCH DETAIL	
SCALE NTS		

S&EC
Soil & Environmental Consultants, Inc.
8412 Falls Of Neuse Road • Raleigh, North Carolina 27615 • Phone: (919) 846-5900 • Fax: (919) 846-9467
www.SandEC.com

GRAHAM SHERRON RD, OLIVIA FARM MINOR SUBDIVISION LOT 1

S&EC Project # 16021.S5

Date: 3/19/2025

REPAIR TAP CHART

HORIZONTAL PANEL BLOCK (PPBPS) PRODUCT

Line #	Color	Field Elev. (ft)	Length (ft)	Hole Size (in)	Flow/Tap (gpm)	gpd	Trench Area (sq ft)	Line LTAR (gpd/sq ft)	# of Panels per Trench	Spacing between Panels (in)
8	RED	*100.40*	70	3/4" SCH. 80	10.10	117.37	210	0.559	16	6
9	ORANGE	*100.00*	80	3/4" SCH. 80	10.10	117.37	240	0.489	18	6
10	BLUE	*99.95*	50	1/2" SCH. 40	7.11	82.63	150	0.551	12	4
11	YELLOW	*99.80*	60	1/2" SCH. 40	7.11	82.63	180	0.459	14	5
12	WHITE	*99.80*	70	3/4" SCH. 80	10.10	117.37	210	0.559	16	6
13	PINK	*99.55*	50	1/2" SCH. 40	7.11	82.63	150	0.551	12	4

Total Feet = 380 **Flow Capacity gal/min (GPM) = 51.63** **Total # of Panels = 88**

Des. Flow		**600**	**gpd**
Pump Run=		**11.62**	**min**
soil LTAR		**0.275**	**gpd/sq ft**
Product Reduction		**50%**	
LTAR with Product Reduction		**0.550**	**gpd/sq ft**
LTAR with Product Reduction + 5%		**0.578**	**gpd/sq ft**
total # of panels	**X**	**3.6**	**gallons per panel**
Dose Volume		**316.80**	**gal**
Pump Run Time		**6.14**	**min**
Pressure Head		*2.0*	*ft*

Minimum Trench Depth: 14 in **Max Trench Depth:** 14 in

**Per T&J Panel Inc., please note spacing between panels does not have to be uniform. Spacing between panels may vary especially at bends along a trench.

**As long as the correct number of panels are installed in the trench and no panels are butted together without space between them, the system will function as designed. Generally spacing between panels should be between 2 to 6 inches.

**If spacing between panels is more than 6 inches apart, this may require connecting pipe(s) longer than 24 inches between panels.

**Trench width for Horizontal Panel Block is 36 inches wide.

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March 20, 2025
S&EC Project #16021.S5

We are enclosing a subsurface wastewater evaluation and septic design completed by **Soil & Environmental Consultants, Inc (S&EC)** on the property located at:
Olivia Farms LLC Minor Subdivision Lot #1, Graham Sherron Rd, Plat Map BK54 PG76, Granville Co., NC.

For Improvement Permit (IP) septic issuance:
"The LSS/LG evaluation(s) attached to this application is to be used to issue an Improvement Permit in accordance with G.S. 130A-335(a2) and (a3)".

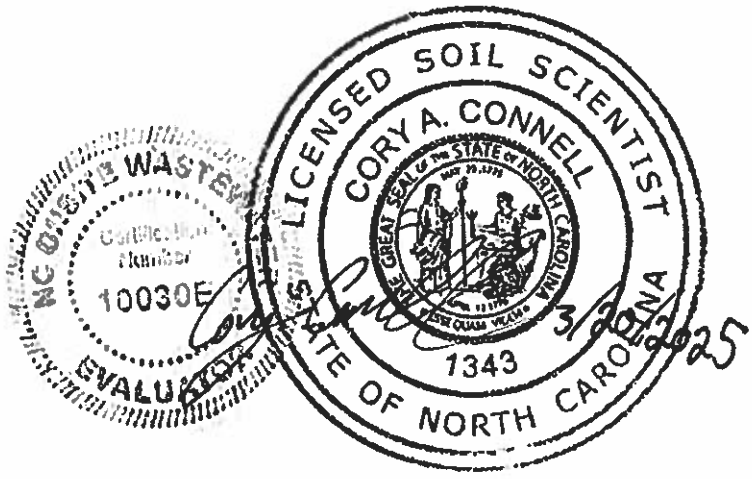
"The LSS evaluation is being submitted pursuant to and meets the requirements of G. S. 130A-335(a2)."

For Construction Authorization Permit (CA) septic issuance:
"The plans or evaluations attached to this application are to be used to issue a Construction Authorization in accordance with G.S. 130A-335(a2), (a5), and (a6)".

"This AOWE/PE submittal is pursuant to and meets the requirements of G. S. 130A-335(a2) and (a5)."

Sincerely
Soil & Environmental Consultants, Inc.

Cory A. Connell
NC Licensed Soil Scientist #1343
NCOWCICB Evaluator #10030E



Owner: _____

Owner's Representative: _____

Date: 3/20/2025