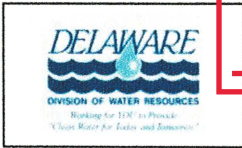


Permit Number:

281028

PAID

\$ 260.00 06/17/2025



APPLICATION - PERMIT
ON-SITE WASTEWATER SYSTEM



(Please Type or Print Legibly)

OWNER'S NAME: Greenwood Conservative Mennonite Church

PHONE: 302-349-4131

ADDRESS: 12802 Mennonite School Rd, Greenwood, DE 19950

PROJECT LOCATION: 12802 Mennonite School Rd, Greenwood, DE 19950

TAX/MAP #: 430-5.00-55.00 (Eval. #: 570989)

APPLICATION

PREPARER: Edwin Tennefoss, PE

DNREC

LICENSE #: 6240C

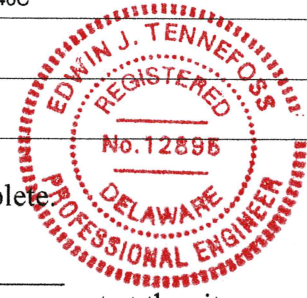
PREPARER'S ADDRESS: P.O. Box 2, 39 Commerce St, Harrington, DE 19952

PHONE: (302) 542-0774

I hereby affirm that the information provided on this document is accurate and complete.

Preparer's Signature: Edwin Tennefoss Date: 6/13/25

By signing this permit application, the preparer further certifies they were physically present at the site.



-SEPTIC DESIGN CRITERIA-

(Please check all boxes that apply)

System Type: (CF = Cap & Fill / FD = Full Depth)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Gravity (FD) | <input type="checkbox"/> Permanent Holding Tank |
| <input type="checkbox"/> Gravity (CF) | <input type="checkbox"/> Elevated Sand Mound |
| <input type="checkbox"/> Pressure Dose (FD) | <input type="checkbox"/> Wisconsin At-Grade |
| <input type="checkbox"/> Pressure Dose (CF) | <input type="checkbox"/> Subsurface Micro Irrigation |
| <input type="checkbox"/> Low Pressure Pipe (FD) | <input type="checkbox"/> Peat Bio- Filter |
| <input type="checkbox"/> Low Pressure Pipe (CF) | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Temporary Holding Tank | |

- ☒ Bed or ☐ Trench
- ☐ Gravelless Chamber ☒ Stone/Gravel ☐ Tire Chips
- Sand-lined ☒ Yes ☐ No

Existing System Malfunctioning ☒ Yes ☐ No ☐ N/A

Pre-Treatment Units

- ☒ Septic Tank
- ☐ Other _____

Central Water Available ☐ Yes ☒ No

(If yes, please state Utility Name: _____)

Type of Construction:

- ☒ Replacement
- ☐ New Construction
- ☐ Component Replacement
- Component: _____
- ☐ Repair to Existing System
- Reason: _____

☐ Authorization to Use Existing System

Permit #: _____

Present Condition: _____

Structure to be connected: _____

of Bedrooms: 200 students

Avg. Percolation Rate: 50

Gallons Per Day Flow: 2000

Minimum Sq. Ft. Req'd: 5940

Sq. Ft. Proposed: 6210

RECEIVED

06/17/2025

Division of Water



INDEX OF DRAWINGS

Sheet Number	Sheet Title
1	INDEX & GENERAL NOTES
2	SITE OVERVIEW
3	PLOT PLAN
4	TRENCH DETAIL
5	DOSING TANK DETAIL
6	VALVE VAULT DETAIL

- CONTRACTOR SHALL FIELD-VERIFY EXISTING CONDITIONS AND ALL SITE FEATURES (ISOLATION DISTANCES, SLOPE DIRECTION/PERCENTAGE, MEASUREMENTS, ETC.) PRIOR TO INSTALLATION. IF DISCREPANCIES ARE FOUND IN THE FIELD, CONTRACTOR SHALL IMMEDIATELY CONTACT THE DESIGNER AT (302) 841-7901.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT (811) AT LEAST (3) WORKING DAYS PRIOR TO EXCAVATION, TO HAVE EXISTING UNDERGROUND UTILITIES LOCATED AND MARKED.
- DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL WORK MUST BE PERFORMED IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AS AMENDED AND ALL RULES AND REGULATIONS THERETO APPURTENANT.
- THIS PERMIT DOES NOT CONSTITUTE A PERMIT FOR CONSTRUCTION IN WETLANDS. IF SUCH CONSTRUCTION IS ANTICIPATED, THE OWNER SHOULD OBTAIN NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES PRIOR TO CONSTRUCTION. THE SYSTEM SHALL BE INSTALLED PER THE APPROVED PERMIT AND ALL APPLICABLE REGULATIONS SET FORTH BY DNREC. ANY CHANGES TO THE PERMIT SHALL BE APPROVED BY THE DESIGNER PRIOR TO INSTALLATION. ANY CHANGES TO THE APPROVED PERMIT WITHOUT PRIOR APPROVAL OF THE DESIGNER OR DNREC SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL LAY-OUT ENTIRE SYSTEM ON SITE TO ENSURE THAT ALL COMPONENTS CAN BE INSTALLED IN ACCORDANCE WITH PERMIT CONDITIONS. SHOULD ANY SITE CHANGES OR PROBLEMS AFFECTING PERMIT CONDITIONS BE NOTED, INCLUDING BUT NOT LIMITED TO SOILS COMPACTION IN DISPOSAL AREAS, THE CONTRACTOR SHALL NOTIFY DNREC (302-739-9947 OR 302-856-5461) AND THE ENGINEER (DAVID HEATWOLE 302-841-7901) BEFORE PROCEEDING WITH CONSTRUCTION.
- IF HIGH WATER CONDITIONS ARE ENCOUNTERED ON SITE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR ADDITIONAL INSTRUCTIONS REGARDING TANK INSTALLATION TO PREVENT TANK LEAKAGE OR FLOTATION. PLACEMENT OF TANKS INTO WATER DEPTHS OF 30" OR MORE IS CAUSE FOR THIS NOTIFICATION. THIS APPLIES TO ALL TANKS.
- ALL TANKS ARE TO BE RATED BY THE MANUFACTURER FOR ADEQUATE STRUCTURAL STRENGTH AT THE ACTUAL DEPTH OF INSTALLATION.
- ALL TREES WITHIN 10' MIN OF DISPOSAL AREAS ARE TO BE REMOVED.
- A DNREC LICENSED SITE EVALUATOR SHALL BE ON-SITE TO VERIFY SUITABILITY OF SOILS IN DISPOSAL AREA AFTER TREES HAVE BEEN REMOVED IN A WOODED SITE PRIOR TO CONSTRUCTION.
- ALL ELECTRICAL WORK SHALL BE COMPLETED BY A LICENSED ELECTRICIAN IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE - LATEST EDITION. BURIED ELECTRICAL CABLES SHALL BE RUN IN PVC CONDUIT.
- FINAL GRADING SHALL PREVENT SURFACE WATER FROM PONDING OVER THE WASTEWATER DISPOSAL AREA / DRAINFIELD.
- CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE BETWEEN THE WASTEWATER DISPOSAL AREA / DRAINFIELD AND EXISTING OR PROPOSED STRUCTURES.
- THIS DESIGN LAYOUT IS BASED ON INFORMATION REPORTED IN THE SITE EVALUATION, STATEMENTS BY OWNER AND OTHER INTERESTED PARTIES, AND OUR OWN PRE-DESIGN SITE OBSERVATIONS AND MEASUREMENTS. NEITHER A PROPERTY SURVEY NOR PROPERTY LINE STAKEOUT HAS BEEN PERFORMED AS PART OF THIS DESIGN WORK. AS SUCH, SITEWORKS ENGINEERING, LLC IS NOT RESPONSIBLE FOR DWELLING PLACEMENT OR ACTUAL LOCATION OF PROPERTY LINES. THIS DESIGN MAY NO LONGER BE VALID IF SITE CONDITIONS OR LAYOUTS CHANGE.
- LOW PRESSURE PIPE DISPOSAL SYSTEMS SHALL BE INSTALLED WITH A TRENCHER PER DNREC REGULATIONS.
- GRAVITY DISPOSAL SYSTEMS MAY REQUIRE A DNREC APPROVED LIFT STATION PACKAGE TO OVERCOME ELEVATION DIFFERENCES FROM THE SEPTIC TANK TO THE DRAINFIELD.
- DISTRIBUTION BOXES ASSOCIATED WITH GRAVITY DISPOSAL SYSTEMS SHALL MAINTAIN MINIMUM 5-FOOT SEPARATION FROM TRENCH/BED DRAINFIELDS.
- ALL PIPING AND FITTINGS SHALL BE PRESSURE RATED SCHEDULE 40 PVC.
- CHANGES TO THE OWTDS LOCATION SHALL REQUIRE A PRE-CONSTRUCTION AS-BUILT APPROVED BY DNREC PRIOR TO INSTALLATION. PRE-CONSTRUCTION AS-BUILTS WILL BE BILLED AS AN EXTRA EXPENSE TO THE CONTRACTOR OR OTHER RESPONSIBLE PARTY.
- ALL SYSTEMS SHALL BE INSPECTED IN ACCORDANCE WITH DNREC REGULATIONS. EQUIPMENT NECESSARY FOR INSPECTIONS (GENERATOR, HOSES, WATER, PRESSURE GAUGES, ETC.) SHALL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR OR HIS/HER REPRESENTATIVE SHALL BE PRESENT DURING THE INSPECTION. CONTRACTOR SHALL NOTIFY DESIGNER MINIMUM 48 HOURS IN ADVANCE TO SCHEDULE ALL INSPECTIONS.
- ANY ADDITIONAL SITE VISITS REQUIRED FOR DESIGNER APPROVAL WILL BE BILLED AS AN EXTRA TO THE CONTRACTOR AND SHALL BE PAID PRIOR TO COMPLETION OF THE INSPECTION REPORT.

SITEWORKS
ENGINEERING LLC
PO BOX 2, 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 542-0774

INDEX & GENERAL NOTES

12802 MENNONITE SCHOOL RD,
GREENWOOD, DE 19950
SUSSEX COUNTY, DE - NANTICOKE HUNDRED
TAX MAP #: 430-5.00-55.00
OWNER: GREENWOOD CONSERVATIVE MENNONITE CHURCH

SCALE: NONE

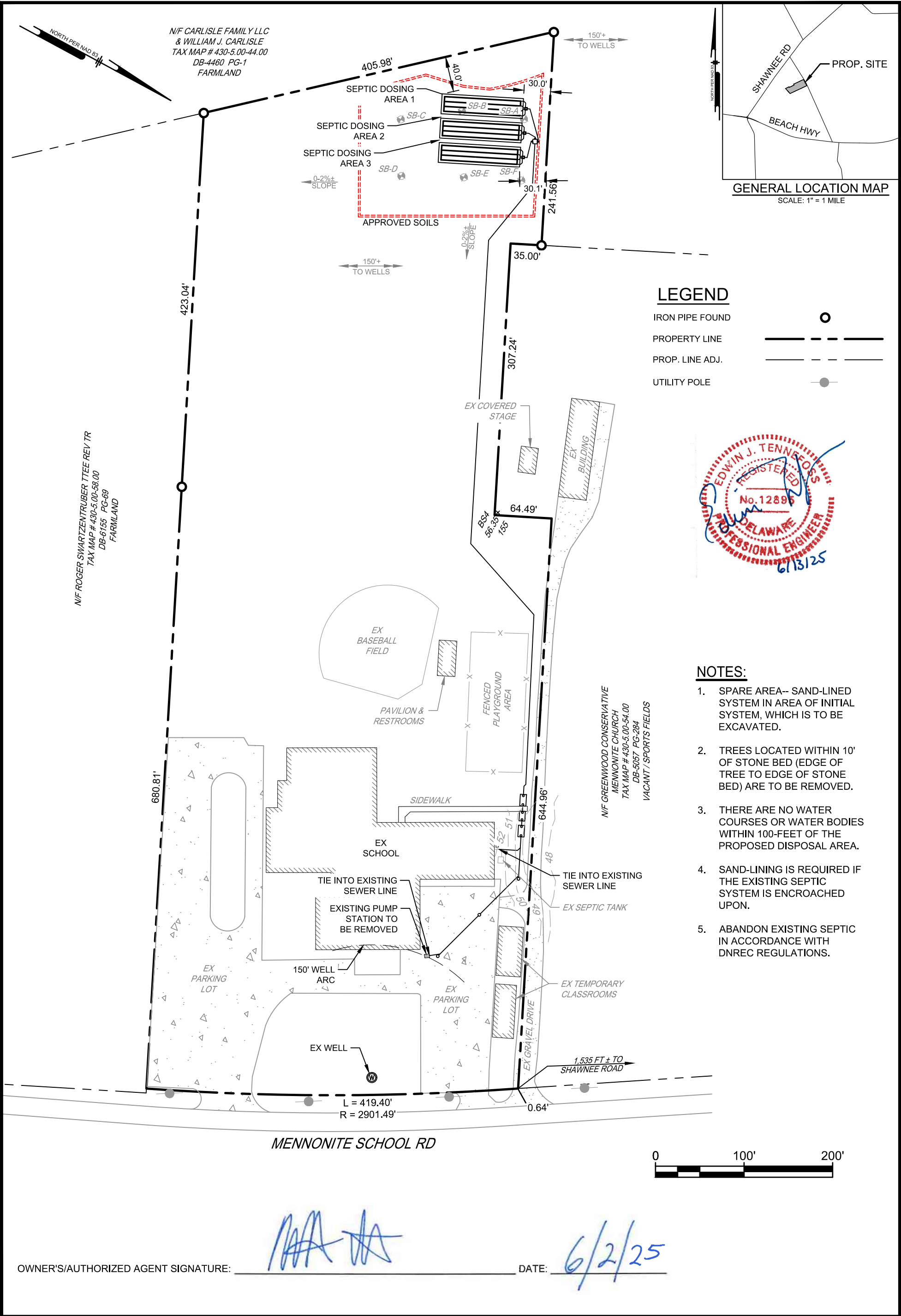
DATE: 4/9/25

SHEET 1 OF 6

DESIGN BY: EJT

REVIEW BY: ET

JOB NO. : 25-616



SITEWORKS
ENGINEERING LLC
PO BOX 2, 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 841-7901

SITE OVERVIEW
12802 MENNONITE SCHOOL RD
SUSSEX COUNTY, DE - NANTICOKE HUNDRED
TAX MAP #: 430-5.00-55.00
OWNERS: GREENWOOD CONSERVATIVE MENNONITE CHURCH
PREPARED FOR: GREENWOOD MENNONITE SCHOOL

SCALE: 1" = 100'

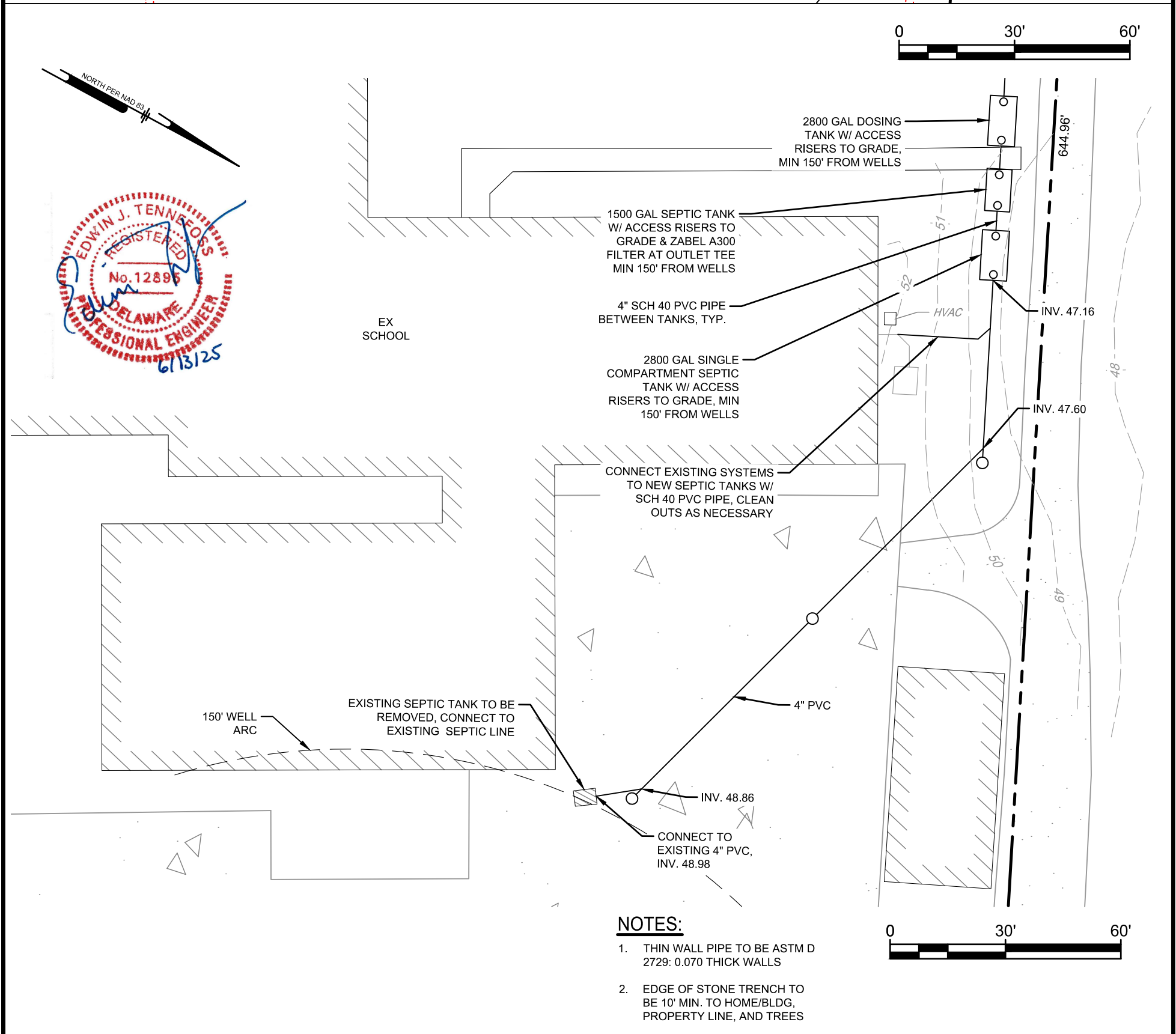
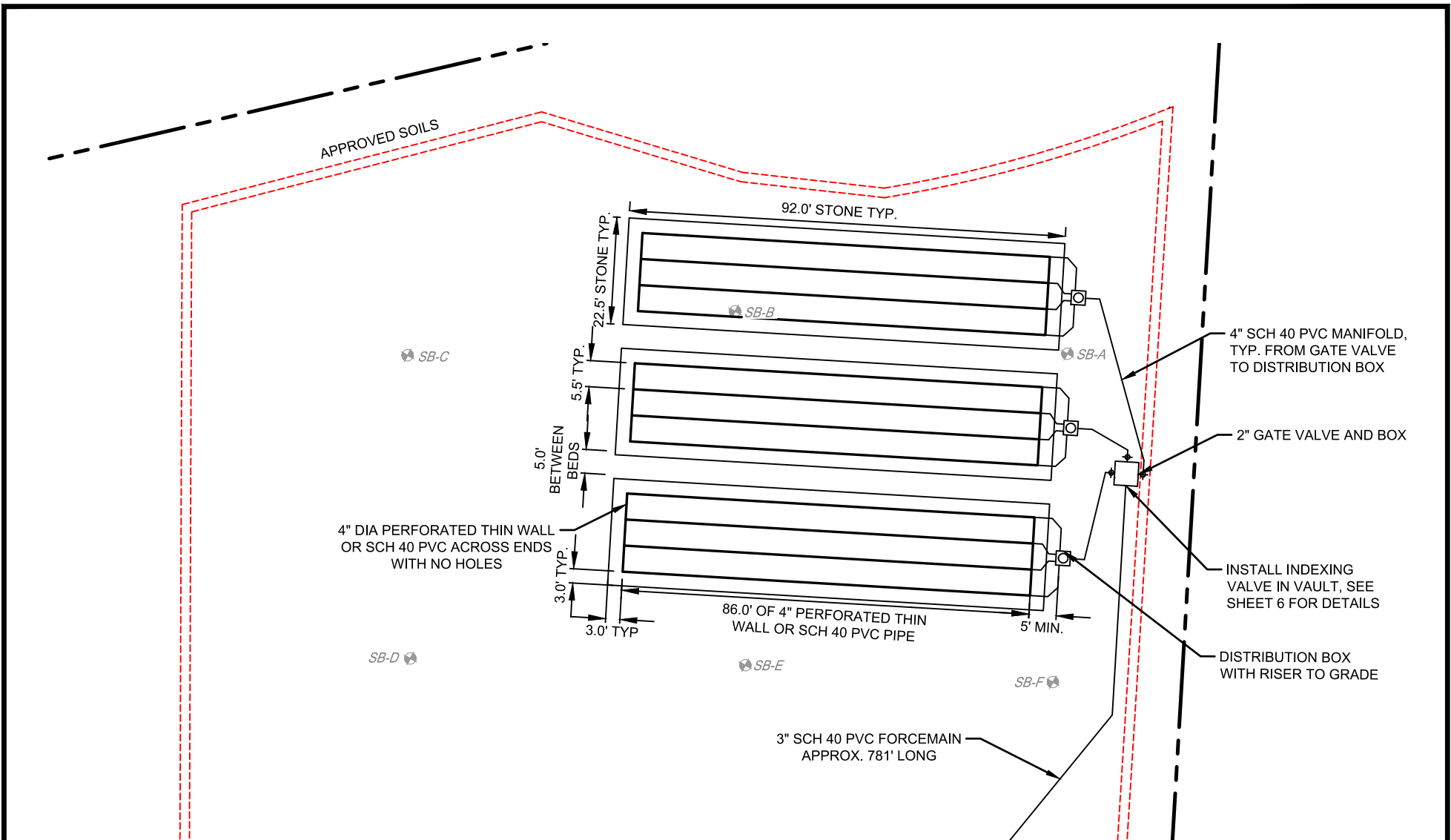
DATE: 4/9/25

SHEET 2 OF 6

DRAWN BY: EJT

REVIEW BY: ET

JOB NO. : 25-616



SITEWORKS
ENGINEERING LLC

PO BOX 2, 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 841-7901

PLOT PLAN

12802 MENNONITE SCHOOL RD
SUSSEX COUNTY, DE - NANTICOKE HUNDRED
TAX MAP #: 430-5.00-55.00
OWNERS: GREENWOOD CONSERVATIVE MENNONITE CHURCH
PREPARED FOR: GREENWOOD MENNONITE SCHOOL

SCALE: 1" = 30'

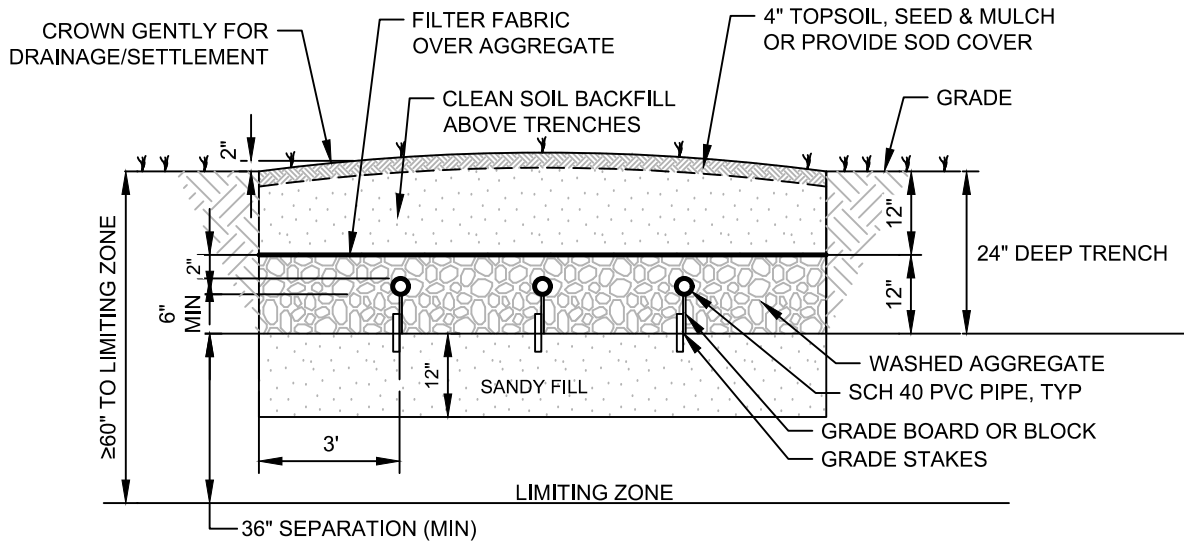
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SHEET 3 OF 6

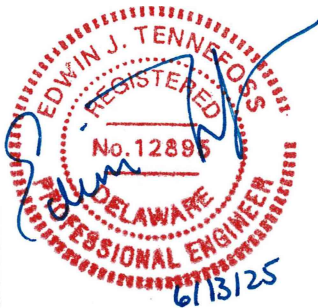
DRAWN BY: EJT

REVIEW BY: ET

JOB NO. : 25-616



BED CROSS SECTION



NOTES

1. SEE SHEET 3 FOR SPACING OF LINES.
2. TYPAR TO BE STYLE 3201 BY DUPONT (OR EQUAL FILTER FABRIC BY OTHER MANUFACTURER). PROVIDE A 2" OVERLAP BOTH SIDES OF THE TRENCH.
3. CONTRACTOR TO PROVIDE OWNER WITH ONE ADAPTER TO CONNECT MALE END OF GARDEN HOSE TO LATERAL UPRIGHT END FOR ANNUAL BACKFLUSHING OF LINES AS RECOMMENDED BY DNREC (i.e. $\frac{3}{4}$ " NPT FEM/ $\frac{3}{4}$ " NHR FEMALE FITTING).
4. THE BOTTOM OF EACH INDIVIDUAL LATERAL LINE SHALL BE RUN LEVEL

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 PO BOX 2, 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 542-0774

12802 MENNONITE SCHOOL RD,
 GREENWOOD, DE 19950
 SUSSEX COUNTY, DE - NANTICOKE HUNDRED
 TAX MAP #: 430-5.00-55.00
 OWNER: GREENWOOD CONSERVATIVE MENNONITE CHURCH

SCALE: NTS

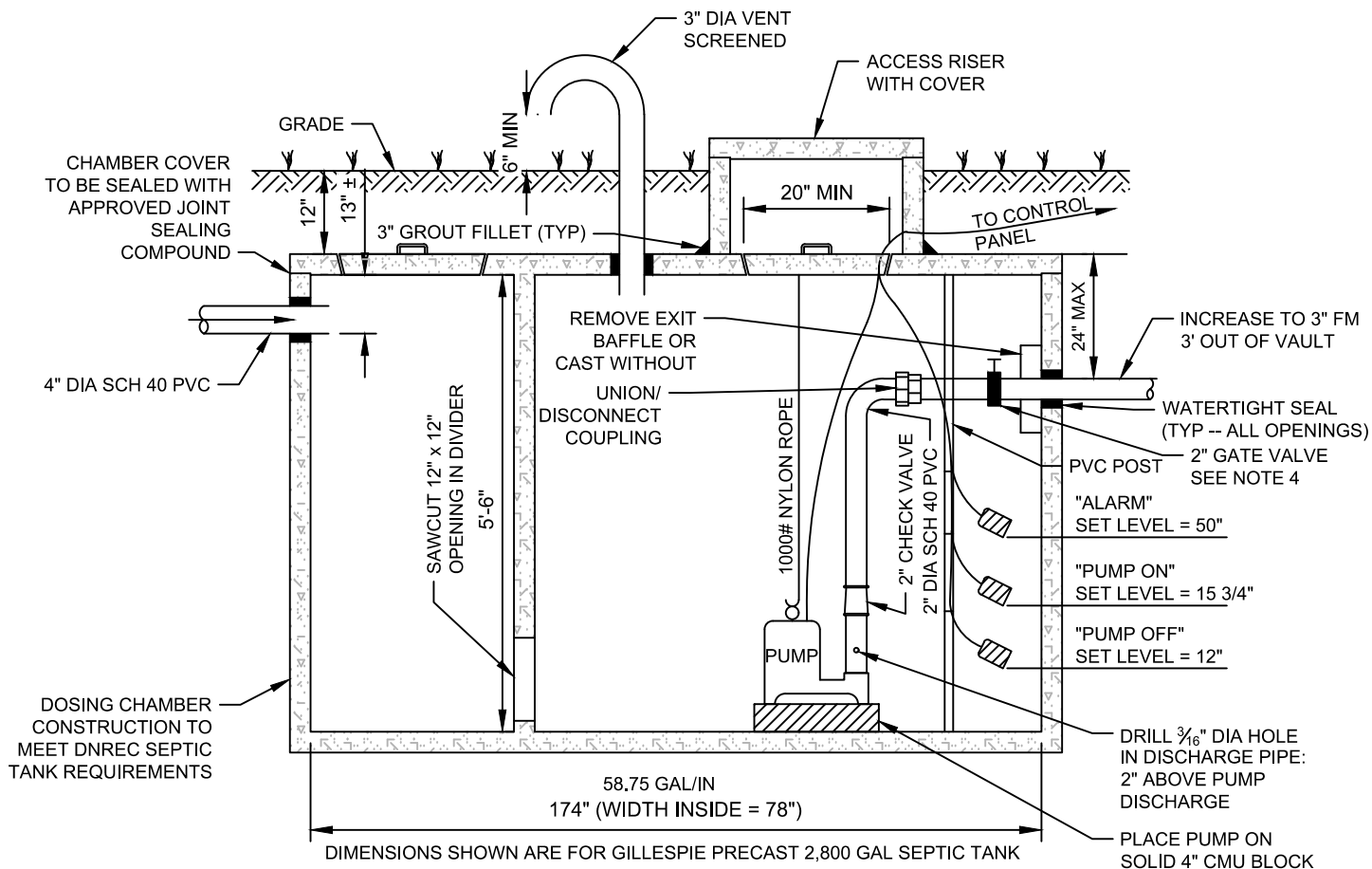
DATE: 4/9/25

SHEET 4 OF 6

DESIGN BY: EJT

REVIEW BY: ET

JOB NO. : 25-616



ELEVATION VIEW

PUMP VOL PER 1/3 CYCLE = 220 GAL BY FLOATS
222 GAL BY TIMER CONTROL
NOTE, 1 FULL CYCLE = DOSING ALL THREE BEDS

TIMER SETTING:
RUN: 5 MIN. 33 SEC
OFF: 2 HOURS 40 MIN

PUMP:
GOULDS MODEL
WS0712B (3/4 HP)



NOTES:

- ALL ELECTRICAL CONNECTIONS INSIDE TANK TO BE EXPLOSION PROOF, CORROSION RESISTANT AND WATERPROOF
- ELECTRICAL INSTALLATIONS SHALL MEET ALL REQUIREMENTS OF NEC. LATEST EDITION
- CONTACT ENGINEER FOR INSPECTION OF SYSTEM INSTALLATION AND OPERATION PRIOR TO PLACING THE DOSING TANK IN OPERATION
- MAXIMUM DEPTH FROM GRADE TO INVERT OF DOSING CHAMBER TO BE 9'-0"
- EXCAVATION LIMITS SHALL EXTEND AT LEAST 2 FEET BEYOND TANK PERIMETER
- ALL DOSING CHAMBER COMPONENTS SHALL BE FIELD TESTED TO ENSURE ACCURACY, WATER TIGHTNESS, AND PROPER OPERATION OF ALL PUMPS AND ALARM CONTROLS.
- EQUIPMENT:
 - FLOAT SWITCHES -- MERCURY TUBE TYPE SEALED IN FLOAT BALL AND RATED FOR VOLTAGE AND AMPERAGE OF SERVICE. FLOATS ARE NOT TO BE LOCATED DIRECTLY BELOW TANK INLET
 - ENCLOSURES -- TO BE RATED FOR MOUNTING LOCATION NEMA-1 FOR INSIDE USE OR NEMA-3R FOR OUTSIDE USE
 - HIGH LEVEL ALARM -- TO OPERATE ON SEPARATE 115 VOLT AC CIRCUIT FROM PUMP, ALARM TO ACTIVATE BOTH RED--LITE AND BELL OR BUZZER

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PO BOX 2, 39 COMMERCE ST, HARRINGTON, DE 19952 Phone: (302) 542-0774

DOSING TANK DETAIL

12802 MENNONITE SCHOOL RD,
GREENWOOD, DE 19950
SUSSEX COUNTY, DE - NANTICOKE HUNDRED
TAX MAP #: 430-5.00-55.00
OWNER: GREENWOOD CONSERVATIVE MENNONITE CHURCH

SCALE: NTS

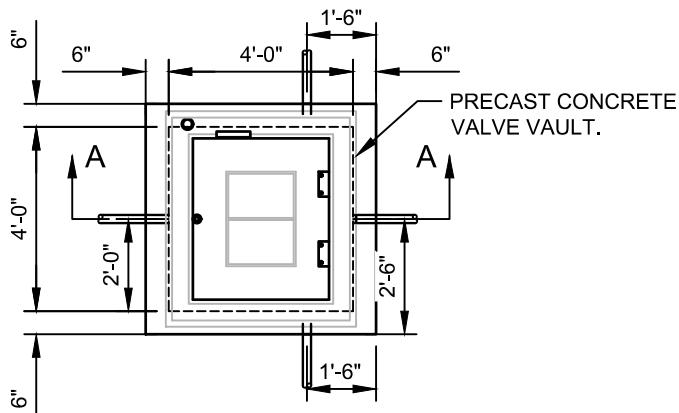
DATE: 4/9/25

SHEET 5 OF 6

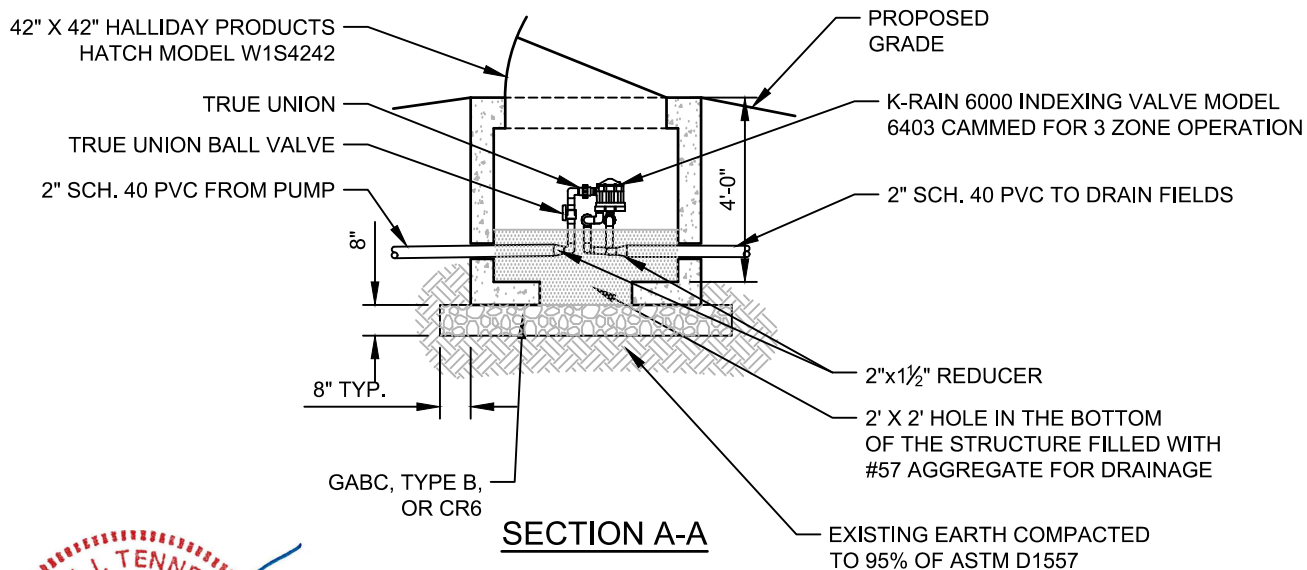
DESIGN BY: EJT

REVIEW BY: ET

JOB NO. : 25-616



PLAN VIEW



SECTION A-A



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VALVE VAULT DETAIL

12802 MENNONITE SCHOOL RD,
 GREENWOOD, DE 19950
 SUSSEX COUNTY, DE - NANTICOKE HUNDRED
 TAX MAP #: 430-5.00-55.00
 OWNER: GREENWOOD CONSERVATIVE MENNONITE CHURCH

SCALE: NTS

DATE: 4/9/25

SHEET 6 OF 6

DESIGN BY: EJT

REVIEW BY: ET

JOB NO. : 25-616



WS_B Series

Model 3886 **3/4 HP**

SUBMERSIBLE SEWAGE PUMP

FEATURES

Impeller: Cast iron, semi-open, dynamically balanced, non-clog with pump out vanes for mechanical seal protection. Optional Silicon bronze impeller available.

Casing: Cast iron volute type for maximum efficiency. Designed for easy installation on A10-20 guide rail or base elbow rail systems.

Mechanical Seal: SILICON CARBIDE VS. SILICON CARBIDE sealing faces for superior abrasive resistance, stainless steel metal parts, BUNA-N elastomers.

Shaft: Corrosion-resistant stainless steel. Threaded design. Locknut on all models to guard against component damage on accidental reverse rotation.

Fasteners: 300 series stainless steel.

Capable of running dry without damage to components.

Designed for continuous operation when fully submerged.

EXTENDED WARRANTY AVAILABLE FOR RESIDENTIAL APPLICATIONS.

AGENCY LISTINGS



Tested to UL 778 and CSA 22.2 108 Standards
By Canadian Standards Association
File #LR38549

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Sewage systems
- Dewatering/Effluent
- Water transfer

SPECIFICATIONS

Pump

- Solids handling capabilities: 2" maximum
- Discharge size: 2" NPT
- Capacities: up to 185 GPM
- Total heads: up to 38 feet TDH
- Temperature: 104°F (40°C) continuous, 140°F (60°C) intermittent

MOTORS

- Fully submerged in high grade turbine oil for lubrication and efficient heat transfer. All ratings are within the working limits of the motor.
- Class B insulation

Single phase (60 Hz):

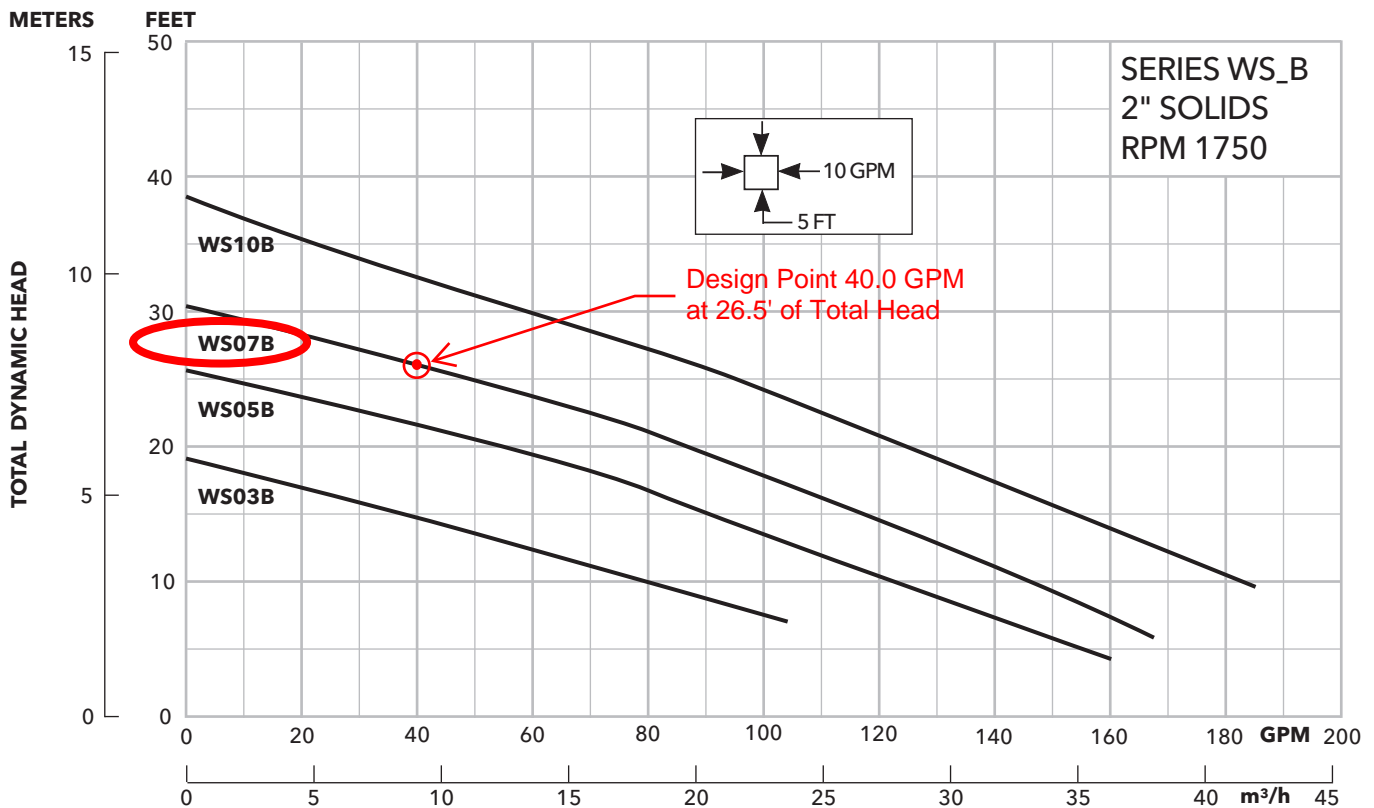
- All single phase models feature capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.
- SJTOW or STOW severe duty oil and water resistant power cords.
- 1/3 - 1 HP models have NEMA three prong ground-ing plugs.

Three phase (60 Hz):

- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.
- **Bearings:** Upper and lower heavy duty ball bearing construction.
- **Designed for Continuous Operation:** Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.
- **Power Cable:** Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.
- **Motor Cover O-ring:** Assures positive sealing against contaminants and oil leakage.

MODELS

Order Number	HP	Phase	Volts	RPM	Impeller Dia. (In.)	Max. Amps	LRA	KVA Code	Full Load Motor Eff.	Resistance		Wt. (Lbs.)
										Start	Line-Line	
WS0311B	0.33	1	115	1750	4.69	10.7	30.0	M	54	11.9	1.7	63
WS0318B			208			6.8	19.5	K	51	9.1	4.2	
WS0312B			230			4.9	14.1	L	53	14.5	8.0	
WS0511B	0.5	1	115		5.00	14.5	31.1	J	55	9.3	1.4	65
WS0518B			208			8.0	19.5	K	51	9.1	4.2	
WS0512B			230			7.3	16.5	J	54	11.7	5.6	
WS0538B		3	200			3.8	12.3	K	75	NA	6.7	
WS0532B			230			3.3	9.7	K	75	NA	9.9	
WS0534B			460			1.7	4.9	K	75	NA	39.4	
WS0537B	0.75	1	575		5.38	1.4	4.3	K	68	NA	47.8	85
WS0718B			208			11.0	39.0	K	65	2.6	1.4	
WS0712B		3	230			9.4	24.8	J	57	4.8	2.3	
WS0738B			200			4.1	21.2	H	74	NA	4.3	
WS0732B			230			3.6	17.3	J	76	NA	5.6	
WS0734B			460			1.8	8.9	J	76	NA	22.4	
WS0737B		1	575		5.75	1.5	7.3	J	71	NA	29.2	
WS1018B			208			14.0	39.0	K	65	2.6	1.4	
WS1012B			230			12.3	30.5	H	60	4.3	1.8	
WS1038B			200			6.0	21.2	H	74	NA	4.3	
WS1032B			230			5.8	17.3	J	76	NA	5.6	
WS1034B			460			2.9	8.9	J	76	NA	22.4	
WS1037B			575			2.4	7.3	J	71	NA	29.2	



MODEL TD Control Panel

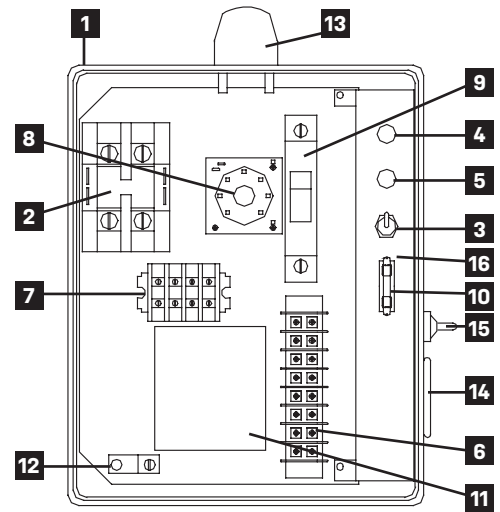
Single phase, simplex timed dosing pump control.

The Model TD control panel provides a reliable means of controlling one single phase pump in onsite septic installations. A programmable timer activates a magnetic motor contactor to turn the pump on and off. A low level cutout float overrides the timer to prevent the pump from running dry. An alarm float activates the audio/visual alarm system indicating a high liquid level. Common applications include sand filter systems, pressure distribution systems, mound systems, or any application requiring a timed dose.

PANEL COMPONENTS

1. **Enclosure** measures 10 x 8 x 4 inches (25.40 x 20.32 x 10.16 cm) NEMA 4X (ultraviolet stabilized thermoplastic with removable mounting feet for outdoor or indoor use).
2. **Magnetic Motor Contactor** controls pump by switching electrical lines.
3. **HOA Switch** for manual pump control.
4. **Control Fuse**
5. **Alarm Fuse**
6. **Float Switch Terminal Block**
7. **Incoming Power Terminal Block**
8. **Programmable Timer** with separate variable controls allows for setting the on and off times from .05 seconds to 30 hours.
9. **Circuit Breaker** provides pump disconnect and branch circuit protection.
10. **Spare Fuse**
11. **Backplate Label** includes diagram of float, pump, and power connections.
12. **Ground Lug**

NOTE: Timer Installation Label and Pump/Float Switch Installation Specification Label are located inside the panel on enclosure cover.



Model Shown TD1W914X

STANDARD ALARM PACKAGE

13. **Red Alarm Beacon** provides 360° visual check of alarm condition.
14. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating).
15. **Exterior Alarm Test/Normal/Silence Switch** allows horn and light to be tested and horn to be silenced in an alarm condition. Alarm automatically resets once alarm condition is cleared.
16. **Horn Silence Relay** (mounted under bracket).

NOTE: other options available.



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 two 20' float switches
- Available with EZconnex® float system
- Complete with step-by-step installation instructions
- Five-year limited warranty

OPTIONAL FEATURE

- **34" (86.36cm) Panel Mounting Post** (Factory Installed). Includes Duplex Installation Kit (Enclosure upsized to 10" x 8" x 6" (25.4 x 20.32 x 15.24 cm). Max. Enclosure size 14" x 12" x 6" (35.56 x 30.48 x 15.24 cm)



SJE RHOMBUS®

1-888-DIAL-SJE • 1-218-847-1317

1-218-847-4617 Fax

email: customer.service@sjeinc.com

www.sjerrhombus.com

B.61

California Prop 65 requires the following:  WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

SEE REVERSE SIDE FOR ORDERING INFORMATION.

SEE PRICE BOOK FOR LIST PRICE.

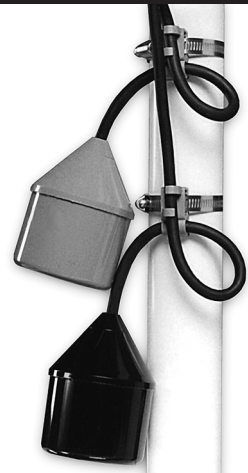
DOUBLE FLOAT® Pump Switch

Mercury activated, wide-angle switch designed to control pumps up to 1 HP at 120 VAC and 2 HP at 230 VAC.

This mercury activated, wide-angle pump switch provides automatic control of pumps in non-potable water and sewage applications. It is well-suited for confined applications requiring an accurate pumping range. It is not sensitive to rotation or turbulence. This switch is voltage sensitive - use with correct voltage.

The **Double Float®** pump switch consists of two floats and a splice tube. Each float contains a heavy-duty mercury switch. The splice tube contains a holding relay which enables the floats to function in series.

The holding relay eliminates pump chatter in turbulent conditions allowing the **Double Float®** pump switch to operate relay control panels for larger pump applications.

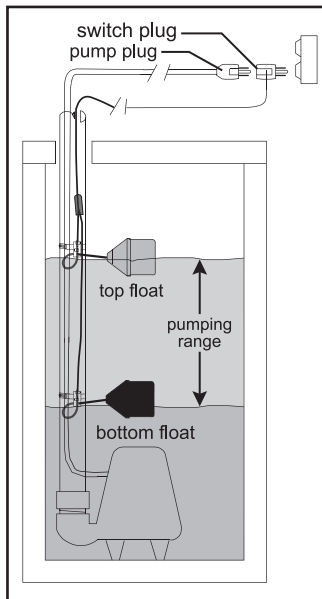
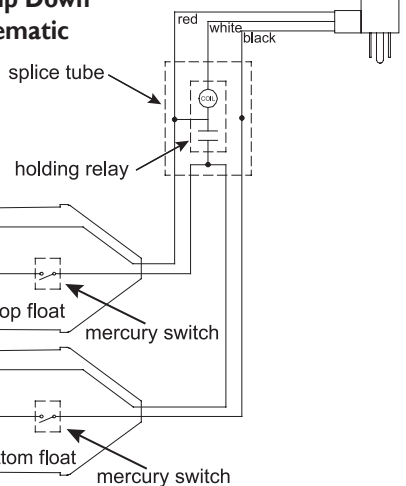


FEATURES

- Controls pumps up to 1 HP at 120 VAC and 2 HP at 230 VAC.
- Adjustable pumping range of 1.75 to 48 inches (4.45 to 122 cm) with increased pumping range up to 6 feet (1.8 meters) available.
- Includes standard mounting clamps and boxed packaging.
- UL Recognized for use in non-potable water and sewage.
- CSA Certified.
- Five-year limited warranty.



Pump Down Schematic



OPTIONS

This switch is available:

- for pump down or pump up applications as specified by part number.
- with a 120 VAC or 230 VAC piggy-back plug.
- without a plug for direct wiring (120 VAC units can only be used with 120 VAC applications within specified amp ratings. 230 VAC units can only be used with 230 VAC applications within specified amp ratings).
- in standard cable lengths of 15, 20, or 30 feet and 5 or 10 meters (longer lengths available).

SPECIFICATIONS

Cable attached to float housing: flexible 14 gauge, 2 conductor (UL, CSA) SJOW, water-resistant (CPE)

Cable above splice: flexible 14 gauge, 3 conductor (UL, CSA) SJTW, water-resistant, thermoplastic

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

MERCURY SWITCH: mercury-to-mercury contacts, hermetically sealed in a steel capsule

ELECTRICAL:

120 VAC 50/60Hz Single Phase:

Maximum Pump Running Current:

15 amps

Maximum Pump Starting Current:

55 amps

Recommended Pump HP:

1 HP or less

230 VAC 50/60Hz Single Phase:

Maximum Pump Running Current:

12 amps

Maximum Pump Starting Current:

35 amps

Recommended Pump HP:

2 HP or less

NOTE: This switch must be used with pumps that provide integral thermal overload protection.

California Prop 65 requires the following: WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

SEE REVERSE SIDE FOR ORDERING INFORMATION.

SEE PRICE BOOK FOR LIST PRICE.



SJE RHOMBUS.

1-888-DIAL-SJE • 1-218-847-1317

1-218-847-4617 Fax

email: customer.service@sjeinc.com



www.sjerrhombus.com

F.23

DOUBLE FLOAT® Pump Switch

Mercury activated, wide-angle switch designed to control pumps up to 1 HP at 120 VAC and 2 HP at 230 VAC.

ORDERING INFORMATION

PUMP DOWN 		PUMP UP 		Shipping Weight
Part #	Description	Part #	Description	
1002022	15DFD1WP	1002030	15DFU1WP	3.63 lbs.
1002024	15DFD2WP	1002032	15DFU2WP	3.64 lbs.
1002026	15DFD1WOP	1002034	15DFU1WOP	3.55 lbs.
1002028	15DFD2WOP	1002036	15DFU2WOP	3.51 lbs.
1002038	20DFD1WP	1002046	20DFU1WP	4.04 lbs.
1002040	20DFD2WP	1002048	20DFU2WP	4.08 lbs.
1002042	20DFD1WOP	1002050	20DFU1WOP	3.97 lbs.
1002044	20DFD2WOP	1002052	20DFU2WOP	4.01 lbs.
1002054	30DFD1WP	1002062	30DFU1WP	4.95 lbs.
1002056	30DFD2WP	1002064	30DFU2WP	4.99 lbs.
1002058	30DFD1WOP	1002066	30DFU1WOP	4.86 lbs.
1002060	30DFD2WOP	1002068	30DFU2WOP	4.87 lbs.

D = Pump Down **U** = Pump Up **1** = 120 VAC **2** = 230 VAC

WP = With Plug **WOP** = With Out Plug

NOTE: Descriptions are grouped by cable length measured in feet (15, 20, 30).
SEE PRICE BOOK FOR LIST PRICE.

OPTIONS

PACKAGING

Boxed - standard

Bagged - optional

Bulk - optional; must be ordered in master carton quantities.

Please contact customer service for details/pricing.

ADDITIONAL CABLE

Longer cable lengths available. Please call for details.

UL Recognized for
Water & Sewage



LR54245



SPECIFICATIONS

PUMPING RANGE: 1.75 to 48 inches (4.45 cm to 122 cm), increased pumping range available. Call factory for quote.

CABLE ATTACHED TO FLOAT HOUSING: flexible 14 gauge, 2 conductor (UL, CSA) SJOW, water-resistant (CPE)

CABLE ABOVE SPLICE: flexible 14 gauge, 3 conductor (UL, CSA) SJTW, water-resistant thermoplastic

FLOAT: 3.38 inch diameter x 4.55 inch long (8.58 cm x 11.5 cm), high impact, corrosion resistant, PVC housing for use in sewage and non-potable water up to 140°F (60°C)

ELECTRICAL:

Voltage 50Hz/60Hz Single Phase	Max. Pump Run Current	Max. Pump Start Current	Recommended Pump HP
120 VAC	15 amps	55 amps	1 HP or less
230 VAC	12 amps	35 amps	2 HP or less

NOTE: This switch must be used with pumps that provide integral thermal overload protection.

OTHER INFORMATION

PUMP DOWN is normally open contacts for emptying.

PUMP UP is normally closed contacts for filling.

DIRECT WIRING

120 VAC units used for direct wiring (without plug) can **only** be used with **120 VAC** applications within specified amp ratings.

230 VAC units used for direct wiring (without plug) can **only** be used with **230 VAC** applications within specified amp ratings.



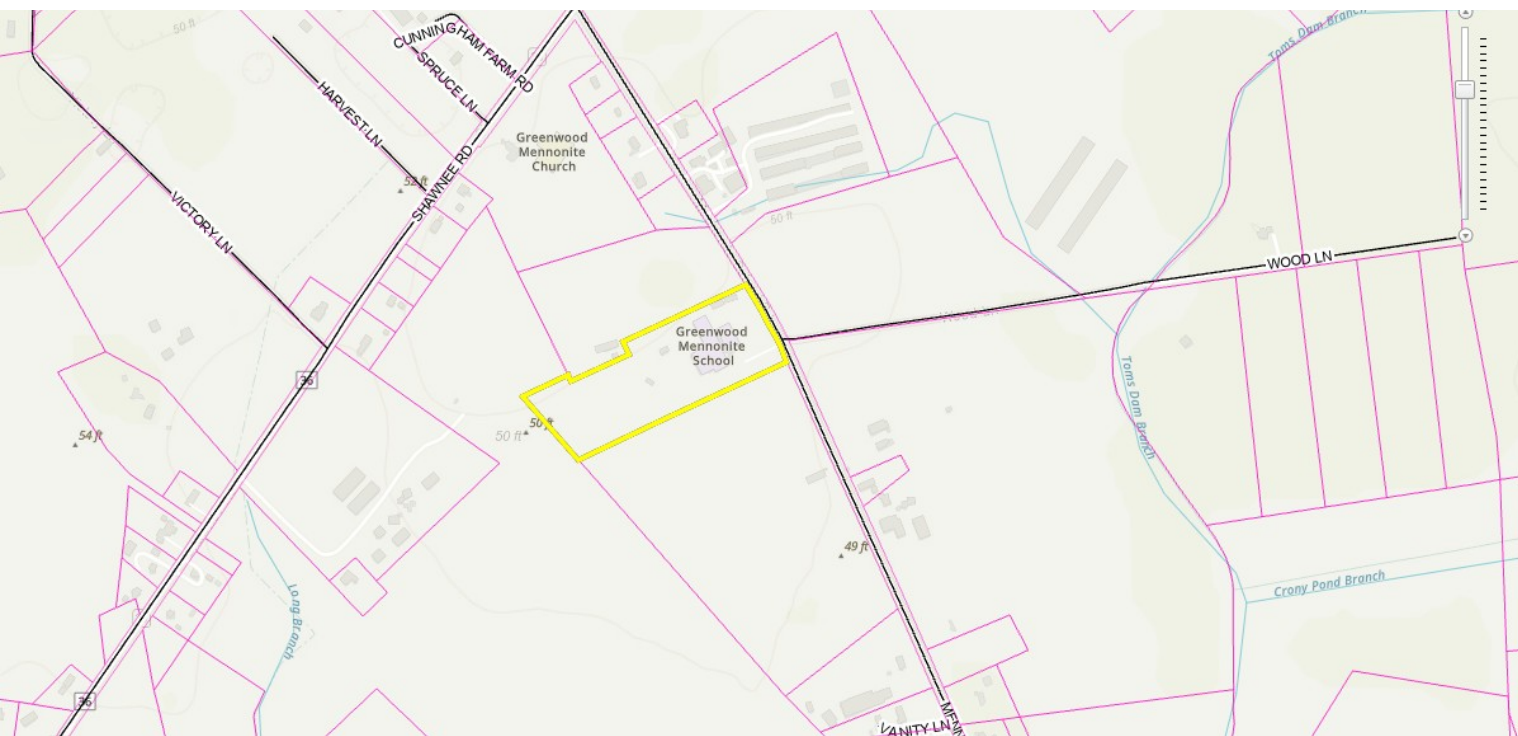
SJE RHOMBUS.

www.sjerrhombus.com
customer.service@sjeinc.com

Call or fax your order!

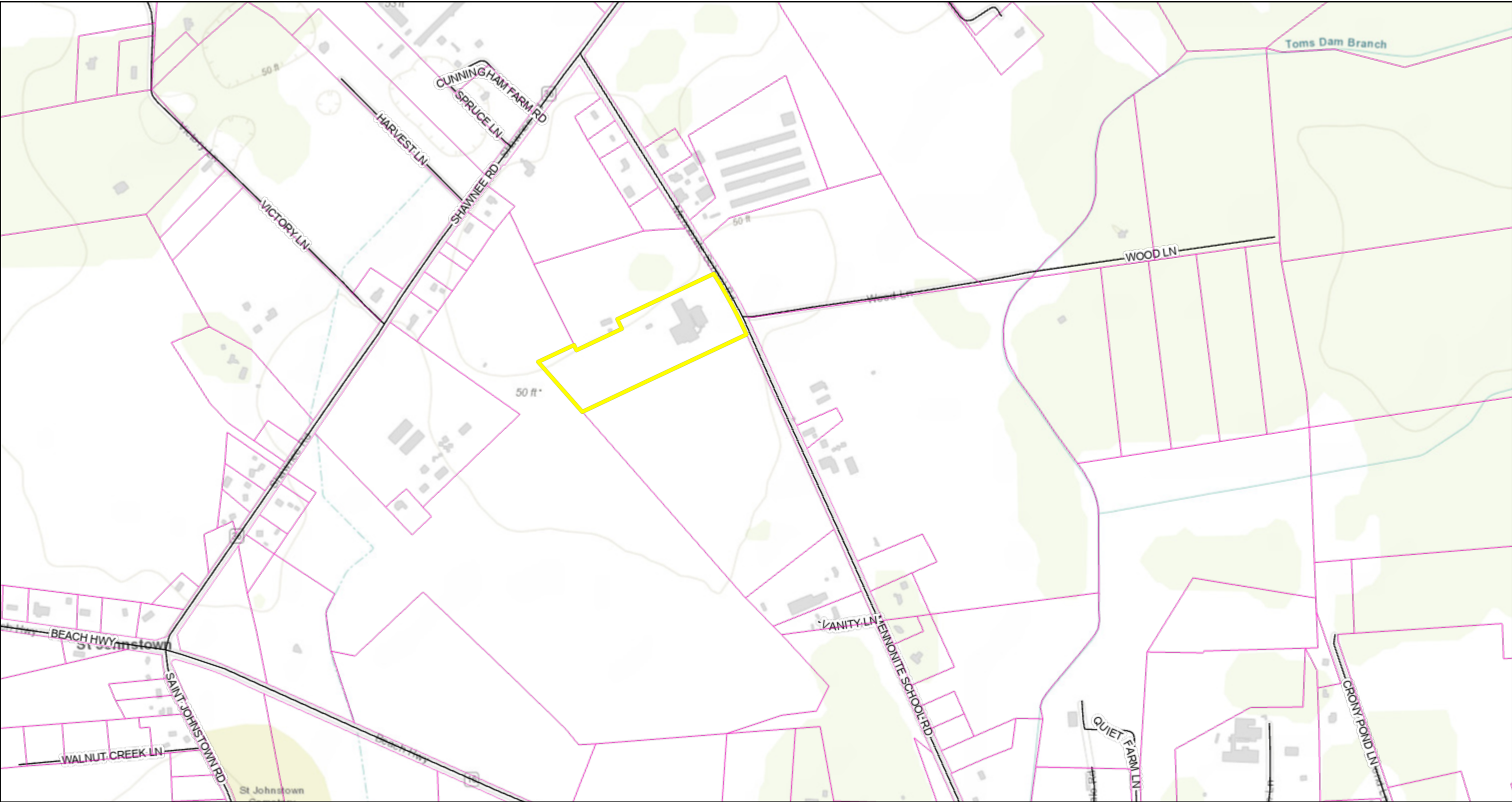
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Product offering and pricing are subject to change without notice.
Please visit www.sjerrhombus.com for the most current information.



1) 430-5.00-55.00		Zo
BOOK	5057	
PAGE	284	
FULLNAME	GREENWOOD CONSERVATIVE MENNONITE CHURCH	
Second_Owner_Name	INC	
MAILINGADDRESS	12802 MENNONITE SCHOOL RD	
CITY	GREENWOOD	
STATE	DE	
DESCRIPTION	SW/ MENNONITE SCHOOL RD	
DESCRIPTION2	S/ SHAWNEE RD	
DESCRIPTION3	168550	
LUC	800	
SCHOOL	5	
MUNI	00	
CAP	0	
APRBLDG	4.4237e+006	
APRLAND	172900	
PINWASSEMENTUNIT	430-5.00-55.00	
PIN	430-5.00-55.00	

Sussex County



May 29, 2025

- polygonLayer

Tax Parcels

Streets

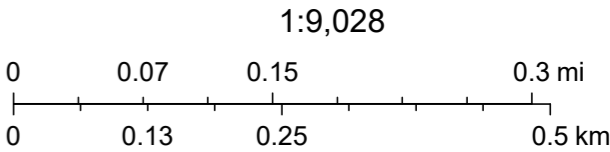
County Boundaries
- Override 1
- Override 2

- layer1

Red: Band_1

Green: Band_2

- Blue: Band_3
- Citations



County of Sussex, DE, Delaware FirstMap, VITA, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/ NASA, EPA, USDA, Sussex County Government



Calculations by Edwin Tennefoss, Sr.

System Type: Gravity Drain Field

Date: 5/20/2025

No. Students: 200

GMS Septic

Percolation Rate (mpi): 50

CALCULATIONS

Check Dosing Volume:

Min. dosing volume:	3 Gravity Fields - 3x a day	gal
Doses per day:	3.0	
Dosing Volume:	222	gal
Size of dosing chamber:	6.5 x 14.5	
Volume/in. of chamber:	58.75	gal/in
Set float at above min required for pump:	3.78	in
Pump On to Pump Off Distance:	3.75	in

Storage Volume:

Tank Size:	6.5 x 14.5	ft
Tank Volume:	3525.00	gal
Dead Water Volume:	587.5	gal
Dosing Volume:	222	gal
Remaining Volume:	2715.50	gal

Timers:

Pump Rate	40	GPM
Volume to Pump:	222	Gallons
Pump Run Time:	5.55	Minutes
Timer Setting	5.55	Minutes
Gallons By Float:	220.31	Gallons
Gallons By Timer:	222.00	Gallons



Septic System Design - Gravity

GMS School

Septic Tank 1	2800
Septic Tank 2	1500
Total	4300

Bed Disposal Area Sizing

Number of Students	200	
School no Cafeteria/Gym	10	
Design Flow (gal / day):	2000	
Percolation Rate (mpi)	50	
Area = $0.42 Q (t)^{0.5}$ (sf)	5940	Bed

Length	92
Width	22.5
Area	2070
3 Beds for a total of	6210

5.3.14.4 The minimum liquid working capacity of septic tanks shall be:

5.3.14.4.1 For flows ≤ 500 gpd the minimum liquid working capacity shall be 1,000 gallons.

5.3.14.4.2 For flows > 500 gpd but $< 2,500$ gpd shall have a working capacity of 1.5 times the expected flow rate with a minimum liquid working capacity of 1,500 gallons.

System Curve: GMS Pump Station

SYSTEM CURVE - HAZEN WILLIAMS

WHERE $4.73 Q^{1.85} L / C^{1.85} d^{4.87}$ = friction headWHERE $V^2 / 2G$ = velocity headWHERE $M V^2 / 2G$ = minor loss head

June 12, 2025

STATIC HEAD 21**FOR LENGTH 1 :**

ENTER C : 140

ENTER DIA. (inches) : 2

ENTER LENGTH (ft) : 10

ENTER MINOR COEF : 6

FOR LENGTH 2:

ENTER C : 140

ENTER DIA. (inches) : 3

ENTER LENGTH (ft) : 800

ENTER MINOR COEF : 2

FOR LENGTH 3:

ENTER C : 140

ENTER DIA. (inches) : 4

ENTER LENGTH (ft) : 40

ENTER MINOR COEF : 3

ENTER Q-1 : 0

ENTER Q-2 : 15

ENTER Q-3 : 30

ENTER Q-4 : **40**

ENTER Q-5 : 50

DATA OUTPUT TABLE

Q (gpm)	Hstat (ft)	Hf (ft)	Hm (ft)	Hv (ft)	TDH (ft)	TDH (psi)	Velocity (fps)
0	21	0.000	0.000	0.000	21.000	9.09	0.00
15	21	0.694	0.234	0.036	21.963	9.51	1.51
30	21	2.501	0.936	0.142	24.580	10.64	3.03
40	21	4.259	1.665	0.253	27.176	11.76	4.04
50	21	6.435	2.601	0.395	30.431	13.17	5.04

GMS FM System Curve