



**Permit Number:**  
**283047**

DELAWARE DEPARTMENT OF  
NATURAL RESOURCES  
APPLICATION – PERMIT  
ON-SITE WASTEWATER SYSTEM

**Paid & Received**  
Division of Water  
\$ 250.00 06/15/2026



DIVISION OF WATER RESOURCES  
Clean Water – for Today and Tomorrow

AND ENVIRONMENTAL CONTROL

Owner's Name: O'NEAL SHIRLEY FAYE TTEE REV TRUST, C/O SHIRLEY O'NEAL Phone: 302-629-3327

Address: 12537 SYCAMORE ROAD, LAUREL, DE 19956

Project Location: 12537 SYCAMORE ROAD, LAUREL, DE 19956

Tax Map #: 232-12.00-106.02

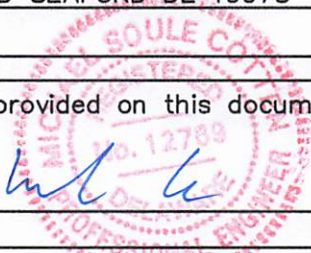
Application Preparer: MICHAEL COTTEN P.E.

DNREC License #: 4483

Preparer's Address: 10087 CONCORD RD SEAFORD DE 19973

Phone: (302)628-9164

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



6/12/26

Preparer's Signature

Date

– SEPTIC DESIGN CRITERIA –

(Please check all boxes that apply)

Type of Construction:

- Replacement
- New Construction
- Component Replacement
- Repair to Existing System
- Authorization to Use Existing System
- Modification to Existing System

System Type:

- Low Pressure Pipe (FD)
- Elevated Sand Mound
- Pressure Dose (FD)
- Holding Tank
- Gravity (FD)
- Std. Pressure Dose (FD)
- Std. Pressure Dose (CF)

CF=Cap & Fill / FD=Full Depth

- Low Pressure Pipe (CF)
- Wisconsin At-Grade
- Pressure Dose (CF)
- Subsurface Micro Irrigation
- Gravity (CF)
- Other: \_\_\_\_\_

Bed or  Trench

Sand-lined  Yes  No

Gravelless Chamber or  Stone/Gravel  
 Other \_\_\_\_\_

Existing System Malfunctioning  Yes  No  N/A

Pre-Treatment Units

- Bio-Clear  Klargester
- Septic Tank  Recirculating Sand Filter
- Other: \_\_\_\_\_

# of Bedrooms: \_\_\_\_\_

Average Percolation Rate: 45 MPI

Gallon Per Day Flow: 1,363 GPD

Minimum Square Ft. Required: 3,333 SF

Square Ft. Proposed: 2 EA. BEDS 22.0' X 90.0' = 3,960 SF

4 DOCTORS @ 70 GPD  
100 PATIENTS @ 7 GPD  
20 STAFF @ 20 GPD  
6 DAYS/WEEK = 1,380 GPD  
7 DAY AVG. /WEEK = 1,183 GPD

Central Water Available  Yes  No

(If yes, please state Utility Name: \_\_\_\_\_)

**Site Evaluation**

**Reference #:**

**574789**

**RECEIVED**

**05/06/2026**

**Division of Water**

**PAID**

**\$ 250.00 05/06/2026**

## Site Evaluation Report – Commercial - Replacement

**Owner's Name:** Shirley F. O'Neal  
**Owner's Address:** 12537 Sycamore Road  
Laurel, DE 19956

**Parcel Number:** 2-32-12.00-106.02

**Phone Number:** (302) 629-3327

**Property Location:** 30549 Sussex Highway  
Laurel, DE  
(+/- 1.97 res)

**Evaluation Date:** January 23, 2026 and March 20, 2026

**Central Water Available** – No

**Hydrologic Unit Code:** 020801090204 – Little Creek

**Central Sewer Available** – No

**Depth to and Type of Limiting Zones Encountered:**

- Soil Boring 1 (SB1): 22 inches to redoximorphic features, >120 inches to free water.  
Aquic Hapludult
- Test Pit 1 (TP1): 26 inches to redoximorphic features, >120 inches to free water.  
Aquic Hapludult
- Test Pit 2 (TP2): 24 inches to redoximorphic features, >120 inches to free water.  
Aquic Hapludult

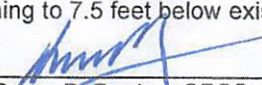
**Summary of Evaluation:** This evaluation was conducted to determine the type of on-site wastewater treatment and disposal system (OWTDS) that is suited for this property under current DNREC Regulations and policies. Soils in the evaluated area are moderately well drained based on the depth to redoximorphic features and observed groundwater levels used to estimate the depth to the seasonal high groundwater levels.

The Web Soil Survey (NRCS, 2023) indicates that the site is potentially underlain by the somewhat poorly drained Glassboro sandy loam, 0 to 2 percent slope (GoA). It is my opinion that the soils observed in the immediate vicinity of Soil Boring 1 and Test Pits 1 and 2 correlate to the moderately well drained Woodstown Soil Mapping Unit.

The soils have moderate limitations for an OWTDS related to very slowly permeable soils, building improvements, well isolation distances and landscape position on the extent of suitable soils. The owner wishes to replace an existing temporary holding tank permitted and installed in 2014 based on the anticipated Town of Laurel sewer connection within five years. The Town of Laurel has no plans for installing town sewer in this area because this property is within Sussex County service area. (See the attached letter for the Town of Laurel). The owner would like to install OWTDS on the property. Non Tidal wetlands, FEMA flood plains and Tax ditch easements do not impact this property per Sussex County and DNREC online information.

An Elevated Sand Mound treatment and disposal system sand lined to 7.5 feet below existing ground surface is potentially suited in the vicinity of Soil Boring 1 and Test Pits 1 and 2. A limiting zone of 22 inches is recommended in the immediate vicinity of Soil Boring 1 and Test Pits 1 and 2 based on observed redoximorphic features. Suitabilities are providing that setback requirements under DNREC Exhibit C can be met. Estimated permeabilities in the immediate vicinity of Soil Boring 1 and Test Pits 1 and 2 are slow based on field estimated clay loam/silty clay within the upper 60 inches of the observed soil material and DNREC Exhibit Y. A design rate of 45 minutes per inch is estimated in the immediate vicinity of Soil Boring 1 and Test Pits 1 and 2 based on sand lining to 7.5 feet below existing ground surface.

5/15/26  
Date

  
Bruce B. Bagley, CPSS  
License Number: 2464

NOTE: This Site Evaluation Report is a summary of the investigation conducted by Bruce Bagley. This report is not a Site Evaluation Approval which typically, but not always, comes with this report. A Site Evaluation Approval, signed by DNREC is required to obtain a septic permit.

## Site Evaluation Approval

The soils on this site are approved when the following is completed in full and is signed by the approving authority. This is not a septic permit but is required to obtain a septic permit. A septic permit is required to obtain a building or placement permit. Isolation requirements from wells, easements, ditches, and other encumbrances may limit the area that is available for a septic permit. It is the responsibility of the designer to verify the information provided by this approval prior to obtaining a septic permit. The information provided here is obtained primarily by field observations and is believed to be accurate under the conditions that existed at the time of the evaluation. Compaction of soils from lot clearing, grading activities, and filling activities may negate this approval or modify the type of system that can be permitted and installed. Lots that are wooded at the time the evaluation are to be inspected prior to septic system installation at the discretion of the Installer.

**Owner's Name:** Shirley F. O'Neal  
**Owner's Address:** 12537 Sycamore Road  
Laurel, DE 19956

**Parcel Number:** 2-32-12.00-106.02

**Disposal System and Location:** Elevated Sand Mound treatment and disposal system sand lined to 7.5 feet below existing ground surface in the immediate vicinity of Soil Boring 1 and Test Pits 1 and 2 provided that setback requirements under Exhibit C can be met. Other OWTDS options include any conventional/alternative technologies approved by DNREC.

**Depth to Limiting Zone:** 22 inches surface for design purposes based on observed redoximorphic features.

### **Design Considerations and Comments:**

1. See Site Evaluation Report and Drawing.
2. See DNREC Exhibit Q/T in the Delaware Regulations, amended January 11, 2014 (2014 Regulations) for criteria on Elevated Sand Mound systems.
3. **Soil Scientist shall be contacted by Class E septic contractor to verify appropriate sand lining depth prior to OWTDS installation.**
4. See Exhibit C, Minimum isolation Distances in the revised 2014 Regulations. All isolation distances specified in Exhibit C must be maintained e.g., 100-foot isolation distance between system and domestic water supply wells.
5. The wastewater disposal area should be clearly marked e.g., by surrounding it with construction fence and the area should be avoided as much as is feasible during construction to avoid disturbance/soil compaction. The Department of Natural Resources and Environmental Control (DNREC) has formulated guidance for clearing/soil compaction avoidance; contact DNREC at 302-856-4561 for guidance.

**Replacement Disposal System and Location:** Same as initial system if space permits or sand-lined upgrade.

**Limitations of Soil Evaluation for System Design/Emplacement:** The soil evaluation was performed to evaluate soil conditions with respect to a wastewater disposal system for a commercial building. For alternative uses contact the site evaluator or DNREC to determine whether additional site evaluation services are necessary.

### **Instructions to Property Owner**

1. Contact a Class C Designer.
2. A permeability rate of 45 minutes per inch based on sand lining to 7.5 feet below existing ground surface has been estimated for the soil on your site based on soil textures and tables published by DNREC. You may use the estimated rate or, at your expense, have a percolation test conducted by a Class A Percolation Tester. Contact Bruce Bagley and DNREC if you choose to conduct a percolation test.
3. For questions call Bruce Bagley at (410) 708-3854 or DNREC at (302) 956-4561.

This report has been prepared by: \_\_\_\_\_

Bruce B. Bagley, Certified Professional Soil Scientist  
Delaware License Number 2464

Bruce Bagley has conducted this site evaluation in accordance with DNREC Regulations and Policies with the best of its ability and with the information provided by the owner and under the conditions that existed at the time of the evaluation. Bruce Bagley is only liable for this evaluation to the extent of the cost of this evaluation.

### **For Office Use Only**

**DNREC APPROVED**

DNREC Reviewing Soil Scientist-Approving Authority

**5/27/2026**

Date

**5/27/2026**

Date Field Checked

**5/27/2031**

Expiration Date

**DNREC Disclaimer:** Approval of a site evaluation indicates only that the site evaluation, based on information presented to us, was conducted in compliance with these Regulations. It is not an indication of the correctness or quality of the site evaluation and does not guarantee the evaluation is free of omissions or that a permit can be issued.

**The Class D licensee is responsible for errors/omissions.  
If there are questions regarding this report, contact the Class D licensee.**

Bruce B. Bagley, CPSS, 420 Cosden Road, Barclay, Maryland 21607 (410) 708-3854

PROJECT #: 26-280

DATE: 6/11/26

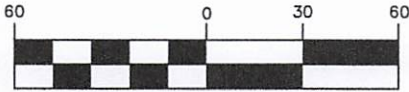
# COTTEN ENGINEERING LLC

CIVIL ENGINEERING, PLANNING AND MANAGEMENT CONSULTANTS  
10087 CONCORD RD SEAFORD, DE 19973  
PHONE/FAX (302) 628-9164

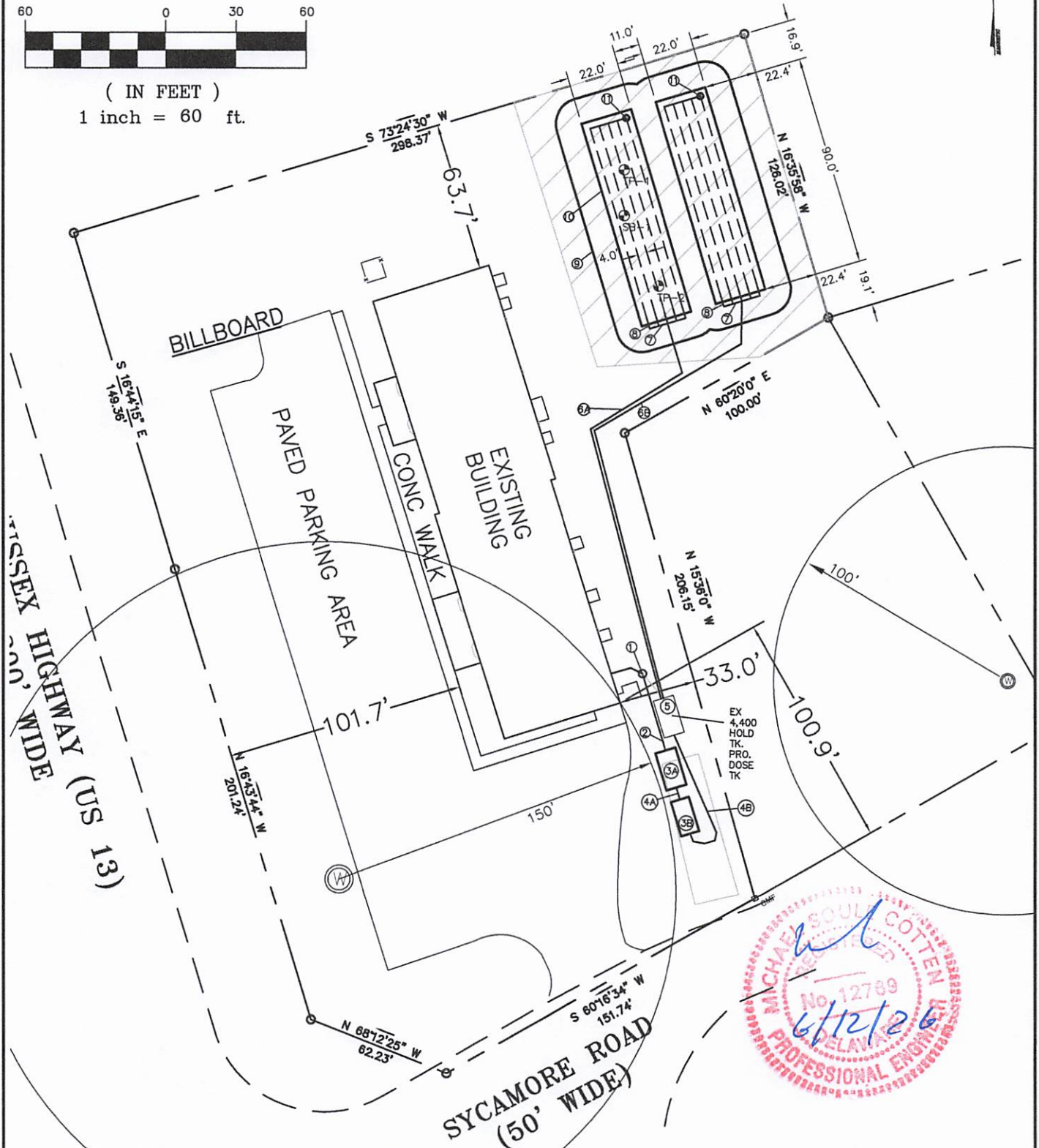
TAX MAP #: 232-12.00-106.02

NOTE: CONTACT SYSTEM DESIGNER IF SITE CONDITIONS CHANGE.

## GRAPHIC SCALE



( IN FEET )  
1 inch = 60 ft.



DESIGN BASED UPON LOT DIMENSIONS PROVIDED BY CLIENT AND FROM APPROVED SITE EVALUATION BY COASTAL SOIL. COTTEN ENGINEERING DID PERFORM A SURVEY OF THIS PROPERTY 4/23/26.

OWNER'S/AUTHORIZED AGENT SIGNATURE: Shirley F. O'Neal DATE: 6-12-2026

A copy of this page must be submitted with both the septic system and well construction report(s).

PROJECT #: 26-280

DATE: 6/11/26

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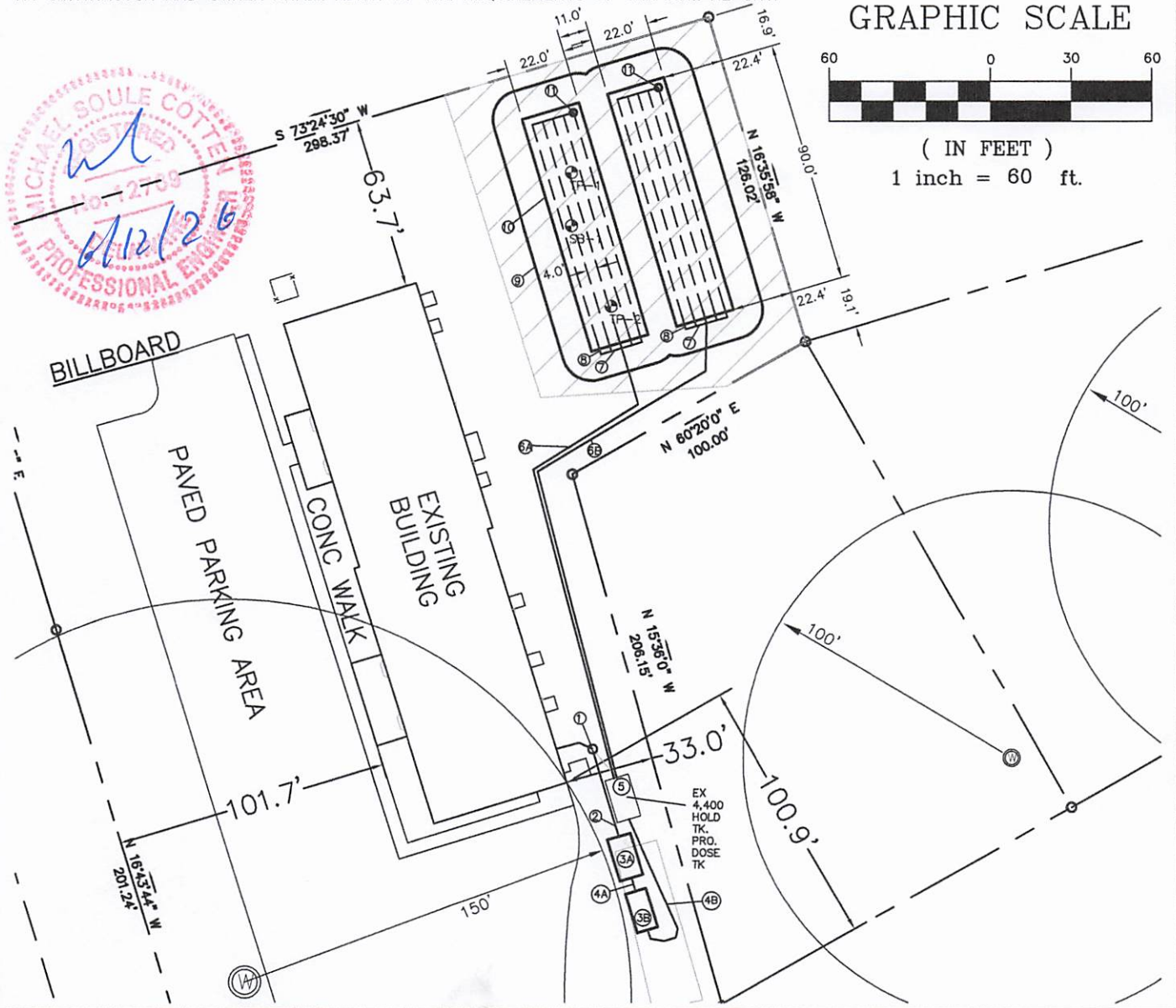
1. PROPOSED SANITARY CLEANOUT
2. 23 LF± NEW 4" GRAVITY LINE SLOPE 1/8"/LF.
- 3A. NEW 2800 GAL SEPTIC TANK WITH RISERS, ZABLE A 100 FILTER, PLACE TANK GREATER THAN 10 FT AWAY FROM DWELLING AND 50FT FROM WELLS PER DNREC, EXTEND RISERS TO ABOVE GRADE TYP. ACCORDING TO DNREC STANDARDS.
- 3B. NEW 1500 GAL SEPTIC TANK WITH RISERS, ZABLE A 300 FILTER, PLACE TANK GREATER THAN 10 FT AWAY FROM DWELLING AND 50FT FROM WELLS PER DNREC, EXTEND RISERS TO ABOVE GRADE TYP. ACCORDING TO DNREC STANDARDS.
- 4A. 3 LF 4" PVC SLOPE 1/8"/LF WITH MIN. 4" DROP BETWEEN TANK 3A OUTLET AND TANK 3B INLET INVERTS.
- 4B. 63 LF 4" PVC SLOPE 1/8"/LF.
5. EXISTING 4400 HOLDING TANK TO BE PUMPED, CLEANED, INSPECTED FOR CRACKS AND LEAKS AND UP GRADED TO DOSE TANK, ELSE REPLACE WITH NEW. THIS TANK WILL HAVE 2EA. GOULDS WE1012H PUMPS. DUPLEX CONTROLS, WITH EVENT COUNTER AND ELAPSED TIMER ACCORDING TO DNREC STANDARDS.
- 6A. 6B. 210LF± 3.0" PVC SCH 40 TRANSMISSION LINE.
7. 16 LF OF 2" PVC MANIFOLD" EACH
8. 5 EA. 8 LF OF 1.25" NON PERF- SCH 40 PVC.
9. TOE OF MOUND
10. 2 EA. 22.0 LF X 90.0 LF BED WITH 5 EA 1.25" PVC LATERALS SPACED AT 4.0'. EACH LATERAL SHALL HAVE 14 EA. 1/4" HOLES SPACED AT 6.0 FEET ON CENTER. SAND LINE MIN 7.5' BELOW DISTURBED SOILS IF ENCOUNTERED. PROCTORED EXCAVATION SUGGESTED.
11. TYP CLEAN OUT/ TEST PORT.
12. APPROVED ELEVATED SAND MOUND WITH DISPOSAL AREA.
13. CONTRACTOR SHALL CONTACT MISS UTILITY PRIOR TO ANY EXCAVATION.
14. CONTRACTOR SHALL REMOVE ANY TREES WITHIN 10FT OF PROPOSED DISPOSAL AREA ACCORDING TO DNREC STANDARDS.
15. CONTRACTOR SHALL COORDINATE WITH OWNER ON SANITARY TIE INS. AND INVERT ELEVATIONS. AND RESTORATION OF SITE LANDSCAPING.
16. SPARE SHALL BE SAND LINED ESM IN AREA OF INITIAL OR ALTERNATIVE APPROVED SYSTEM IN RESIDUAL AREA.
17. CONTRACTOR AND OWNER SHALL ABIDE BY THE REQUIREMENTS OF THE SOIL REPORT.

NOTE: CONTACT SYSTEM DESIGNER IF SITE CONDITIONS CHANGE.

## GRAPHIC SCALE



( IN FEET )  
1 inch = 60 ft.



PROJECT # 26-280

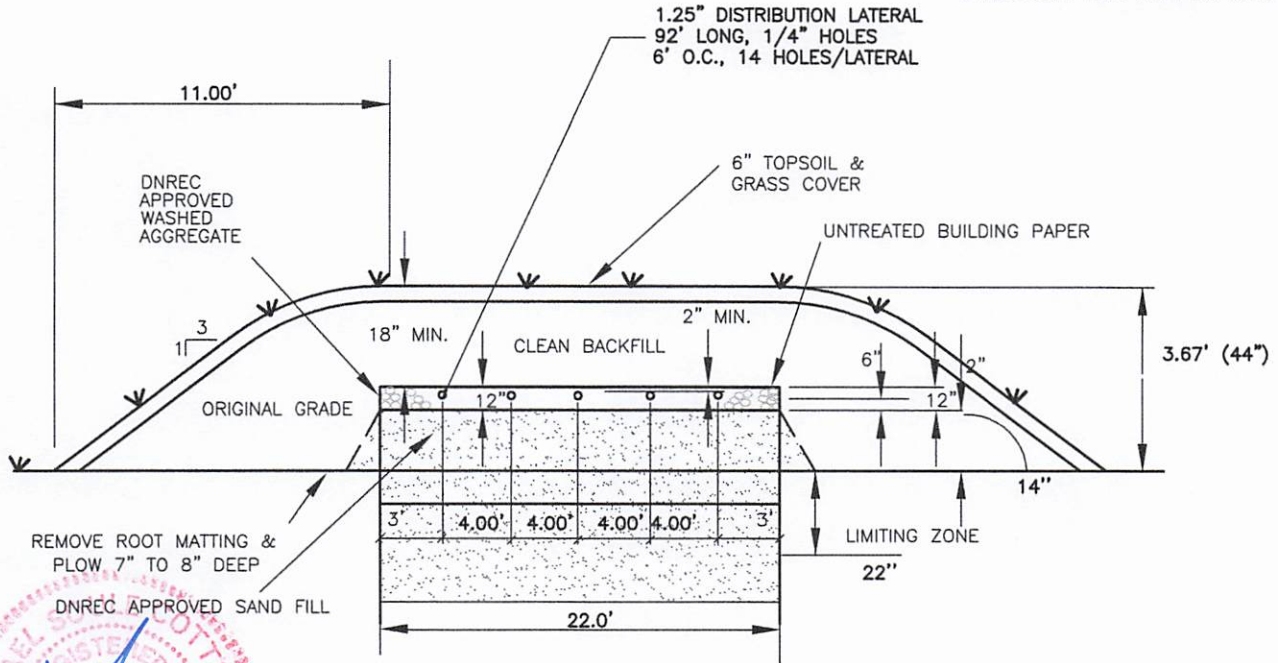
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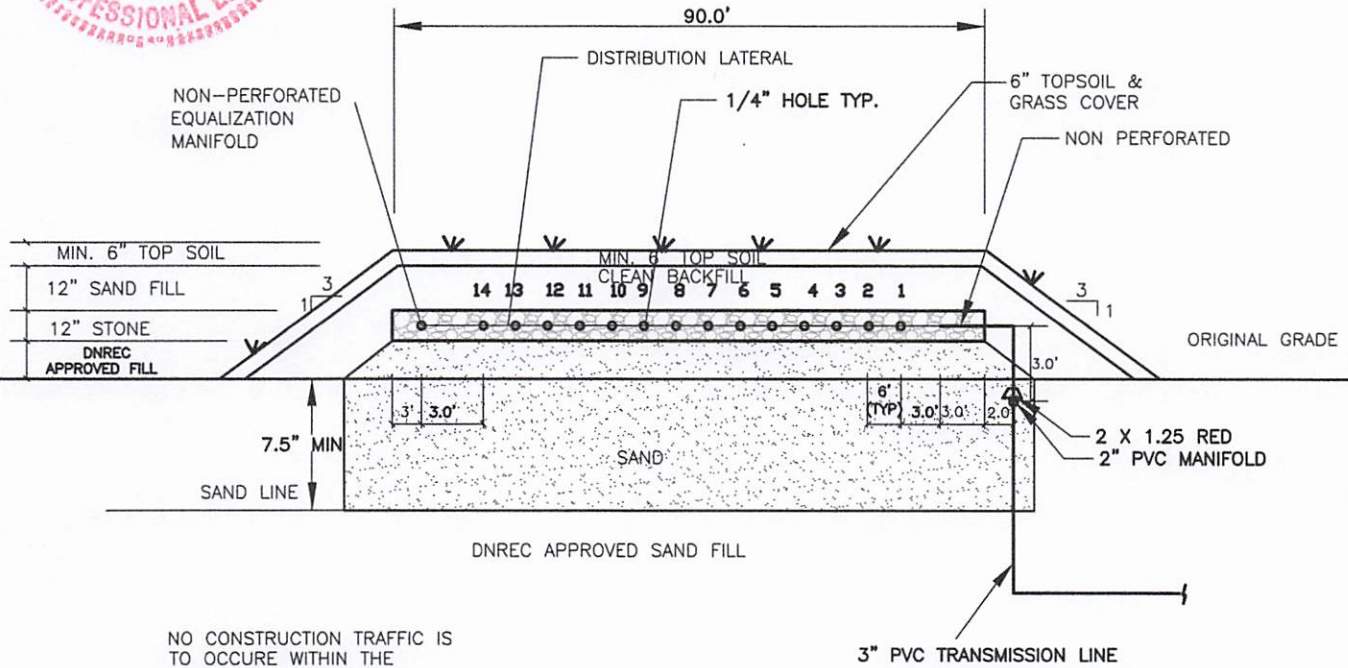
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JUTE MATTING OR EQUIVALENT  
MUST BE UTILIZED TO  
STABILIZE THE CAPPED SLOPES.



2 EACH

### ELEVATED SAND MOUND CROSS SECTION (N.T.S.)



NO CONSTRUCTION TRAFFIC IS TO OCCURE WITHIN THE OWTDS AREA

### ELEVATED SAND MOUND ELEVATION VIEW (N.T.S.)

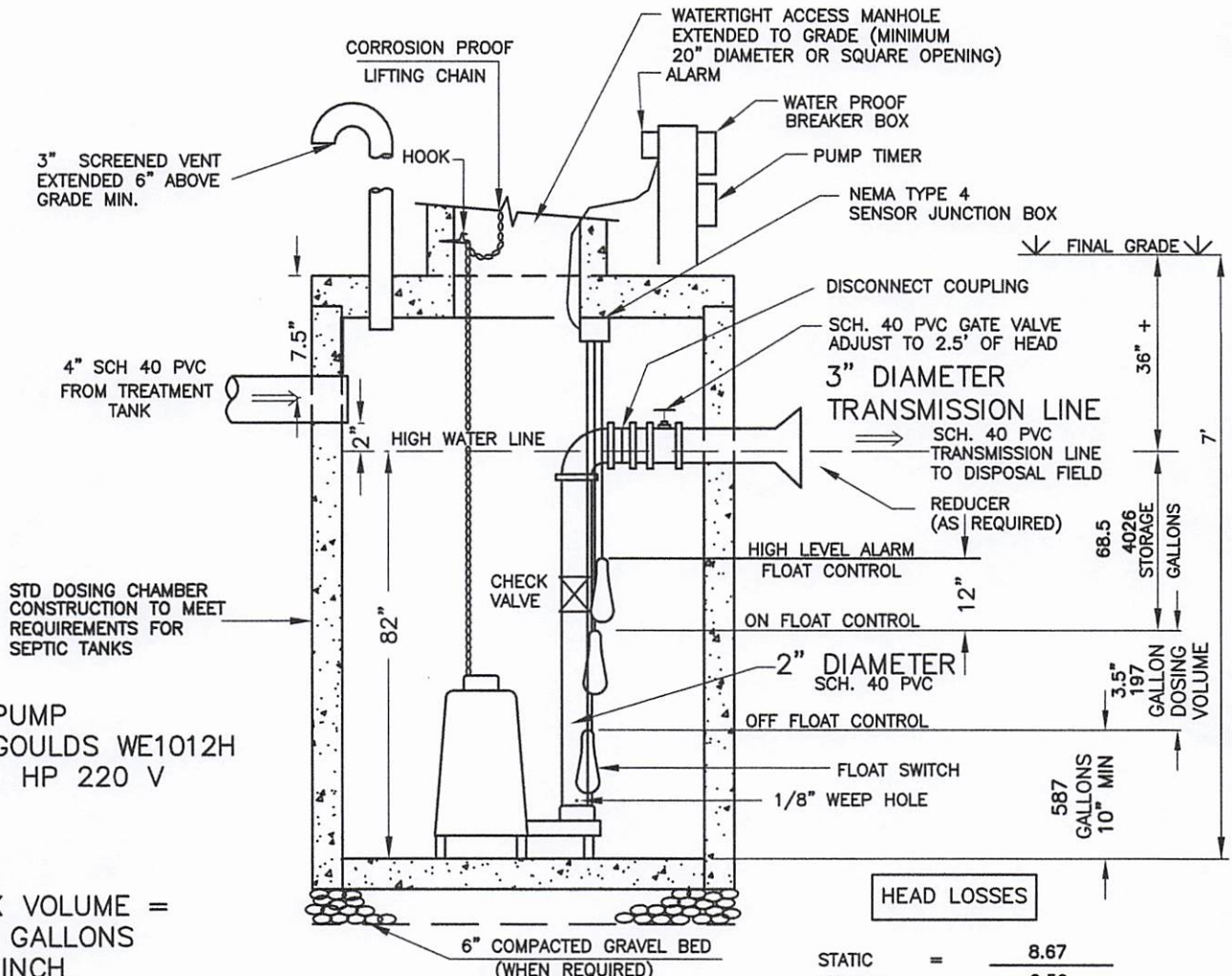
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PUMP  
 GOULDS WE1012H  
 1 HP 220 V

TANK VOLUME =  
 58.7 GALLONS  
 PER INCH

TIMER TO RUN  
 2.41 MIN  
 3 TIMES PER DAY

## SECTION EX 4400 GAL DOSE TANK ID 14.5'X6.5'

**NOTES:**

- \* 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 PIPE TO BE PVC SCHEDULE 40 OR SDR 26
- \* CHAMBER TO BE SIZED ACCORDING TO REQUIREMENTS OF DOSING VOLUME AND STORAGE.
- \* ALL DOSING CHAMBER COMPONENTS SHALL BE FIELD TESTED TO INSURE ACCURACY, WATERTIGHTNESS AND PROPER OPERATION OF ALL PUMPS AND ALARM CONTROLS
- \* ALL ELECTRICAL CONNECTIONS SHALL BE WATERPROOF, CORROSION RESISTANT AND EXPLOSION PROOF
- \* ALL TANK INLETS, OUTLETS, AND ACCESS EXTENSIONS SHALL BE PROPERLY SEALED WITH WATERTIGHT GROUT OR APPROVED JOINT SEALING COMPOUND
- \* PUMP SHALL BE CONNECTED TO A SEPARATE CIRCUIT FROM ALARM
- \* FLOATS TO BE INSTALLED ON FLOAT TREE NOT TRANSMISSION LINE



**COTTEN ENGINEERING LLC**

Job #: 26-280  
 NAME ONEAL MEDICAL  
 Calc. by: MC  
 Date: 6/2/2026

**1183 GPD 7 DAY AVG.  
 EACH BED/ 7 DAY AVG.**

Design flow/Bed: 592 gpd  
 Perc. rate: 45 mpi  
 Required area/bed: 1667.93 ft.^2  
 Bed width: 22  
 Bed length: 90 ft.  
 No. of trenches/bed: 1  
 No. of Beds: 2  
 Lateral spacing: 4 ft.  
 Proposed area: 3960 ft.^2

Type of System: ELEVATED SAND MOUND

Bed Size: 3960 ft.^2  
 Outer Boundary: 3 ft.  
 Orifice head: 2.5 ft.

Laterals: **EACH MOUND**  
 No. of laterals: 5  
 Length of laterals: 84 ft.  
 Hole diameter: 0.25 in.  
 Length O.C./hole: 6 ft.  
 No. of holes/lateral: 14.00  
 No. holes/lat. used: 14.00  
 Flow/hole: 1.17 gpm/hole  
 Lateral flow: 16.35 gpm/lateral



1/4" ROUND DOWN

Total flow in field: 81.76 gpm  
**Total flow used: 82 gpm**

Orifice head: 2.5 ft.  
 LIMITING ZONE: 22  
 Dist. of lat. above grnd: 20 in.  
 Static head: 8.67 ft.

HT INCHS	HT FT	TOE
44	3.67	11.00

Check head:  
 Pump: \_\_\_\_\_  
 Allowable TDH: 20 ft.  
 @ flow of: 82 gpm  
 Allowable friction head: 8.83 ft.

Friction head  
 Lateral diameter: 1.25 in.  
 Lateral flow: 16.35 gpm/lateral  
 Head loss/100 ft.: 7.58 ft./100 ft. C=130  
 Length of lateral: 92 ft. **+8FT NON-PERF**

Multiplier for fittings: 1.2  
 Lateral head loss: 8.369 ft.

Manifold diameter: **2** in.  
 Head loss/100 ft.: 4.22 ft./100 ft.  
 Length of manifold: **8** ft.  
 Multiplier for fittings: 1.2  
 Manifold head loss: 0.405 ft.

C=130  
**1/2 MANIFOLD**

Trans. line diameter: **3** in.  
 Head loss/100 ft.: 2.11 ft./100 ft.  
 Length of trans. line: **210** ft.  
 Multiplier for fittings: 1.2  
 Trans. line head loss: 5.32 ft.

**2.3 FT/SEC**

C=130  
**LONGEST RUN**

Total friction head: **14.10** ft.  
 % of allow. frict. head: 159.61

**TDH: 25.27 ft.**

Check dosing volume:

Lateral diameter: 1.25 in.  
 Volume/ft. of lateral: 0.06 gal/ft.  
 Linear feet of lateral: 420 ft.  
 Lateral volume: 26.77 gal.

Manifold diameter: 2 in.  
 Volume/ft. of manifold: 0.163 gal/ft.  
 Linear feet of manifold: **16** ft.  
 Manifold volume: 2.61 gal.

Trans. line diameter: 3 in.  
 Volume/ft. of trans. line: 0.367 gal/ft.  
 Linear feet of trans. line: 210 ft.  
 Trans. line volume: 77.11 gal.

Min. dosing volume: 147 gal  
 Dosing vol. used: 197.3333 gal  
 Doses per day: 3  
 Size of dosing chamber: 4400  
 Volume/in of chamber: 56.32 gal/in  
 Set float at: **3.50** in.

**MANIFOLD**



Gallons Size	<b>USE 5.5 FOR 5X5</b> per inch	
	4.4	10
	5.5	15.6
	1000	22.3
	1500	35.38
	4400	56.32
duel(6600)		112.65

**Set timer to run 3 doses per day. 2.41 MINUTES**



# ITT

B3885

Wastewater

## Goulds Pumps

WE Series Model 3885

Submersible Effluent Pump

EXTENDED WARRANTY AVAILABLE FOR  
RESIDENTIAL APPLICATIONS.



### FEATURES

- **Impeller:** Cast iron, semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.
- **Casing:** Cast iron volute type for maximum efficiency. 2" NPT discharge.
- **Mechanical Seal:** Silicon Carbide vs. Silicon Carbide sealing faces. 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.

 **GOULDS PUMPS**

Goulds Pumps is a brand of ITT Corporation.

[www.goulds.com](http://www.goulds.com)

*Engineered for life*





# ITT

## GOULDS PUMPS Wastewater

### APPLICATIONS

Specifically designed for the following uses:

- Homes, Farms, Trailer Courts, Motels, Schools, Hospitals, Industry, Effluent Systems

### SPECIFICATIONS

#### Pump

- Solids handling capabilities: 3/4" maximum.
- Discharge size: 2" NPT.
- Capacities: up to 140 GPM.
- Total heads: up to 128 feet TDH.
- Temperature: 104°F (40°C) continuous, 140°F (60°C) intermittent.
- See order numbers on reverse side for specific HP, voltage, phase and RPM's available.

#### MOTORS

- Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.
- Class B insulation on 1/3 – 1 1/2 HP models.
- Class F insulation on 2 HP models.

#### Single phase (60 Hz):

- 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 grounding plugs.
- 1 1/2 HP and larger units have bare lead cord ends.

#### 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.
- **Designed for Continuous Operation:** Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.
- **Bearings:** Upper and lower heavy duty ball bearing construction.
- **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.
- **O-ring:** Assures positive sealing against contaminants and oil leakage.

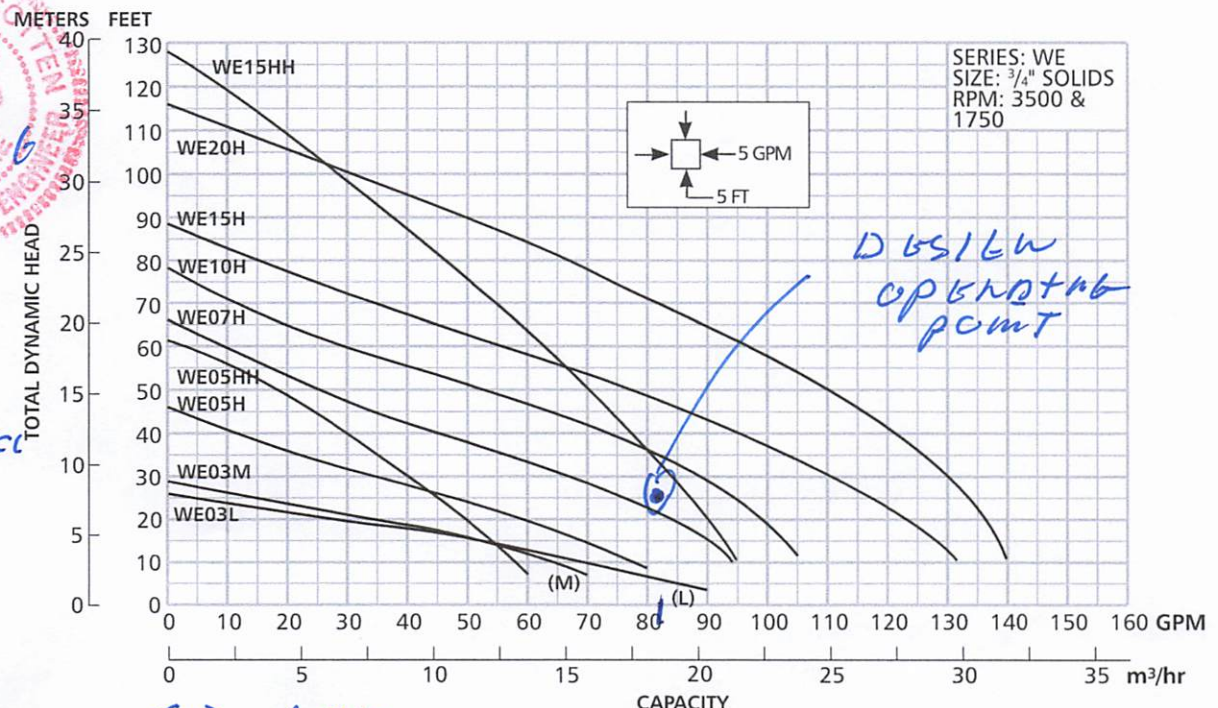
#### AGENCY LISTINGS



Tested to UL 778 and CSA 22.2 108 Standards  
By Canadian Standards Association File #LR38549  
Goulds Pumps is ISO 9001 Registered.



+DH.  
25.27 FC





# ITT

## GOULDS PUMPS Wastewater

### MODELS

Order Number	HP	Phase	Volts	RPM	Impeller Diameter (in.)	Maximum Amps	Locked Rotor Amps	KVA Code	Full Load Efficiency %	Resistance		Power Cable Size	Weight (lbs.)				
										Start	Line-Line						
WE0311L	0.33	1	115	1750	5.38	10.7	30.0	M	54	11.9	1.7	16/3	56				
WE0318L			208			6.8	19.5	K	51	9.1	4.2						
WE0312L			230			4.9	14.1	L	53	14.5	8.0						
WE0311M			115			10.7	30.0	M	54	11.9	1.7						
WE0318M			208			6.8	19.5	K	51	9.1	4.2						
WE0312M			230			4.9	14.1	L	53	14.5	8.0						
WE0511H	0.5	1	115	3450	3.56	14.5	46.0	M	54	7.5	1.0	14/3	60				
WE0518H			208			8.1	31.0	K	68	9.7	2.4	16/3	60				
WE0512H			230			7.3	34.5	M	53	9.6	4.0	14/4	60				
WE0538H			3			200	4.9	22.6	R	68	NA			3.8			
WE0532H						230	3.3	18.8	R	70	NA			5.8			
WE0534H						460	1.7	9.4	R	70	NA	23.2					
WE0537H		575	1.4		7.5	R	62	NA	35.3	14/3	60						
WE0511HH		1	115		14.5	46.0	M	54	7.5			1.0					
WE0518HH			208		8.1	31.0	K	68	9.7			2.4					
WE0512HH			230		7.3	34.5	M	53	9.6			4.0					
WE0538HH		3	200		4.9	22.6	R	68	NA			3.8	14/4	60			
WE0532HH			230		3.6	18.8	R	70	NA			5.8					
WE0534HH			460		1.8	9.4	R	70	NA	23.2							
WE0537HH		575	1.5		7.5	R	62	NA	35.3	14/3	70						
WE0718H		0.75	1		208	4.06	4.44	11.0	31.0			K	68	9.7	2.4		
WE0712H					230			10.0	27.5			J	65	12.2	2.7		
WE0738H			3		200			6.2	20.6			L	64	NA	5.7	14/4	70
WE0732H					230			5.4	15.7			K	68	NA	8.6		
WE0734H	460			2.7	7.9			K	68			NA	34.2				
WE0737H	575			2.2	9.9			L	78	NA	26.5						
WE1018H	1	1	208	4.44	4.56	14.0	59.0	K	68	9.3	1.1	14/3	70				
WE1012H			230			12.5	36.2	J	69	10.3	2.1						
WE1038H		3	200			8.1	37.6	M	77	NA	2.7	14/4	70				
WE1032H			230			7.0	24.1	L	79	NA	4.1						
WE1034H			460			3.5	12.1	L	79	NA	16.2						
WE1037H			575			2.8	9.9	L	78	NA	26.5						
WE1518H	1.5	1	208	4.56	5.50	17.5	59.0	K	68	9.3	1.1	14/3	80				
WE1512H			230			15.7	50.0	H	68	11.3	1.6						
WE1538H		3	200			10.6	40.6	K	79	NA	1.9	14/4	80				
WE1532H			230			9.2	31.7	K	78	NA	2.9						
WE1534H			460			4.6	15.9	K	78	NA	11.4						
WE1537H			575			3.7	13.1	K	75	NA	16.9						
WE1518HH		1	1			208	5.50	5.38	17.5	59.0	K	68	9.3	1.1	14/3	80	
WE1512HH						230			15.7	50.0	H	68	11.3	1.6			
WE1538HH			3			200			10.6	40.6	K	79	NA	1.9	14/4	80	
WE1532HH						230			9.2	31.7	K	78	NA	2.9			
WE1534HH						460			4.6	15.9	K	78	NA	11.4			
WE1537HH						575			3.7	13.1	K	75	NA	16.9			
WE2012H	2	1	230	5.38	5.38	18.0	49.6	F	78	3.2	1.2	14/3	83				
WE2038H			3			200	12.0	42.4	K	78	NA			1.7			
WE2032H		230				11.6	42.4	K	78	NA	1.7						
WE2034H		460				5.8	21.2	K	78	NA	6.6						
WE2037H		575				4.7	16.3	L	78	NA	10.5						

MICHAEL SOULE CO.  
No. 12769  
6/12/26  
PROFESSIONAL ENGINEER



# ITT

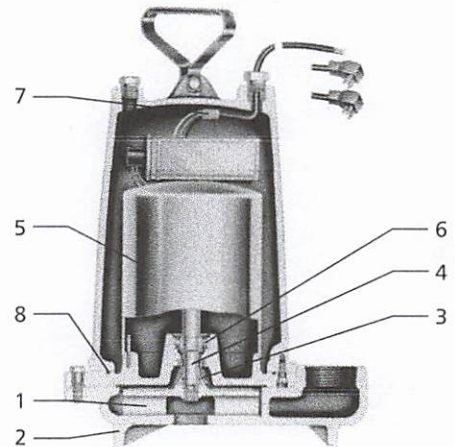
## Wastewater

### PERFORMANCE RATINGS (gallons per minute)

Order No.	WE03L	WE03M	WE05H	WE07H	WE10H	WE15H	WE05HH	WE15HH	WE20H
HP	1/3	1/3	1/2	3/4	1	1 1/2	1/2	1 1/2	2
RPM	1750	1750	3500	3500	3500	3500	3500	3500	3500
Total Head Feet of Water	5	86	—	—	—	—	—	—	—
	10	70	63	78	94	—	—	58	95
	15	52	52	70	90	103	128	53	93
	20	27	35	60	83	98	123	49	90
	25	5	15	48	76	94	117	45	87
	30	—	—	35	67	88	110	40	83
	35	—	—	22	57	82	103	35	80
	40	—	—	—	45	74	95	30	77
	45	—	—	—	35	64	86	25	74
	50	—	—	—	25	53	77	—	70
	55	—	—	—	—	40	67	—	66
	60	—	—	—	—	30	56	—	63
	65	—	—	—	—	20	45	—	58
	70	—	—	—	—	—	35	—	55
	75	—	—	—	—	—	25	—	51
	80	—	—	—	—	—	—	—	47
	90	—	—	—	—	—	—	—	37
100	—	—	—	—	—	—	—	28	

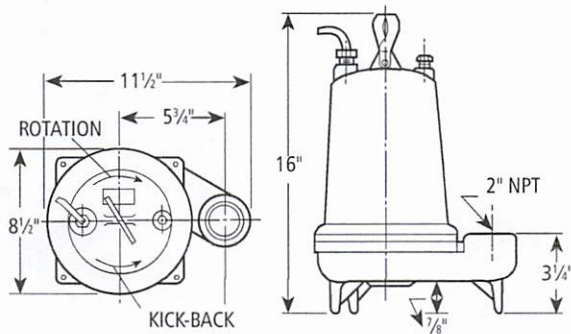
### COMPONENTS

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



### DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



Goolds Pumps and the ITT Engineered Blocks Symbol are registered trademarks and tradenames of ITT Corporation.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

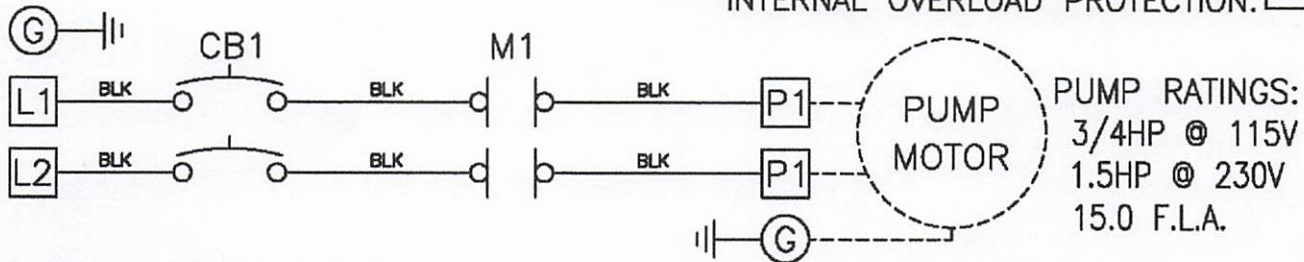
B3885 June, 2009  
© 2008 ITT Corporation

*Engineered for life*

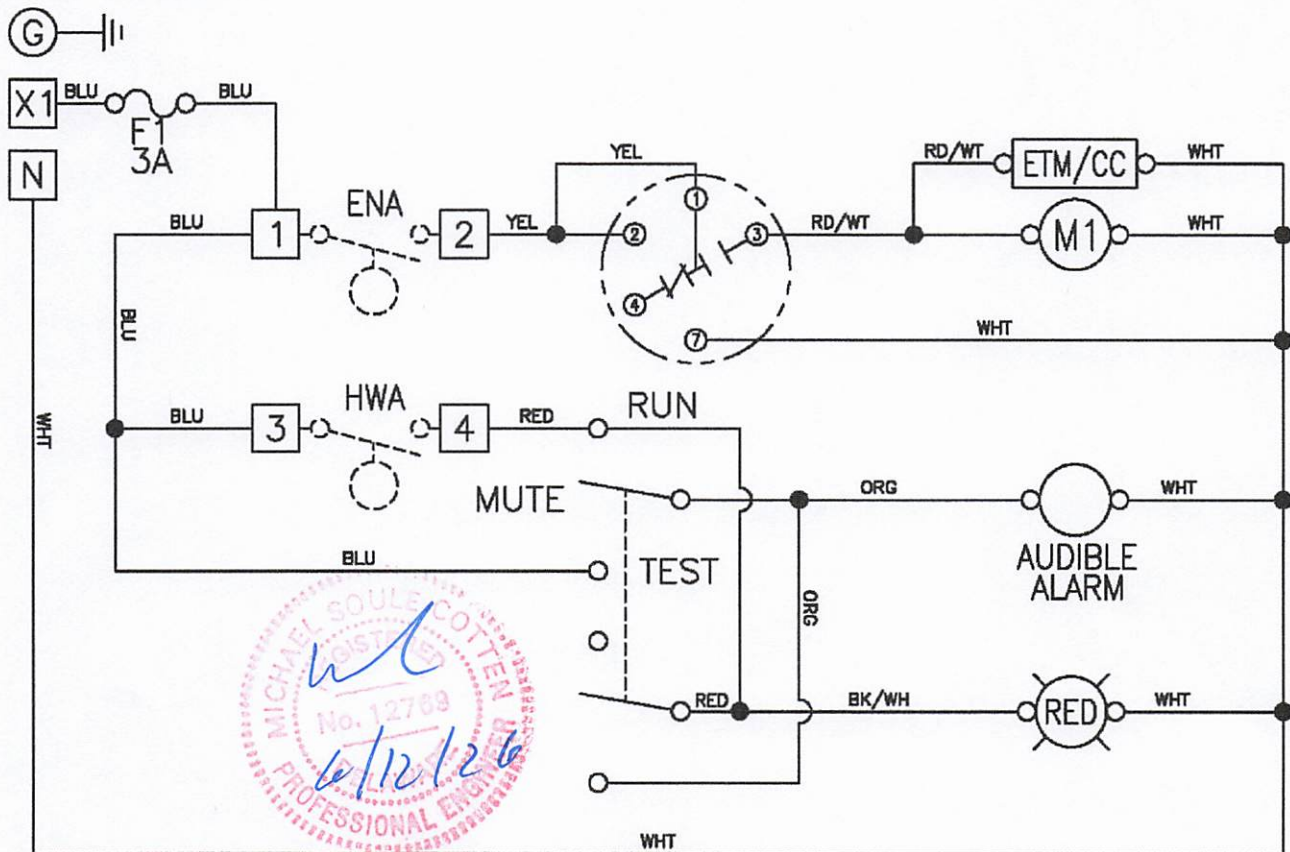


PUMP POWER CIRCUIT  
115/230V - 1PH

NOTE: BOTH MOTORS MUST HAVE  
INTERNAL OVERLOAD PROTECTION.



CONTROL POWER CIRCUIT  
115 - 1PH



NOTES: MAIN PANEL DISCONNECT MUST BE PROVIDED BY INSTALLER.  
DASHED LINES INDICATE ITEMS NOT CONTAINED IN THE PANEL.  
FIELD WIRING MUST BE A MINIMUM OF 60°C COPPER WIRE.  
REQUIRED TORQUE FOR TERMINAL BLOCK SCREWS IS 9 in-lbs.  
ALL INFORMATION CONTAINED IN THIS DRAWING IS CONFIDENTIAL  
AND PROPRIETARY TO SEPTIC PRODUCTS, INC.



CHANGES	TOLERANCES	DRAWN BY	DATE	SCHEMATIC, ELECTRICAL	
F	DECIMALS	C. BARRICK	11/29/2017	SCALE:	PART NO.
E	.XXX = ±.005	MATERIAL SPECIFICATION:  AS NOTED		FULL	50B036
D	.XX = ±.010				
C	FRACTIONAL				
B	X/X = ±.1/64				
A	ANGLES				
	X° = ±1/2°				

TIGHTENING TORQUE FOR TERMINAL BLOCK IS 9 in-lbs.

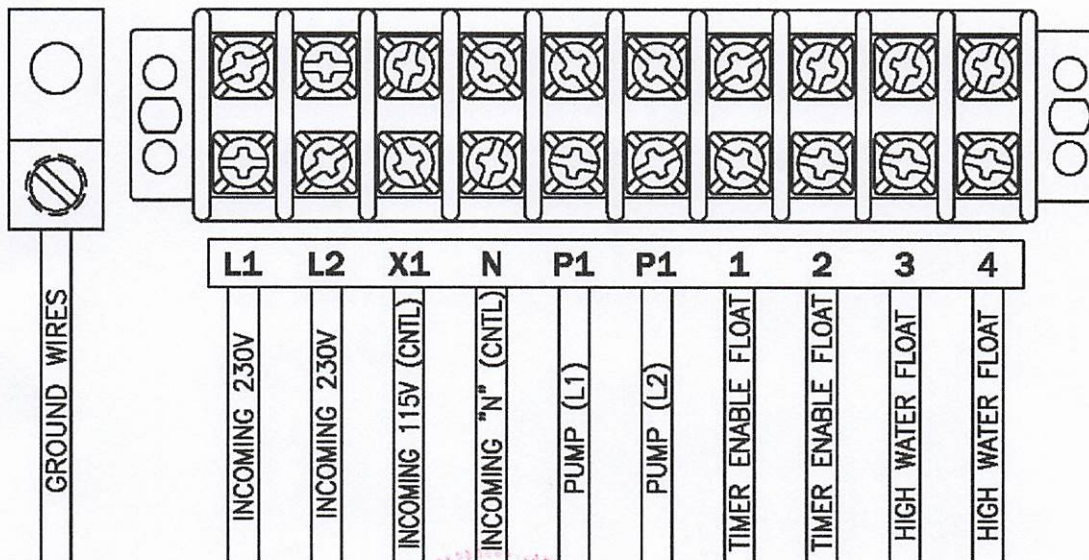
MODEL NO.

C1C2

PAGE

1

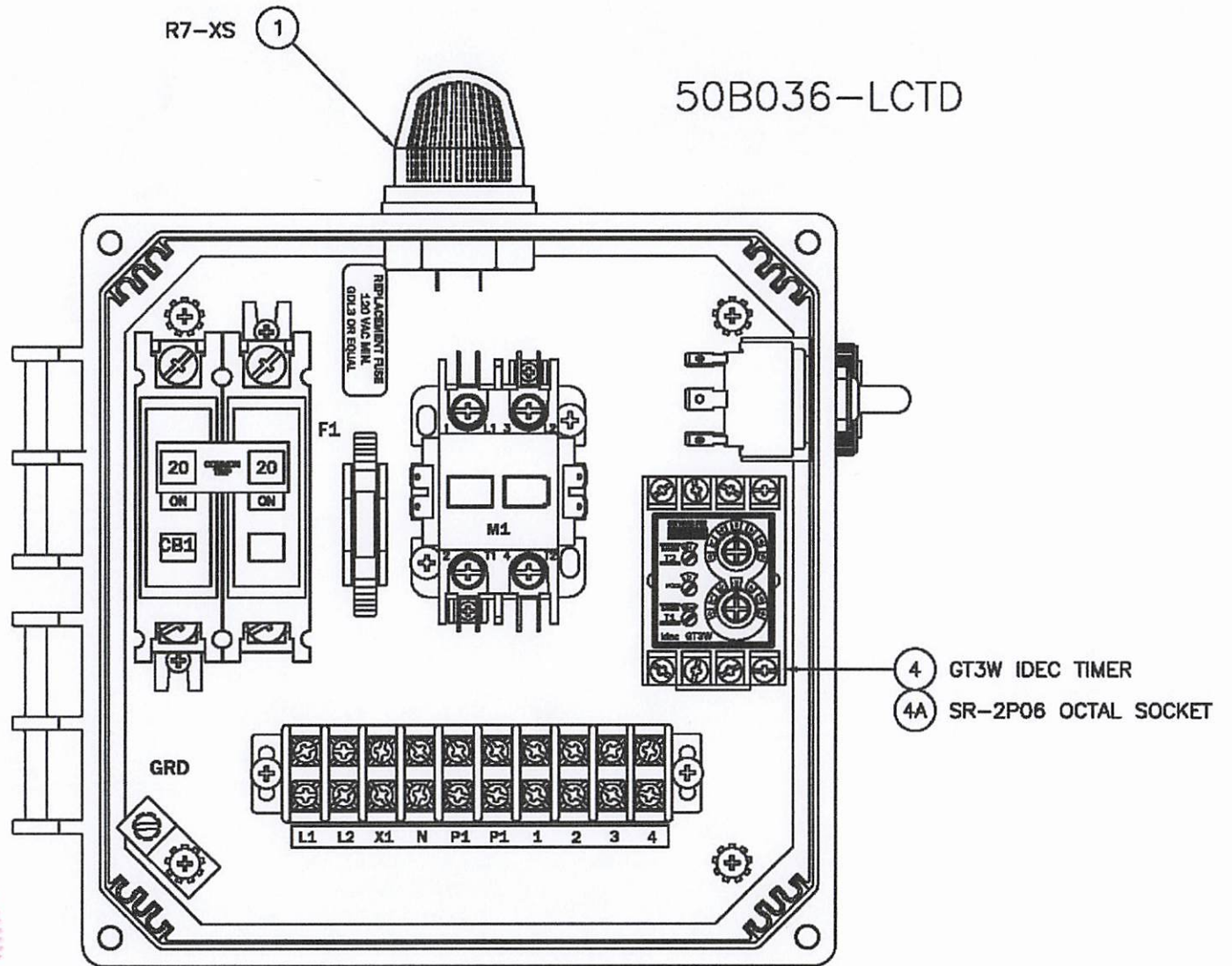
# CONNECTION DIAGRAM (230V PUMP)



ALL INFORMATION CONTAINED IN THIS DRAWING IS  
CONFIDENTIAL AND PROPRIETARY TO SEPTIC PRODUCTS INC.

CHANGES	TOLERANCES	DRAWN BY	DATE	CONNECTION DIAGRAM	
F	DECIMALS .XXX = ±.005 .XX = ±.010 FRACTIONAL X/X = ±.1/64 ANGLES ° = ±1/2°	C. BARRICK	11/29/2017	SCALE: PART NO.	
E		MATERIAL SPECIFICATION:			
D		AS NOTED		FULL	50B036
C					
B					
A					

Labeling: 8x8 poly lid-  
Screws & plugs-  
UL label-  
Thermal label





**OutdoorSmart Filter Alarm**

All Polylok/Zabel filters accept the SmartFilter® switch and alarm.



*2,800  
+ tank*

**A100 Filter 1/16" Filtration  
 8" and 12" Diameter**

This filter is ideal for larger homes, multi-family homes or light commercial settings where increased flows or higher quality effluent is required. The A100-8 Series is sized to handle flow rates from 1200 to 2400 GPD and is available in three different lengths. The A100-12 Series, installed in more locations than any other filter on the market, is sized to handle flow rates from 3000 to 6000 GPD. The A100-12 Series can be used in almost any application. Independent research has shown the A100-12 decreases TSS by 50-90% and CBOD<sup>5</sup> by 20-40%. With 1/16" filtration, the A100-8 Series filter is available in 18", 26" and 32" lengths. The A100-12 Series filter is available in 20", 28" and 36" lengths.

*1,500  
+ tank*

**A300 Filter 1/32" Filtration  
 8" and 12" Diameter**

The finer 1/32" level of filtration achieved with the A300-8 filter makes this the perfect effluent filter for small grease trap applications, dog kennels, laundromats and other applications where fine suspended solids are present. The A300 offers flow rates between 1200-2400 GPD. The A300-12 Series provides 1/32" filtration and has been shown to reduce FOG by as much as 50-98%. The A300-12 is also used for onsite wastewater systems which require a finer level of TSS removal. The A300-8 Series filter is available in 12", 26" and 32" lengths. The A300-12 Series filter is available in 20", 28" and 36" lengths.

**A600 Filter 1/64" Filtration  
 8" and 12" Diameter**

The A600 is ideal for specialty applications where very fine filtration is required and low flows are expected. Due to fine, 1/64" level filtration, every A600 comes equipped with a SmartFilter® switch and alarm. The SmartFilter® switch provides notification of required filter servicing through the use of both an audible and visual alarm. A minimum of a 3" drop is required in the tank for proper SmartFilter® operation. The A600-8 Series filter is available in 18", 26" and 32" lengths. The A600-12 Series is available in 20", 28" and 36" lengths.



PARID: 232-12.00-106.02  
 O'NEAL SHIRLEY FAYE TTEE REV TR

30549 SUSSEX HWY

Property Information

Property Location:	30549 SUSSEX HWY
Unit:	
City:	LAUREL
State:	DE
Zip:	19956
Class:	C-Commercial
Use Code (LUC):	304-Office - Medical
Town:	00-None
Tax District:	232 - BROAD CREEK
School District:	2 - LAUREL
Fire District:	81-Laurel
Calc'd Acres:	1.9700
Frontage:	0
Depth:	.000
Irr Lot:	
Plot Book Page:	/PB
100% Land Value:	\$417,900
100% Improvement Value:	\$1,212,700
100% Total Value:	\$1,630,600

Legal

Legal Description	NW/RT 466 E/RT 13
-------------------	----------------------

Owners

Owner	Co-owner	Address	City	State	Zip
O'NEAL SHIRLEY FAYE TTEE REV TR		12537 SYCAMORE RD	LAUREL	DE	19956

Sales

Sale Date	Book/Page	Sale Price	Stamp Value	Parcels Sold	Grantee/Buyer
10/06/2025	6386/74				O'NEAL SHIRLEY FAYE TTEE REV TR
07/06/1988	2612/275	\$1.00	\$200.00	0	

Owner History

Tax Year:	Owner:	Co-owner	Address:	City:	State:	Zip:	Deed Book/Page:
2025	O'NEAL SHIRLEY FAYE TTEE REV TR		12537 SYCAMORE RD	LAUREL	DE	19956	6386/74
2025	O'NEAL LOUIS D & SHIRLEY F	TRUSTEES	12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2024	O'NEAL LOUIS D & SHIRLEY F	TRUSTEES	12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2023	O'NEAL LOUIS D & SHIRLEY F	TRUSTEES	12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2022	O'NEAL LOUIS D & SHIRLEY F	TRUSTEES	12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2021	O'NEAL LOUIS D & SHIRLEY F	TRUSTEES	12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2020	O'NEAL LOUIS D & SHIRLEY F	TRUSTEES	12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2019	O'NEAL LOUIS D & SHIRLEY F	TRUSTEES	12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2018	O'NEAL LOUIS D & SHIRLEY F	TRUSTEES	12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2017	O'NEAL LOUIS D & SHIRLEY F	TRUSTEES	12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2014	O'NEAL LOUIS D SHIRLEY F		TRUSTEES 12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2003	O'NEAL LOUIS D SHIRLEY F		TRUSTEES 12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2002	O'NEAL LOUIS D SHIRLEY F		TRUSTEES 12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
2002	O'NEAL LOUIS D SHIRLEY F		TRUSTEES RR 1 BOX 48B	LAUREL	DE	19956	3171/41
2002	O'NEAL LOUIS D SHIRLEY F		TRUSTEES 12537 SYCAMORE RD	LAUREL	DE	19956	2612/275
1900	O'NEAL LOUIS D SHIRLEY F					0	1578/182
1900	O'NEAL LOUIS DSHIRLEY F-TRUSTES					0	1625/52

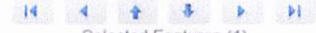
- Layers
- Search
- Basemaps
- Select Area
- Eagleview
- Print

Eagleview Search Results

Selected Features: Parcels (1)

1) 232-12.00-106.02 Zoom

BOOK	6386
PAGE	74
FULLNAME	O'NEAL SHIRLEY FAYE TTEE REV TR
MAILINGADDRESS	12537 SYCAMORE RD
CITY	LAUREL
STATE	DE
DESCRIPTION	NW/RT 466
DESCRIPTION2	E/RT 13
LUC	304
SCHOOL	2
MUNI	00
CAP	0
APRBLDG	1 2127e+006
APRLAND	417900
PINWASSEMMENTUNIT	232-12.00-106.02
PIN	232-12.00-106.02
ZIPCODE	19956
FRONTFOOT	0
DEPTH	0

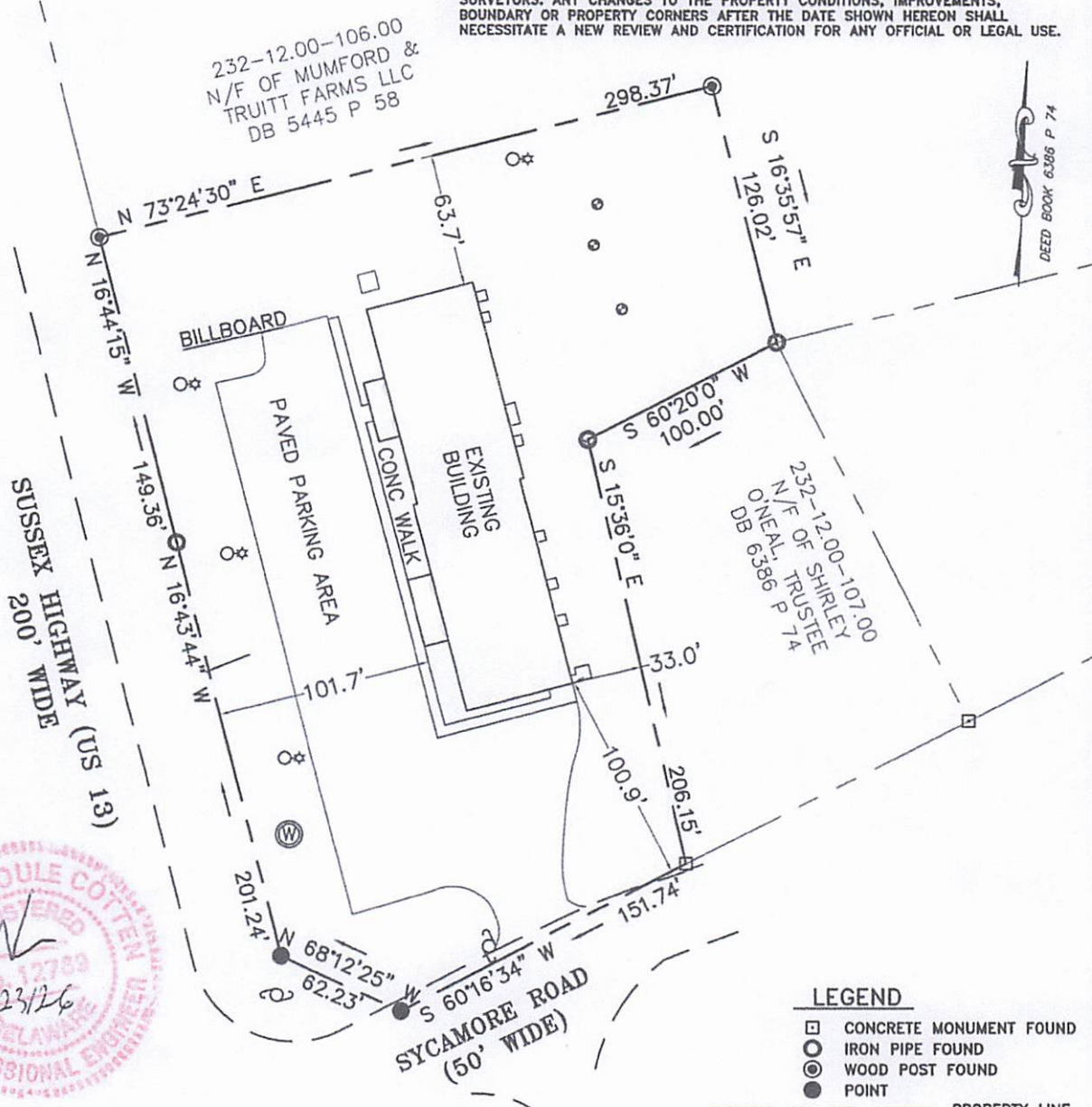


Selected Features (1)

Clear Selected



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*Michael S. Cotten*  
 4/23/2026  
 MICHAEL S. COTTEN  
 REGISTERED PROFESSIONAL ENGINEER  
 DE 12789  
 DELAWARE

- LEGEND**
- CONCRETE MONUMENT FOUND
  - IRON PIPE FOUND
  - WOOD POST FOUND
  - POINT
  - PROPERTY LINE

**NOTES**

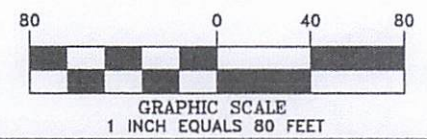
1. TITLE REFERENCED TO DEED BOOK 6386, PAGE 74.
2. "SUBURBAN" SURVEY. ZONING C-1.
3. SUBJECT TO ANY AND ALL RESTRICTIONS, RESERVATIONS, CONDITIONS, EASEMENTS & AGREEMENTS OF RECORD IN THE OFFICE OF RECORDER OF DEEDS, SUSSEX COUNTY, DE. NO TITLE SEARCH PROVIDED.
4. THIS SURVEY DOES NOT CERTIFY AS TO THE EXISTENCE OR NON EXISTENCE OF ANY EASEMENTS OR RIGHT OF WAYS AFFECTING THIS PROPERTY.
5. FEMA FLOOD ZONE 'X'

**BOUNDARY SURVEY**  
 FOR SHIRLEY O'NEAL, TRUSTEE  
 30547 & 30549 SUSSEX HIGHWAY  
 LAUREL, DE 19956  
 BROAD CREEK HUNDRED  
 SUSSEX COUNTY, DELAWARE  
 TAX MAP #232-12.00-107.00  
 AREA: 87,438±SF / 2.01±ACRES

**COTTEN ENGINEERING LLC**

CIVIL ENGINEERS  
 10087 CONCORD RD.  
 SEAFORD DE 19973  
 PHONE/FAX (302) 628-9164

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DRAWN BY: JCD	DATE: 04/23/2026	SHEET 1 OF 1
CHECKED BY: JCD	SCALE: AS-SHOWN	