THIS PERMIT IS
NOT TRANSFERABLE

Water Supply and/or Sewage Disposal System Construction Permit

Commonwealth of Virginia
Department of Health
Northumberland Health Department

Health Department
Identification Number 166-01-3026
Map Reference 9C(1) 36

General Information

Water Supply System: New ✓ Repair ___ Public ___ FHA ___ VA ___ Case No. ___
Sewage Disposal System: New ✓ Repair ___ Expanded ___ Conditional ___ Public ___
Based on the application for a sewage disposal system construction permit filed in accordance with Section 2.13 E, of the Sewage Handling and Disposal Regulations and/or Section 2.13 of the Private Well Regulations a construction permit is hereby issued to:
Owner VICKI JENKINS Telephone (717) 432-9455
Address 126 SPRING RD DILLSBURG, PA 17019 For a Type I Sewage Disposal System or Well to be constructed on/at 3606E; TR 6014, TL COAN HARBOUR INTO SUBDIVISION; PROP ON RT. NEAR END
Subdivision COAN HARBOUR Section/Block ___ Lot 36 Actual or estimated water use 600gpd

DESIGN	NOTE: SEWAGE DISPOSAL SYSTEM INSPECTION RESULTS
Water supply, existing: (describe) ___ **To be installed:** class III A cased 100'+ grouted 20' MIN	**Water supply location:** Satisfactory yes ☐ no ☐ comments Completion Report G. W. 2 Received: yes ☐ no ☐ not applicable ☐
Building sewer: 4" I.D. PVC Schedule 40, or equivalent. Slope 1.25" per 10' (minimum). ☐ Other ___	**Building sewer:** yes ☐ no ☐ comments Satisfactory
Septic tank: Capacity 1200' gals. (minimum). ☒ Other COMPLY WITH 2000 REGS	**Pretreatment unit:** yes ☐ no ☐ comments Satisfactory
Inlet-outlet structure: PVC Schedule 40, 4" tees or equivalent. ☐ Other ___	**Inlet-outlet structure:** yes ☐ no ☐ comments Satisfactory
Pump and pump station: No ☒ Yes ☐ describe and show design. if yes: ___	**Pump & pump station:** yes ☐ no ☐ comments Satisfactory
Gravity mains: 3" or larger I.D., minimum 6" fall per 100', 1500 lb. crush strength or equivalent. ☐ Other ___	**Conveyance method:** yes ☐ no ☐ comments Satisfactory
Distribution box: Precast concrete with 10 ports. ☐ Other ___	**Distribution box:** yes ☐ no ☐ comments Satisfactory
Header lines: Material: 4" I.D. 1500 lb. crush strength plastic or equivalent from distribution box to 2' into absorption trench. Slope 2" minimum. ☐ Other ___	**Header lines:** yes ☐ no ☐ comments Satisfactory
Percolation lines: Gravity 4" plastic 1000 lb. per foot bearing load or equivalent, slope 2" 4" (min. max.) per 100'. ☐ Other ___	**Percolation lines:** yes ☐ no ☐ comments Satisfactory
Absorption trenches: Square ft. required 1260 ; depth from ground surface to bottom of trench 22" ; aggregate size ½" - 1½" ; Trench bottom slope 1-2" PER 50' ; center to center spacing 9' ; trench width 3' Depth of aggregate 13" ; Trench length 70' ; Number of trenches 6	**Absorption trenches:** yes ☐ no ☐ comments Satisfactory Date ___ Inspected and approved by: ___ Sanitarian

CHS 202A

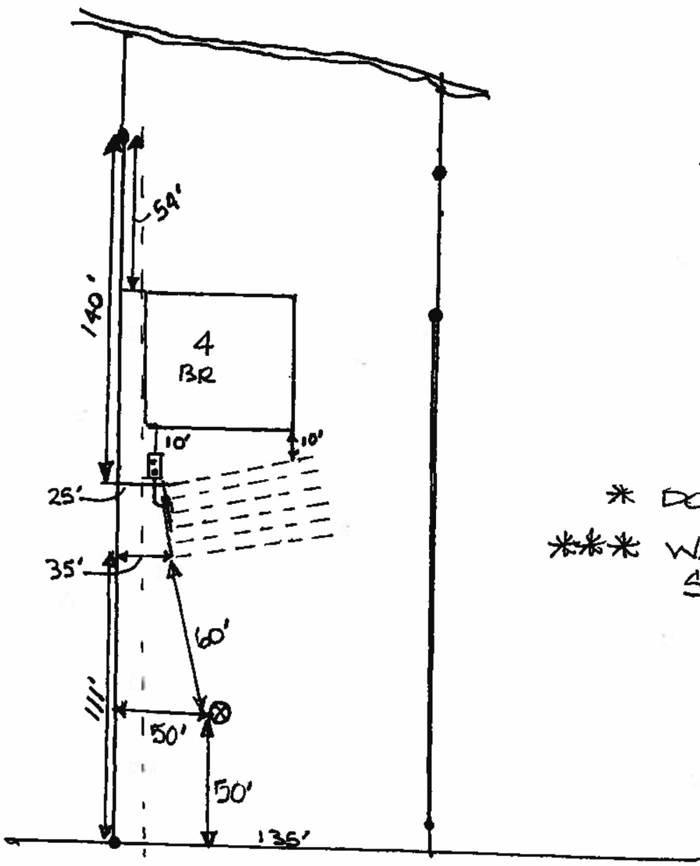
NOT TO SCALE

Health Department
Identification Number 166-01-306

Schematic drawing of sewage disposal and/or water supply system and topographic features.

Show the lot lines of the building site, sketch of property showing any topographic features which may impact on the design of the well or sewage disposal system, including existing and/or proposed structures and sewage disposal systems and wells within 200 feet. The schematic drawing of the well site or area and/or sewage disposal system shall show sewer lines, pretreatment unit, pump station, conveyance system, and subsurface soil absorption system, reserve area, etc. When a nonpublic drinking water supply is to be permitted, show all sources of pollution within 200 feet.

☐ The information required above has been drawn on the attached copy of the sketch submitted with the application. Attach additional sheets as necessary to illustrate the design.



VICKI JENKINS
TM 9C(1)36
COAN HARBOUR, LOT 36

NOTES

INSTALL 1200 GAL TANK
COMPLY WITH 2000 REG'S
PUMP WILL BE REQUIRED IF GRAVITY CAN'T BE MAINTAINED AT 22" DEPTH
INSTALL AT 22" DEPTH
USE 3' HOE; 9' CENERS

* DO NOT PARK OR DRIVE ON SEPTIC SYS

*** WATERLINE MUST BE MINIMUM 10' OFF SEPTIC

DISTURBANCE OR REMOVAL OF SOIL BY ... TREE OR VEGETATION REMOVAL AND/OR DRAINAGE SITE PREPARATION MAY VOID THIS PERMIT

This sewage disposal system and/or water supply is to be constructed as specified by the permit X or attached plans and specifications _____.

This sewage disposal system and/or well construction permit is null and void if (a) conditions are changed from those shown on the application (b) conditions are changed from those shown on the construction permit.

No part of any installation shall be covered or used until inspected, corrections made if necessary, and approved, by the local health department or unless expressly authorized by the local health dept. Any part of any installation which has been covered prior to approval shall be uncovered, if necessary, upon the direction of the Department.

Date: 7/12/01 **Issued by:** [signature] Sanitarian

Date: _____ **Reviewed by:** _____ Supervisory Sanitarian

This Construction Permit Valid until 1/12/03

If FHA or VA financing

Reviewed by Date _____ _____ Supervisory Sanitarian **Date** _____ _____ Regional Sanitarian

C.H.S. 202B

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

THREE RIVERS HEALTH DISTRICT
P.O. BOX 415
SALUDA, VIRGINIA 23149

OSE Construction Permit

Well and Sewage Contractors: Please notify Health Department and OSE or PE 48 hours prior to installation to arrange for inspection

April 25, 2024

Dale Durrance
445 Kennon Rd.
Mineral, VA 23117

RE: **Tax Map**: 9C(1)36
HDID: 166-24-088
System Capacity: Residential; 3 Bedrooms, 450 gallons per day

Dear Dale Durrance:

This letter and the attached drawings, specifications, and calculations (16 pages) dated April 16, 2024, constitute your permit to connect to a sewage disposal system and well if applicable on the property referenced above. Your application for a permit was submitted pursuant to §32.1-163.5 of the Code of Virginia, which requires the Health Department to accept private soil evaluations and designs from an Onsite Soil Evaluator (OSE) or a Professional Engineer working in consultation with an OSE for residential development. VDH is not required to perform a field check to verify the private evaluations of OSEs or PEs and such a field check may not have been conducted for the issuance of this permit.

The soil absorption area ("site"), sewage system design, and the well location and construction if applicable were certified by Alwyn W. Davis, Jr., Private OSE as substantially complying with the Board of Health's regulations (and local ordinances if the locality has authorized the local health department to accept private evaluations for compliance with local ordinances). This permit is issued in reliance upon that certification. VDH hereby recognizes that the soil and site conditions acknowledged by this permit are suitable for the installation of an onsite sewage system. This construction permit is null and void if any substantial physical change in the soil or site conditions occurs where a sewage disposal system is to be located.

If modifications or revisions are necessary between now and when you construct your dwelling, please contact the OSE/PE who performed the evaluation and design on which this permit is based. Should revisions be necessary during construction, your contractor should consult with the OSE/PE that submitted the site evaluation or site evaluation and design. The OSE/PE is authorized to make minor adjustments in the location or design of the system at the time of construction provided adequate documentation is provided to the Three Rivers Health District.

The OSE/PE that submitted the certified design for this permit is required to conduct a final inspection of this sewage system when it is installed and to submit an inspection report and completion statement. As the owner, you are responsible for giving reasonable notice to the OSE/PE of the need for a final inspection. If the designer is unable to perform the required inspection, you may provide an inspection report and completion statement executed by another OSE/PE. The Three Rivers Health District is not required to inspect the installation but may perform an inspection at its sole discretion. No part of this installation shall be covered until it has been inspected by the OSE/PE as noted herein. The

sewage system may not be placed into operation until you have obtained an Operation Permit from the Three Rivers Health District.

This Construction Permit is null and void if conditions are changed from those shown on your application or if conditions are changed from those shown on the Site and Soil Evaluation Report and the attached construction drawings, specifications, and calculations. VDH may revoke or modify any permit if, at a later date, it finds that the site and soil conditions and/or design do not substantially comply with the Sewage Handling and Disposal Regulations, 12 VAC 5-610-20 et seq., or if the system would threaten public health or the environment.

This permit approval has been issued in accordance with applicable regulations based on the information and materials provided at the time of application. There may be other local, state, or federal laws or regulations that apply to the proposed construction of this onsite sewage system. The owner is responsible at all times for complying with all applicable local, state, and federal laws and regulations. This construction permit is transferrable until expired or deemed null and void. A permit transfer form may be found on the VDH website at http://www.vdh.virginia.gov/environmental-health/gmp-2015-01-forms/ .

If you have any questions, please contact me at (804)-580-3731.

This permit expires: October 25, 2025

Sincerely,

Hank Becker,
Environmental Health Specialist, Sr.
Three Rivers Health District

CC: Alwyn W. Davis, Jr., Private OSE

WHAT YOU WILL NEED TO GET YOUR SEPTIC SYSTEM OPERATION PERMIT

- Your system must have a satisfactory inspection at the time of installation. This will be done by either a representative of the local Health Department, a private OSE, or a PE, depending on the designer of your permitted system. If your system is designed/inspected by an OSE or PE, they must submit a copy of the inspection results, complete with an as-built diagram, to the Health Department.
- Please ensure that your contractor turns in a Completion Statement to the local Health Department after installation.
- If your permit is for an alternative system, you must sign, have notarized, and record the attached Notice of Recordation in your locality's land records. Please bring proof of this recordation to the local Health Department
- If you have a conditional permit then you must sign, have notarized, and record the permit in your locality's land records. Please bring proof of this recordation to the Health Department.

IF YOUR PERMIT IS FOR BOTH A SEPTIC SYSTEM AND WELL YOU WILL ALSO NEED

- Your well must have satisfactory inspection results after installation. Please give the Health Department several days notice to schedule this inspection before your Operation Permit will be requested.
- The Health Department must receive a copy of your water sample test result being negative/satisfactory for coliform bacteria. You are responsible for performing this test and ensuring the results are received at the Health Department
- Please ensure that your Well Driller submits a Uniform Water Well Completion Statement or GW-2 to the Health Department, including documentation of a proper well abandonment if required by permit

Allow 5 business days after the last piece of documentation is received for the Operation Permit to be issued. To avoid delays, clearly label each piece of documentation with the property Tax Map/GPIN number and HDID number shown above and on your construction permit. Please note that due to the individual circumstances of your permit there may be additional required items not covered by this checklist.

If you have any questions about any of the items on this list, please do not hesitate to contact the Three Rivers Health District at (804)-580-3731.

OSE/PE Report For:

☑ Construction Permit ☐ Repair Permit ☐ Voluntary Upgrade Permit ☐ Certification Letter ☐ Subdivision Approval

Property Location:

911 Address: Coan Harbour Drive City: Lottsburg

Lot 36 Section 1 Subdivision Coan Harbour Estates

GPIN or Tax Map # 9C(1)36 Health Dept ID # 146-24-0088

Latitude 37°58'43.7"N Longitude 76°30'02.5"W

Applicant or Client Mailing Address:

Name Dale Durrance

Address 445 Kennon Road

City Mineral State: VA Zip Code 23117

Prepared by:

OSE Name Davis Onsite Soil Evaluations L.L.C. License # 1940001136 Phone (804) 366-1137

Address P.O. Box 3133 E-mail awdavis272@gmail.com

City Tappahannock State: VA Zip Code 22560

PE Name _____ License # _____

Address _____

City _____ State: _____ Zip Code _____

Date of Report _____ Date of Revision #1 _____

OSE/PE Job # _____ Date of Revision #2 _____

Contents/Index of this report (e.g., Site Evaluation Summary, Soil Profile Descriptions, Site Sketch, Abbreviated Design, etc.)

Application
Construction/System/Well Specifications
Soil Summary Report
Soil Profile Descriptions
Soil Boring Locations
200' Sanitary Survey
Abbreviated Design Reports
Construction Drawings
Well Addendum

Certification Statement

I hereby certify that the evaluations and/or designs contained herein were conducted in accordance with the *applicable provisions of the* Sewage Handling and Disposal Regulations (12 VAC5-610), the Private Well Regulations (12 VAC5-630), *the* Regulations for Alternative Onsite Sewage Systems (12VAC5-613) and all other applicable laws, regulations and policies implemented by the Virginia Department of Health. I further certify that I currently possess any professional license required by the laws and regulations of the Commonwealth that have been duly issued by the applicable agency charged with licensure to perform the work contained herein. The potential for both conventional and alternative onsite sewage systems has been discussed with the owner/applicant.

The work attached to this cover page has been conducted under an exemption to the practice of engineering, specifically the exemption in Code of Virginia Section 54.1-402.A.11

I recommend that a (select one): construction permit ☑ certification letter ☐ subdivision approval ☐ be (select one) Issued ☑

repair permit ☐ voluntary upgrade ☐ Denied ☐

OSE/PE Signature _____ #1940001136 Date: 04-16-2024

Commonwealth of Virginia

Application for: ☑ Sewage System ☑ Water Supply

VDH Use Only
Health Department ID# PWC-24-0088
Due Date

Owner	Dale Durrance	Phone	(863) 697-6878
Mailing Address	445 Kennon Road	Phone	(828) 269-7113
	Mineral, VA 23117	Email	Dale.a.durrance@gmail.com
Agent	Davis Onsite Soil Evaluations L.L.C.	Phone	(804) 366-1137
Mailing Address	P.O. Box 3133	Phone	
	Tappahannock, VA 22560	Fax	
Site Address	Coan Harbour Drive		
	Lottsburg, VA 22511	Email	awdavis272@gmail.com

Directions to Property: R/360; R/614; L/Coan Harbour Drive; on Right after "1192"

Subdivision: Coan Harbour Estates Section: 1 Block: Lot: 36

Tax Map: 9C(1)36 Other Property ID: Acreage: 0.98 acres

Sewage System

Type of Approval: Applicants for new construction are advised to apply for a certification letter to determine if land is suitable for a sewage system and to apply for a construction permit (valid for 18 months) **only when ready to build.**

○Certification Letter ● Construction Permit ○Voluntary Upgrade ○Repair Permit ○Minor Modification

Proposed Use:

Single Family Home (**Number of Bedrooms** 3) Multi-Family Dwelling (**Total Number of Bedrooms** ___)

Other (describe)

Basement? ○Yes ●No Walk-out Basement? ○Yes ○No Fixtures in Basement ○Yes ○No

Conditional permit desired? ○Yes ●No If yes, which conditions do you want?

☐Reduced water flow ☐Limited Occupancy ☐Intermittent or seasonal use ☐Temporary use not to exceed 1 year

Do you wish to apply for a betterment loan eligibility letter? ○Yes ●No *There is a $50 fee for determination of eligibility.

Water Supply

Will the water supply be ○Public or ●Private? Is the water supply ○Existing or ●Proposed?

If proposed, is this a replacement well? ○Yes ●No If yes, will the old well be abandoned? ○ Yes ○ No

Will any buildings within 50' of the proposed well be termite treated? ○Yes ●No

Well Type (e.g. domestic use, agricultural, irrigation, etc.) Domestic

All Applicants

Is this property intended to serve as your (owners) principal place of residence? ○Yes ●No

All applications must be accompanied by private sector evaluations and designs, unless a petition for VDH services is approved.

Is a Petition for Service form attached? ○Yes ●No

In order for VDH to process your application for a sewage system you must attached a plat of the property and a site sketch. For water supplies, a plat of the property is recommended and a site sketch is required. The site sketch should show your property lines, actual and/or proposed buildings and the desired location of your well and/or sewage system. When the site evaluation is conducted the property lines, building location and the proposed well and sewage sites must be clearly marked and the property sufficiently visible to see the topography. I give permission to the Virginia Department of Health to enter onto the property described during normal business hours for the purpose of processing this application and to perform quality assurance checks of evaluations and designs certified by a private sector Onsite Soil Evaluator or Professional Engineer as necessary until the sewage disposal system and/or private water supply has been constructed and approved.

Signature of Owner/Agent

04-16-2024
Date

Well Specifications

VDH Use Only
HDIN: 106-29-0088

Applicant Information

Name: Dale Durrance
Address: 445 Kennon Road
Phone: (863) 697-6878
Mineral, VA 23117

Location Information

Tax Map/GPN #: 9C(1)36
Property Address: Coan Harbour Drive
Subdivision: Coan Harbour Estates
Section: 1
Block:
Lot: 36
Directions: R/360; R/614; L/Coan Harbour Drive; on Right after "1192"

General Information

Well Purpose (select all that apply): ☑ Domestic Drinking Water ☐ Agricultural ☐ Irrigation ☐ Industrial/Commercial ☐ Geothermal

Well Class: IIIB
Minimum Casing Depth: 50 ft.
Estimated Water Usage: 450gpd
Minimum Grout Depth: 50 ft.

Horizontal Setbacks

Distance from Building Sewer: 50+ ft.
Distance from Pretreatment Unit(s): 50+ ft.
Distance from Conveyance System: 50+ ft.
Distance from Absorption Area: 50+ ft.
Distance from Property Line: 35+ ft.
Distance from foundations: 50+ ft.
Distance from other source(s) of contamination: 50+ ft.
List other source(s):

Note:

Addendum to AOSE/PE Certification Statement
For Private Well Construction Permit

Instructions: Please check on box in 1-3 below. Statement templates for items #2 and #3 are on the following pages.

The proposed well site shown herein,

☐ 1. Is located a minimum of 50 feet from all property lines.

☑ 2. Is located within 50 feet of the adjacent property line(s) but I have determined that the adjacent property is not used for an agricultural operation.

- ☐ i. Written affirmation from the adjacent property owner(s) that their property is not used for an agricultural operation.
- ☑ ii. Other confirmation that land use is not an agricultural operation, please describe: **Property is located within a residential subdivision.**

☐ 3. Is located within 50 feet of an adjacent property line where the property is used for an agricultural operation. For confirmations, I have attached the appropriate documentation pursuant to § 32.1-176.5:2 of the *Code of Virginia*. (check one below)

- ☐ i. Written permission from the adjacent property owner(s) for the well construction.
- ☐ ii. I certify that no other site on the property complies with the Board's Regulations for the construction of a private well.

System Specifications

VDH Use Only
HDIN: 166-24-0088

Application Information

Name: Dale Durrance
Address: 445 Kennon Road
Phone: (863) 697-6878
Mineral, VA 23117

Location Information

Tax Map/GPN #: 9C(1)36
Property Address: Coan Harbour Drive
Subdivision: Coan Harbour Estates
Section: 1
Block:
Lot: 36
Directions: R/360; R/614; L/Coan Harbour Drive; on Right after "1192"

General Information

Property Type (e.g. residential): Residential
Number of Bedrooms: 3
Daily Flow: 450 gpd
Conditions:
Notes:

Sewer Line

Diameter: 4 in.
Material: Schedule 40 PVC (or equivalent)
Notes:

Pretreatment Unit(s)

Treatment Level: Septic Tank Effluent
Septic Tank Capacity: 900 gallons
Number of Septic Tanks: 1
Size of Septic Tank(s): 1000 gallons

Per the Sewage Handling and Disposal Regulations, check which option(s) chosen:

☐ Septic tank with inspection port ☑ Septic tank with effluent filter ☐ Reduced maintenance septic tank

Secondary treatment device(s), if applicable:

Notes: Install Zabel effluent filter with access riser on outlet side of tank

Conveyance Line

Conveyance Method: Pump to Gravity
If pumping, include pump specifications sheet.
Material: SCH 40 PVC
Diameter: 2"
Notes: See attached specifications

Distribution Method and Header Lines

Distribution Method: Gravity Distribution
No. of Boxes: 1
No. of outlets: 6-8
Surge or splitter box required: ☐Yes ☑No
Header Line Material: 4" 3000 lb crush strength

Percolation Lines/Absorption Area

Dispersal Method (e.g. laterals, pad, mound): Laterals

If using pressure dispersal (e.g. drip), include pressure dispersal specifications sheet.

No. of laterals/pads: 5
Length of lateral(s)/pad(s): 75 ft.
Width of lateral(s)/pad(s): 36 in.
Center to center spacing: 9 ft.
Installation depth: 18 in.
Aggregate depth: 13 in.
Size/Type of Aggregate: Clean #57 Stone
Lateral/pad slope: 2-4 in. per 100 ft.
Reserve Area Provided: 0 %
Notes: Pre-Bay Act Lot, No Reserve Required

Please Note: **CONTRACTOR TO CONTACT Alwyn W. Davis Jr. AT 804-366-1137 TO SCHEDULE AN INSPECTION. NO PART OF THIS SYSTEM IS TO BE COVERED UNTIL INSPECTED AND APPROVED. CALL IN ADVANCE TO INSURE THAT I WILL BE AVAILABLE. CONTRACTOR IS RESPONSIBLE FOR INSPECTION FEE.**

CONSTRUCTION NOTES

Install (1) 1000 gallon septic tank a minimum of 10' from house foundation. Contractor is responsible for ensuring that all tanks are properly sealed and watertight.

Install Zabel effluent filter in outlet side of septic tank.

Install access riser on outlet side of septic tank.

Install (1) 1000 gallon pump tank a minimum of 10' from house foundation.

Contractor is responsible for ensuring that all tanks are properly sealed and watertight.

Install Liberty FL-30 Series pump with American Time Dose Panel

Time dose 75 gallons every four hours (6 doses/day).

All PVC from dwelling to Distribution Box to be Sch. 40 PVC Primed & Glued.

Use 3000 lb Crush Strength PVC for Header Lines.

Install 5 lines 75' long and 3' wide, at 18" depth on contour, 9' center-to-center spacing. Corners have been set with laser level and flagged in field. 5'+ from all property lines which have been recently surveyed.

Install Class IIIB Well, Cased 50'+, Grout 50'+, 50'+ from all potential sources of contamination, i.e. termite treated foundation.

Water line to be a minimum of 10' from all parts of septic system.

KEEP ALL PARTS OF SYSTEM 10'+ FROM UNDERGROUND UTILITIES.

Install System In Dry Conditions Only!

See Additional Construction Notes Attached

COMPLY WITH ALL LOCAL, STATE AND OSHA REGULATIONS.

Contact Alwyn W. Davis Jr. at (804) 366-1137 prior to installation to schedule a construction inspection. No part of this system is to be covered prior to inspection. Recommend calling in advance to insure that I will be available.

INSPECTION FEE SCHEDULE AS FOLLOWS: To be paid by contractor at time of inspection
48 Hours Notice, $300.00 Per Inspection

Davis Onsite Soil Evaluations, L.L.C.

Important Septic System Construction Notes
To be Read Carefully by Applicants and Installers

- Installations shall be in accordance with the most current Virginia Department of Health Sewage Handling and Disposal Regulations.
- No buried utility lines shall be closer than 10' to any component of this system.
- Do not install this sewage disposal system or clear the proposed area during periods of wet weather or when soil conditions are wet. Installers are encouraged to review **State Health Regulation 12 VAC 5-610-700 Site Preparation and Alteration** to determine suitability of soil before installing this system.
- All hydrophilic trees (Weeping Willow, Maple, Gum, Sycamore, Cottonwood, Locust, etc) within 10' of this sewage disposal system should be removed. Grind all tree stumps when proposed system is installed at a depth of less than 24 inches.
- Land clearing resulting in a significant change of the original grade or soil continuity will void this permit.
- Drainfield trenches should be placed on contour; pads should be level.
- Roof drains, basement sump discharges (non-sewage), floor drains, footing drains, etc. are not permitted to be connected to this sewage disposal system.
- Divert all roof drainage and all other surface water runoff away from the primary and reserve drainfield areas.
- CAP AND CROWN: The minimum cover or fill over aggregate is 12 inches. Soil cover must be crowned in a way that promotes surface water drainage away from the drainfield area and prevents ponding of water on or around the drainfield area.
- Immediate seeding and straw application is required over and around the drainfield area to prevent erosion.
- Keep structures, equipment, vehicles, lawn irrigation systems, etc. off of the primary and reserve drainfield areas.
- This sewage disposal system and/or water supply system is to be constructed as specified on this permit, drawing, and specifications. Alwyn W. Davis, Jr., AOSE #194000136, must be notified prior to any necessary changes to the design of this system (804) 366-1137.
- Alwyn W. Davis, Jr., AOSE #194000136, must be notified at least 2 business days prior to final inspection. Voicemail messages must be confirmed in order to establish an inspection appointment. Please call (804) 366-1137 to arrange an inspection appointment.
- All conventional drainfield designs which require a pump to convey effluent to a distribution box and drainfield will require a pump drawdown inspection. Contractors please make arrangements to have the complete system ready for inspection.
- Completion and Inspection Statements will not be released until payment is received for the system inspection and/or design.
- Please contact Alwyn W. Davis, Jr., AOSE #1940001136, when using any type of substitute system for AOSE approval. Size reductions for trenches are not recommended.
- The performance of any alternative system used in any permit design is not guaranteed by Davis Onsite Soil Evaluations, L.L.C. Only alternative treatment systems approved by the Virginia Department of Health can be used for onsite septic system designs. Davis Onsite Soil Evaluations L.L.C. assumes their performance based on this approval.
- It is the property owner's responsibility to ensure that the proposed well, primary drainfield, and reserve drainfield area is designed and installed on the applicants property and does not interfere with utilities and easements.

Site and Soil Evaluation Report

VDH Use Only
HDIN: _____

General Information

Date: March 27, 2024 Northumberland County Health Department

Owner: Dale Durrance Phone: (863) 697-6878

Owner Address: 445 Kennon Road, Mineral, VA 23117

Property Address: Coan Harbour Drive, Lottsburg, VA 22511

Tax Map/GPIN #: 9C(1)36

Subdivision: Coan Harbour Estates Section: 1 Block: _____ Lot: 36

Soil Information Summary

1. Position in landscape satisfactory: ☑Yes ☐No Describe landscape position: Broad Flat
2. Slope: 0-1 %
3. Depth to rock/impervious strata: Max. _____ in. Min. _____ in. ☑ Not observed
4. Free Water Present: ☐Yes ☑No Range in inches: _____
5. Depth to seasonal water table (gray mottling or gray color): 36 inches ☐ Not observed
6. Soil percolation rate estimated: ☑Yes ☐No Estimated rate: 45 min/in at 18 inches depth
   Texture Group: ☐ I ☑ IIb ☐ III ☐ IV
7. Percolation test performed: ☐Yes ☑No If yes, provide additional data on percolation test results.

Name and title of evaluator: Alwyn W. Davis Jr., AOSE #1940001136

Signature: _____

☑Site Approved: Absorption trenches (describe dispersal area, e.g. absorption trenches) dispersing Septic Tank Effluent (proposed level of treatment at time of evaluation) to be placed at 18 (inches) depth at site designated on permit. Site provides a total of 1125 square feet of absorption area for primary and reserve (if applicable).

☐ Site disapproved: Reasons for rejection (check all that apply)

1. ☐ Position in landscape subject to flooding or periodic saturation.
2. ☐ Insufficient depth of suitable soil over hard rock.
3. ☐ Insufficient depth of suitable soil to seasonal water table.
4. ☐ Rates of absorption too slow.
5. ☐ Insufficient area of acceptable soil for required absorption area, and/or reserve area.
6. ☐ Proposed system too close to well.
7. ☐ Other (specify) _____

Date of Evaluation: Mar. 27, 2024 Profile Description

SOIL EVALUATION REPORT

Property ID: Northumberland TM#: 9C(1)36

Where the local health department conducts the soil evaluation the location of profile holes may be shown on the schematic drawing on the construction permit or the sketch submitted with the application. If soil evaluations are conducted by a private Onsite Soil Evaluator or Professional Engineer, location of profile holes and sketch of the area investigated including all structural features (i.e. sewage disposal systems, wells, etc.) within 200 feet of the site and reserve site shall be shown on the reverse side of this page or prepared on a separate page and attached to this form.

☐ See application sketch ☐ See Construction Permit ☑ See sketch on reverse side or page attached to this form.

Hole #	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A	00-10	10YR 4/4 Dark Yellow Brown; VFSL	IIa
	E	10-16	10YR 5/6 Yellow Brown; FSCL	IIa
	B	16-48	7.5YR 5/6 Strong Brown; HSCL, 45mpi, with few 10YR 7/2, 7/3, 6/4 mottles at 38"+	IIb
	BC	48-76	10YR 6/4 Light Yellow Brown; FSCL, w/ few 10YR 7/3, 7/4 mottles	IIa
	C	76-90	10YR 7/4 Very Pale Brown; LS, clean, 5-10mpi, moist to wet at 88"	I
2	A	00-10	10YR 4/4 Dark Yellow Brown; VFSL	IIa
	E	10-16	10YR 5/6 Yellow Brown; FSCL	IIa
	B	16-48	7.5YR 5/6 Strong Brown; HSCL, 45mpi, with few 10YR 7/3, 6/4 mottles at 34", with 7/1, and 7/2 mottles at 36"	IIb
	BC	48-62	10YR 6/4 Light Yellow Brown; FSCL, w/ few 10YR 7/3, 7/4 mottles	IIa
3	A	00-10	10YR 4/4 Dark Yellow Brown; VFSL	IIa
	E	10-16	10YR 5/6 Yellow Brown; FSCL	IIa
	B	16-48	7.5YR 5/6 Strong Brown; HSCL, 45mpi, with few 10YR 7/2, 7/3, 6/4 mottles at 36"+	IIb
	BC	48-76	10YR 6/4 Light Yellow Brown; FSCL, w/ few 10YR 7/3, 7/4 mottles	IIa
	C	76-90	10YR 7/4 Very Pale Brown; LS, clean, 5-10mpi, moist to wet at 88"	I
			Note: VDH HDID 166-01-306 indicates chroma 2 or less, but 3 borings performed on 3.27.24 did not see this until 36".	

REMARKS: 3 bdrm, 45mpi, 1032sf required. Primary 5 x 75' = 1125sf design.
Pre-Bay Act Lot, No Reserve required.

ABBREVIATED DESIGN FORM
(PRIMARY)

For use with gravity, pump to gravity, enhanced flow, and low pressure distribution (LPD) sewage system designs and when applying for a construction permit, certification letter or subdivision approval.

Tax Map: 9C(1)36 County: Northumberland

Design Basis			
Estimated percolation rate:	45 mpi	Number of Bedrooms:	3
Proposed Distribution Method (select one):			
Gravity, Pump to Gravity, or Enhanced Flow:	Pump to Gravity	LPD or drip dispersal:	N/A
Square feet of trench bottom required per bedroom (from Table 5.4 of SHDR) based on the distribution method selected above:			
Square feet per bedroom:	344	Total square feet required:	1032

Area Calculations:			
Number of trenches:	5	Length of trenches:	75'
Width of trenches:	3'	Center to center spacing:	9'
Reserve required?	No	Percent reserve area required:	0
Total width of required absorption area:	39'	Total square feet proposed:	1125

The required width is calculated by multiplying the number of trenches minus 1 by the center to center spacing and adding 1 trench width plus any required reserve area. If the topography is not uniform across the length of the site, the trenches will need to flare apart on one end to maintain contour. When this occurs, it is necessary to use a center-to-center spacing that accounts for the flair or the installer will not be able to fit the system within the approved area. It is perfectly acceptable to have more area available, especially up and down the slope, than is required.

Length of available area:	75'	Total width of available area:	39'

PUMP SYSTEM DESIGN CRITERIA, SPECIFICATIONS, AND CALCULATIONS

A.	Number of bedrooms					3
B.	Gallons per bedroom					150
C.	Design flow in gallons per day (A x B)					450
D.	Minimum pump capacity in gallons per minute					21 gpm
E.	Maximum pump capacity in gallons per minute using 2" force main					84 gpm
F.	Relative elevation of force main at surge basin/distribution box					-
G.	Relative elevation of pump off float switch					-
H.	Static head in feet (F-G)					6
I.	Equivalent length of 2" pipe in feet for this system (all materials are 2")					
	1.	Length of 2" force main			30	
	2.	4	90 degree bends at	9	feet per bend =	36
	3.	2	45 degree bends at	4	feet per bend =	8
	4.	1	check valve			17
	5.	1	gate valve			2
					Total (1+2+3+4+5) =	93
J.	Friction loss in feet per 100' of pipe (2" pipe, C = 140, 36 GPM)					2.49
K.	Number of 100' pipe increments (I/100)					0.93
L.	Friction head for this system (J x K)					2.32
M.	Total Dynamic Head (H + L)					**8.32**
N.	Pump chamber volume in gallons					1000 gallons
O.	Gallons per inch in pump chamber (inside length = 96" , inside width = 48")					20 gal/in
P.	Number of soil absorption trenches					5
Q.	Length of absorption trenches					75
R.	Total linear feet of percolation piping (P x Q)					375
S.	Volume pumped per pump cycle in gallons (R x 0.653 x 60%) *(time dosed)*					75 gallons
T.	Volume pumped per pump cycle in inches (S/O)					3.75 inches
U.	Minimum emergency storage in gallons (C/4)					112.5 gallons
V.	Minimum emergency storage in inches (U/O)					5.63 inches
W.	Maximum pump run time in minutes (S/D)					2 min, 5 sec
X.	Minimum pump run time in minutes (S/E)					54 sec

Pump Selection:

Pump must provide a minimum of 36 GPM at a Total Dynamic Head of **8.32** feet.

Pump: Liberty Model #: FL-30 Series Horsepower: 1/3 HP

Control Panel: American Time Dose Panel

Additional Information: Time dosed system – 450 gpd/6 cycles = 75 gallons per dose

Approximate Run Time of pump at calculated system head**: 75 gallons/46gpm = 1 min, 37 sec

Approximate Off Time of pump**: 3 hours, 58 min

**Times will be adjusted in field accordingly after Pump Delivery Rate field measured with Drawdown Test.

SDS/WELL CONSTRUCTION DRAWING
200' SANITARY SURVEY
SOIL BORING LOCATIONS
MARCH 27, 2024

DALE DURRANCE
NORTHUMBERLAND TM#: 9C(1)36
COAN HARBOUR ESTATES, SECT. 1, LOT 36
COAN HARBOUR DRIVE

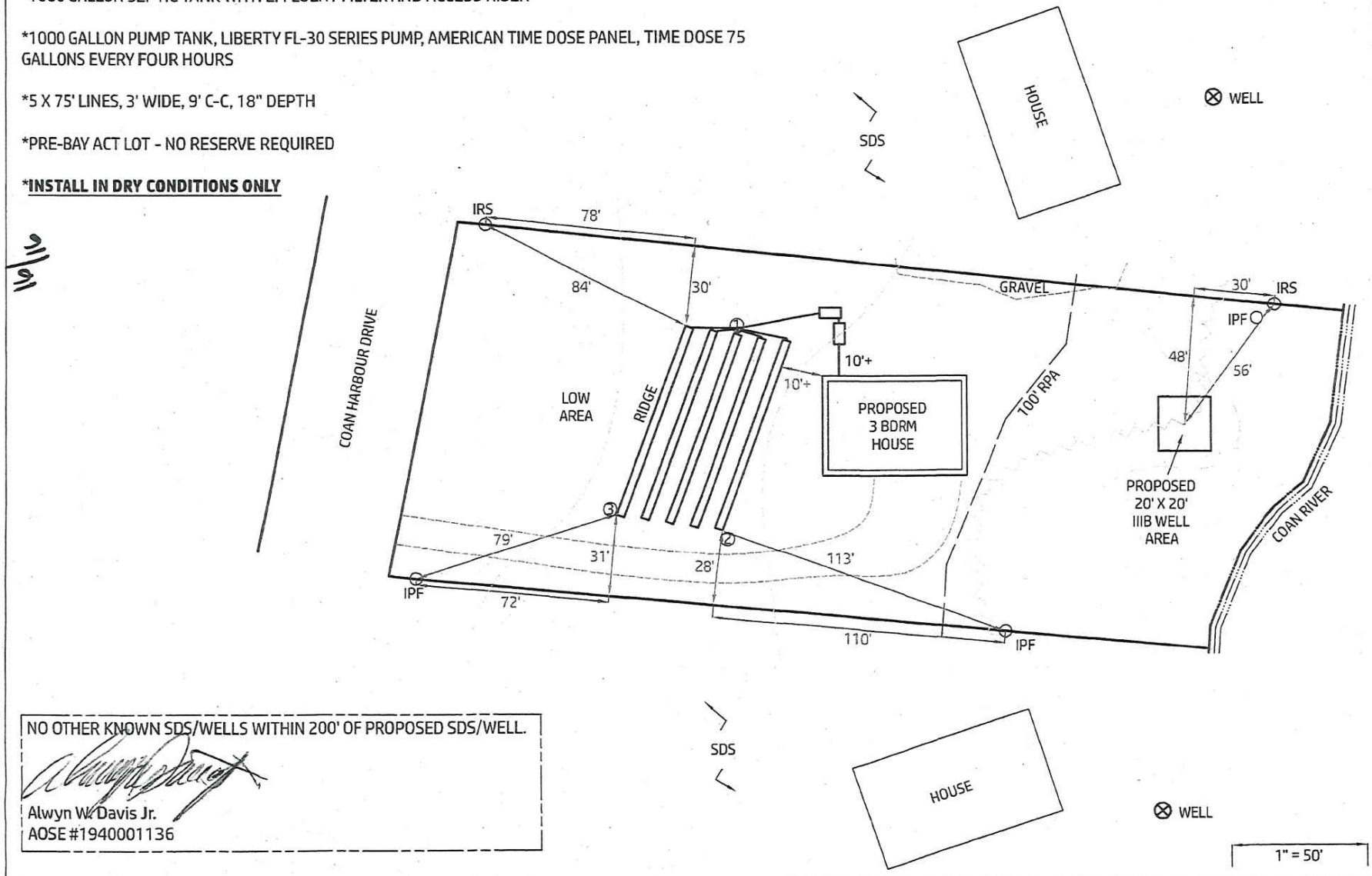
*1000 GALLON SEPTIC TANK WITH EFFLUENT FILTER AND ACCESS RISER

*1000 GALLON PUMP TANK, LIBERTY FL-30 SERIES PUMP, AMERICAN TIME DOSE PANEL, TIME DOSE 75 GALLONS EVERY FOUR HOURS

*5 X 75' LINES, 3' WIDE, 9' C-C, 18" DEPTH

*PRE-BAY ACT LOT - NO RESERVE REQUIRED

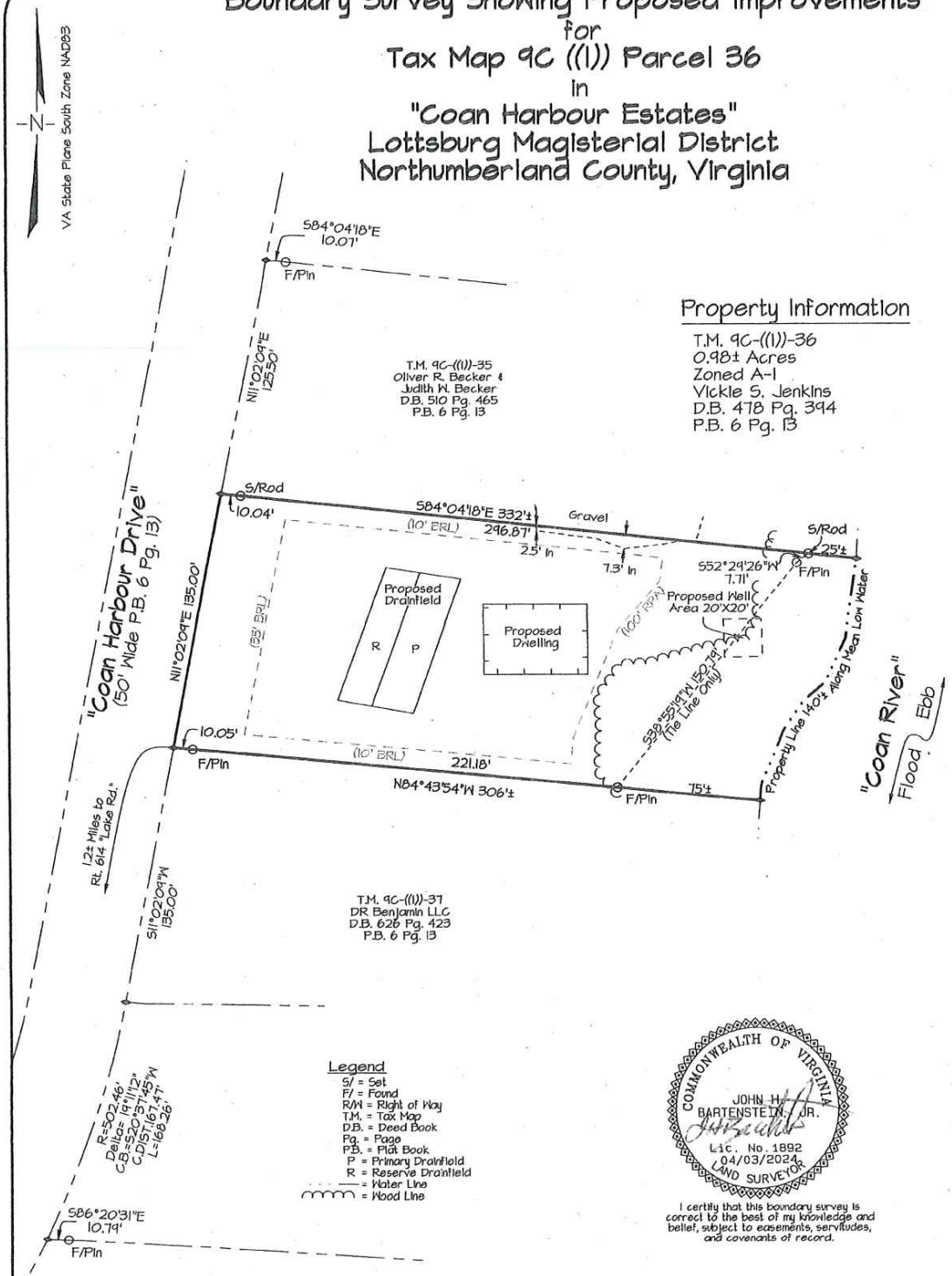
***INSTALL IN DRY CONDITIONS ONLY**



NO OTHER KNOWN SDS/WELLS WITHIN 200' OF PROPOSED SDS/WELL.

Alwyn W. Davis Jr.
AOSE #1940001136

Boundary Survey Showing Proposed Improvements
for
Tax Map 9C ((1)) Parcel 36
in
"Coan Harbour Estates"
Lottsburg Magisterial District
Northumberland County, Virginia



Property Information

T.M. 9C-((1))-36
0.98± Acres
Zoned A-1
Vickie S. Jenkins
D.B. 478 Pg. 394
P.B. 6 Pg. 13

Legend

S/ = Set
F/ = Found
R/W = Right of Way
T.M. = Tax Map
D.B. = Deed Book
Pg. = Page
P.B. = Plat Book
P = Primary Drainfield
R = Reserve Drainfield
= Water Line
= Wood Line

COMMONWEALTH OF VIRGINIA
JOHN H. BARTENSTEIN, JR.
Lic. No. 1892
04/03/2024
LAND SURVEYOR

I certify that this boundary survey is correct to the best of my knowledge and belief, subject to easements, servitudes, and covenants of record.

DATE: 04/03/2024 P.N. 024010895.00 SHEET 1 OF 1

Notes

1. All Lines Reproduced by Deed Description, Adjoining Plats, and Found Physical Evidence as Near as Possible.
2. This Survey was Performed without the Benefit of a Title Report.
3. This Plat Represents a current Field Survey.

GRAPHIC SCALE 1"=50'

0 50 100 150

ARM Resource
Engineers and Scientists
An ARM Group Company
P.O. Box 6160 • 9560 Kings Charter Drive • Ashland, VA 23005
(804) 550-9200 • FAX (804) 550-9259

9/15

PUMP SYSTEM PLANS AND SPECIFICATIONS

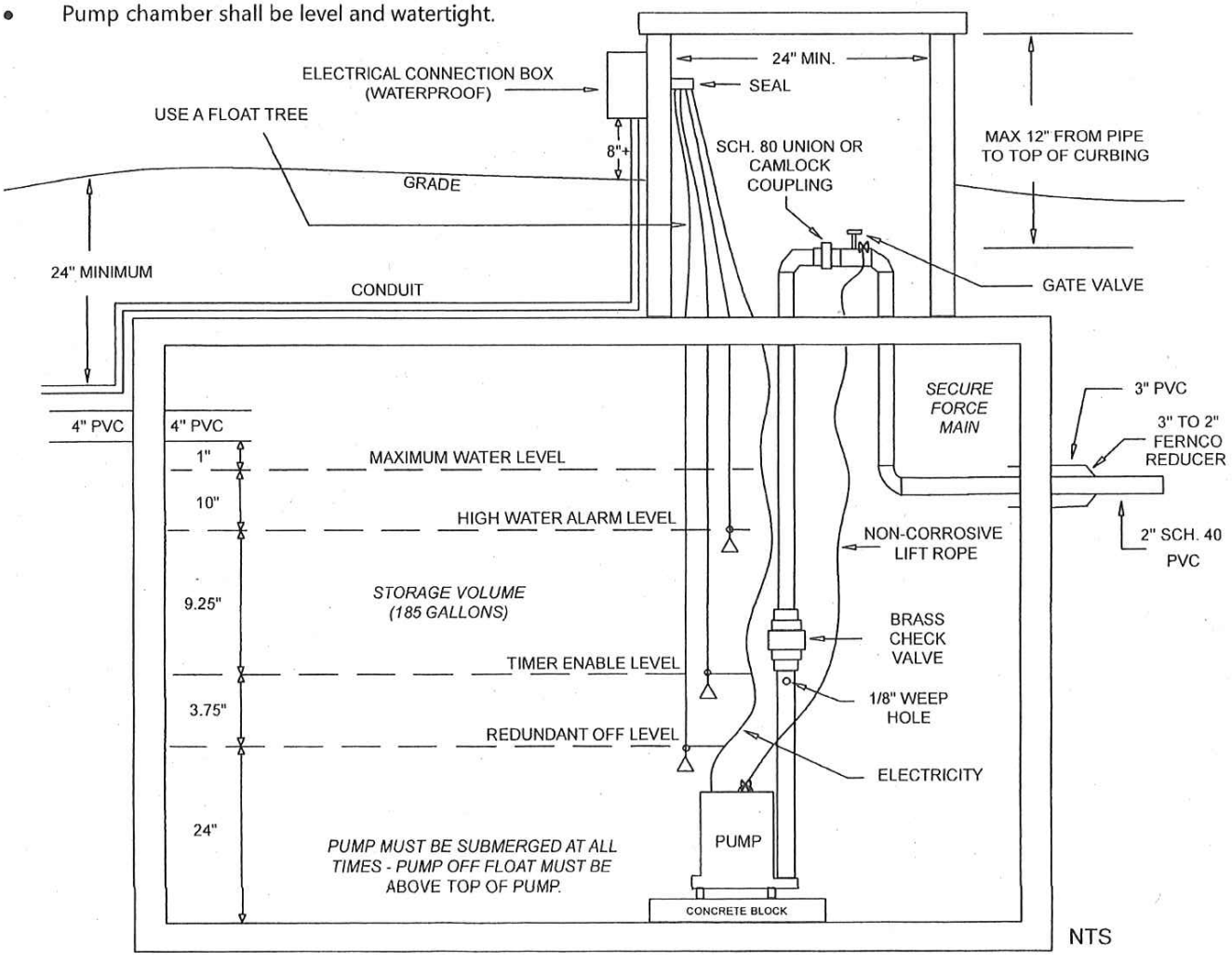
14/16

Pump Chamber Size in Gallons:	1000 gallons
Drawdown in Gallons (Each Pump Cycle):	75 gallons
Drawdown in Inches (Each Pump Cycle):	3.75 inches
¼ Day Storage Volume in Gallons:	112.5 gallons
¼ Day Storage Volume in Inches:	5.63 inches

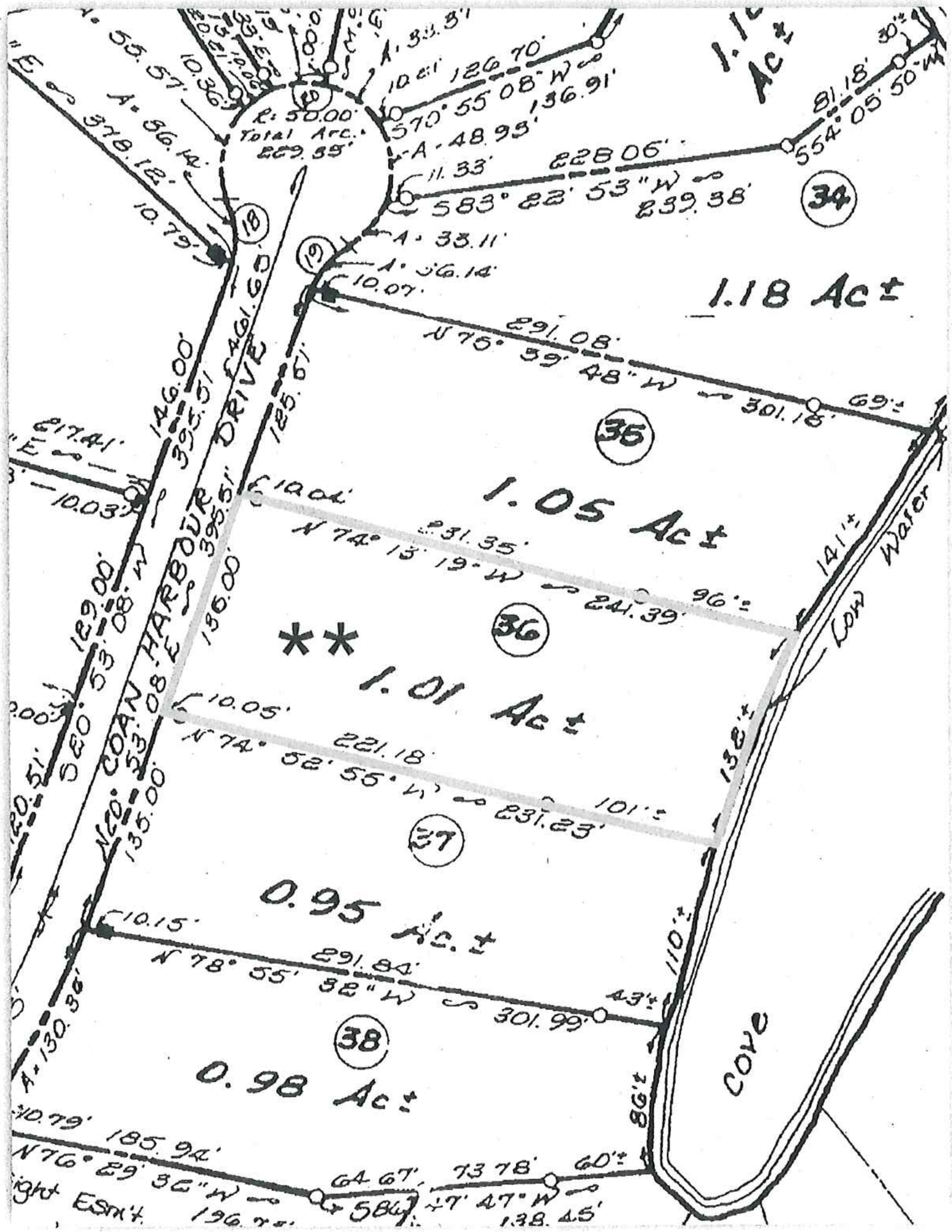
Force Main shall be 2" Diameter SCH 40 PVC pressure pipe with pressure fittings.
Pump must provide 36 Gallons per minute minimum and 84 gallons per minute maximum at system head.

Maximum Pump Cycle Time (Drawdown in Gallons 36 GPM = 2 mins. 5 secs.
Minimum Pump Cycle Time (Drawdown in Gallons 84 GPM = 0 mins. 54 secs.

- Pump shall be of the open face centrifugal type designed to pump sewage.
- The pump station must be provided with controls for automatically starting and stopping the pump based on water level.
- The electrical motor control center and master disconnect switch shall be placed in a secure location above grade and remote from the pump station.
- Each motor control center shall be provided with a manual override switch.
- A high water alarm with remote sensing and electrical circuitry separate from the motor control center circuitry shall be provided.
- The alarm shall be audiovisual and shall alarm in an area where it may be easily monitored.
- All electrical connections shall be hardwired.
- Do not use compression fittings.
- Force main shall be deep enough to prevent freezing.
- Pump chamber shall be level and watertight.



NTS


COAN HARBOUR DRIVE
R: 50.00
Total Arc. 229.35
1.18 Ac±
1.05 Ac±
** 1.01 Ac±
0.95 Ac±
0.98 Ac±
34
35
36
37
38
18
19
Low Water
Cove
S 70° 55' 08" W
126.70'
136.91'
S 83° 22' 53" W
228.06'
239.38'
81.18'
S 54° 05' 50" W
N 75° 39' 48" W
291.08'
301.16'
N 74° 13' 19" W
231.35'
241.39'
N 74° 52' 55" W
221.18'
231.23'
N 78° 55' 32" W
291.84'
301.99'
N 76° 29' 36" W
185.94'

Liberty Pumps®

A Family and Employee Owned Company

Pump Specification

FL30-Series

1/3 HP Submersible Effluent Pumps