VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Gloucester County Health Department
PO BOX 663
Gloucester, Virginia 23061
(804) 693-6130 Voice
(804) 693-1398 Fax

Professional Engineer Alternative Onsite Sewage Disposal System Construction Permit Letter (COV 32.1-163.6)

Sewage Contractors: Notify Health Department and PE 48 hours prior to installation to arrange for inspection

January 10, 2024

Middle Peninsula Chesapeake Bay Public Access Authority
PO Box 286
Saluda Va 23149

RE: Health Department Identification Number: 136-24-0006; EHD#: 073-STS-16502
Tax Map #: 47-03B onto TM#: 47-03; RPC#: 24035 & 11941
Address: 9530 Whitaker Drive, Gloucester, VA (Pool House to residential living space)
System Capacity: Residential – 3-bedroom dwelling/450 gallons per day

Dear Middle Peninsula Planning District Commission:

This letter and the attached drawings, specifications, and calculations (15 pages) dated January 8, 2024, by way of a professional engineer seal, along with the below listed documents, constitute your alternative onsite sewage system construction permit on the property referenced above.

1. County of Gloucester Resolution Interposing no objection on behalf of Gloucester County, Virginia to the use of, encroachment upon, and transversing of certain county rights of way by the Middle Peninsula Chesapeake Bay Public Access Authority (PAA) to enable the provision of Septic Sewage System Service for properties owned by and being developed by the PAA, dated December 5, 2023;
2. Dominion Energy, Drainfield Encroachment agreement signed 16 October 2023; and
3. Certified Wetland Delineation document, dated August 31, 2023, without supporting approval of the Professional Wetland Delineator's determination by the Army Corp of Engineer.

Your application for a permit was submitted pursuant to §32.1-163.6 of the *Code of Virginia*, which requires the Health Department to accept private soil evaluations and designs from a Professional Engineer for residential development. VDH is not required to perform a field check to verify the private evaluations of PEs and such a field check may not have been conducted for the issuance of this permit.

The soil absorption area ("site") and sewage system design were certified by S. Taylor Goodman, Professional Engineer, License # 40228, 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. The attached plat shows the approved area for the sewage disposal 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 Gloucester County Health Department.

The 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 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 PE. The Gloucester County Health Department 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 PE as noted herein. The sewage system may not be placed into operation until you have obtained an Operation Permit from the Gloucester County Health Department.

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.

This permit expires: **July 10, 2025**

Sincerely,

Tammy Faulkner, AOSE/A Master
Environmental Health Specialist, Senior

CC: S. Taylor Goodman, Professional Engineer

Documentation required to be submitted to the health department for closure of the construction permit (issuance of the Operation Permit)

- Inspection documentation by the designer and their as-built drawing;
- Contractor Completion Statement. and
- Copy of the Recorded Notice of Recordation.

Allow 5 business days after the last piece of documentation is received for the Operation Permit to be issued. If you have any questions about any of the items on this list, please do not hesitate to contact the Gloucester County Health Department at (804) 693-6130.

VDH VIRGINIA DEPARTMENT OF HEALTH

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PO BOX 663
Gloucester, Virginia 23061
(804) 693-6130 Voice
(804) 693-1398 Fax

January 10, 2024

Middle Peninsula Chesapeake Bay Public Access Authority
PO Box 286
Saluda Va 23149

Subject: **Recordation of Future Operation Permit**
Health Department Identification Number: 136-24-0006; EHD#: 073-STS-16502
Tax Map #: 47-03B onto TM#: 47-03; RPC#: 24035 & 11941
Address: 9530 Whitaker Drive, Gloucester, VA (Pool House to residential living space)
System Capacity: Residential – 3-bedroom dwelling/450 gallons per day

Dear Middle Peninsula Planning District Commission:

Your application to construct an alternative sewage disposal system to serve a residence at the above location has been evaluated in accordance with the requirements contained in Section 32.1-164.1 of the *Code of Virginia,* 12 VAC 5-610-250 of the *Sewage Handling and Disposal Regulations,* and current agency policies and procedures.

Your application is approved and your construction permit is attached to this letter. After your alternative sewage disposal system is constructed and approved for use, the local health department will issue an Operation Permit. The Operation Permit will be valid as long the sewage disposal system is properly operated and maintained. In accordance with Section 15.2-2157 of the *Code of Virginia,* operation permits for alternative systems serving residential facilities must be conditioned. Before you receive an operation permit for your alternative onsite sewage disposal system, you must record a notice in the land records of the Clerk of the Circuit Court in the locality where the system is located. You must furnish to the local health department a certification from the Clerk of the Circuit showing the deed book number and page number (or instrument number) upon which the notice was recorded. The notice must be indexed in the grantor index under your name.

This notice will state the following:

> *This permit is issued in accordance with the provisions of Title 32.1, Chapter 6 of the Code of Virginia as Amended, and § 12VAC5-610-340 of the Sewage Handling and Disposal Regulations of the Virginia Department of Health. The continued validity of this permit is contingent upon compliance with the operation and maintenance requirements contained in the Owner's Operation and Maintenance Manual and Regulations for Alternative Onsite Sewage Systems of the Virginia Department of Health (12VAC5-613-100 et seq.). Owners are advised to be aware of the operation and maintenance instructions for their alternative onsite sewage system and to follow them. Copies of the operation and maintenance instructions can be found by contacting the local health department for the locality where the onsite sewage disposal system is located.*

If you have any questions or if this office can be of further service to you, call us at (804) 693-6130.

Sincerely,

Tammy Faulkner, OSE/A Master
Environmental Health Specialist, Senior

VDH VIRGINIA DEPARTMENT OF HEALTH

Protecting You and Your Environment

Gloucester County Health Department
PO BOX 663
Gloucester, Virginia 23061
(804) 693-6130 Voice
(804) 693-1398 Fax

Notice for Recordation: AOSS Operation and Maintenance Required

TO: Property Owner Date: January 10, 2024

From: Tammy Faulkner, Environmental Health Specialist, Senior

RE: Health Department Identification Number: 136-24-0006; EHD#: 073-STS-16502
Tax Map #: 47-03B onto TM#: 47-03; RPC#: 24035 & 11941
Address: 9530 Whitaker Drive, Gloucester, VA (Pool House to residential living space)
System Capacity: Residential – 3-bedroom dwelling/450 gallons per day

TO WHOM IT MAY CONCERN:

The Gloucester County Health Department has approved an alternative onsite sewage system (AOSS) for use for the property identified above as long as the system is properly operated and maintained and performs in accordance with the *Sewage Handling and Disposal Regulations* (12 VAC 5-610-10 *et seq.)* and the *Regulations for Alternative On-Site Sewage Systems* (12 VAC 5-613-10 *et seq.)*

This permit is issued in accordance with the provisions of Title 32.1, Chapter 6 of the *Code of Virginia* as Amended, and §12VAC5-610-340 of the *Sewage Handling and Disposal Regulations* of the Virginia Department of Health. The continued validity of this permit is contingent upon compliance with the operation and maintenance requirements contained in the Owner's Operation and Maintenance Manual and the *Regulations for Alternative Onsite Sewage Systems* of the Virginia Department of Health (12VAC5-613-100 et seq.). Owners are advised to be aware of the operation and maintenance instructions for their alternative onsite sewage system and to follow them. Copies of the operation and maintenance instructions should have been given to the original owner by the system designer and should be passed on from owner to owner; they can also be found by contacting the local health department for the locality where the onsite sewage disposal system is located.

This Notice must be recorded in the owner's name in the grantor's index of the land records of the Clerk of the Circuit Court of the county having jurisdiction over the property. You must furnish the Gloucester County Health Department with certification from the Clerk of the Circuit Court showing the deed book and page number or the instrument number upon which the notice was recorded before you can receive your permit to operate the on-site sewage treatment and disposal system.

As owner of the property, I acknowledge that the sewage disposal system designed to serve the dwelling requires adherence to the Owner's Operation and Maintenance Manual and to Part III, Operation and Maintenance, found in the *Regulations for Alternative Onsite Sewage Systems* of the Virginia Department of Health (12VAC5-613-100 et seq.).

_____ _____
Property owner signature Date

COMMONWEALTH OF VIRGINIA, COUNTY/CITY OF _____, to wit:

Subscribed and acknowledged before me this ____ day of _____, 2024 _____.

_____
NOTARY PUBLIC for the COMMONWEALTH OF VIRGINIA AT LARGE

My Commission expires_____

Registration #: _____

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

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PO BOX 663
Gloucester, Virginia 23061
(804) 693-6130 Voice
(804) 693-1398 Fax

January 10, 2024

Middle Peninsula Chesapeake Bay Public Access Authority
PO Box 286
Saluda Va 23149

Subject: **Alternative Onsite Sewage Disposal System, Owner Responsibilities**
Health Department Identification Number: 136-24-0006; EHD#: 073-STS-16502
Tax Map #: 47-03B onto TM#: 47-03; RPC#: 24035 & 11941
Address: 9530 Whitaker Drive, Gloucester, VA (Pool House to residential living space)
System Capacity: Residential – 3-bedroom dwelling/450 gallons per day

Records on file at the Gloucester County Health Department indicate that you are the owner of an Alternative Onsite Sewage System (AOSS) located at 10004 Forest Grove, Gloucester, VA. This letter is to provide you with important information regarding owner responsibilities for the operation and maintenance of your AOSS.
The *Regulations for Alternative Onsite Sewage Systems*(the "*AOSS Regulations,*" 12 VAC 5-613) became effective on December 7, 2011. These regulations can be found online at http://www.vdh.virginia.gov/EnvironmentalHealth/Onsite/regulations/index.htm.
The Commonwealth of Virginia State Board of Health *Alternative Onsite Sewage Regulation* outline the owner's responsibilities for alternative onsite sewage systems. Owners are now required to:

1. Have the **AOSS operated and maintained by a licensed operator**. A list of licensed operators can be obtained by visiting the Department of Professional and Occupational Regulation at www.dpor.virginia.gov. Select "License Lookup" from the menu, type an asterisk (*) in the name field, check the "Operators" box under "Onsite Sewage Systems Professionals" and click "search."

2. Have a **licensed operator visit** the AOSS at the frequency required by the regulations.

3. Have a licensed operator collect any **samples** required by the regulations (specific laboratory sampling requirements depend on the date your application was filed, the size of the treatment system, the approval status of the treatment unit, whether or not disinfection was required, and whether or not there is direct dispersal to groundwater. Laboratory sampling is not required for any small AOSS with an installed soil treatment area that is sized for septic tank effluent and complies with the requirements of 12VAC5-610 for septic tank effluent. Please consult your Operation and Maintenance Manual, the system designer, an Operator, or the Health Department if you have questions.).
4. Keep a copy of the **maintenance log** provided by the operator on the property where the AOSS is located, make the log available to the health department upon request, and transfer the log to any future owner of the property.

5. Keep a copy of the **Operation and Maintenance (O&M) Manual** for the AOSS on the property where the system is located, make the manual available to the health department upon request, and transfer the O&M Manual to any future owner.

6. Comply with the onsite sewage disposal requirements contained in any local ordinance adopted pursuant to the Chesapeake Bay Preservation Act (§10.1-2100 of the *Code of Virginia)* and the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 10-20) if the AOSS is located within a designated Chesapeake Bay preservation area.

Proper operation and maintenance of an AOSS is required by law and is necessary to ensure continued functioning of the system and may prevent premature failure of the system. Operation and maintenance information for your system may be found by contacting the system designer, the local health department, or by visiting the VDH website at http://www.vdh.virginia.gov/EnvironmentalHealth/Onsite/newsofinterest/index.htm.
If you have any questions regarding this letter or believe that you received this letter in error, please contact me at (804) 693-6130. Your cooperation and timely response will be appreciated.

Sincerely,
Virginia Department of Health

~~HDID # 136-23-0145, 073-STS-102722, Acct # 2642~~

Commonwealth of Virginia

Application for: ☒ Sewage System ☐ Water Supply

VDH Use only
Health Department ID# 136-24-0006
Due Date 1-9-24

Owner MPCBPAA PUBLIC ENTITY 15.2-6600 Phone 804-758-2311

Mailing Address PO BOX 286 Phone

SALUDA VA 23149 Fax Rev. Pkg Rec'd 6-12-23

Agent LEWIS LAWRENCE Phone 136-23-0145 Denied

Mailing Address SAME Phone 1-9-24 Resubmission

Fax No Fee due

Site Address 9530 WHITTAKER DR Email LLAWRENCE@MPPDC.COM

Directions to Property: END RT 614 ONTO LANDS END RD LEFT ON WHITTAKER

Subdivision _____ Section _____ Block _____ Lot _____

Tax Map 47-3B Pool House Other Property Identification _____ Dimension/Acreage of Property _____

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

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

All Applicants

OK to use Private well

Is this a private sector OSE/PE application? ☒ Yes ☐ No If yes, is the OSE/PE package attached? ☒ Yes ☐ No

Is this property indeed to serve as your (owners) principal place of residence? ☐ Yes ☐ No PUBLIC HOUSING/FACILITY

In order for VDH to process your application for a sewage system you must attach 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.

MPPDC/MPCBPAA 5/23/23 1-9-24 Resubmission

Signature of Owner/ Agent Date w/ signed docs, see denial comment

This form contains personal information subject to disclosure under the Freedom of Information Act. Revised 3/22/2017

EHSO.

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS

Rec'd 1-9-2024
T. Faulkner, EHSsr

Alternative Onsite Soil Evaluator /Professional Engineer Report for Construction Permit

Approved, HDID# 136-24-0006, 1-10-24
Tammy Faulkner, EHSsr

Property Location:

Subdivision: **Captain Sinclair** Section: Lot: Pool House to Residential Living space TM 47-3B onto 47-3

Map Reference: **0685-40-8210,0685-40-7345 0685-40-7821** Acreage: County: **Gloucester**

Other Property ID: **The Corduroy Null/ Lands End Road.**

Applicant / Client and Address:

MMDC
PO Box 286
Saluda VA 23149
(804)758-2311

Prepared by:

David K. Hogan, AOSE #1940001362
Balzer & Associates Inc.
15871 City View Drive, Suite 200
Midlothian, VA 23113
(804) 794-0571

Date of Report: **5/19/2023**

AOSE/P.E. Job Number: **59220006.00**

Revisions: 8/5/2023 VDH Revisions

Health Dept. ID No.:

Contents/Index of this Report			Page(s):
Site Layout/Construction Drawings	☑ Yes	☐ No	2-4
Soil Summary Report	☑ Yes	☐ No	5
Soil Profile Descriptions	☑ Yes	☐ No	6-7
Construction Specifications	☑ Yes	☐ No	8-10
Pump Specifications	☑ Yes	☐ No	11-13
Abbreviated Design Form	☑ Yes	☐ No	14
Septic Care and Maintenance	☑ Yes	☐ No	15
Water Supply Design Specs	☐ Yes	☑ No	

COMMONWEALTH OF VIRGINIA
S. TAYLOR GOODMAN
Lic. No. 40228
1/8/24
PROFESSIONAL ENGINEER

Certification Statement:

I hereby certify that the evaluations and/or designs contained herein were conducted in accordance with 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 work attached to this cover page has been conducted under an exemption to the practice of engineering, specifically the exemption in
The Code of Virginia Section 54.1-402.A.11.

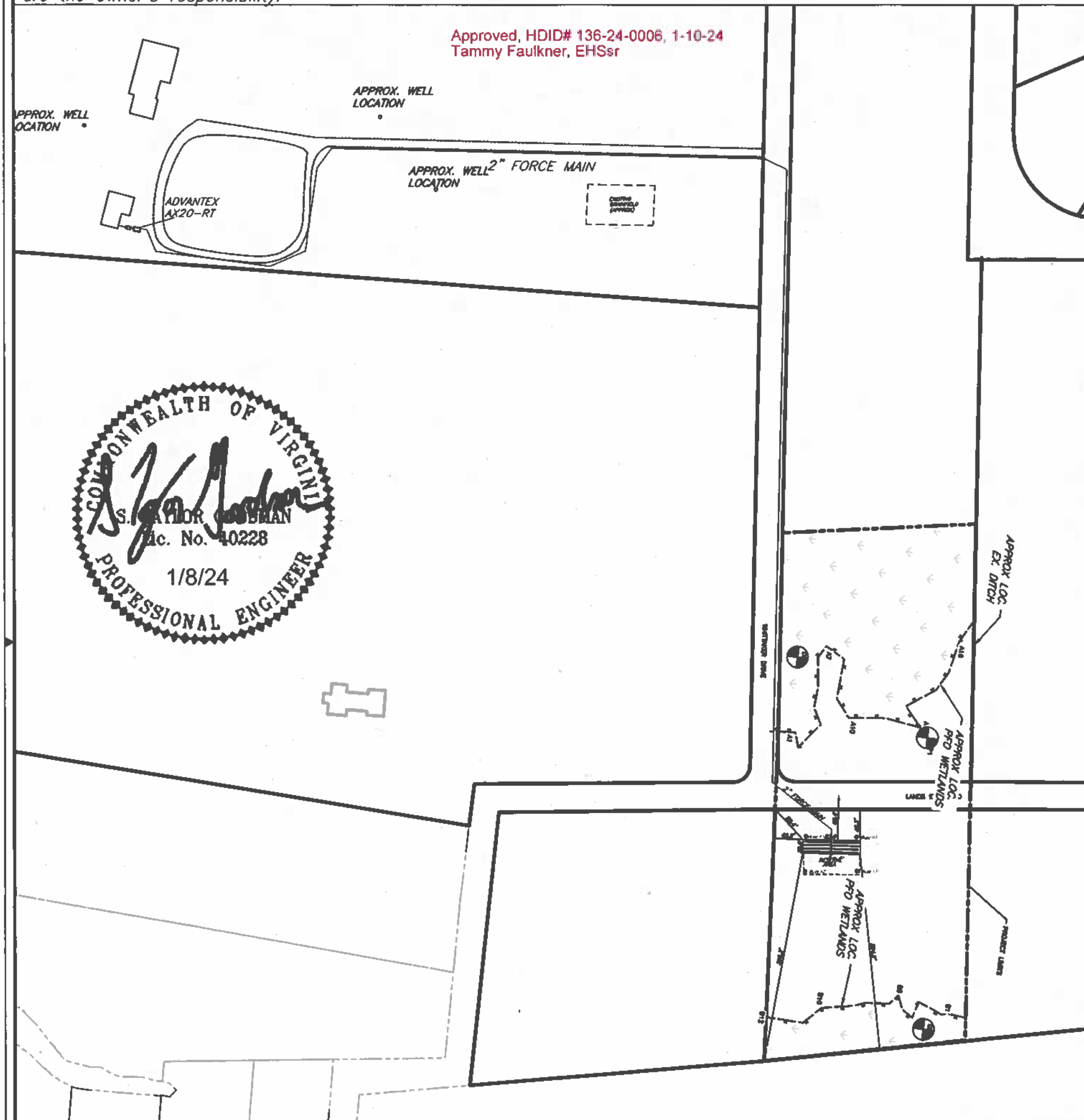
COMMONWEALTH OF VIRGINIA
5/19/2023
DAVID K. HOGAN
No. 1940001362
A.O.S.E.

I recommend a **Construction Permit** be approved

A.O.S.E. / P.E Stamp Signature & Date

This plat is for Health Department review only. The information provided herein does not constitute a certified survey, building permit plat, or record plat. All matters pertaining to easements, setbacks, right of ways, etc, are the owner's responsibility.

Approved, HDID# 136-24-0006, 1-10-24
Tammy Faulkner, EHSsr



DATE: 5/19/2023
SCALE: 1"=200'
JOB NO: 59220006.00
Pur: MPPDC

CHK: dkh
DWG: dkh

Proposed
WASTEWATER TREATMENT
CAPTAIN SINCLAIR
PoolHouse
Gloucester County, Virginia

PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS
ROANOKE / RICHMOND / NEW RIVER VALLEY / SHENANDOAH VALLEY / LYNCHBURG
15871 City View Drive, Suite 200 / Midlothian, Virginia 23113 / Phone (804) 794-0571 / www.balzer.cc

BALZER & ASSOCIATES

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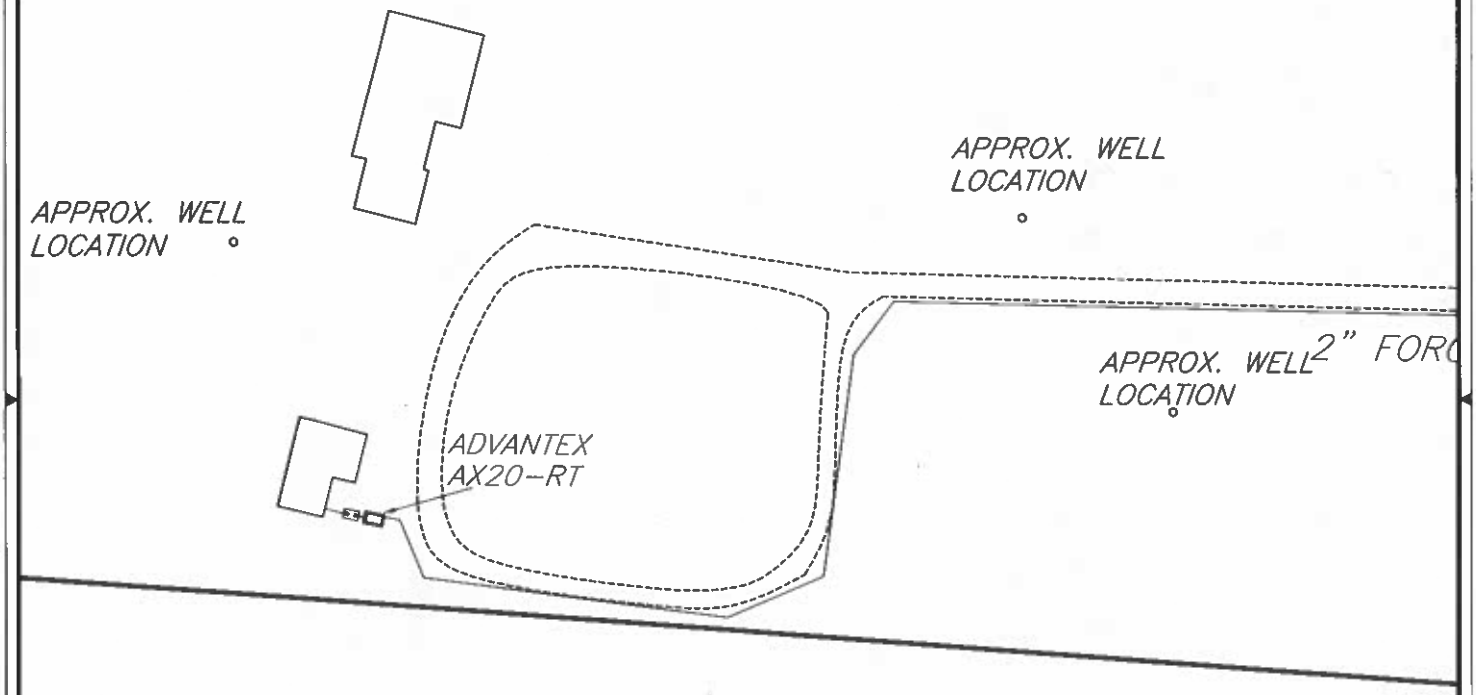
Approved, HDID# 136-24-0006, 1-10-24
Tammy Faulkner, EHSsr

COMMONWEALTH OF VIRGINIA
J. TAYLOR GOODMAN
Lic. No. 40228
1/8/24
PROFESSIONAL ENGINEER



DATE: 5/19/2023
SCALE: 1"=100'
JOB NO: 59220006.00
Pur: MPPDC

CHK: dkh
DWG: dkh

Proposed
WASTEWATER TREATMENT
CAPTAIN SINCLAIR
PoolHouse
Gloucester County, Virginia

PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS
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BALZER & ASSOCIATES

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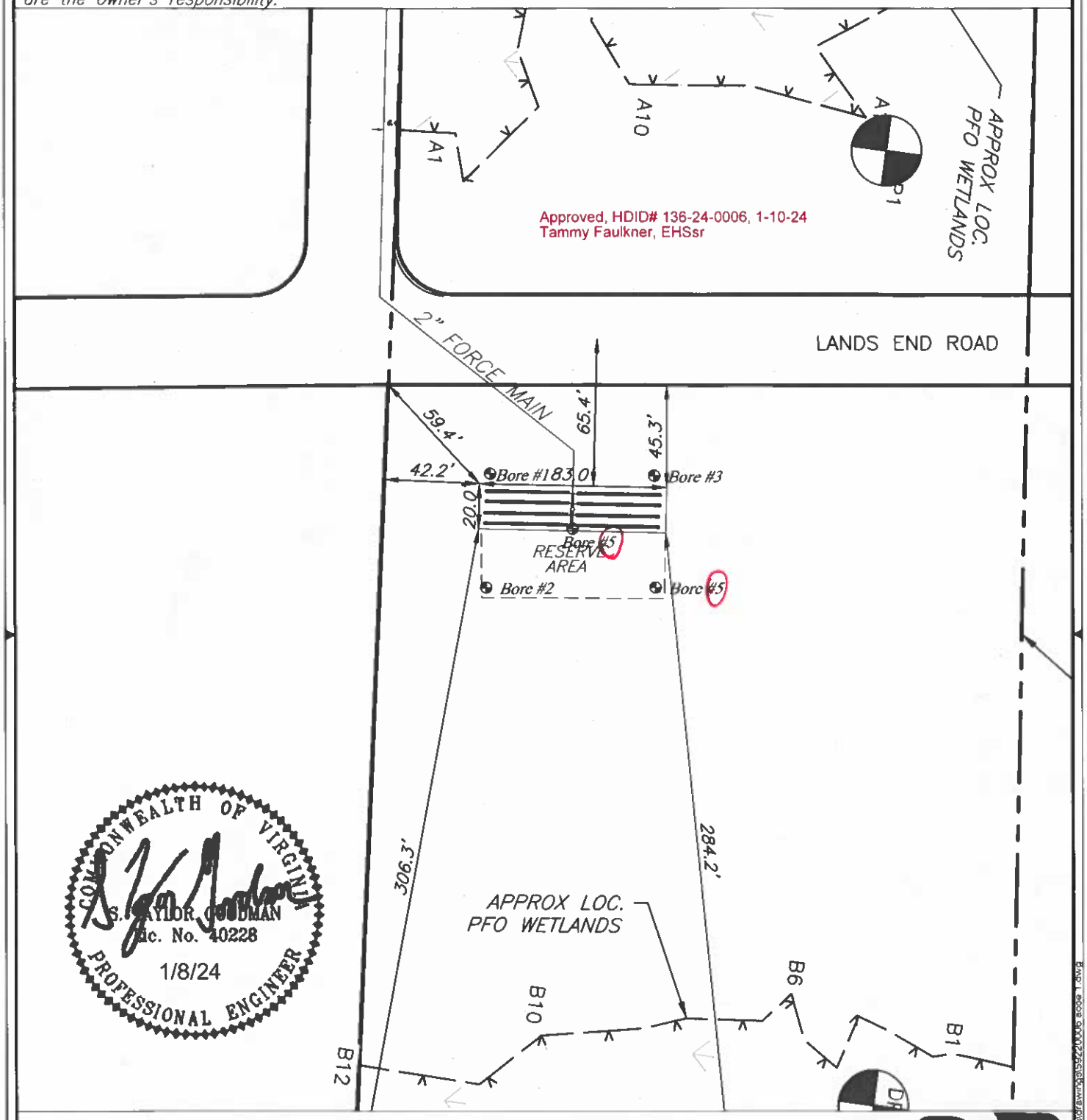

COMMONWEALTH OF VIRGINIA
S. TAYLOR GOODMAN
Lic. No. 40228
1/8/24
PROFESSIONAL ENGINEER

DATE: 5/19/2023
SCALE: 1"=60'
JOB NO: 59220006.00
Pur: MPPDC

CHK: dkh
DWG: dkh

Proposed
WASTEWATER TREATMENT
CAPTAIN SINCLAIR
PoolHouse
Gloucester County, Virginia

PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS
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15871 City View Drive, Suite 200 / Midlothian, Virginia 23113 / Phone (804) 794-0571 / www.balzer.cc

BALZER & ASSOCIATES

COMMONWEALTH OF VIRGINIA
[illegible] HOGAN
Lic. No. 40228
1/8/24
PROFESSIONAL ENGINEER

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS

Approved, HDID# 136-24-0006, 1-10-24
Tammy Faulkner, EHSsr

Soil Summary Report

General Information

Date: 5/19/2023 Submitted to: Gloucester Health Department

Applicant: David K. Hogan, AOSE, Balzer and Associates, Inc Phone: (804) 794-0571

Address: 15871 City View Drive, Suite 200; Midlothian, VA 23113

Owner: MMDC

Address: PO Box 286 City, State Zip: Saluda VA 23149

Location: The Corduroy Null/ Lands End Road. Tax Map: 0685-40-8210,0685-40-7

Subdivision: Captain Sinclair Section: 0 Lot: 0

Soil Information Summary

1. Position in landscape satisfactory: ☑ Yes ☐ No
   Describe: Nearly Level
2. Slope: 0-1%
3. Depth to rock or impervious strata: Min. Max. None
4. Depth to seasonal water table (gray mottling or gray color): ☐ No ☑ Yes 0 inches
5. Free water present: ☑ No ☐ Yes inches
6. Soil Percolation rate estimated: ☑ Yes Texture group IIB
   ☐ No Estimated rate of 50 min/inch
7. Permeability test performed: ☐ Yes
   ☑ No
   If yes, note type of test performed and attach _____

☑ Site Approved: Drainfield to be placed at a depth of +6 inches at site designated on permit
__ Site Disapproved:

Reasons for rejection:
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 seasonable water table.
4. ___Rates of absorption to slow.
5. ___Insufficient area of acceptable soil for required drainfield, and/or Reserve Area.
6. ___Proposed system too close to well.
7. ___(attach additional pages if necessary)

SOIL PROFILE DESCRIPTION REPORT

Evaluation Location: Captain Sinclair Section: 0 Lot: 0

Map Reference: 0685-40-8210,0685-40-7 Other Property I.D.: The Corduroy Null/ Lands End Road.

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 attached to this form.

Hole #	Horizon	Depth(inches)	Descriptions of color, texture, etc.	Texture Group
Bore#1	A	0-2	2.5Y 3/2 Very Dark Grayish Brown Sandy Loam	IIB
	E	2-10	2.5Y 5/3 Light Olive Brown, Sandy Loam, Few 10YR 5/6	IIB
			Yellowish Brown Mottles	
	B	10-16	2.5Y 6/1 Gray Sandy Clay Loam, W/ 2.5Y 5/6 Light	IIB
			Olive Brown Mottles	
	B/C	16-40	2.5Y 6/1 Gray & 2.5Y 5/6 Light Olive Brown Sandy	IIB
			Loam, Friable	
Bore#2	A	0-2	2.5Y 3/2 Very Dark Grayish Brown Sandy Loam	IIB
	E	2-10	2.5Y 5/3 Light Olive Brown, Sandy Loam, Few 10YR 5/6	IIB
			Yellowish Brown Mottles	
	B	10-24	2.5Y 6/1 Gray Sandy Clay Loam, W/ 2.5Y 5/6 Light	IIB
			Olive Brown Mottles	
	B/C	24-30	2.5Y 6/2 Light Brownish Gray Sand, Loose Friable	
			Few Clay Mottles	
Bore#3	A	0-4	2.5Y 3/2 Very Dark Grayish Brown Sandy Loam	IIB
	E	4-11	2.5Y 5/6 Light Olive brown, Sandy Loam	IIB
	B	11-18	2.5Y 6/1 Gray Sandy Clay Loam, Friable Loose	IIB
	B/C	18-42	2.5Y 6/1 Gray & 2.5Y 5/6 Sandy Clay Loam into	IIB
			Sandy Loam Layered	
Bore#4	A	0-3	Organic Loam	IIB
	E	3-13	10YR 5/1 Gray Fine Sandy Loam, Common 10YR	IIB
			5/6 Yellowish Brown Mottles	
	B	13-16	2.5Y 6/2 Light Brownish Gray With Common 10YR	IIB
			5/6 Yellowish Brown Iron Staining Clay Loam	
	C	16-30	2.5Y 6/2 Light Brownish Gray With Common 10YR	IIB
			5/6 Yellowish Brown Iron Staining Sandy Clay Loam	

Remarks:

SOIL PROFILE DESCRIPTION REPORT

Evaluation Location: Captain Sinclair Section: 0 Lot: 0

Map Reference: 0685-40-8210,0685-40-7 Other Property I.D.: The Corduroy Null/ Lands End Road.

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 attached to this form.

Hole #	Horizon	Depth(inches)	Descriptions of color, texture, etc.	Texture Group
Bore#5	A	0-13	2.5Y 3/2 Very Dark Grayish Brown Fine Sandy Loam	IIB
	E	13-17	2.5Y 3/1 Very Dark Gray High organics Fine	IIB
			Sandy Loam	
	B	17-19	2.5Y 5/1 Gray, 2.5Y 3/1 Very Dark Gray Heavy Sandy	IIB
			Loam W/ Common Iron Staining	
	B/C	19-30	2.5Y 5/3 Light Olive brown Fine Sandy Loam,	IIB
			Very Dense , Very Firm 7.5YR 5/8 Strong Brown	
			Iron Staining	

Remarks:

Approved, HDID# 136-24-0006, 1-10-24
Tammy Faulkner, EHSsr

COMMONWEALTH OF VIRGINIA
S. TAYLOR GOODMAN
Lic. No. 0402028
1/8/24
PROFESSIONAL ENGINEER

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS

Sewage Disposal System Construction Specifications

General Information

Use:

☑ Residential ☐ Commercial

☑ New ☐ Repair ☐ Modified

☐ Gravity Conventional ☐ Pump Conventional

☑ Alternative: TL-3 To GeoMat Pad

Number of Bedrooms: 3

Termite Treatment: ☑ Yes ☐ No

Basement: ☐ Yes ☑ No

Fixtures in Basement: ☐ Yes ☑ No

Owner: **MMDC**

Address: **PO Box 286** City, State Zip: **Saluda VA 23149**

Subdivision: **Captain Sinclair** Section: **0** Lot: **0**

Actual or estimated water use: **450** GPD

Design

Water Supply: ☐ Public ☑ Private ☑ New ☐ Existing

To be installed: Class: Cased: Grouted:

Building Sewer:

4" I.D. PVC 40 or equivalent

Slope 1.25" per 10' (minimum)

☐ Other:

Septic Tank: Capacity: **1000** gallons (minimum) ☑ With inspection port or filter

☑ Other: **Settling Tank for Poolhouse W/ Advantex AX20 RT Unit with UV Disinfection**

Inlet-outlet structure:

PVC 40, 4" tees or equivalent

☐ Other:

Pump and pump station:

☐ No ☑ Yes describe and show design

If Yes: **ADVANTEX AX20 W/ INTAGRATED PUMP**

Gravity Mains: 3" or larger I.D., minimum 6" fall per 100', 1500 lb. crush strength or equivalent

☐ Other:

Distribution Box:

Pre-cast concrete with **8** ports

Header Lines:

Material: 4" I.D. 1500 lb. crush strength plastic or equivalent from distribution box to 2' into absorption trench

Slope: 2"/100' minimum

☐ Other:

Percolation Lines:

Gravity 4" plastic 1000 lb. per foot bearing load or equivalent, slope 2"-4" (min.-max.) per 100'

☐ Other:

Absorption Trenches:

Square feet required: **1660 ft²** Depth to bottom of Pad: **+6 inches** Pad width: **20 feet**

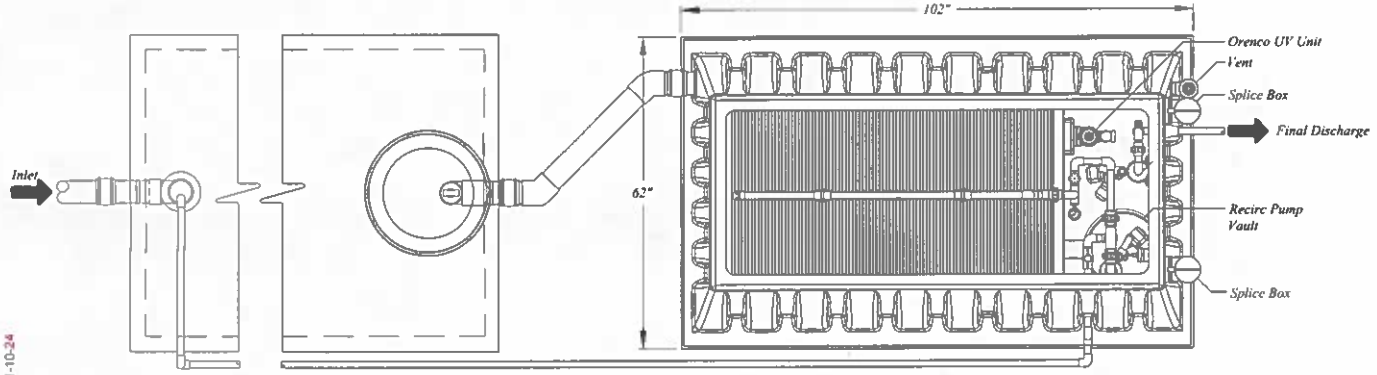
Depth of Sand: **16"** Pad length: **83 feet** Number of Pads: **1**

AX20RTUV Treatment System - UV with Pump Discharge (VA)

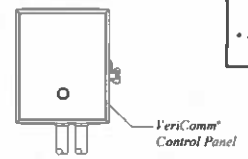
Filter Tank Dry Weight: 900 lbs

Design and Installation Notes

- For Expected Flows 4 Bedrooms or less
- Installation To Be Performed By An AdvanTex Trained Installer Only
- Start-up And Service To Be Performed By An AdvanTex Trained Service Provider



1000 gal. Primary Tank - Top View



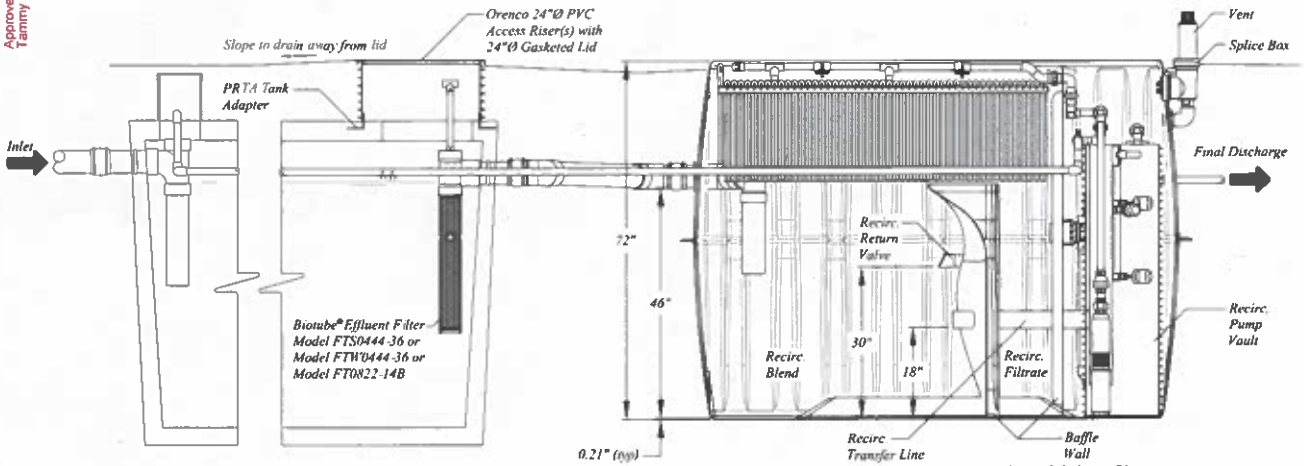
Control Panel Detail
Not To Scale

AX20 800 gal. Recirc. Tank - Top View

Note: Only tanks from the manufacturers listed below shall be used.

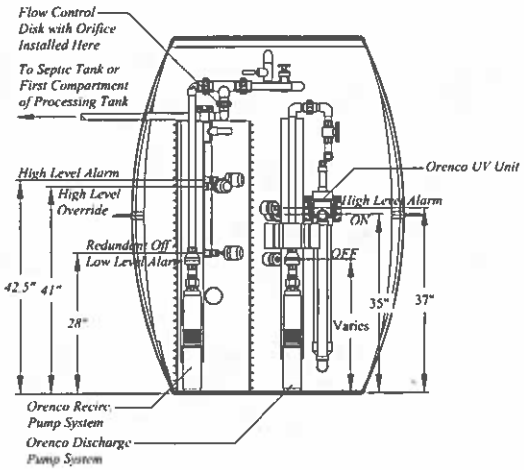
Tank Manufacturer	Septic Tank Size	I	D
Orenco Fiberglass Tank	1000 Gal.	11"	65"
C.T. Jamison	1000 Gal.	14"	65"
Hanover Precast	1000 Gal.	16"	66.5"
Rockingham Precast	1000 Gal.	16"	64"
Wrights Ready Mix	1000 Gal.	15"	65"
Beasley Concrete	1000 Gal.	16"	66"
Roth Global Plastics	1000 Gal.	18"	51"

Note: All tanks shall be tested for watertightness. All concrete tanks shall have PRTA24 cast into tank for acceptance of Model RR24XX Riser.



1000 gal. Primary Tank - Side View

AX20 800 gal. Recirc. Tank - Side View



Discharge Chamber - End View

0 1' 2' 4'
Graphic Scale

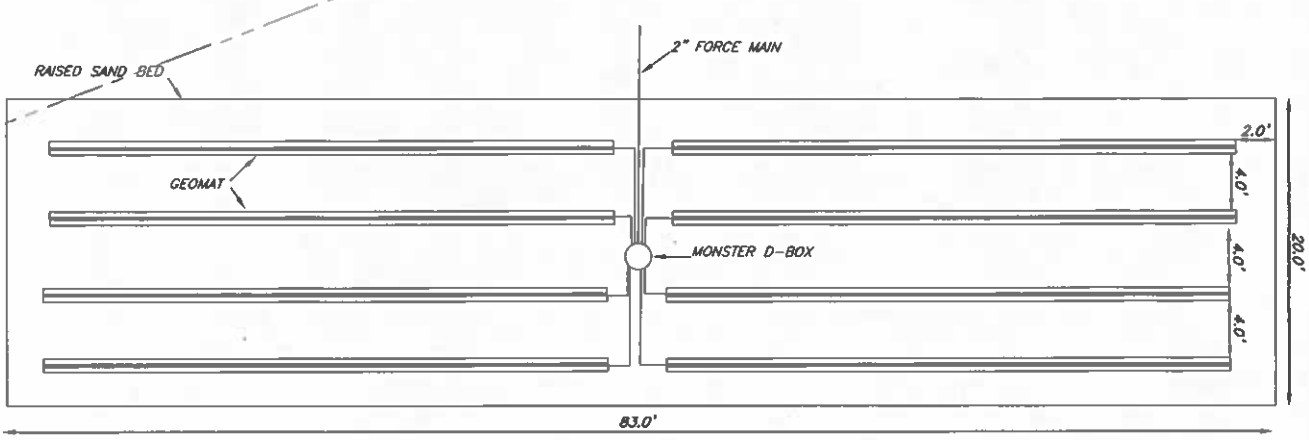
PRODUCT CONFIGURATION DRAWINGS

Orenco Systems® Incorporated
Changing the Way the World Does Wastewater®

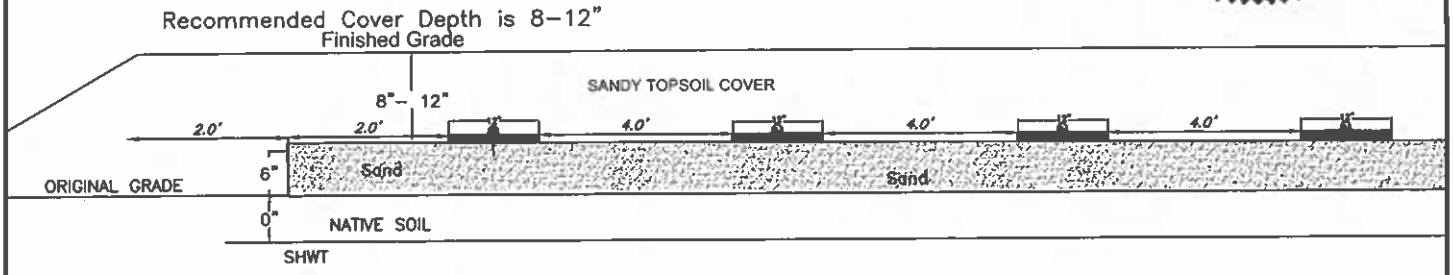
Drawn By: DSM	Project: AX20RTUV Mode 3B	Scale: 1" = 2'-0"	
Drawn For:		Sheet: 1 OF 1	
	Title: NDW-ATX-RT-VA-11	Rev: A-01	Date: 02/04/14

This plat is for Health Department review only. The information provided herein does not constitute a certified survey, building permit plat, or record plat. All matters pertaining to easements, setbacks, right of ways, etc, are the owner's responsibility.

Approved, HDID# 136-24-0006, 1-10-24
Tammy Faulkner, EHSsr



COMMONWEALTH OF VIRGINIA
[illegible] TAYLOR GOODMAN
Lic. No. 40228
1/8/24
PROFESSIONAL ENGINEER



DATE: 5/19/2023
SCALE: N/A
JOB NO: 59220006.00
Pur: MPPDC

CHK: dkh
DWG: dkh

Proposed
WASTEWATER TREATMENT
CAPTAIN SINCLAIR
POOLHOUSE
Gloucester County, Virginia

PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS
ROANOKE / RICHMOND / NEW RIVER VALLEY / SHENANDOAH VALLEY / LYNCHBURG
15871 City View Drive, Suite 200 / Midlothian, Virginia 23113 / Phone (804) 794-0571 / www.balzer.cc

BALZER & ASSOCIATES

Approved, HDID# 136-24-0006, 1-10-24
Tammy Faulkner, EHSsr

COMMONWEALTH OF VIRGINIA
S. TAYLOR GOODMAN
Lic. No. 40228
1/8/24
PROFESSIONAL ENGINEER

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS

Pump System Design Criteria, Specifications, and Calculations

A.	Number of bedrooms				3	
B.	Gallons per bedroom				150	Gal
C.	Design flow in gallons per day (A x B)				450	GPD
D.	Minimum pump capacity in gallons per minute (enhanced flow distribution)				10	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				8	ft
G.	Relative elevation of pump off float switch				0	ft
H.	Static head in feet (F-G)				8	ft
I.	Equivalent length of 2" pipe in feet for this system (all materials are 2"):					
	1 Length of 2" force main			1400	ft	
	2	3	90 degree bends at	5.2	feet per bend =	15.6 ft
	3	2	45 degree bends at	2.8	feet per bend =	5.6 ft
	4	1	Check valve	1.4	feet per valve =	1.4 ft
	5	1	Gate valve	17.2	feet per valve =	17.2 ft
	Total (1+2+3+4+5)				1439.8	ft
J.	Friction loss in feet per 100' of pipe (2" pipe, C=150, 36 GPM)				2.19	ft
K.	Number of 100' pipe increments (I/100)				14.398	ft
L.	Friction head for this system (J x K)				31.53	ft
M.	Total Dynamic Head (H + L)				39.53	ft
N.	Pump chamber volume in gallons				1000	Gal
O.	Gallons per inch in pump chamber				21.64	Gal
	(inside length = ____ ", inside width= ____ ")					
P.	Number of soil absorption trenches				4	
Q.	Length of soil absortion trenches				83	ft
R.	Total linear feet of percolation piping (P x Q)				332	ft
S.	Volume pumped per pump cycle in gallons (R x 0.653 x 60%)				130.0776	Gal
T.	Volume pumped per pump cycle in inches (S/O)				6.01	in.
U.	Minimum emergency storge in gallons (C/4)				112.5	Gal
V.	Minimum emergency storge in inches (U/O)				5.20	in.
W.	Maximum pump run time in minutes (S/D)				13.01	min.
X.	Minimum pump run time in minutes (S/E)				1.55	min.

Pump Selection:

Pump must provide a minimum of 10 GPM at a Total Dynamic Head of 39.53162 feet.

Pump ORENCO Model # PF100511FC

Orenco SYSTEMS

Technical Data Sheet

PF Series 60-Hz, 4-inch (100-mm) Submersible Effluent Pumps

Applications

Our 4-inch (100-mm) Submersible Effluent Pumps are designed to transport screened effluent (with low TSS counts) from septic tanks or separate dosing tanks. All our pumps are constructed of lightweight, corrosion-resistant stainless steel and engineered plastics; all are field-serviceable and repairable with common tools; 60-Hz PF Series models are CSA certified to the U.S. and Canadian safety standards for effluent pumps, meeting UL requirements.

Orenco's Effluent Pumps are used in a variety of applications, including pressurized drainfields, packed bed filters, mounds, aerobic units, effluent irrigation, effluent sewers, wetlands, lagoons, and more. These pumps are designed to be used with a Biotube® pump vault or after a secondary treatment system.

C SP US
LR80980
LR2053896

Powered by Franklin Electric

Features/Specifications

To specify this pump for your installation, require the following:

- Minimum 24-hour run-dry capability with no deterioration in pump life or performance*
- Patented 1/8-inch (3-mm) bypass orifice to ensure flow recirculation for motor cooling and to prevent air bind
- Liquid end repair kits available for better long-term cost of ownership
- TRI-SEAL™ floating impeller design on 10, 15, 20, and 30 gpm (0.6, 1.0, 1.3, and 1.9 L/sec) models; floating stack design on 50 and 75 gpm (3.2 and 4.7 L/sec) models
- Franklin Electric Super Stainless motor, rated for continuous use and frequent cycling
- Type SOOW 600-V motor cable

** Not applicable for 5-hp (3.73 kW) models*

Standard Models

See specifications chart, pages 2-3, for a list of standard pumps. For a complete list of available pumps, call Orenco.

Product Code Diagram

PF [10] [05] [1] [1] [FC] - [ ]

- Pump, PF Series
- Nominal flow, gpm (L/sec): 10 = 10 (0.6), 15 = 15 (1.0), 20 = 20 (1.3), 30 = 30 (1.9), 50 = 50 (3.2), 75 = 75 (4.7)
- Horsepower (kW): 03 = ⅓ hp (0.25), 05 = ½ hp (0.37), 07 = ¾ hp (0.56), 10 = 1 hp (0.75), 15 = 1½ hp (1.11), 20 = 2 hp (1.50), 30 = 3 hp (2.24), 50 = 5 hp (3.73)
- Frequency: 1 = single-phase 60 Hz, 3 = three-phase 60 Hz
- Voltage, nameplate: 1 = 115*, 2 = 230, 200 = 200, 4 = 460
- Check valve: Blank = no internal check valve, CV = internal check valve†
- Cord length, ft (m):‡ Blank = 10 (3), 20 = 20 (6), 30 = 30 (9), 50 = 50 (15)

* ½-hp (0.37kW) only
† Available for 10 gpm (0.6 L/sec), 1/2 hp (0.37 kW) only
‡ Note: 20-ft cords are available only for single-phase pumps through 1½ hp

Pump Selection for a Non-Pressurized System - Single Family Residence Project

Captian Sinclair / Poolhouse

Parameters

Discharge Assembly Size	2.00	inches
Transport Length	2085	feet
Transport Pipe Class	40	
Transport Line Size	2.00	inches
Distributing Valve Model	None	
Max Elevation Lift	5	feet
Design Flow Rate	8	gpm
Flow Meter	None	inches
'Add-on' Friction Losses	0	feet

Calculations

Transport Velocity	0.8	fps

Frictional Head Losses

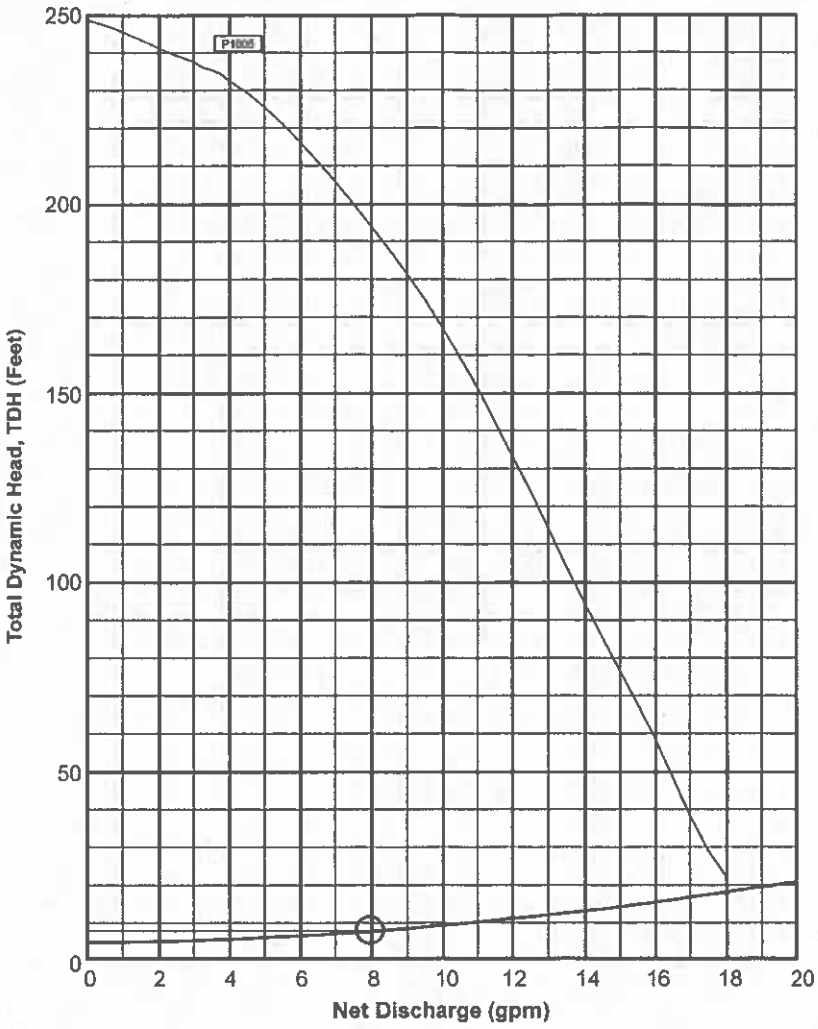
Loss through Discharge	0.1	feet
Loss in Transport	2.8	feet
Loss through Valve	0.0	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	0.0	feet

Pipe Volumes

Vol of Transport Line	363.4	gals

Minimum Pump Requirements

Design Flow Rate	8.0	gpm
Total Dynamic Head	7.9	feet



PumpData

P1005 HH Effluent
Pump Data
P1005 High Head Effluent Pump
10 GPM 1/2HP
115V 1Ø

Legend

System Curve:
Pump Curve:
Pump Optimal Range:
Operating Point:
Design Point:

Orenco SYSTEMS

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS

Approved, HDID# 136-24-0006, 1-10-24
Tammy Faulkner, EHSsr

Abbreviated Design Form

For use with gravity and pump drainfields, enhanced flow systems and low-pressure distribution systems when applying for a certification letter or subdivision approval.

Design Basis: **TL-3 To GeoMat Pad**

A. Estimated Percolation Rate: **50 min/inch**

B. Hydraulic Loading Rate: **0.5 GPD/ft²**
(Table 5.1 Regulations for Alternative Onsite Sewage Systems)

C. Number of Bedrooms: **3**

D. Peak Daily Flow: **450**
(150 GPD*C)

Area Calculations

E. Length of pad: **83 feet**

F. Width of pad: **20 feet**

G. Number of pads: **1**

H. Center spacing: **n/a**

I. Width required: **20 feet**
H(G-1)+F

J. Total square footage required: **900 ft²**
(line D/line B)

K. Square footage design: **1660 ft²**
(E*F*G)

L. Is reserve area required? ☑ Yes ☐ No

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Important Factors to Consider When Installing and Maintaining Onsite Sewage Disposal Systems

DRAINFIELD DISTURBANCE: The designated drainfield area (primary and reserve), must remain undisturbed until installation. The client is responsible for all parties that are involved in the home construction process and any destruction to the restricted area. The drainfield area is not to be driven on, parked on, or disturbed in anyway (i.e. soil compaction). Vehicles (trucks, tractors, and heavy equipment) especially should avoid this area. Our design package is final and cannot be deviated from without permission from our department. If the area is disturbed to a point where the area is no longer feasible as a drainfield site, the additional costs will fall on the client for our company or another AOSE to find another appropriate drainfield area.

LOGGING AND CLEARING: The clearing of a drainfield area is sometimes necessary, but must be followed according to the AOSE's specifications. The area must be hand-cleared when an engineered or alternative system has been specified with an install depth of 24 inches or less. Logging on or around the drainfield area is prohibited without permission from the AOSE. Heavy logging traffic and logging decks must be kept at least 50' feet away from the designated area (primary and reserve). If the area is disturbed to a point where the area is no longer feasible as a drainfield site, the additional costs will fall on the client for our company or another AOSE to find another appropriate drainfield area.

MULCH / IRRIGATION: We do not recommend the use of bark, sawdust, or plastic sheeting on drainfield sites. The purpose of these mulch beds is to prevent evaporation and retain water, while the primary function of a drainfield is to percolate water through the soil system with evapo-transpiration being an integral part of that process. Mulch can lead to an early failing of your septic system. Yard irrigation systems are not recommended for use on or within 25 feet of the drainfield trenches. Additional water added to the drainfield area can increase the likelihood of premature drainfield failure. The drainfield should be graded and seeded and maintained as a lawn for optimal performance. Consult your local Extension Service office for seed, lime, and fertilizer recommendations.

GARBAGE DISPOSERS AND KITCHEN WASTE: If a garbage disposal unit is installed within a home, the kitchen plumbing should be plumbed to a separate outlet and a 1250/1500-gallon septic tank/grease trap installed to receive only kitchen effluent. This effluent can then flow to the primary or a separate drainfield site. We do not recommend garbage disposal units with conventional drainfields that do not have a dedicated septic tank/grease trap. Grease/kitchen waste build-up can lead to premature failure of your septic system.

The client is responsible for maintaining the drainfield site and minimizing the disturbance on or around our designated area. It is also the responsibility of the client to ensure that the installer is supplied with the most updated version of all drawings and specifications, including a current Health Department approval letter. It is also your responsibility to pass care and maintenance information on to the eventual homeowner. We assume no liability outside of our specifications and design package. If any questions arise, do not hesitate to call for any advice or consultation.

David K. Hogan, AOSE CPSS

Approved, HDID# 136-24-0006, 1-10-24
Tammy Faulkner, EHSsr

AT A REGULAR MEETING OF THE GLOUCESTER COUNTY BOARD OF SUPERVISORS, HELD ON TUESDAY, DECEMBER 5, 2023, AT 6:00 P.M., IN THE COLONIAL COURTHOUSE AT 6504 MAIN STREET, GLOUCESTER, VIRGINIA ON A MOTION MADE BY MR. HEDRICK, AND SECONDED BY MR. CHRISCOE, THE FOLLOWING RESOLUTION WAS ADOPTED BY THE FOLLOWING VOTE:

Phillip N. Bazzani, yes;
Ashley C. Chriscoe, yes;
Kenneth W. Gibson, yes;
Michael W. Hedrick, yes;
Christopher A. Hutson, yes;
Robert J. Orth, yes;
Kevin M. Smith, yes;

RESOLUTION INTERPOSING NO OBJECTION ON BEHALF OF GLOUCESTER COUNTY, VIRGINIA TO THE USE OF, ENCROACHMENT UPON, AND TRANSVERSING OF CERTAIN COUNTY RIGHTS OF WAY BY THE MIDDLE PENINSULA CHESAPEAKE BAY PUBLIC ACCESS AUTHORITY (PAA) TO ENABLE THE PROVISION OF SEPTIC SEWAGE SYSTEM SERVICE FOR PROPERTIES OWNED AND BEING DEVELOPED BY THE PAA

WHEREAS, the PAA proposes to develop certain parcels of real property located in Gloucester County, Virginia, to-wit: Tax Map Nos. 47F(1)-2 RPC#18796, 47F(1)-3 RPC#14186, 47F(1)-5 RPC#25175 and 47(3)-B RPC#13634 for public park and occupancy uses; and

WHEREAS, in order to develop the property as proposed, it is necessary that the property have access to a functional sewage disposal system permitted by the Virginia Department of Health; and

WHEREAS, in order to provide the required sewage disposal system to service the property to be developed, it is necessary to transverse certain County owned rights of way for sewer pipes to run from the property to a drain field located across from said rights of way, generally as depicted on the plats attached hereto; and

WHEREAS, Virginia Code § 15.2-2001 authorizes localities in the Commonwealth to control their rights of way, and Virginia Code § 15.2-2009 authorizes localities to allow encroachments upon their rights of way subject to such terms and conditions as the governing body may prescribe; and

WHEREAS, the rights of way at issue are Whittaker Road, Lands End Road, and The Corduroy Null (also known as Robins Neck Drive), as depicted on the attached plat; and

WHEREAS, the Gloucester County Board of Supervisors has been requested to express that it has no objection to utilization of the rights of way as proposed.

NOW, THEREFORE, BE IT RESOLVED by the Gloucester County Board of Supervisors that the Board interposes no objection to use of, construction under, and transversing of the rights of way known as Whittaker Road, Lands End Road, and The Corduroy Null, generally as depicted on the attached plats for the purpose of enabling the provision of septic sewage service for the properties known as Tax Map Nos. 47F(1)-2 RPC#18796, 47F(1)-3 RPC#141, 47F(1)-5 RPC#25175 and 47(3)-B RPC#13634.

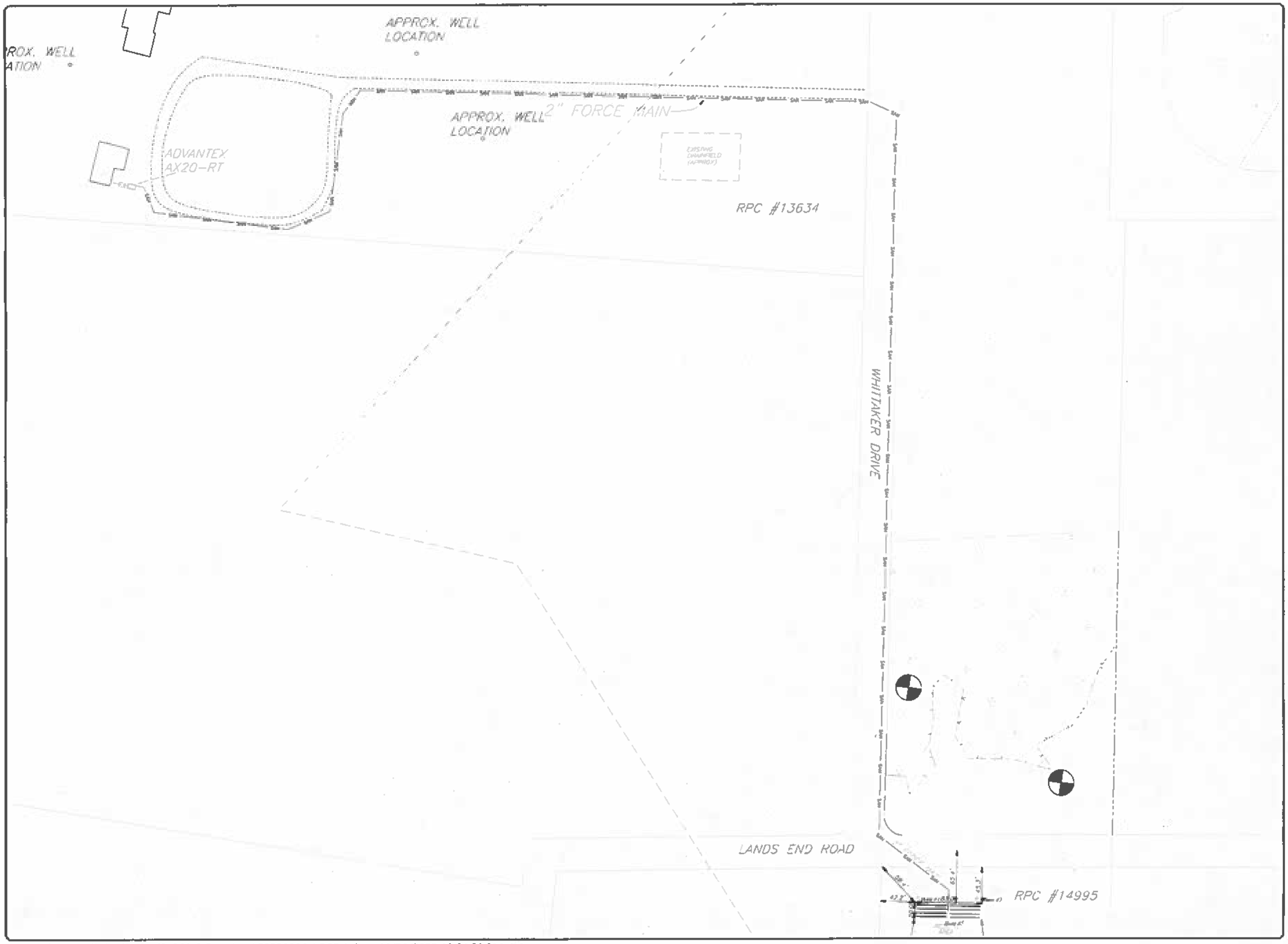
BE IT FURTHER RESOLVED that such expression of no objection shall be expressly contingent upon the following:

1. The rights of way shall only be used for the purposes as indicated hereinabove;
2. Following construction and installation of the pipe or pipes to convey sewage from the parcels to the drain field across the rights of way, the rights of way shall be restored, as is reasonably practicable to their condition prior to construction and installation of the pipes;
3. The PAA shall be liable for any negligence on account of such encroachment and utilization of the rights of way, and shall indemnify and hold harmless Gloucester County, Virginia, and the Gloucester County Board of Supervisors from and against all claims and liabilities associated with said use and encroachment; and
4. The PAA shall comply with all Federal, State and local laws, regulations, and ordinances regarding the proposed development and use of the rights of way as proposed, including the obtaining of all necessary governmental permits and permission regarding the proposed development and use.

A Copy Teste:

Carol Steele

Carol E. Steele, County Administrator



BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS
www.balzer.cc

CAPTAIN SINCLAIR
SEPTIC SYSTEM DESIGN
FORCE MAIN ROUTE

DRAWN BY	DKH
DESIGNED BY	DKH
CHECKED BY	DKH
DATE	10-18-2023
SCALE	1"=40'
REVISIONS	

1.0

J:\22\50\59\59220006.00 CAPTAIN SINCLAIR\SOILS\Drawings\59220006 AOSE 1.dwg, 11/20/2023 12:54:58 PM, 1:1

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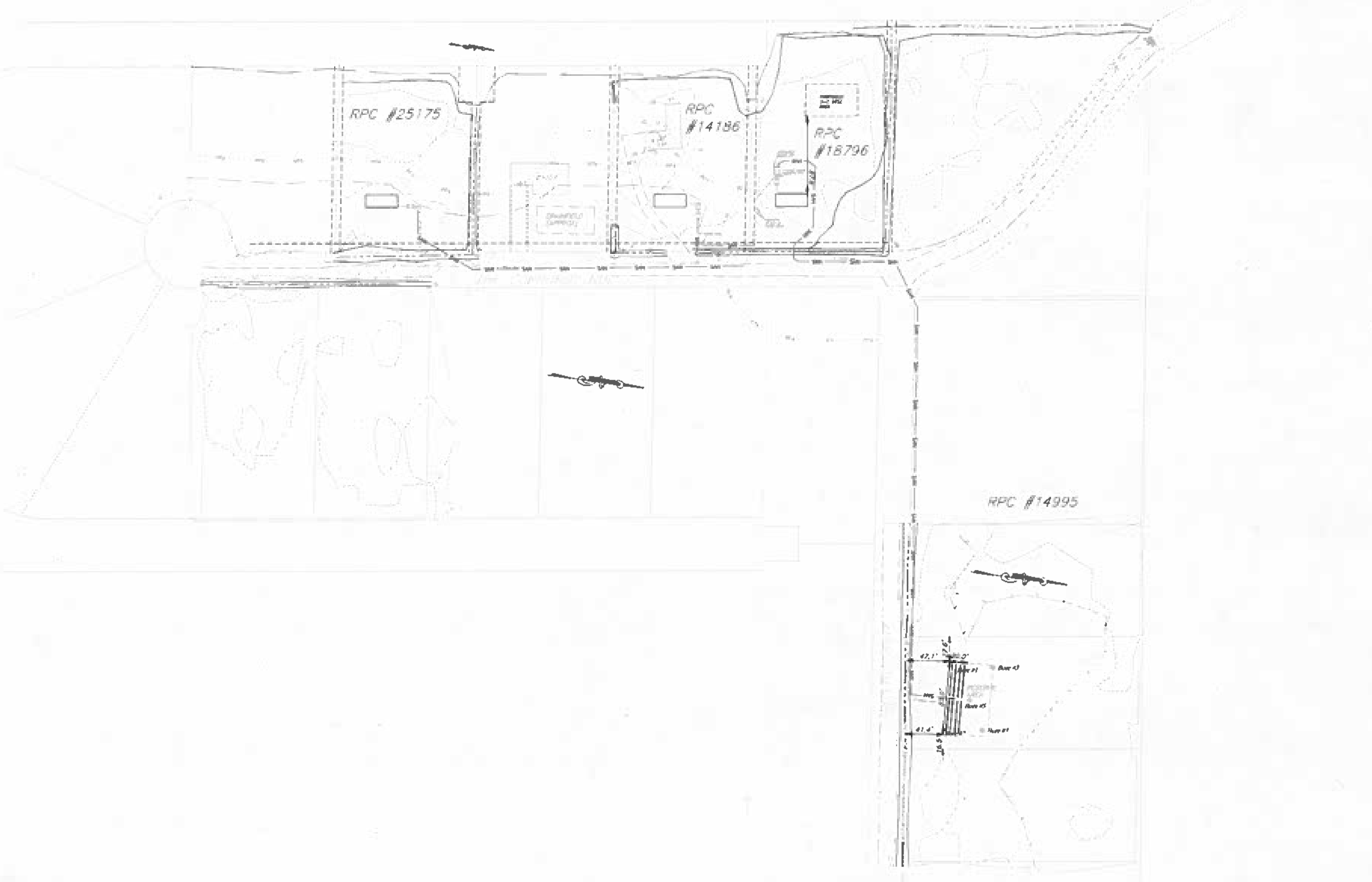

CAPTAIN SINCLAIR
SEPTIC SYSTEM DESIGN
FORCE MAIN ROUTE

1.0

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Pool House
136-24-0006
Faulkner EHSL
1-10-24

Dominion Energy

Drainfield Encroachment

THIS LICENSE AGREEMENT for Drainfield Encroachment (this "Agreement") dated as of this 6 day of October, 2023, by and between DOMINION ENERGY VIRGINIA, a Virginia public service corporation, doing business in Virginia as Dominion Energy Virginia ("**GRANTOR**") and

MIDDLE PENINSULA CHESAPEAKE BAY PUBLIC ACCESS AUTHORITY

("**GRANTEE**"), hereby provides as follows:

1. **GRANTEE** is the owner of certain real property situated in the City/County of GLOUCESTER, Virginia, over which **GRANTOR** has a right-of-way for its facilities, including one or more overhead utility lines.

2. **GRANTEE** has requested that **GRANTOR** permit **GRANTEE** to install and maintain one (1) sewage disposal system (the "Sewage Facilities") under or near the above referenced overhead utility line(s) of **GRANTOR** within **GRANTOR's** right-of-way.

3. **GRANTOR**, insofar as its rights and interests are concerned, hereby licenses and permits **GRANTEE** to install and maintain the above mentioned Sewage Facilities, subject to the following conditions contained herein.

4. Septic tanks will not be permitted on **GRANTOR's** right of way. **GRANTOR's** permission is for drain fields, gravity mains, and force mains only, subject to the restrictions herein.

5. Drain fields, gravity mains, and force mains will be permitted on **GRANTOR's** right-of-way subject to the following restrictions:

   (a) No grading or excavation shall be done within fifteen (15) feet of any of **GRANTOR's** poles, towers, structures, guys, anchors or other facilities.

   (b) A minimum distance of fifteen (15) feet must be maintained between all of **GRANTOR's** electrical conductors and all of **GRANTEE's** construction equipment.

   (c) None of **GRANTEE's** construction equipment may have wire cables which, if broken, could whiplash and come within ten (10) feet of any of **GRANTOR's** conductors.

   (d) **GRANTEE** is to avoid blasting on **GRANTOR's** right-of-way. If blasting is unavoidable, **GRANTEE** shall use the smallest explosive charge possible and matting or other suitable buffering to prevent damage to **GRANTOR's** lines and facilities.

Initials: MPCBPAA

VAROW No(s). 00-23-0225

Tax Map No. 47-3B RPC#13634

Form No. 720250-1 (May 2019)

(e) **GRANTEE** must give **GRANTOR** five (5) days notice before starting construction on **GRANTOR's** right-of-way.

(f) **GRANTEE** must pay the costs of **GRANTOR's** maintaining an inspector on the job site should such appear to be necessary in **GRANTOR's** reasonable discretion.

(g) **GRANTOR** reserves the rights to construct, operate, maintain, and rebuild any or all of **GRANTOR's** lines and facilities and to have access thereto without incurring any liability for damage to **GRANTEE's** Sewage Facilities; however, **GRANTOR** will exercise reasonable care in the performance of its work.

(h) Should all or any part of **GRANTEE's** Sewage Facilities be determined to be unsafe at any future date, the unsafe condition shall be corrected or removed by **GRANTEE** at **GRANTEE's** expense within thirty (30) days after receiving written notification of the same by the **GRANTOR.**

(i) **GRANTEE**, its successors, and assigns hereby agree to indemnify, save, and hold harmless **GRANTOR**, its officers and agents, and employees from and against any and all claims, demands, and damages, including death, and liability of every kind and nature whatsoever for, on account of, or growing out of the permission hereby provided to **GRANTEE** by **GRANTOR**, except when such claims and demands are caused solely by the gross negligence of **GRANTOR**, its agents, employees, successors, or assigns.

(j) In the event of any damage to **GRANTOR's** facilities by **GRANTEE** or any agent or contractor of **GRANTEE**, including but not limited to damage to poles, structures, guys, anchors, counterpoise, or landscaping, **GRANTEE** shall be responsible for all associated costs for the repairs of **GRANTOR's** facilities.

(k) **GRANTEE's** Sewage Facilities shall be designated and constructed to support occasional traffic crossings by heavy construction and/or maintenance equipment.

6. The license provided by this Agreement for **GRANTEE's** Sewage Facilities on **GRANTOR's** right-of-way shall in no way be construed as the granting of a perpetual easement by **GRANTOR** to **GRANTEE**. If it later becomes necessary for **GRANTOR** to exercise its rights in its right-of-way in a manner inconsistent with the concurrent uses of **GRANTEE** permitted herein, all costs and responsibility for **GRANTEE's** abandoning or relocating **GRANTEE's** Sewage Facilities within **GRANTOR's** right-of-way shall be borne by **GRANTEE**, its heirs, successors, and/or assigns, as applicable.

Initials: _____ NPCBPAA

Witness the following signatures and seals:

GRANTOR:

Dominion Energy Virginia, a Virginia public service corporation doing business in Virginia as Dominion Energy Virginia

By: SHAUN REILLY

Its: AUTHORIZED REPRESENTATIVE

Commonwealth of Virginia,

City/County of RICHMOND, to wit:

The foregoing was executed and acknowledged before me this 16 day of OCTOBER, 2023, by SHAUN REILLY, the AUTHORIZED REPRESENTATIVE of Dominion Energy Virginia, a Virginia public service corporation doing business in Virginia as Dominion Energy Virginia, for and on behalf of such public service corporation.

Amanda Lynn Parrish
Notary Public (Print Name)

Notary Public (Signature)

7859752
Virginia Notary Registration Number

My commission expires: 9-30-2024

AMANDA LYNN PARRISH NOTARY PUBLIC MY COMMISSION NUMBER 7859752 COMMONWEALTH OF VIRGINIA

Initials: _____

VAROW No(s). 00-23-0225

Form No. 720250-3 (May 2019)

Drainfield Encroachment

GRANTEE: Corporation

MIDDLE PENINSULA CHESAPEAKE BAY PUBLIC ACCESS AUTHORITY

By: LEWIS L. LAWRENCE

Its: SECRETARY

Commonwealth of Virginia,

City/County of Middlesex Co., to wit:

The foregoing was executed and acknowledged before me this 6th day of October

2023, by LEWIS L. LAWRENCE, the SECRETARY of

MIDDLE PENINSULA CHESAPEAKE BAY PUBLIC ACCESS AUTHORITY a, body politic of The Commonwealth of Virginia,

for and on behalf of MIDDLE PENINSULA CHESAPEAKE BAY PUBLIC ACCESS AUTHORITY.

Heather Modispaw
Notary Public (Print Name)

Heather Modispaw
Notary Public (Signature)

7930425
Virginia Notary Registration Number

My commission expires: 12/31/2025

HEATHER ANN MODISPAW - NOTARY PUBLIC
REG# 7930425
MY COMM. EXP. 12/31/2025
COMMONWEALTH OF VIRGINIA

Initials: MPCBPAA

VAROW No(s). 00-23-0225

Form No. 720250-4 (May 2019)

This plat is for Health Department review only. The information provided herein does not constitute a certified survey, building permit plat, or record plat. All matters pertaining to easements, setbacks, right of ways, etc, are the owner's responsibility.

DOMINION ENERGY PLAT# 00-23-0225

DATE: 5/19/2023
SCALE: 1"=200'
JOB NO: 59220006.00
Pur: MPPDC

CHK: dkh
DWG: dkh

Proposed
WASTEWATER TREATMENT
CAPTAIN SINCLAIR
PoolHouse
Gloucester County, Virginia

PLANNERS / ARCHITECTS / ENGINEERS / SURVEYORS
ROANOKE / RICHMOND / NEW RIVER VALLEY / SHENANDOAH VALLEY / LYNCHBURG
15871 City View Drive, Suite 200 / Midlothian, Virginia 23113 / Phone (804) 794-0571 / www.balzer.cc

BALZER & ASSOCIATES

Certified Wetland Delineation - Not Corp Received - ok

136-24-0006
1-10-24
Faulkner EHS.

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

15871 City View Drive
Suite 200
Midlothian, VA 23113
804.794.0571
www.balzer.cc

Roanoke
Richmond
New River Valley
Shenandoah Valley

August 31, 2023

Tammy Faulkner
Environmental Health Specialist Senior
Gloucester County Health Department
PO Box 663
Gloucester, Virginia 23061

RE: Captain Sinclair
Gloucester, VA GPIN 0684-59-7797, 0685-60-2345
Balzer Project Number 59220006.00

Dear Ms. Faulkner,

Balzer & Associates, Inc. has assessed the referenced site for the presence of waters of the U.S. and wetlands regulated under section 404 of the Federal Clean Water Act as defined by the United States Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual. The 4.93-acre study area is undeveloped forest bisected by Lands End Road, north of Whittaker Drive. This area was assessed in support of proposed development to the south at the Captain Sinclair project area. Additional delineation work on parcels to the north have been confirmed by USACE.

There are palustrine forested wetlands present within the proposed project limits. Surface drainage flows with the general gradient from the center of the site to the west and east, away from Lands End Road, ultimately to the Severn River.

The on-site wetlands and waters were delineated by Balzer and Associates, Inc. staff including a Professional Wetland Delineator (PWD) and submitted to USACE for confirmation.

The enclosed delineation map and data points by Balzer and Associates, Inc. were submitted to USACE on August 16, 2023 as an addendum to the confirmed delineation NAO-2022-01316 Captain Sinclair. The map, as well as the submittal most recently provided for Health Department review (HDID #136-23-0145; EHD#073-STS-102722) depicts wetland and waters locations accurately on the property.

If there are any questions or comments, please do not hesitate to contact me at (804) 794-0571.

Sincerely,

Balzer & Associates, Inc.

Emily Salkind

Emily Salkind, LPSS, PWD
Professional Wetland Delineator #3402000186
Environmental Project Manager
Associate

Envisioning Tomorrow, Designing Today

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Captain Sinclair Drainfield City/County: Gloucester/Gloucester County Sampling Date: 07/25/2023
Applicant/Owner: MPPDC State: VA Sampling Point: DP1
Investigator(s): EKS & TAS Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR or MLRA): MLRA 153B Lat: 37.328732 Long: -76.425484 Datum: NAD 83
Soil Map Unit Name: Meggett sandy loam (18) NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes No X
Is the Sampled Area within a Wetland? Yes No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15) (LRR U)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)
- Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): ____
Water Table Present? Yes ____ No ____ Depth (inches): ____
Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): ____
Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Not completed isn't this important?

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus alba	45	Yes	FACU
2. Quercus rubra	25	Yes	FACU
3. Pinus taeda	10	No	FAC
4.			
5.			
6.			
7.			
8.			
	80	= Total Cover	

50% of total cover: ____ 20% of total cover: ____

Sapling/Shrub Stratum (Plot size: 15')			
1. Pinus taeda	8	Yes	FAC
2. Liquidambar styraciflua	1	No	FAC
3. Juniperus virginiana	1	No	FACU
4.			
5.			
6.			
7.			
8.			
	10	= Total Cover	

50% of total cover: ____ 20% of total cover: ____

Herb Stratum (Plot size: 5')			
1. Microstegium vimineum	2	Yes	FAC
2. Juncus effusus	2	Yes	FAC
3. Parthenocissus quinquefolia	2	Yes	FACU
4. Toxicodendron radicans	2	Yes	FAC
5. Carex spp	2	Yes	FAC
6. Smilax Rotundifolia	2	Yes	FAC
7. Ilex opaca	2	Yes	FAC
8. Juniperus virginiana	2	Yes	FACU
9.			
10.			
11.			
12.			
	16	= Total Cover	

50% of total cover: ____ 20% of total cover: ____

Woody Vine Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____	= Total Cover	

50% of total cover: ____ 20% of total cover: ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)
Total Number of Dominant Species Across All Strata: 11 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 55 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
__ 3 - Prevalence Index is ≤3.0[1]
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (If observed, list morphological adaptations below).

Name	SALKIND, EMILY KATE
License Number	3402000186
License Description	Professional Wetland Delineator Certification
Rank	Professional Wetland Delineator
Address	RICHMOND, VA 23221
Initial Certification Date	2021-08-23
Expiration Date	2025-08-31

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100						
3-12+	10YR 5/2	85	10YR 5/4	10	C	M		
			10YR 3/1	5	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Captain Sinclair Drainfield City/County: Gloucester/Gloucester County Sampling Date: 07/25/2023

Applicant/Owner: MPPDC State: VA Sampling Point: DP2

Investigator(s): EKS & TAS Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR or MLRA): MLRA 153B Lat: 37.328184 Long: -76.425812 Datum: NAD 83

Soil Map Unit Name: Meggett sandy loam (18) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes X No ____

Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? Yes X No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): _____

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 3

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Liquidambar styraciflua	45	Yes	FAC
2. Pinus taeda	20	Yes	FAC
3. Acer rubrum	10	No	FAC
4. Quercus phellos	5	No	FACW
5.			
6.			
7.			
8.			
	80	= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Sapling/Shrub Stratum (Plot size: 15')			
1. Morella cerifera	25	Yes	FAC
2. Liquidambar styraciflua	7	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	32	= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Herb Stratum (Plot size: 5')			
1. Microstegium vimineum	20	Yes	FAC
2. Toxicodendron radicans	10	Yes	FAC
3. Carex spp	10	Yes	FAC
4. Juncus effusus	2	No	FAC
5. Liquidambar styraciflua	2	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	44	= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	

50% of total cover: _____ 20% of total cover: _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (If observed, list morphological adaptations below)

SOIL

Sampling Point: DP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5	10YR 3/1	100						
5-12+	10YR 6/1	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Captain Sinclair Drainfield City/County: Gloucester/Gloucester County Sampling Date: 07/25/2023

Applicant/Owner: MPPDC State: VA Sampling Point: DP3

Investigator(s): EKS & TAS Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR or MLRA): MLRA 153B Lat: 37.328846 Long: -76.424038 Datum: NAD 83

Soil Map Unit Name: Meggett sandy loam (18) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	Is the Sampled Area within a Wetland? Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☑ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☑ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 5

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	30	Yes	FAC
2. Liquidambar styraciflua	20	Yes	FAC
3. Acer rubrum	15	Yes	FAC
4. Quercus phellos	10	No	FACW
5.			
6.			
7.			
8.			
	75	= Total Cover	
50% of total cover: _____	20% of total cover: _____		
Sapling/Shrub Stratum (Plot size: 15')			
1. Pinus taeda	30	Yes	FAC
2. Liquidambar styraciflua	20	Yes	FAC
3. Acer rubrum	10	No	FAC
4. Ilex opaca	10	No	FAC
5.			
6.			
7.			
8.			
	70	= Total Cover	
50% of total cover: _____	20% of total cover: _____		
Herb Stratum (Plot size: 5')			
1. Phragmites australis	10	Yes	FACW
2. Juncus effusus	7	Yes	FAC
3. Carex spp	5	No	FAC
4. Liquidambar styraciflua	2	No	FAC
5. Pinus taeda	2	No	FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	26	= Total Cover	
50% of total cover: _____	20% of total cover: _____		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____	= Total Cover	
50% of total cover: _____	20% of total cover: _____		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: DP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/1	100						
4-8	10YR 5/2	85	10YR 3/1	5		M		
			10YR 5/4	10	C	M		
8-12+	10YR 6/1	70	10YR 5/2	15	C	M		
			10YR 3/1	5		M		
			10YR 5/4	10	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☑ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Captain Sinclair Drainfield City/County: Gloucester/Gloucester County Sampling Date: 07/25/2023

Applicant/Owner: MPPDC State: VA Sampling Point: DP4

Investigator(s): EKS & TAS Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR or MLRA): MLRA 153B Lat: 37.328313 Long: -76.424853 Datum: NAD 83

Soil Map Unit Name: Meggett sandy loam (18) NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ____	Is the Sampled Area within a Wetland?	Yes ____ No X
Hydric Soil Present?	Yes ____ No X		
Wetland Hydrology Present?	Yes ____ No X		

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): _____

Water Table Present? Yes ____ No ____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ____ No ____ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: DP4

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus taeda	30	Yes	FAC
2. Liquidambar styraciflua	30	Yes	FAC
3. Magnolia grandiflora	15	No	FACU
4. Quercus rubra	15	No	FACU
5. Acer rubrum	10	No	FAC
6.			
7.			
8.			
	100	= Total Cover	
50% of total cover:		20% of total cover:	

Sapling/Shrub Stratum (Plot size: 15')			
1. Pinus taeda	15	Yes	FAC
2. Quercus phellos	15	Yes	FAC
3. Liquidambar styraciflua	5	No	FAC
4. Acer rubrum	5	No	FAC
5.			
6.			
7.			
8.			
	40	= Total Cover	
50% of total cover:		20% of total cover:	

Herb Stratum (Plot size: 5')			
1. Rosa rubiginosa	4	Yes	FACU
2. Vitis rotundifolia	2	Yes	FAC
3. Quercus rubra	1	No	FACU
4. Liquidambar styraciflua	1	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	8	= Total Cover	
50% of total cover:		20% of total cover:	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
50% of total cover:		20% of total cover:	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: DP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/1	100						
3-12+	10YR 5/3	80	10YR 4/4	10	C	M		
			10YR 5/4	10	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) (LRR P, T, U)
- ☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ☐ Muck Presence (A8) (LRR U)
- ☐ 1 cm Muck (A9) (LRR P, T)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) (MLRA 150A)
- ☐ Sandy Mucky Mineral (S1) (LRR O, S)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) (LRR P, S, T, U)
- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
- ☐ Thin Dark Surface (S9) (LRR S, T, U)
- ☐ Loamy Mucky Mineral (F1) (LRR O)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) (LRR U)
- ☐ Depleted Ochric (F11) (MLRA 151)
- ☐ Iron-Manganese Masses (F12) (LRR O, P, T)
- ☐ Umbric Surface (F13) (LRR P, T, U)
- ☐ Delta Ochric (F17) (MLRA 151)
- ☐ Reduced Vertic (F18) (MLRA 150A, 150B)
- ☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (LRR O)
- ☐ 2 cm Muck (A10) (LRR S)
- ☐ Reduced Vertic (F18) (outside MLRA 150A,B)
- ☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ☐ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:

Depth (inches):

Hydric Soil Present? Yes ____ No X

Remarks:

BALZER & ASSOCIATES
PLANNERS / ARCHITECTS
ENGINEERS / SURVEYORS

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CAPTAIN SINCLAIR

WETLANDS LAYOUT