



**RAPIDAN SERVICE AUTHORITY
BOARD OF MEMBERS AGENDA
18-May-23**

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**NOTE: MEETING TO BE HELD AT THE ORANGE COUNTY PUBLIC SAFETY BUILDING AT 2:00 PM.
11282 GOVERNMENT CENTER DRIVE, ORANGE, VA 22960**

stating they had no comment. Ms. Lynn indicated that if the SCC requested anything additional from RSA, she would advise the Board in order to keep the process moving.

On a motion from the Chairman, seconded by Bowman, and passed on a unanimous rollcall vote, the Board went into closed session 2:15 PM to discuss. The Board came out of closed session at 2:32 PM with the Board members individually verbally certifying that only public business matters appropriate to discuss in the closed session had been discussed. A motion was then made by Crozier, seconded by Coppage, as follows: The RSA Board agrees that it is interested in accepting the land located in Wilderness Shores from Tricord and authorizes the RSA General Manager to continue to work with Tricord in effectuating this transfer. The motion was passed unanimously on a rollcall vote. Mr. Crozier thanked Tricord for attending the meeting.

As there was no further business to be brought before the Board, Bowman made a motion, seconded by Martin, that the meeting be adjourned. The motion passed on a unanimous voice vote at 2:34 PM.

Chairman

LEASE AGREEMENT

THIS LEASE (this “Lease”) is made effective this _____ day of _____, 2023 (the “Commencement Date”), by and between GREENE COUNTY, a political subdivision of the Commonwealth of Virginia (“Landlord”), and RAPIDAN SERVICE AUTHORITY, a political subdivision of the Commonwealth of Virginia (“Tenant”).

WITNESSETH:

1. **Premises.** Landlord hereby leases to Tenant and Tenant hereby leases from Landlord, on an "AS IS, WHERE IS" basis, that certain real estate located at 11235 Spotswood Trail, Ruckersville, Virginia 22968, in Greene County, Virginia, together with all buildings and other improvements thereon, including the “administration building” located thereon, as more particularly described as Tax Map Number 50-A-3 (the “Premises”). Except as expressly provided herein, Landlord makes no representations or warranties concerning the condition or fitness of the Premises.

2. **Term.** The term of this Lease (the “Term”) shall begin on the Commencement Date and expire on December 31, 2023 (the “Expiration Date”). Tenant shall not have the option to extend the Term beyond the Expiration Date.

3. **Rent.** Tenant shall pay Landlord rent in an aggregate amount equal to One Dollar (\$1.00), which shall be due and payable in advance on the Commencement Date.

4. **Property Taxes.** Tenant acknowledges and agrees that the Premises is exempt from taxation under Section 58.1-3606 of the Code of Virginia (1950). Tenant shall take no actions that would impair such tax-exempt status. In the event Tenant takes any action that would violate this Section 4, Tenant shall promptly pay, at Tenant’s sole expense, as and when due, all resulting taxes related to the Premises that may be levied and assessed by any governmental authority upon the Premises and any improvement thereon, including all real estate taxes and assessments.

5. **Utilities and Services.** Tenant shall pay for all utilities provided to the Premises, including, but not limited to, those necessary for heat, ventilation, air conditioning, gas, hot and cold water, electricity, internet, garbage disposal, and sewer services.

6. **Maintenance Responsibilities.** During the Term, Landlord shall be responsible for the repairs and maintenance of the major structural elements of the Premises, including the roof, exterior walls, foundation, HVAC system, plumbing, electrical and mechanical devices. During the Term, Tenant shall be responsible for the repairs and maintenance of the interior of the Premises and outdoor landscaping. Tenant shall take good care of the Premises and shall not do or suffer any waste with respect thereto. Landlord shall promptly make all repairs to the Premises, of every kind and nature, necessary to keep the Premises in good order and condition. Tenant shall keep and maintain all portions of the Premises, including, without limitation, the fixtures and equipment thereof and the bathrooms facilities contained therein, in a clean and orderly condition, free of accumulation of dirt, rubbish, and other obstructions. All damage or injury to the Premises

or any part thereof caused by Tenant or its employees, agents, or invitees, shall be promptly repaired at Tenant's sole cost and expense.

7. **Improvements.** Tenant shall not make any material alterations, additions, or other improvements to the Premises without Landlord's prior written consent. The ownership of any such approved alterations, additions, or improvements shall vest in Landlord at the expiration of this Lease, unless otherwise agreed by Landlord.

8. **Signage.** Within thirty (30) days after the Commencement Date, Tenant shall remove all signage from the Premises that identifies or otherwise references Tenant; provided, that Tenant shall leave the brick sign structure located on the Premises in place and undamaged. Tenant shall not install any additional signage during the Term without Landlord's prior written consent.

9. **Right of Entry.** Landlord and Landlord's agents shall have the right during reasonable hours and upon reasonable prior notice to Tenant to enter the Premises, and upon such notice, Tenant shall permit Landlord, its agents, employees and contractors to enter the Premises and all parts thereof at any reasonable time; provided, that, Landlord shall not unreasonably disrupt Tenant's business operations.

10. **Insurance.** For the duration of the Term, Landlord shall maintain in full force and effect fire and extended coverage insurance on the buildings and improvements on the Premises in amounts as determined by Landlord but not less than the value of the property and improvements shown on the Greene County WebGIS of \$259,300. Tenant shall keep and maintain in full force and effect a policy of insurance on the contents of the building, naming Landlord as an additional insured thereon. Tenant shall maintain in full force and effect a general liability policy insuring both the Landlord and Tenant against the risk of loss due to personal injury or property damage arising from the use of the premises.

11. **Environmental Matters.**

11.1As used in this Lease: (i) "Hazardous Wastes" means all waste materials subject to regulation under the Comprehensive Environmental Response, Compensation, and Liability Act as modified by the Superfund Amendments and Reauthorization Act of 1986, the Resource Conservation and Recovery Act, or applicable state law and any other applicable federal, state or local laws and their regulations now in force or hereafter enacted relating to hazardous waste disposal; and (ii) "Toxic Substances" means and includes any materials present on the Premises which have been shown to have significant adverse effects on human health or which are subject to regulation under the Toxic Substances Control Act, applicable state law, or any other applicable federal, state or local laws now in force or hereafter enacted relating to toxic substances. "Toxic Substances" includes, but is not limited to, asbestos, polychlorinated biphenyls (PCB's), petroleum products, and lead-based paints. All such laws relating to Hazardous Waste disposal and Toxic Substances are collectively referred to herein as "Environmental Laws".

11.2 Tenant shall comply in all respects with all Environmental Laws and shall not, without Landlord's prior written consent, permit any activity at or on the Premises that involves, or could involve, (i) the use, manufacture, storage or disposal of Hazardous Wastes or Toxic Substances,

or (ii) the imposition of liability on the Landlord or any other subsequent owner of the Premises or the creation of a lien on the Premises under any Environmental Laws. Tenant shall promptly notify Landlord in the event of the discovery of any Hazardous Wastes or Toxic Substances as the Premises, any spillage or leak of Hazardous Wastes or Toxic Substances, and any violation or potential violation of any Environmental Law at or on the Premises.

12. **Eminent Domain.** If any part of the Premises shall be taken for any public or quasi-public use under any statute or by right of eminent domain, or by purchase in lieu thereof, then Tenant shall have the option to terminate this Lease as of the date that title shall be taken. All compensation awarded or paid in any such eminent domain proceeding shall belong to and be the property of Landlord without any participation by Tenant; provided, however, that nothing contained herein shall be construed to preclude Tenant from prosecuting any claim directly against the condemning authority.

13. **Default.** In the event either party fails to perform, or violates any of the covenants, conditions, provisions or agreements herein contained when due, and such failure or violation continues for thirty (30) days after written notice thereof from the non-defaulting party (or such longer period of time as may be reasonable under the circumstances), the non-defaulting party shall have the right to terminate this Lease upon at least five (5) days' written notice to the defaulting party. A termination under this Section 14 shall not waive any claim the non-defaulting party has against the defaulting party; and upon any such termination, the non-defaulting party shall, in addition to all other rights and remedies it may have at law or in equity, be entitled to enforce any or all of the defaulting party's obligations hereunder by specific performance and shall be entitled to collect all damages it may incur on account of such default, including, but not limited to, reasonable attorney fees.

14. **No Assignments or Subleases.** Tenant shall not assign, mortgage or in any manner transfer this Lease or any estate or interest herein or permit any such assignment or transfer to occur by operation of law or otherwise sublet the Premises or any part thereof without the prior written consent of Landlord.

15. **Surrender.** Upon the expiration of this Lease, Tenant shall surrender the Premises broom clean, in good order and condition, and in substantially the same condition as leased to Tenant on the Commencement Date, normal wear and tear and damage due to acts of God excepted, subject to requirements of Section 7 above.

16. **Notices.** All notices, demands, requests and other instruments that are required or may be given under this Lease or the law, shall be given by US. mail, postage prepaid, registered, or certified, return receipt requested, properly addressed at the addresses set forth below with sufficient postage prepaid.

17. **Governing Law.** All of the terms hereof shall be governed and construed by the laws of the Commonwealth of Virginia.

18. **Entire Agreement; Waivers.** This Lease forms the entire agreement between Landlord and Tenant and supersedes all prior agreements with respect to the subject matter herein

and no provision hereof shall be altered, waived, amended, or extended, except in a writing signed by both parties. No Party shall be considered to have waived any of the rights, covenants, or conditions of this Lease unless evidenced by its written waiver and the waiver of one default or right shall not constitute the waiver of any other.

19. **Severability.** If any term or provision of this Lease is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other term or provision of this Lease or invalidate or render unenforceable such term or provision in any other jurisdiction.

20. **Survival.** All obligations of Tenant hereunder not fully performed as of the expiration or earlier termination of the Term shall survive the expiration or earlier termination of the Term hereof until fully performed or waived in writing by Landlord.

21. **Counterparts.** This Lease may be executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original for all purposes, and all such counterparts shall together constitute but one and the same agreement. A signed copy of this Lease delivered by facsimile, e-mail or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Lease.

[Signature page follows.]

IN WITNESS WHEREOF, the parties hereto have caused this Lease to be executed as of the date first written above.

LANDLORD:

Greene County

By: _____
Name: _____
Title: _____

Address for Notices:

TENANT:

Rapidan Service Authority

By: _____
Name: _____
Title: _____

Address for Notices:

Approved as to form: _____

County Attorney

**Rapidan Service Authority
April 20, 2023 Meeting
Lease**

RESOLUTION

**A RESOLUTION APPROVING THE LEASE FOR RAPIDAN SERVICE AUTHORITY
AND GRANTING AUTHORITY TO THE RAPIDAN SERVICE AUTHORITY
CHAIRMAN TO ENDORSE SAID LEASE**

WHEREAS Rapidan Service Authority (“RSA”) is an authority established and operating under the Virginia Water and Waste Authorities Act, Virginia Code § 15.2-5100 et seq. Greene County and the Counties of Orange and Madison are participating localities of RSA pursuant to §15.2-5102. RSA was created by concurrent resolutions adopted in June, 1969; and

WHEREAS on July 28, 2020, the Board of Supervisors of Greene County adopted a Resolution calling for the Boards of Supervisors of Orange County and Madison County to consent to Greene County's withdrawal from RSA pursuant to Va. Code § 15.2-5112(B); and

WHEREAS on April 5, 2021, the Board of Supervisors of Greene County adopted its Second Resolution calling for the Boards of Supervisors of Orange County and Madison County to consent to Greene County’s withdrawal from RSA pursuant to Va. Code § 15.2-5112(B); and

WHEREAS on April 13, 2021, the Boards of Supervisors of Orange County and Madison County adopted Resolutions consenting to Greene County’s withdrawal from RSA pursuant to Va. Code § 15.2-5112(B); and

WHEREAS on May 25, 2021, Orange County and Madison County entered into a Memorandum of Agreement/Withdrawal of Greene County, Virginia from Rapidan Service Authority. This Memorandum of Agreement provided for the governance and operation of RSA after Greene County's withdrawal; and

WHEREAS on June 14, 2022, the participating localities, including Greene County, adopted a Concurrent Resolution Approving a Withdrawal and Transition Agreement for Greene County’s Withdrawal from RSA. On the same date, the respective officers of the participating localities signed the Withdrawal and Transition Agreement; and

WHEREAS on June 16, 2022, RSA’s Board of Members adopted a Resolution approving the Withdrawal and Transition Agreement; and

WHEREAS, on June 30, 2022, RSA’s Board of Members adopted a Resolution consenting to Greene County’s withdrawal from RSA; and

WHEREAS Section 2.01(d) of the Withdrawal and Transition Agreement provides that “After the Asset Transfer Date, Greene shall lease the administration building and grounds on Route 33 to RSA through December 31, 2023, for rent of \$1.00.” Pursuant to the provisions of

Section 2.01(d) of the Withdrawal and Transition Agreement, a lease has been prepared and approved by Greene County. A copy of the approved lease is attached hereto as Exhibit “1.” Greene County has agreed to execute the lease upon transfer of the assets; and

WHEREAS The Virginia Resources Authority entered into a Consent Agreement with Greene County and RSA dated as of January 1, 2023, agreeing to Greene County’s withdrawal from RSA; and

WHEREAS Greene County has submitted the SCC Application to the SCC requesting issuance of a Certificate of Withdrawal; and

WHEREAS Greene County has been working with the Virginia Department of Health and the Virginia Department of Environmental Quality to procure the necessary permits; and

WHEREAS upon SCC’s approval of the Application and issuance of a Certificate of Withdrawal, Greene County will be ready to procure the needed permits; and

WHEREAS RSA’s Greene County Assets as set forth in the Withdrawal and Transition Agreement, need to be transferred to Greene County simultaneously with Greene County’s receipt of the permits; and

WHEREAS RSA will need an executed lease once the assets including the administration building are transferred to Greene County.

WHEREAS RSA gives its approval to the terms of the Lease attached hereto as Exhibit “1,”

NOW, THEREFORE BE IT RESOLVED, that the Rapidan Service Authority Board does hereby approve the Lease attached hereto as Exhibit “1” and all of its Recitals and Terms.

BE IT FURTHER RESOLVED that the Rapidan Service Authority Board authorizes its chairman to execute the lease attached hereto as Exhibit “1” after the lease is signed by Greene County and upon the “asset transfer date” as defined in Article II Section 2.01 of the Withdrawal and Transition Agreement.

Adopted: April 20, 2023

Lee Frame, Chairman
Rapidan Service Authority

ATTEST:

Tim Clemons, Secretary
Rapidan Service Authority

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**Rapidan Service Authority
May 18, 2023 Meeting
Engineering Contracts**

RESOLUTION

**RESOLUTION GRANTING AUTHORITY TO THE RAPIDAN SERVICE AUTHORITY
GENERAL MANAGER TO EXTEND THE TERM CONTRACTS FOR
WATER/WASTEWATER ENGINEERING SERVICES
FOR 3 ADDITIONAL 1 -YEAR TERMS.**

WHEREAS on May 19, 2022, the Rapidan Service Authority (“RSA”) Board authorized the General Manager to enter into one-year term contracts with four engineering firms, namely Wiley & Wilson Inc., Mangrum Consulting & Design, Hurt & Proffitt, Inc., and Short-Elliott-Hendrickson, Inc.;

WHEREAS pursuant to this authority, the General Manager entered into a one-year term contract with Wiley & Wilson Inc. on June 2, 2022;

WHEREAS pursuant to this authority, the General Manager entered into a one-year term contract with Mangrum Consulting & Design on May 24, 2022;

WHEREAS pursuant to this authority, the General Manager entered into a one-year term contract with Hurt & Proffitt, Inc. on June 1, 2022;

WHEREAS pursuant to this authority, the General Manager entered into a one-year term contract with Short-Elliott-Hendrickson, Inc. on June 10, 2022;

WHEREAS the termination dates for all four of these contracts for water/wastewater engineering services are approaching;

WHEREAS Code of Virginia §2.2-4303.1 provides that a term contract for professional engineering services may be renewable for three additional terms at the option of the public body;

WHEREAS Rapidan Service Authority still believes that the services of these four engineering firms will be of potential benefit and use for upcoming and future projects;

WHEREAS Rapidan Service Authority hereby gives its approval to the extension of the four term engineering contracts listed above;

NOW, THEREFORE BE IT RESOLVED, that the Rapidan Service Authority Board does hereby authorize its general manager to extend the term contracts as identified above for water/wastewater engineering services for 3 additional 1-year terms.

Adopted: May 18, 2023

Lee Frame, Chairman
Rapidan Service Authority

ATTEST:

Tim Clemons, Secretary
Rapidan Service Authority

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THIS LEASE AGREEMENT, made and entered as of this 16th day of May 2023 by and between **FREDERICK J. GETTY**, party of the first part, hereinafter called Lessors, and **RAPIDAN SERVICE AUTHORITY**, party of the second part, hereinafter called Lessee.

ARTICLE I - GRANT AND TERM

Section 1.01 Grant. Lessors do by these presence lease and demise unto, Lessee the following described property, to wit:

Suite A comprising of approximately 2,100 square feet on the ground and second floor levels, commonly known as 4258 Germanna Highway, Suite A, Locust Grove, Virginia, 22508.

Personal property delineated in 17.08.

Section 1.02 Initial Term and Termination. Lessee shall have and hold the leased premises pursuant to this agreement for a term of one year, immediately following the commencement of the leased term, as hereinafter defined.

Section 1.03 Commencement of the Term. The initial term of this lease shall commence June 1, 2023 and terminate at midnight on May 31, 2024.

ARTICLE II - RENT

Section 2.01. Rent. The rental for the initial term shall be \$3,500.00 per month. A security deposit in the amount of one (1) month's rent, \$3,500.00 along with the first month's rent shall be due and payable upon the execution of this lease by the Lessee. Notwithstanding the foregoing, Lessee shall be permitted to begin occupancy of the premises prior to June 1, 2023., The monthly rental for any occupancy prior to June 1, 2023 shall be prorated on a daily basis. Lessee shall pay unto Lessors the sum of \$ 115.00 for each day Lessee intends to occupy the premises prior to June 1, 2023. The payment for such occupancy prior to June 1, 2023 shall be due and payable in full prior to such occupancy.

Section 2.02 Payment and Late Payment Penalty. The monthly rental for the term of this lease, and the monthly rental payments shall be due and payable on the first day of each month thereafter until fully paid, commencing with the first day of the first month after the commencement of the initial term. In the event any rental payment is not received within five (5) days of its due date,

then Lessee shall pay to Lessors, a late charge of 15% of any unpaid balance then due. In addition, any unpaid balance shall accrue interest at an APR of 18% until paid.

Section 2.03 Payment of Rentals. All rental payments shall be paid to Lessors at the address shown in Section 17.02, or at such other place as the Lessors may designate in writing.

Section 2.04 Bad Checks. Lessee agrees to pay as additional rent a charge of \$100.00 for each check returned for insufficient funds. If any of Lessee's checks are returned to Lessors for insufficient funds, Lessors shall have the option of requiring that further payments must be paid by cash or money order.

ARTICLE III - USE OF PREMISES

Section 3.01 Use of the Demised Premises. The demised premises may be used for the conducting of business as an office of a public utility company. No other business shall be permitted or undertaken in the subject premises without the prior written consent of Lessors. Lessee shall specifically not use the subject premises for the operation or conducting of the business of a law office, beauty salon, real estate closing company or real estate title company.

ARTICLE IV - REPAIRS AND ALTERATIONS

Section 4.01 Repairs by Lessors. Lessors shall maintain the structure of the building, including the exterior walls, roof, foundation, and exterior grounds. Lessors shall be responsible for the repairs and maintenance of the major structural elements of the Premises, including HVAC system, plumbing, electrical and mechanical devices, not otherwise caused by Lessee's or its employees, invitees, or guests, abuse, misuse or negligence. Lessee shall take good care of the Premises and shall not do or suffer any waste with respect thereto. Lessors shall promptly make all repairs to the Premises, of every kind and nature, necessary to keep the Premises in good order and condition. Lessee shall keep and maintain all portions of the Premises, including, without limitation, the fixtures and equipment thereof and the bathrooms facilities contained therein, in a clean and orderly condition, free of accumulation of dirt, rubbish, and other obstructions. Lessee agrees to keep its section of the sidewalk leading to its portion of the common area and its parking area clean and free of litter and debris.

Section 4.02 Roofing Activities. Lessee shall not attach anything to the roof of the building, without the prior written consent of Lessors. No penetration shall be allowed without the express written permission of Lessors. If permission is granted, all work shall be performed by Lessor's

roofer at Lessees' expense.

Section 4.03 Alteration and Remodeling. Subject to Lessors prior written approval, Lessee shall have the right to replace the carpeting and paint the interior walls within the leased area, and further, subject to Lessor's approval, shall have the right to make alterations and changes to the interior of the leased premises as it deems necessary for its purposes, provided that such alterations do not injure the building structure. It is agreed that all alterations and changes to said premises shall be made at Lessee's sole cost and expense. Any permanent alteration or change so made by Lessee shall become the property of Lessors at the termination of this lease, or at Lessor's sole option, must be removed and the structure restored to its original condition prior to the Lessee's occupancy. If applicable, all restoration shall be at Lessee's sole cost and expense. Lessee agrees that it will remove at its own expense and forthwith repair any and all damage done by the removal of Lessee's appliances or fixtures. Prior to making any of the aforesaid alterations, Lessee shall assure to Lessors satisfaction that payment for the same will be made by Lessee, and Lessee agrees to completely and fully indemnify Lessors against any mechanic's liens or other lien or claim in connection with the making of such alterations. It is specifically understood and agreed that any alteration, remodeling, repair, replacement, and/or maintenance required by or required of Lessee, must be conducted and constructed by duly licensed and qualified individuals and/or entities preapproved by Lessor. Any appliances within said premises are AS IS and maintenance, repair and replacement of the same shall be at Lessee's sole cost and expense.

Section 4.04 Compliance with Governmental Regulations. Lessee shall promptly execute and fulfill all the ordinances of Orange County, Virginia applicable to Lessee's operation on said premises and all orders and requirements imposed by virtue of said county for the correction, prevention and abatement of nuisances in connection with Lessee's operations on said premises.

ARTICLE V - TAXES

Section 5.01 Personal Property Taxes. Lessee shall pay all personal property taxes levied by any governmental authority with respect to its property located on the demised premises and hold Lessors harmless with respect thereto.

ARTICLE VI - INSURANCE AND INDEMNITY

Section 6.01 Lessors' Indemnity. Lessors shall not be liable to Lessee or to Lessee's employees, agents, invitees or visitors for any damage to person or property caused by any action or omission

of Lessee, its employees, agents, invitees or visitors. Lessee agrees to indemnify and hold Lessors harmless from any and all claims for such damage.

Section 6.02 Public Liability and Property Damage Insurance. Lessee herewith agrees to carry public liability insurance and property damage insurance to indemnify Lessors from liability arising out of claims for persons or property injured on the premises, herein demised. Such general public liability insurance to be carried by Lessee shall provide protection to the extent of not less than \$500,000.00 for the injury or death of one person and \$1,000,000.00 per occurrence for the injury or death of more than one person, and \$100,000.00 for damage to property of third persons. Lessee will furnish a certificate of insurance to Lessors upon the request of Lessors. Said certificate shall reflect as co-insured/additional insured, Lessors, and/or Lessor's mortgagee.

Section 6.03 Fire Insurance. Lessors shall procure and maintain during the term of this lease or any extension thereof fire insurance on the demised premises. Likewise, Lessee agrees to carry its own fire insurance coverage on its property located on the demised premises, and Lessee expressly waives all right of recovery against Lessors, their employees, agents or assigns for such losses of property owned by Lessee located on the demise premises.

Section 6.04 Waiver of Subrogation. Lessee hereby releases Lessor, from any and all liability from any loss or damage which may be inflicted upon the property or any of Lessee's invitees, clients, employees, and/or guests unless such loss or damage shall be brought about by the fault or negligence of Lessor, its agents, employees, invitees, or assigns.

ARTICLE VII - SIGNS

Section 7.01 Signs. Lessee may, specifically subject to Lessors' prior written approval and the provisions of Article IV, at its expense, construct a sign to properly conduct its marketing activities. The design and installation of such sign must have Lessor's prior written approval. Lessors warrant that they will cooperate with Lessee in obtaining sign permits and will not restrict or prohibit the use of such signs, provided the signs conform with existing laws related to the erection of such signs. It is understood and agreed that the availability of signs and sign permits are not a contingency of this agreement. Further, Lessee understands that if the allowance of signage is based on building area or lot frontage, Lessee will be restricted to the area of such signage provided them based on such percentage of building frontage. Further, signage shall be permitted only in those areas designated and approved by Lessor and Lessor reserves the sole and exclusive right to relocate and/or alter any designated area and signage permitted.

ARTICLE VIII - UTILITIES

Section 8.01 Utility Connections. Lessors shall at their expense, provide the necessary mains, conduits and facilities of the available utilities to the premises. Lessee agrees to pay any security deposit that may be required by the utilities to be used by it, or any fees charged. In the event Lessee requires additional utilities, upgraded electric, or other related alterations, Lessee may at its sole cost and expense, with Lessors prior written approval only, arrange and contract for installation of the same at Lessee sole cost and expense. Any and all alterations or other adjustments must be conducted and constructed by duly licensed and qualified individuals and/or entities and approved by Lessor prior to commencement of the same.

Section 8.02 Lessee's Responsibility for Utilities Consumed. Lessee shall be solely responsible for and shall promptly pay all charges for heat, gas, if available, electricity, telephone, or other utilities used or consumed on the demised premises. The Lessors shall provide to Lessee water and sewage up to 6000 gallons per month. Lessor hereby reserves the right to charge Lessee for its share of water and sewer fees should Lessee's water and sewer use exceed this amount.

ARTICLE IX - ASSIGNMENT SUBLETTING AND MORTGAGING

Section 9.01 Assignment. Lessees shall not transfer, assign, sublet or share rights in this lease or Lessee's interest in the demised premises without first procuring the written consent of the Lessors. Any attempted transfer, assignment, subletting or sharing of rights without Lessor's written consent shall be void and confer no rights upon any third person; and Lessors reserve the right to immediate re-entry in the event of any such attempted transfer, assignment, subletting or sharing and retake the subject premises without further notice to Lessee and remove Lessee and its property therefrom. Lessee agrees to reimburse Lessors for Lessor's reasonable attorney's fees, if any, incurred in connection with the documentation of any transfer by Lessee of its rights hereunder.

Section 9.02 Written Document Required. Each transfer, assignment, subletting, hypothecation or sharing of rights to which there has been consent shall be by an instrument in writing, in a form satisfactory to Lessors, executed by any and all third parties obtaining any right hereunder as well as the parties hereto; and such writing shall require that such third party shall agree, in writing, to assume to be bound by, and to perform the terms, covenants and conditions of this lease agreement to be done, kept and performed by Lessee, including the payment of all amounts due or to become due under this lease agreement. In addition, as a condition precedent to Lessors' consent to any

transfer, assignment, subletting, or hypothecation of this lease or Lessee's interest in the demised premises, Lessors may require any or all of the following:

- (1) Lessee shall remain fully liable under the terms of this lease during the unexpired term thereof, unless released in writing by Lessors;
- (2) Lessors shall not be bound by any provision in any agreement pertaining to Lessee's transfer of rights or sharing of the demised premises to which they are not parties thereto;
- (3) Lessee shall deliver to Lessors one executed copy of any and all written instruments evidencing or relating to Lessee's transfer, assignment, subletting, or hypothecation of this lease agreement or Lessee's interest in the demised premises;
- (4) Lessee hereby agrees and acknowledges that the conditions permitted to be imposed upon the granting of Lessor's consent hereunder are reasonable and Lessor's imposition of such conditions shall under no circumstances impair or limit Lessor's rights and remedies under Virginia law.

Section 9.03 Consummation of Proposed Transfer. Notwithstanding any other provision hereof, in lieu of giving such consent as contemplated by Sections 9.01 and 9.02, Lessors may, at their option, elect to (1) construe such proposed transfer as an offer to Lessors which may be accepted at any time within sixty (60) days after receipt thereof, and if so accepted such transfer by Lessee shall automatically be deemed consummated on all the terms and provisions set forth in such proposed transfer; or (2) terminate this lease, or in the case of a proposed subletting or assignment of a portion of the premises, elect to terminate this lease upon thirty (30) days prior notice with respect to that portion and release Lessee from any liability under this agreement as to that portion of the demised premises involved, accruing after the effective date of such termination.

Section 9.04 Each Transfer Independent. Lessor's consent to Lessee's transfer or sharing of the demised premises on any one or more occasions shall apply only to the specific transaction thereby authorized. Such consent shall not be construed as waiver of the duty of Lessee or any transferee to obtain Lessor's consent to any other or subsequent transfer or sharing of the demised premises or as modifying or limiting Lessor's rights hereunder. Lessor's acceptance of rent or any other payment directly from any third party shall not be construed as a waiver of any of Lessor's rights or Lessor's agreement to accept the attornment of any third party in the event of a termination of this lease agreement.

Section 9.05 Third Party Consent. In the event that Lessors give consent to a transfer of rights

18
or sharing of the premises, such third party to whom said consent was given may in turn apply to Lessors for their consent to subsequent transfers of rights or sharing of the demised premises, in which case the provisions of this article shall apply as fully as possible to such third-party transfers, provided, however, that as an additional condition of the granting of Lessor's consent the demised premises will not, in Lessor's opinion, thereby become unduly fractionalized.

Section 9.0 Mortgage by Lessors. Lessors shall have the right to mortgage the demised premises, and all of his rights hereunder, but any such mortgage or deed of trust shall be junior, subject, and subordinate to the rights of Lessee under this lease agreement. In the alternative, if any mortgage or beneficiary under a deed of trust will agree in writing that so long as Lessee performs the obligations incumbent upon the Lessee under the terms of this lease agreement, and this lease and Lessee's right to occupy the demised premises shall continue in full force and effect after such mortgaging, then this lease agreement will become junior, subject and subordinate to such mortgage or deed of trust. In confirmation of such subordination, Lessee agrees, within the limits of this article, to execute promptly any reasonable certificate that Lessors may request, from time to time.

ARTICLE X – CONDEMNATION

Section 10.01 Whole or Partial Taking. In the event that the demised premises or any part thereof shall at any time after the execution of this lease agreement be taken for public or quasi-public use or condemned under any eminent domain statutes, then this lease agreement shall terminate as to the parts so taken on the day when Lessee is required to yield possession thereof. Lessors at their own expense shall make such repairs and alterations as may be necessary in order to restore the part not taken to useful condition, and the fixed minimum rent shall be reduced proportionally as to the portion of the demised premises so taken. If the amount of the demised premises so taken is such as to impair substantially the usefulness of the demised premises for the purposes for which the same are leased, then Lessee shall have the option to terminate this lease agreement as of the date when Lessee is required to yield possession.

Section 10.02 Sharing of Condemnation Proceeds. All compensation awarded for such taking of the fee and leasehold shall belong to and be the property of Lessors.



ARTICLE XI - DESTRUCTION OF DEMISED PREMISES

Section 11.01 Damage to Building - In the event the building as described in Section 1.01 is damaged by fire, or other casualty, thru no fault or negligence of Lessee, during the term of this lease agreement or any extension thereof, to the extent that such damage substantially interferes with the operation of Lessee's business Lessee may, at its option, terminate this lease agreement by a written notification at such time to Lessors, whereupon all rights and obligations hereunder shall cease and terminate.

ARTICLE XII - SURRENDER OF PREMISES AND INSPECTION

Section 12.01 Liability for Return of Premises. Upon the termination or expiration of this lease agreement, Lessee will remove all of its property from the demised premises and deliver possession of the premises, thoroughly clean and in basically the same good condition as existed at the commencement of this lease, reasonable wear and tear excepted. All floorings must be professionally cleaned. Lessee will be liable for any damages Lessors may suffer due to Lessee's failure to leave the demised premises in the required condition, including any loss of rent from the next tenants. Lessee will surrender all keys to the demised premises on the date Lessee vacates the same and failure to return all keys will result in a \$250.00 deduction from the security deposit.

Section 12.02 Move Out Inspection. Upon the termination or expiration of this agreement, Lessors will inspect the demised premises to determine whether Lessee has properly maintained the same and has left the same thoroughly cleaned and in good condition, reasonable wear and tear excepted. Grease accumulation and unreasonable marks, holes, nicks or other injury to walls, ceilings, floors, or appliances will not be considered ordinary wear and tear. This inspection will be made to determine what portion of the security deposit will be returned to Lessee and whether Lessee will be liable for damages exceeding the amount of the security deposit. The foregoing inspection will be made as soon as reasonably possible by Lessor after the termination of Lessee's occupancy of the said premises. For purposes of this section, the termination of Lessee's occupancy of the said premises will not be deemed to have occurred until all of Lessee's property has been removed from the demised premises. Within 5 days after Lessors receive notice of Lessee's intent to vacate, or upon request by Lessors for Lessee to vacate, Lessors will advise Lessee that Lessee will have right to be present during this inspection. Upon receiving such notice, Lessors will notify Lessee of the time and date when the inspection will be made. If Lessee attends the inspection, an itemized list of damages known to exist at the time of the inspection will be provided to Lessee by Lessors as soon as reasonably possible after completion of the inspection.

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ARTICLE XIII - DEFAULT AND ABANDONMENT

Section 13.01 Default by Lessee. In the event Lessee shall commit one of the following acts:

- (1) Fails to pay any installment of rent within 5 calendar days after the due date or fails to perform or commence in good faith and proceed with reasonable diligence to perform any of its covenants under this lease within 15 calendar days after notice, or
- (2) Is adjudicated as bankrupt, or
- (3) Has a receiver appointed for all or substantially all of its profits and such appointment is not vacated within 45 calendar days, or
- (4) Has a trustee in reorganization or arrangement; or
- (5) Files a voluntary petition for reorganization or arrangement, or
- (6) Files an answer admitting bankruptcy or agreeing to reorganization or arrangement, or
- (7) Makes an agreement for the benefit of creditors, or
- (8) Permits its leasehold interest hereunder to be sold pursuant to execution.

In such event, Lessors may terminate this lease and reenter the demised premises with or without process of law, using force as may be necessary, remove all persons and property therefrom, make such alterations and repairs as may be necessary in order to relet the demised premises or any part thereof upon the best terms and conditions that shall be available at the time and Lessee shall remain liable for all costs and expenses of alterations and repairs and reletting and for the difference between the rentals received by Lessors and the rent which would have been paid hereunder by Lessee. If Lessors rent the demised premises for more than the annual rental as described in Section 2.01, the Lessee shall not be entitled to any part thereof.

Section 13.02 Waiver of Breach. The waiver by Lessors of any breach of any term, covenant or condition herein contained, shall not be deemed to be a waiver of any subsequent breach of the same.

Section 13.03 Abandonment of Premises. If all occupants of the leased premises will be absent from the same for more than 30 days, Lessee will give prior written notice of such absence to

Lessors. If Lessee fails to give such notice, Lessors may deem the demised premises to be abandoned and may reenter and relet the same, and Lessee will remain liable for all rent and any damages until the demised premises are relet or the term of the lease expires, whichever comes first. Any personal property Lessee leaves on the demised premises after the termination or expiration of this lease agreement or abandonment of the demised premises may be treated by Lessors as abandoned property. Lessors will prepare an itemized list of such property and may immediately remove the property from the demised premises and place it in storage at the expense of Lessee, for safe keeping for a period of not less than one month from the date this lease agreement terminates, and possession of the demised premises is delivered to Lessors. Lessee may reclaim the property during the said one month period, provided that Lessee pays the costs of its removal and storage. Upon expiration of the said one month period, Lessors will be free to dispose of the property. Any funds received by Lessors from the disposal of Lessee's property may be applied to Lessee's indebtedness to Lessors for unpaid rent or other damages, including charges for removing, storing, and selling the property.

ARTICLE XIV - INSPECTION OF PREMISES

Section 14.01 Lessors' Rights to Inspect. Lessors and its agent or employees shall have the right to enter the demised premises at all reasonable times to examine the same and to show them to prospective purchasers or prospective lessees, and to make such repairs, alterations, improvements, or additions as Lessors may deem necessary or desirable.

ARTICLE XV - QUIET ENJOYMENT

Section 15.01 Lessor's Covenant of Quiet Enjoyment. Lessors covenant that upon payment of the rent by Lessee and complying with the terms, covenants and conditions of this lease, it shall peaceably and quietly have, hold and enjoy the demised premises for the term hereof or any extension of the same without hindrance of interruption by Lessors or by any other person or persons claiming under Lessors.

ARTICLE XVI - RENEWAL AND HOLDING OVER

 **Section 16.02 Rent for Holding Over Period.** If Lessee remains in possession of the demised premises or any part thereof after the expiration of this lease agreement or any extension thereof without the express written consent of Lessors, such occupancy shall be deemed a tenancy from month to month at a monthly rental rate of 150% of the last monthly rent due hereunder plus all other charges payable hereunder Lessee covenants that it will faithfully observe each and every other term and provision of this lease agreement during any such hold-over occupancy. Such month-to-month tenancy may be terminated by either party upon thirty (30) days written notice.

ARTICLE XVII - MISCELLANEOUS

Section 17.01 Force Majeure. In the event Lessors shall be delayed or hindered in or prevented from the performance of any duty required hereunder by reason of fire, casualty, strikes, lockouts, labor trouble, inability to procure materials permits, permits or supplies, failure of power, governmental authority, riots, insurrections, war or other reason of like nature, where such delay, hindrance or prevention or performance shall not be within the reasonable control of Lessor and is not avoidable by diligence, Lessor shall promptly give notice to Lessee and thereupon performance of such act shall be excused for such period of delay. The provisions of this section shall not apply, however, to any payment of rent, and it is understood and agreed that the provisions regarding the abatement of rent in the event of damage to the premises shall prevail over the terms of this section.

Section 17.02 Notices. Any notice provided for herein shall be given by written instrument, personally delivered, or sent by United States First Class mail, postage prepaid to, or at such address as the other party may designate from time to time, with written notice given in accordance with the terms of this section.

Lessor: Frederick J. Getty
P.O. Box 1040
Locust Grove, VA 22508

Lessee: Rapidan Service Authority
By Tim Clemons, General Manager
P.O. Box 736
Locust Grove, VA 22508

 **Section 17.03 Successor in Interest.** The terms and conditions of this lease agreement shall be binding upon the respective successor and assigns of the parties hereto. The Lessee's agree and acknowledge that they are jointly and severally liable and responsible to comply with the terms and payments contained herein.

Section 17.04 Headings. The article in section headings in this agreement are for convenience and reference only and shall not be construed or held in any way to explain, modify, amplify, or add to the interpretation, construction or meaning of this agreement.

Section 17.05 Attorney Fees. If, on account of any breach by Lessee of its obligations hereunder, it shall become necessary for Lessors to employ an attorney to enforce or defend any of its rights or remedies hereunder or to enforce Lessee's obligations hereunder, and should Lessor substantially prevail, Lessor shall be entitled to all costs and expenses incurred, including but not limited to all attorney's fees incurred in such action.

Section 17.06 Entire Agreement. The foregoing lease agreement constitutes the entire agreement between the parties and all prior negotiations are merged into this agreement. Any amendment, change or addition to this agreement shall be made only in writing signed by both parties.

Section 17.07 Common Area Maintenance and Snow Removal. It is understood and agreed that the maintenance of the common area and snow removal is essential to the operation of Lessee's business and the other businesses in Lessor's complex. As such, Lessor reserves the right to charge Lessee, as additional rent, its pro-rata share, as defined hereinabove, for the maintenance and snow removal on the common areas of the complex. Any bills submitted shall be due within 15 days of Lessee's receipt of the same.

Section 17.08 Lessee Use of Business Furniture. It is understood and agreed that the Lessee shall be permitted to use for its purposes the business furniture currently situated in the demised premises. Such furniture is "AS IS" and maintenance, repair, and replacement of the same shall be at Lessee's sole cost and expense. Tenant use of existing furniture in the Premises is without charge. Tenant shall be responsible to return such furniture in the same condition received, normal wear and tear excepted, upon the expiration of this lease. All furniture shall continue to be owned by Landlord. This furniture consists of the following:

1 conference room table;

16 Desks;

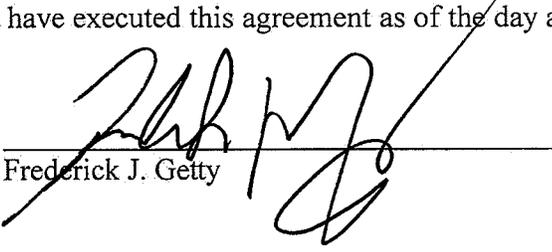
11 chairs;

1 folding table;

1 file cabinet; and

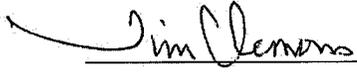
1 double door metal cabinet.

IN WITNESS WHEREOF the parties hereto have executed this agreement as of the day and year first above written.



Frederick J. Getty

Rapidan Service Authority
By Tim Clemons, General Manager

 Tim Clemons GM/RSA



COMMONWEALTH of VIRGINIA

Parham Jaber, MD, MPH
Acting State Health Commissioner

Department of Health
OFFICE OF DRINKING WATER
Culpeper Field Office

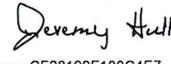
400 S. Main Street, 2nd Floor
Culpeper, VA 22701
Phone: 540-829-7340

April 25, 2023

The Office of Drinking Water congratulates you for earning the enclosed Virginia Optimization Program Award, which was attained by scoring consistently excellent performance at the water treatment plant throughout the previous year.

We commend the waterworks personnel on the time and effort they continue to invest in going beyond minimum requirements to provide the highest quality drinking water to customers. We look forward to the continued excellent operation in the future.

Sincerely,

DocuSigned by:

CF28199F180C4E7...

Jeremy D. Hull, P.E.
Engineering Field Director

Enclosure

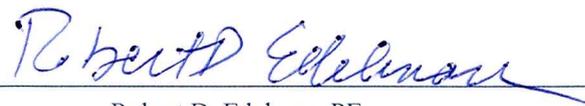
RECEIVED
MAY 01 2023
RSA

Office of Drinking Water
For Achieving Virginia's Optimization Program Goals
Rapidan Service Authority
Wilderness Water Treatment Plant

Is Awarded the

2022 Silver

Water Treatment Plant Performance Award for
Excellence in Filtration and Backwash



Robert D. Edelman, PE
Director, Division of Technical Services



Doubling Down on Packaged Treatment to Maximize Capacity and Improve Quality

Germanna-Wilderness Water Improvements Plan

Phase 1



David Jarrell
Director of Operations
Rapidan Service Authority

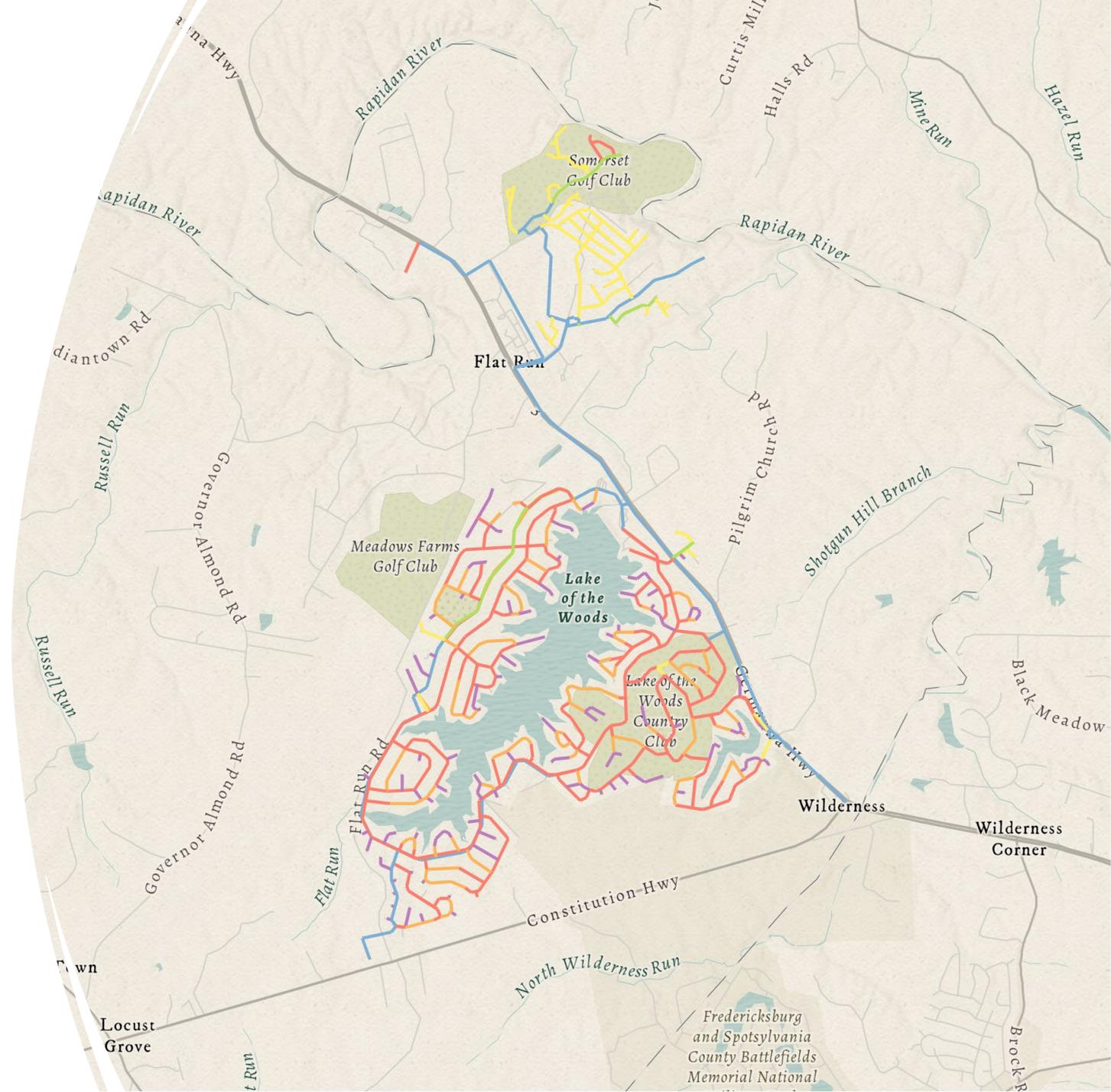
MANGRUM
Consulting & Design



C. Robert L. Mangrum, P.E., BCEE
Consultant / Process Engineer

Wilderness WTP Waterworks Service Area

- 5,162 connections
- 12,595 population
- Primarily Residential
- 20 miles southeast of Culpeper
- 15 miles west of Fredericksburg

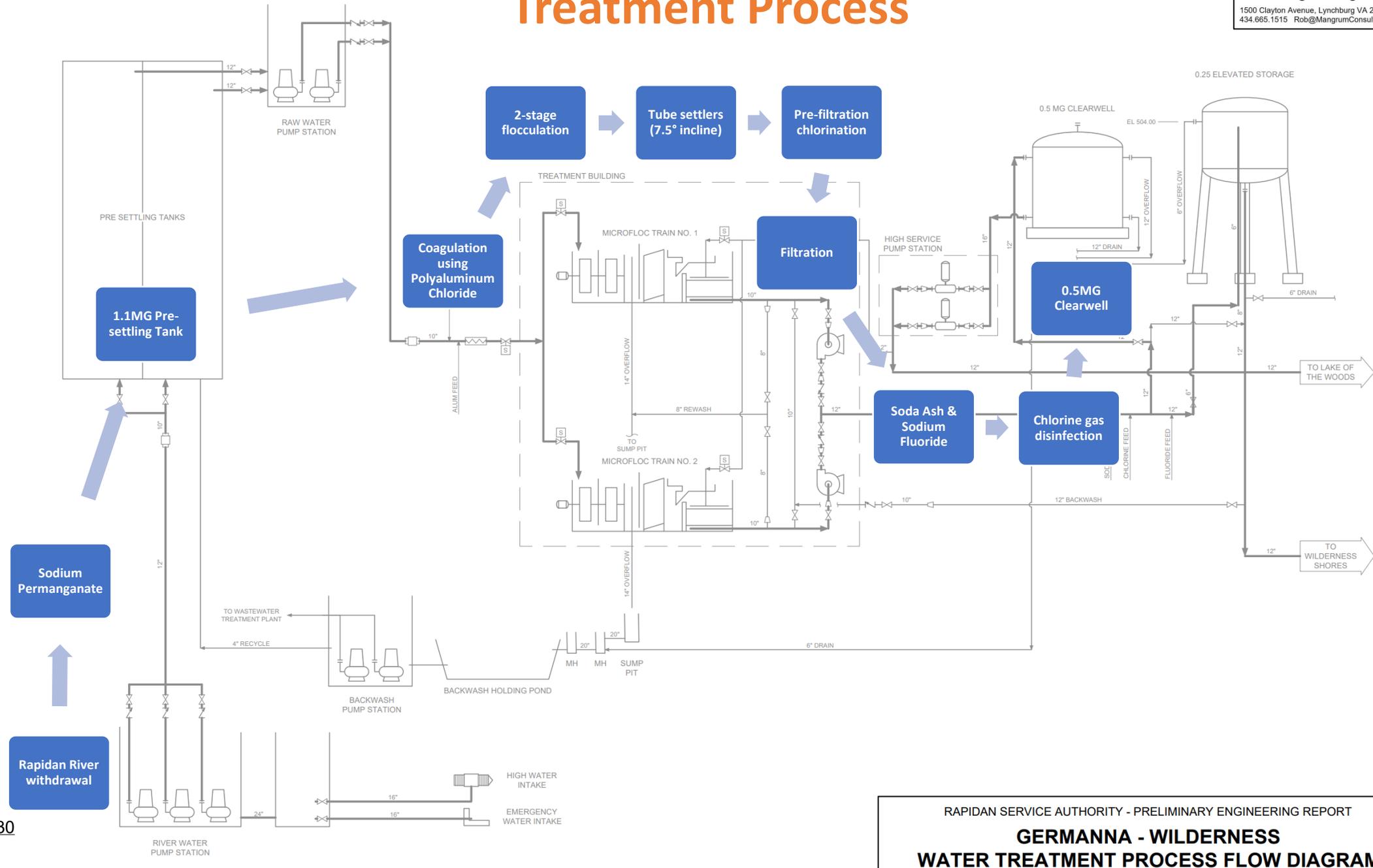




Brief History

- Rapidan Service Authority (RSA) acquired the system in 1987
- 8 wells served Lake of the Woods subdivision
- 1.58 MGD surface water treatment plant in service 1991
- All wells have since been abandoned due to poor water quality and yield
- 3 MGD Rapidan River withdrawal – VWP permit

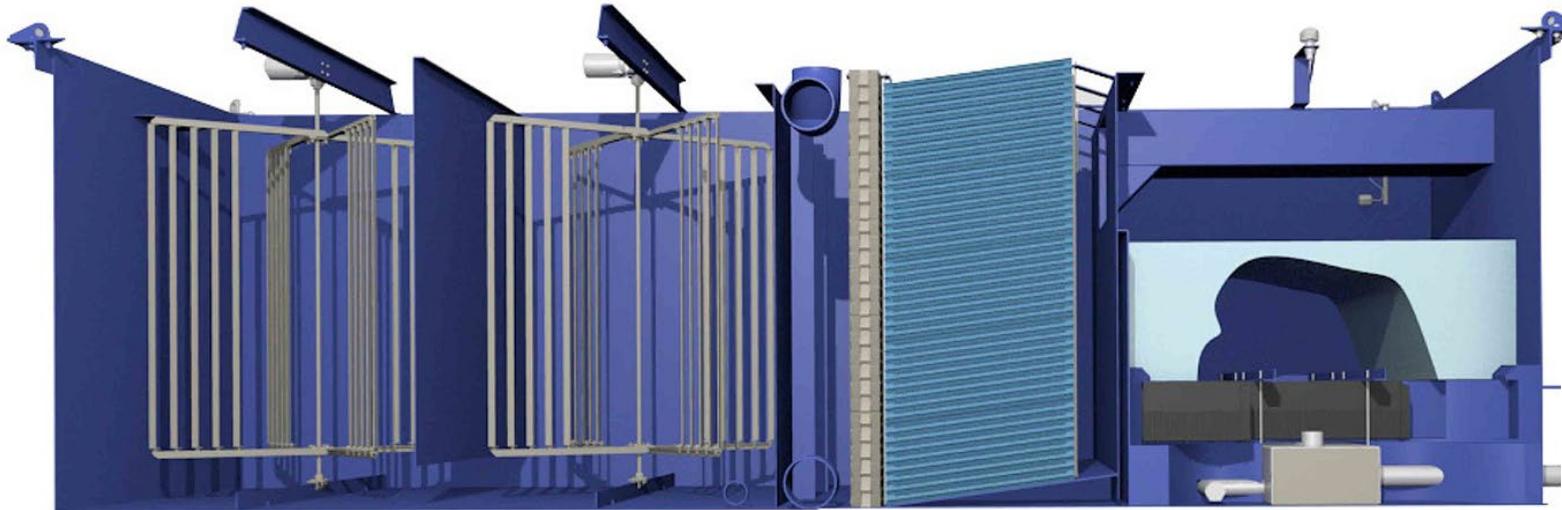
Treatment Process



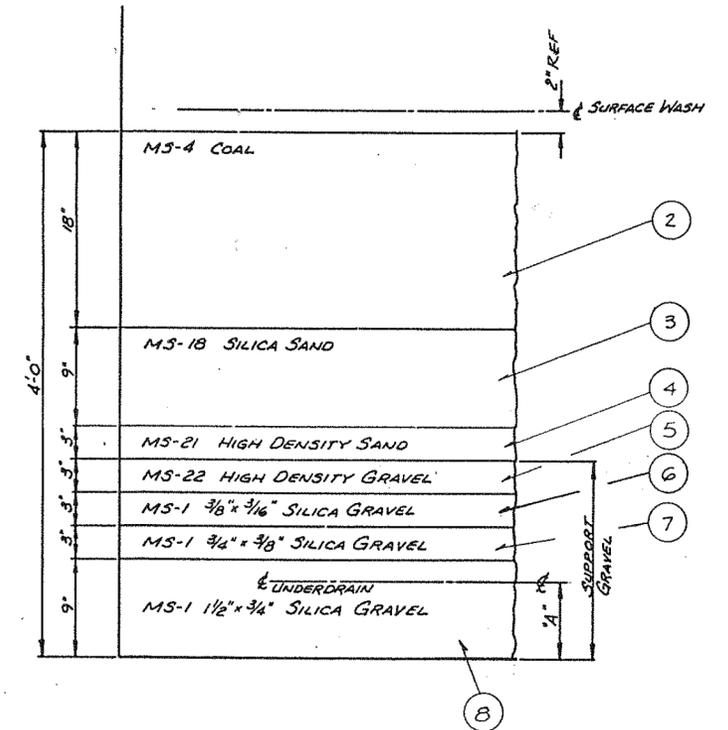
Existing Treatment System

2 Trains @ 0.79MGD each

Aquarius® Package Water Treatment Plant

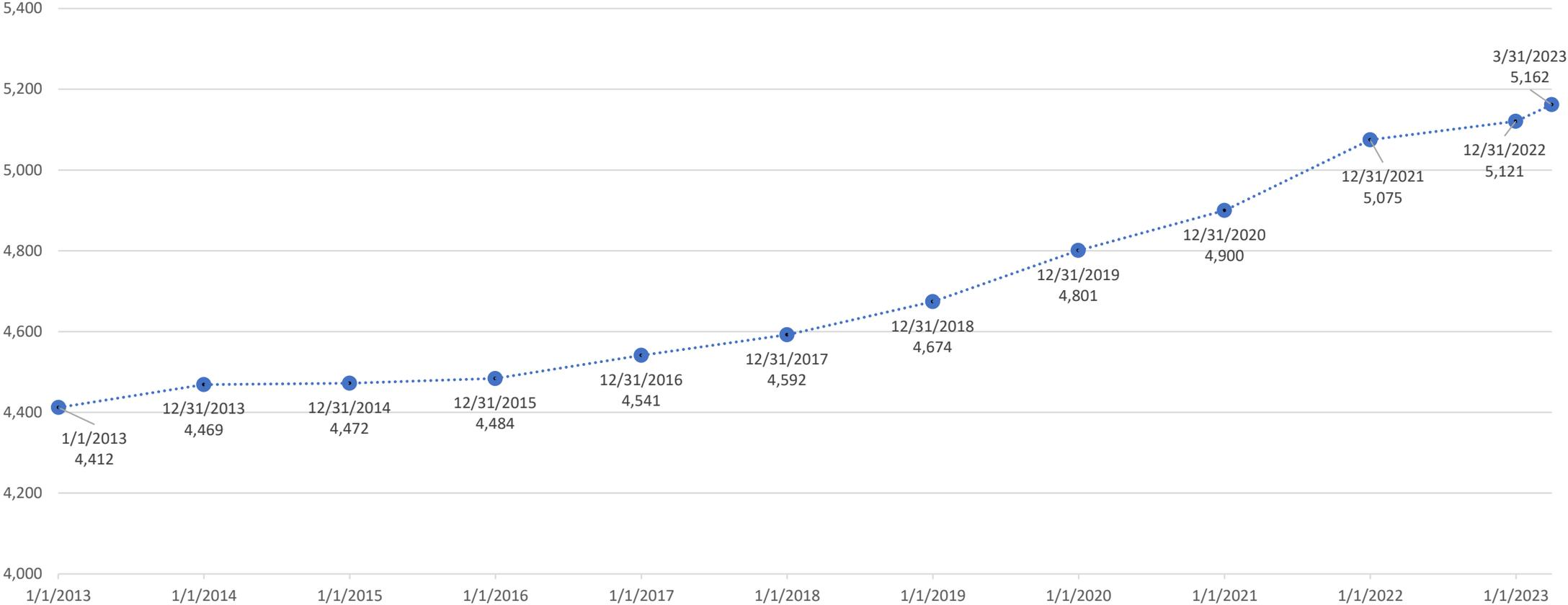


Credit: WesTech



Steady System Growth

Connections (January 2013 – March 2023)



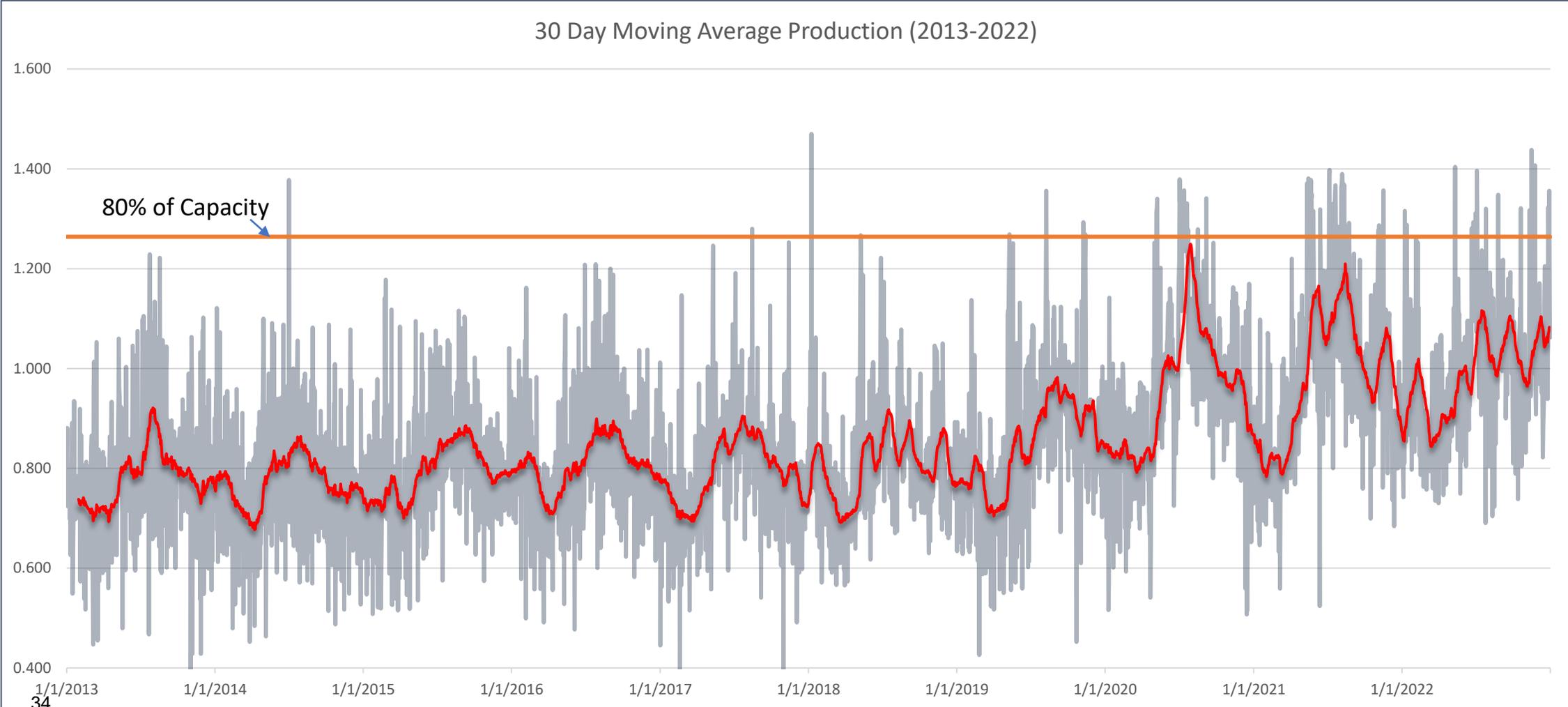
Significant Growth Anticipated

- Existing developments not yet complete
- New development proposed, undergoing rezoning
- Current demand (>1 MGD) aligned with projections

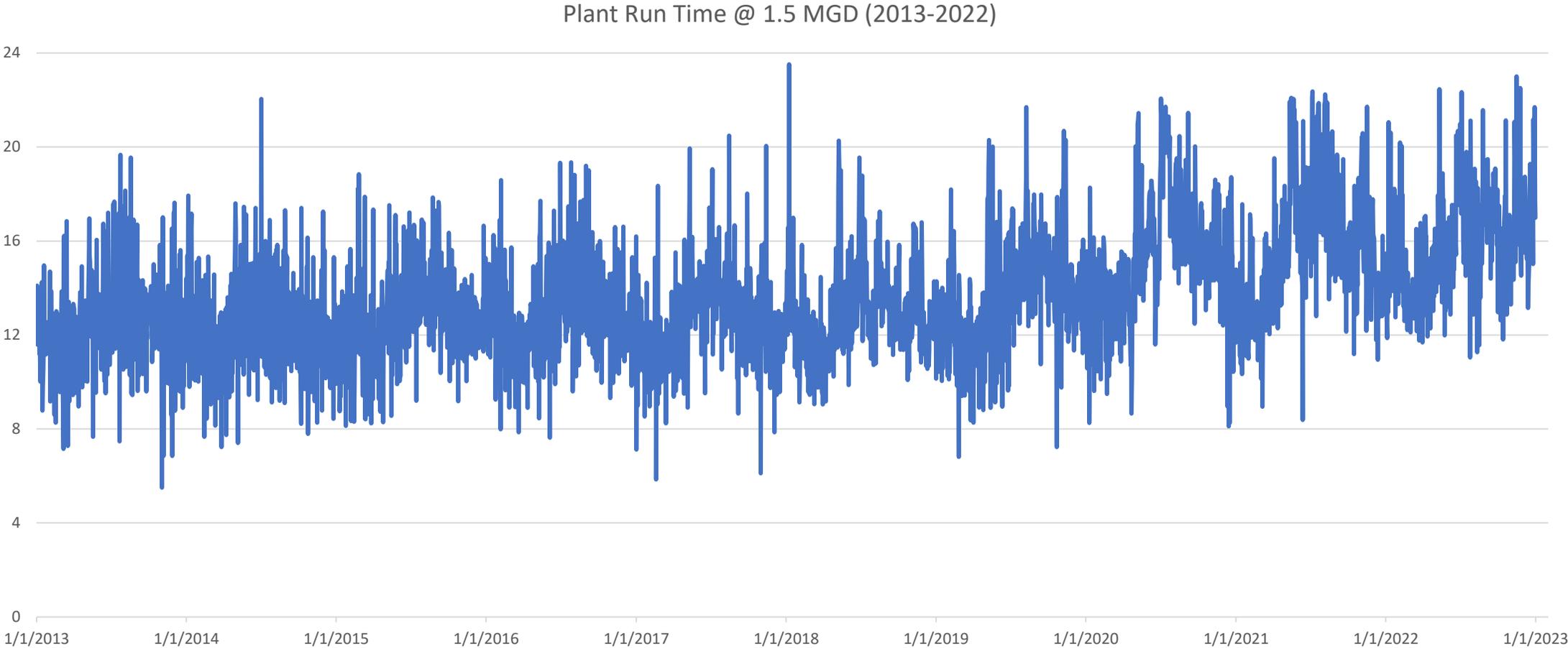
Year	Demand Projections Inclusive of Economic Development Demands (gpd) & Percentage of Build-Out Demand (%)					
	Low (1.50%)		Med (2.50%)		High (4.00%)	
2015	653,930	10%	653,930	10%	653,930	10%
2020	704,468	11%	739,862	11%	795,606	12%
2025	1,758,912	27%	1,837,086	28%	1,967,976	30%
2035	1,880,749	28%	2,071,540	31%	2,432,841	37%
2050	2,101,141	32%	2,551,910	38%	3,580,466	54%
2065	2,376,681	36%	3,247,629	49%	5,647,273	85%

Source: Germanna-Wilderness Area Plan, Water and Sewer Master Plan Technical Memorandum (2018)

Quickly Approaching the “Danger Zone”



Run Times Exceed 20 hours on Peak Days



Germannanna-Wilderness Water Treatment Improvements Plan

Phase I

Objective: Meet near-term demand in a cost effective and expeditious manner. Capitalizing on existing infrastructure, **increase the capacity of the existing facility to 2.5+ MGD.**

Phase II

Objective: Construct a **3.0 MGD green-field water treatment facility** in close proximity to the existing site that is easily expandable to 6.0 MGD and utilizes modern technology, provides robust treatment redundancy, and enables significant operational flexibility.

Phase III

Objective: **Attain 6.0 MGD finished water capacity** by making minor improvements to expand the Phase II WTP. Develop and implement a water supply plan involving an off-line reservoir, an in-line reservoir, or a remotely located upstream raw water "storage and release" reservoir sized to provide drought protection for the 6.0 MGD treatment facility.

Playing the Cards You're Dealt

- Just over 2-acre site —
- Constrained by residential development and roadways —
- 1.1MG raw storage +
- 0.5MG clearwell +
- Adequate finished pumping capacity +
- Adequate distribution network +

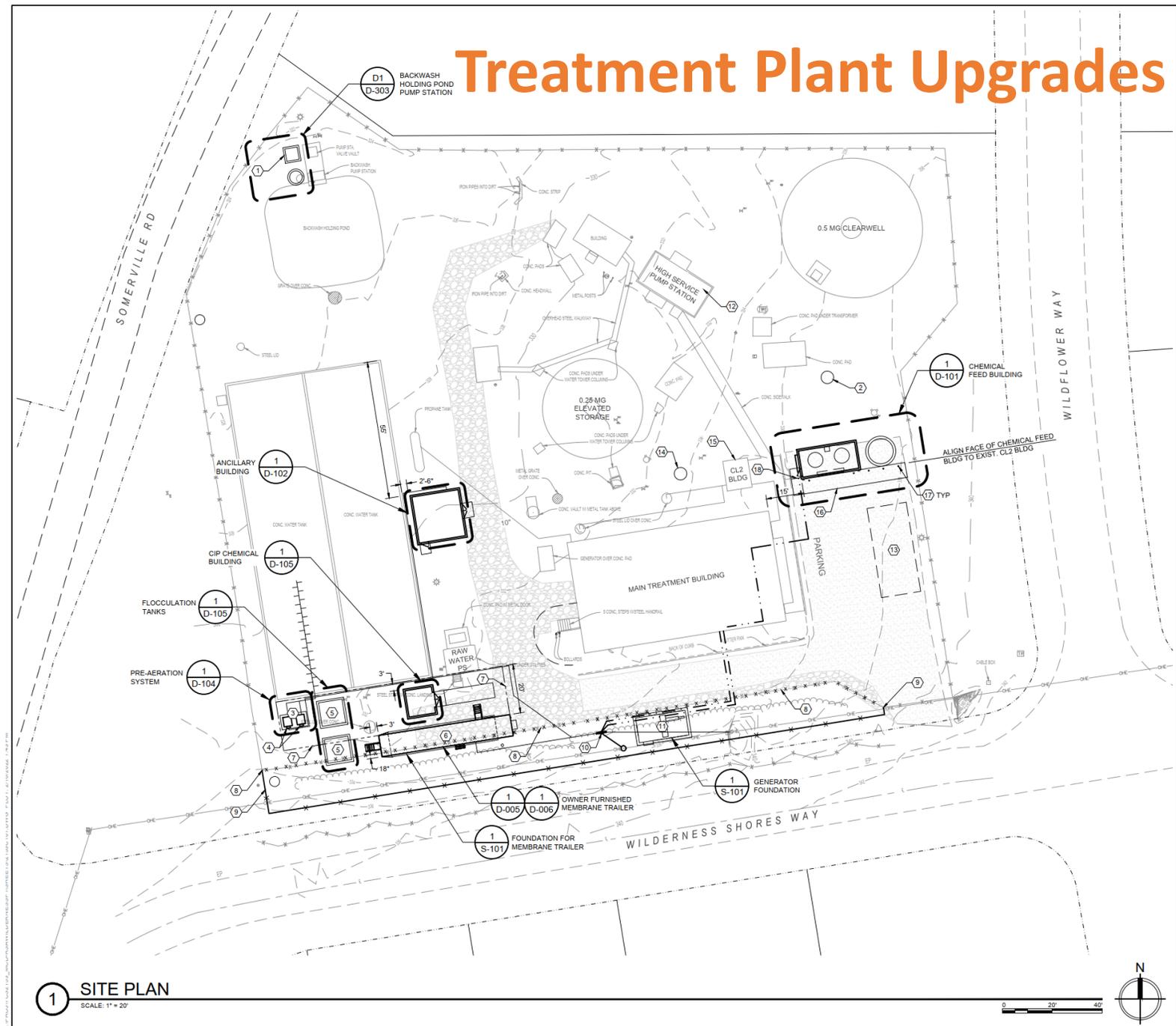


Making It Work

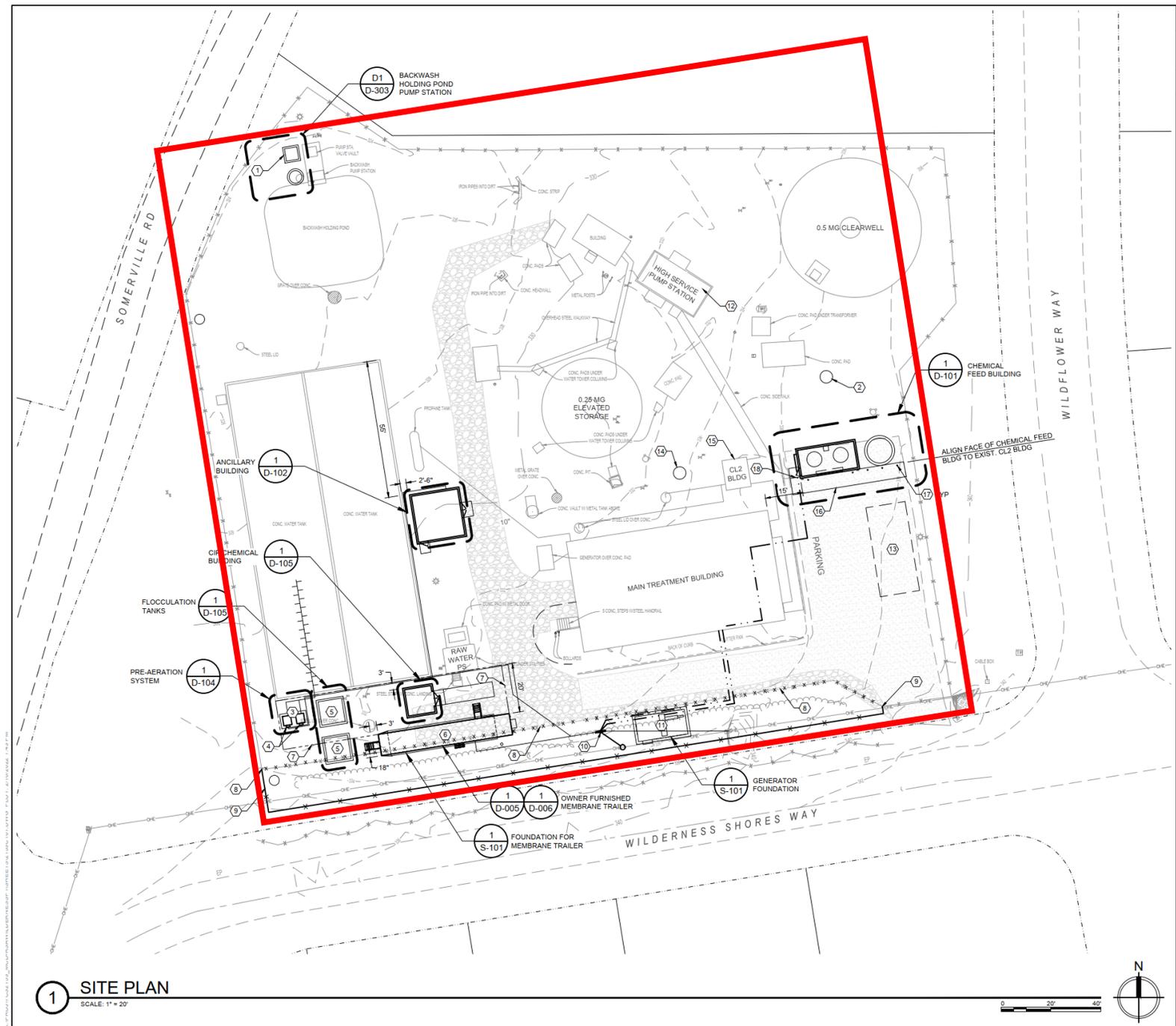
- Pall Aria FAST T96
- 96 MF membrane modules
- 2 independent trains
- Max capacity 2 MGD
- Delivered December 2021



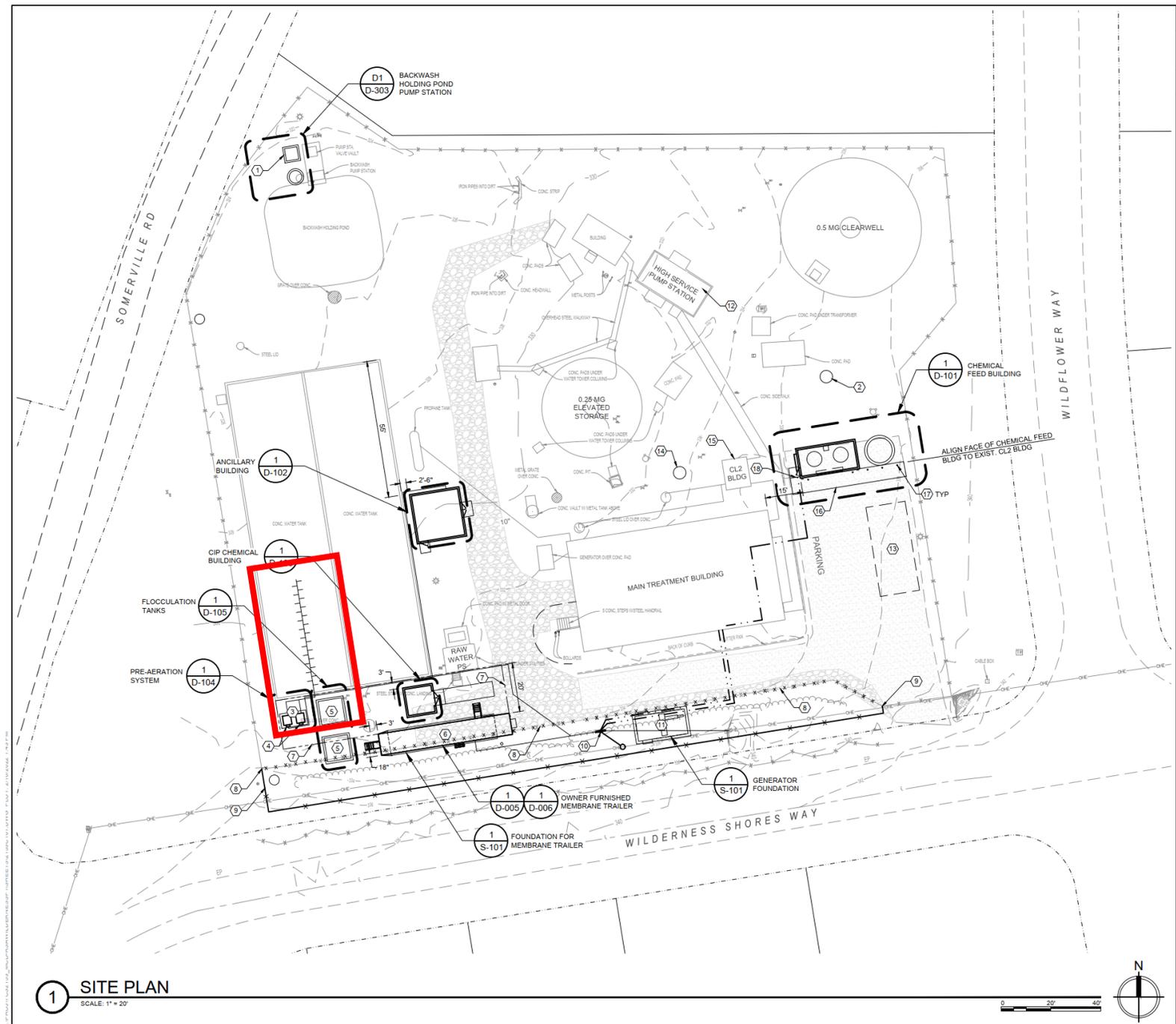
- Automation and Controls overhaul
- Blowers & Diffusers
 - Iron/Manganese oxidation
- Membrane feed pump building
 - Coagulant storage and feed
- Floc tanks
 - 20 to 30-minute detention
 - NOM/DOC removal
- Clean-in-Place chemical storage
- Merge with current filter effluent
- Convert Chlorine gas building to store hydrofluorosilicic (HFS) acid
- New building for sodium hypochlorite and sodium hydroxide
- Add orthophosphate corrosion inhibitor



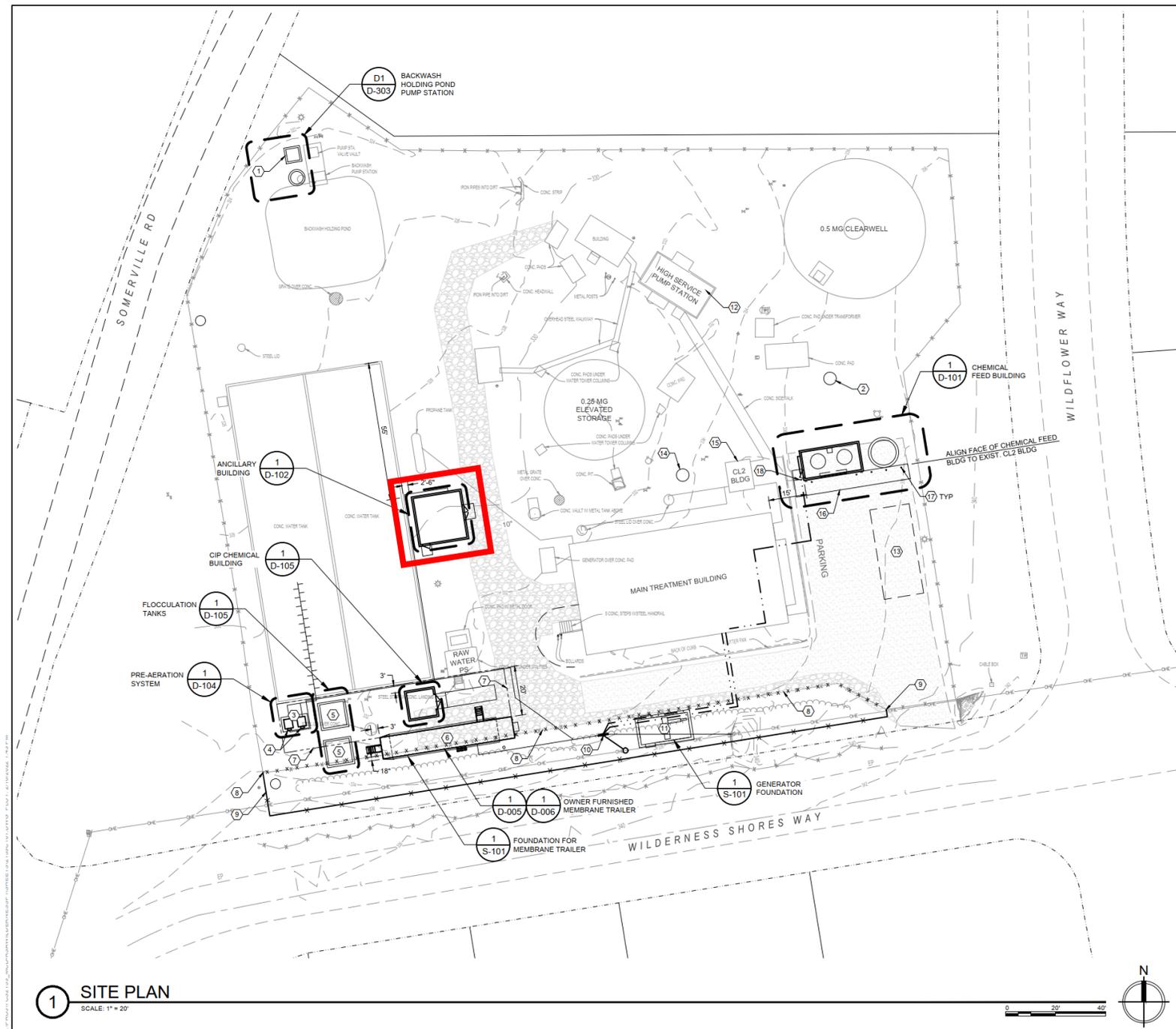
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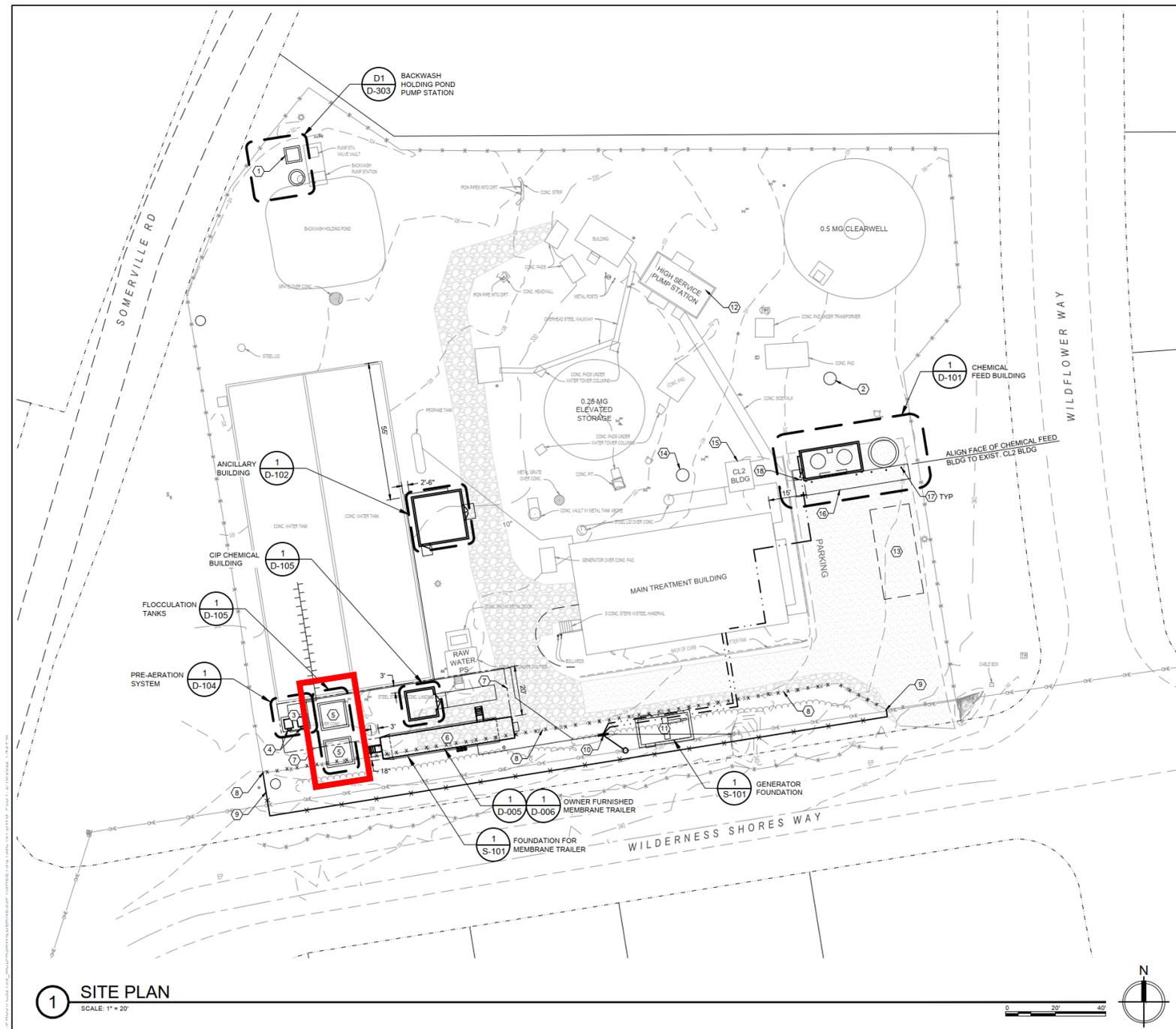
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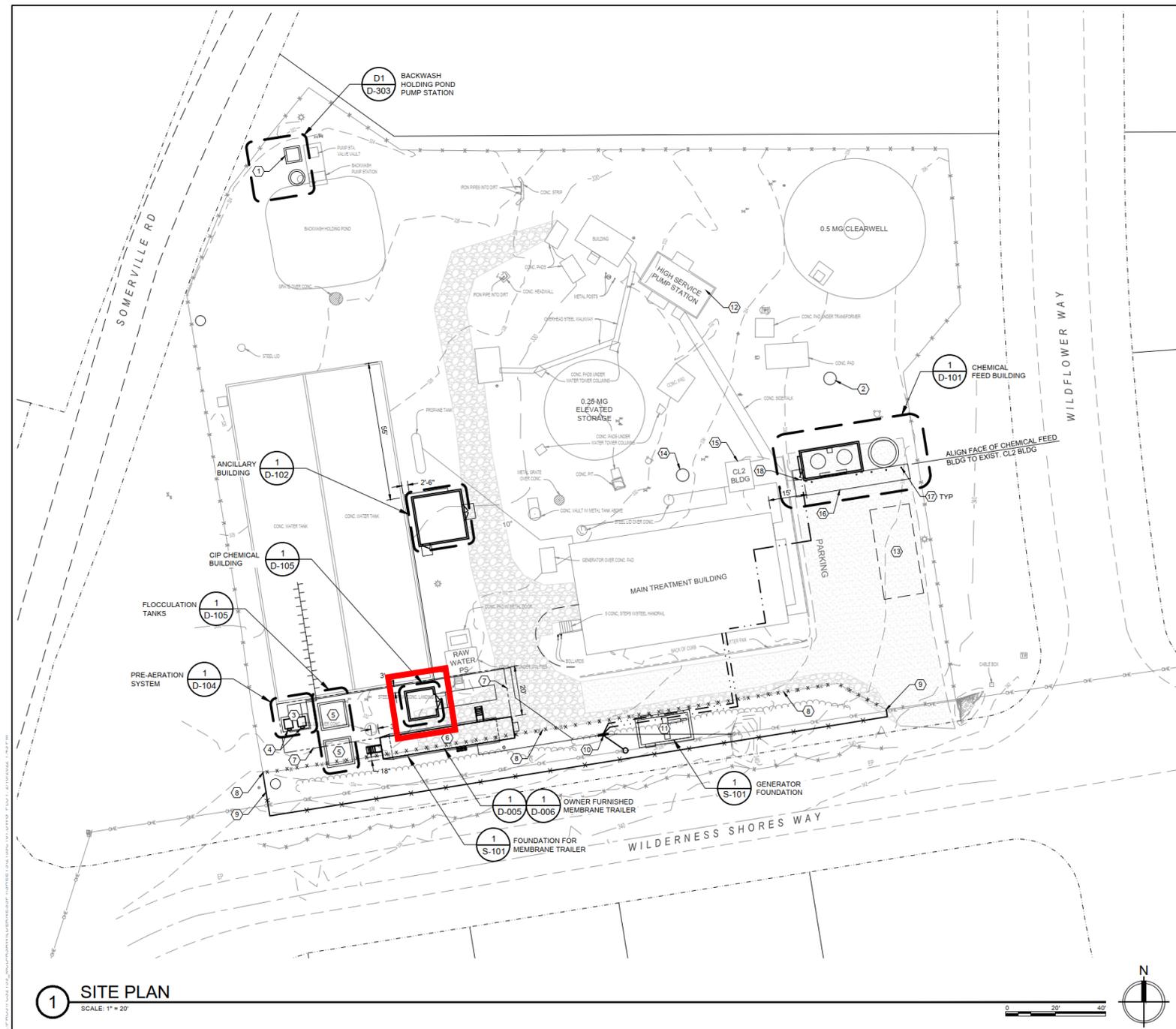
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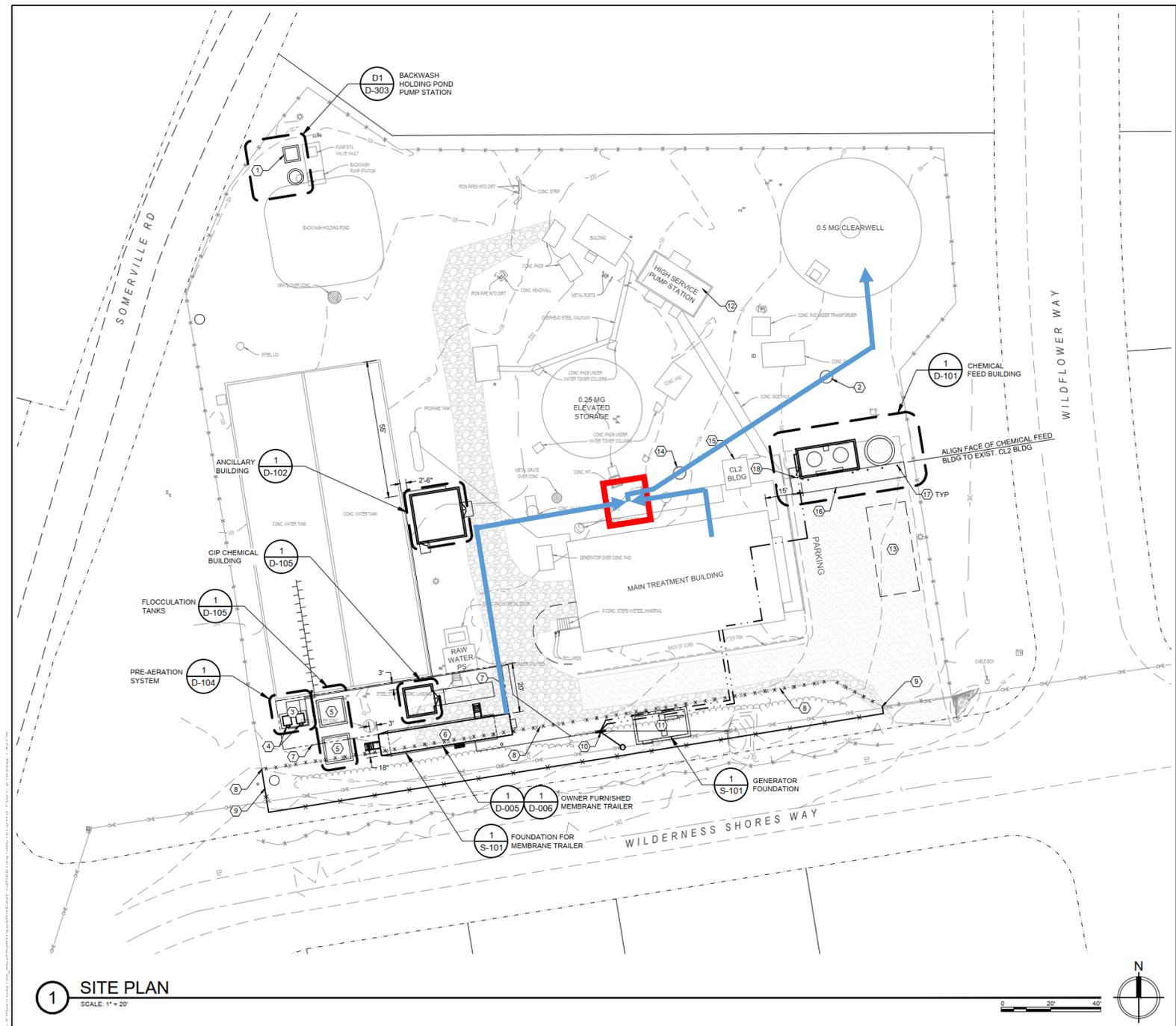
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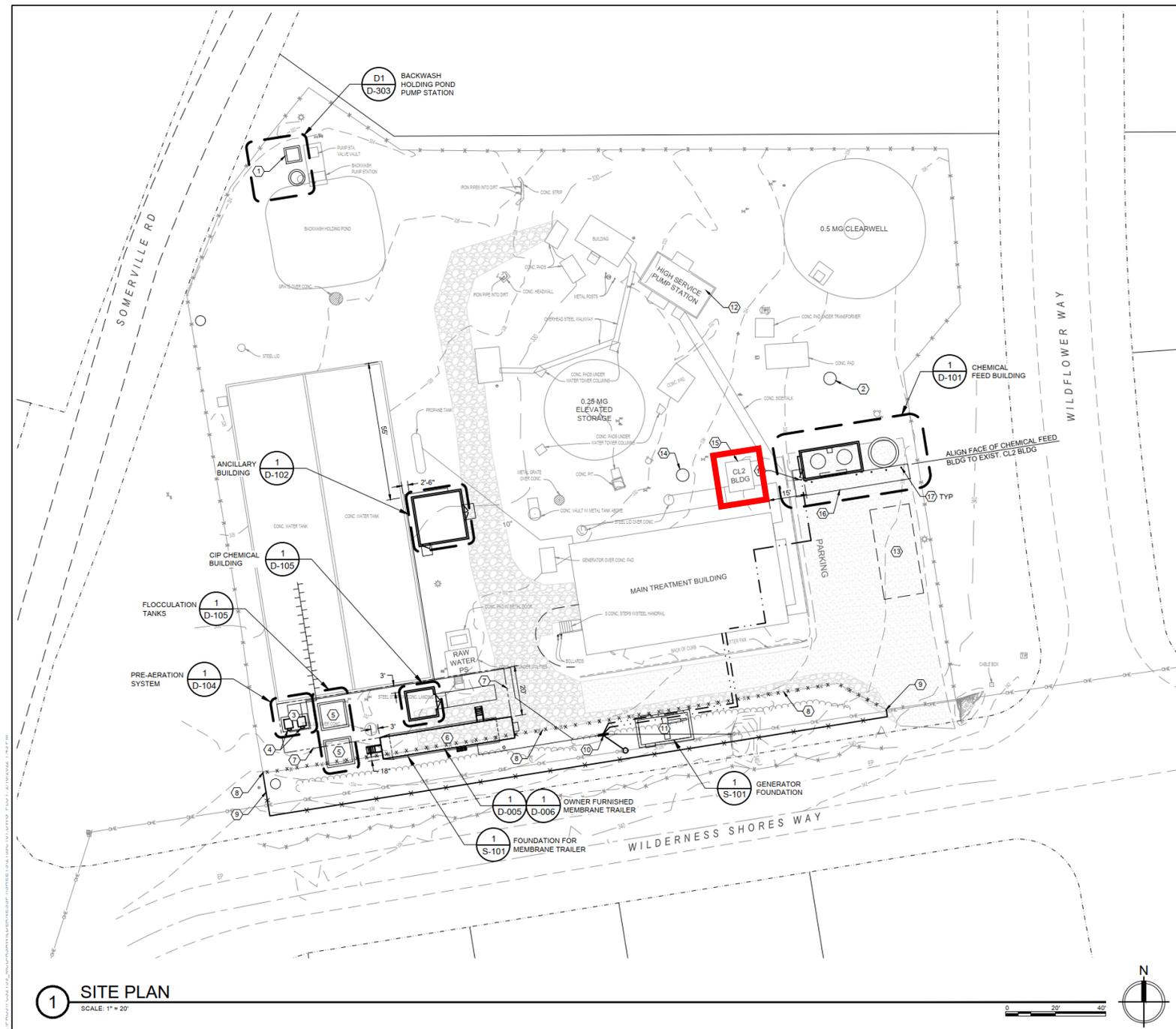
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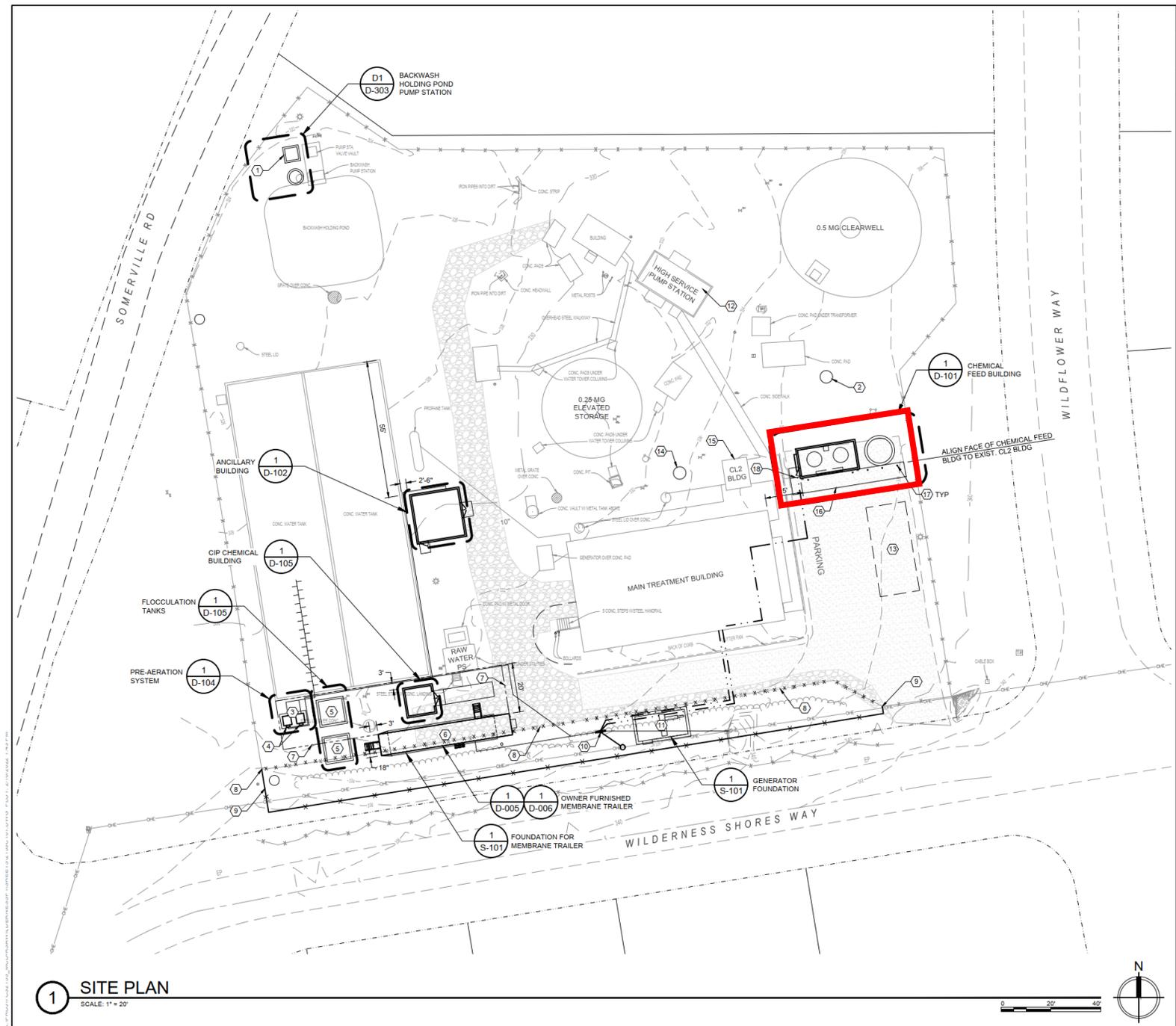
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Feature Element of Phase I Improvements

- 0.1-micron membrane pore size
- Rapid mix & flocculation with poly-aluminum chloride or aluminum sulfate
- 20+ minute detention time in flocculation tanks

Manufacturer's Stated Capacity of Mobile Membrane System for Rapidan River in Orange County	Avg. Flux Rate (GFD)	Sedimentation Following Rapid Mix & Flocculation ?
2.0 MGD	42	YES
1.5 MGD	31	NO
1.1 MGD	23	NO

Conservative Phase I Design Criteria & includes 3-4 gpm/module of XR

Feed Water Characteristics

- Operating procedures based on source water data provided to Pall
- These characteristics guide initial cleaning programs
- Operating procedures may change following commissioning

Parameter	Units	Min	Avg	Max
Alkalinity, Total	mg/L as CaCO ₃	8	20.4	32
Fats, Oils, Grease (FOG)	mg/L	ND	ND	<0.50
Hardness, Total	ppm as CaCO ₃	4	9.9	16
Hydrocarbons	mg/L	ND	ND	ND
Iron, Total (Fe)	mg/L	0.03	0.42	1.46
Manganese (Mn ⁺²)	mg/L	0.011	0.026	0.225
Organic Carbon, Total (TOC)	mg/L	<1.0	2.01	5.83
pH		6.9	7.3	7.8
Silica (SiO ₂)	mg/L			5
Temperature	°F	33	55	70
Total Suspended Solids (TSS)	mg/L	ND	5	75
Turbidity	NTU	0.9	11.6	153

“Base Case” – conservative approach

- Flux Maintenance (FM) – backwash, reverse flow
- Enhanced Flux Maintenance (EFM) – TOC/Algae fouling
 - NaOCL, 500 mg/L
- Alternate EFM – Iron/Manganese fouling
 - Citric Acid, 1% concentration
- Clean in Place (CIP) – deep cleaning
 - NaOLC, 2000 mg/L + NaOH, 1% concentration
 - Citric Acid, 2% concentration

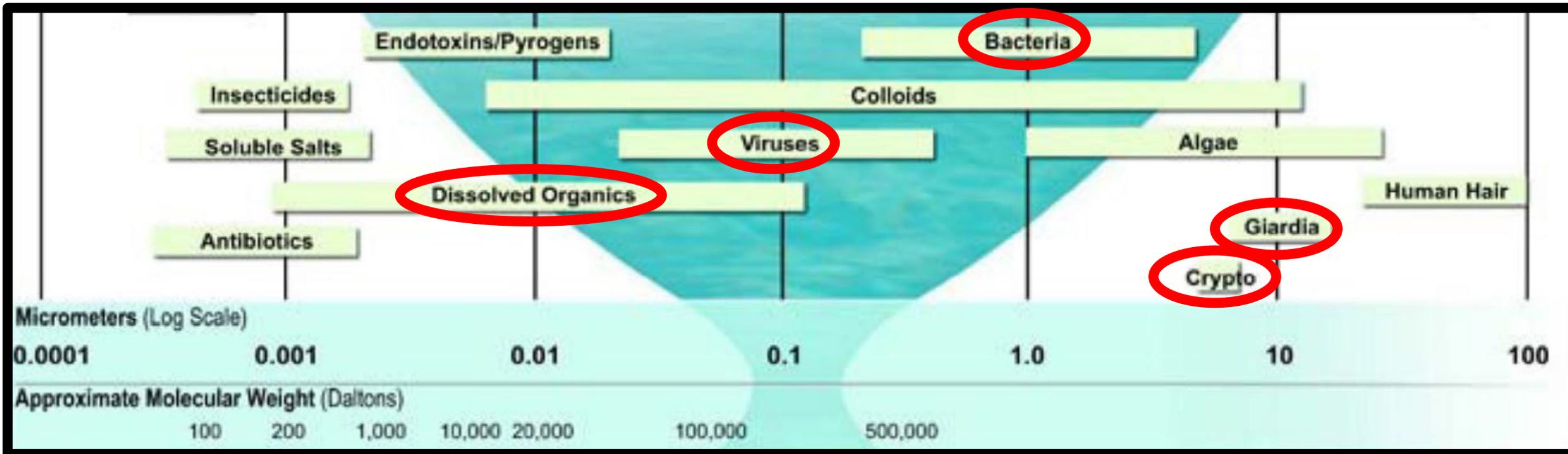
Net Filtrate Capacity	1.13 ^{Note 6}	MGD
Recovery	>94	%
Instantaneous Flux max.	27	GFD
FM (Backwash) Interval	14,400 300	Gal of filtrate produced/rack Gal of filtrate produced/module
Excess Recirculation	144 3.0	GPM/Rack GPM/Module
EFM Interval	597,000	Gallons of filtrate produced/rack (Each rack every day at design flow)
Alternate EFM interval	4.18	Million Gallons of filtrate produced/rack (7 days at design flow)
CIP Interval	30	Days

“Experimental” Design Flow

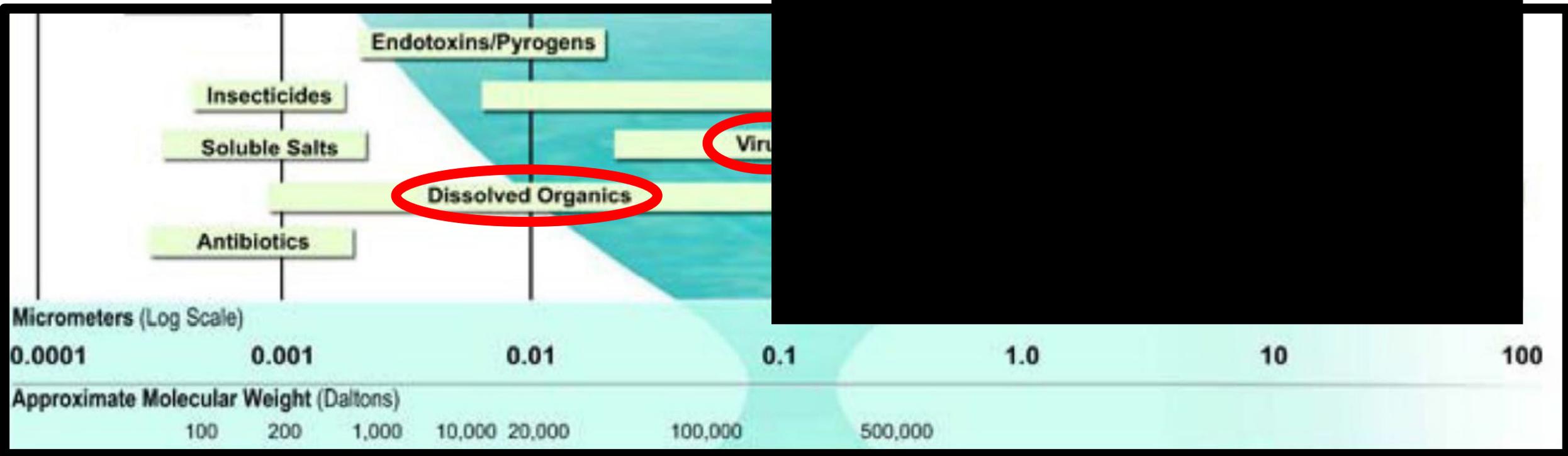
- After 3 months at the Base Case operational parameters
- Additional design cases may be attempted depending on observations

Net Filtrate Capacity	1.43 ^{Note 6}	MGD
Recovery	>94	%
Instantaneous Flux max.	36	GFD
FM (Backwash) Interval	14,400 300	Gal of filtrate produced/rack Gal of filtrate produced/module
Excess Recirculation	144 3.0	GPM/Rack GPM/Module
EFM Interval	754,500	Gallons of filtrate produced/rack (Each rack every day at design flow)
Alternate EFM interval	5.208	Million Gallons of filtrate produced/rack (7 days at design flow)
CIP Interval	30	Days

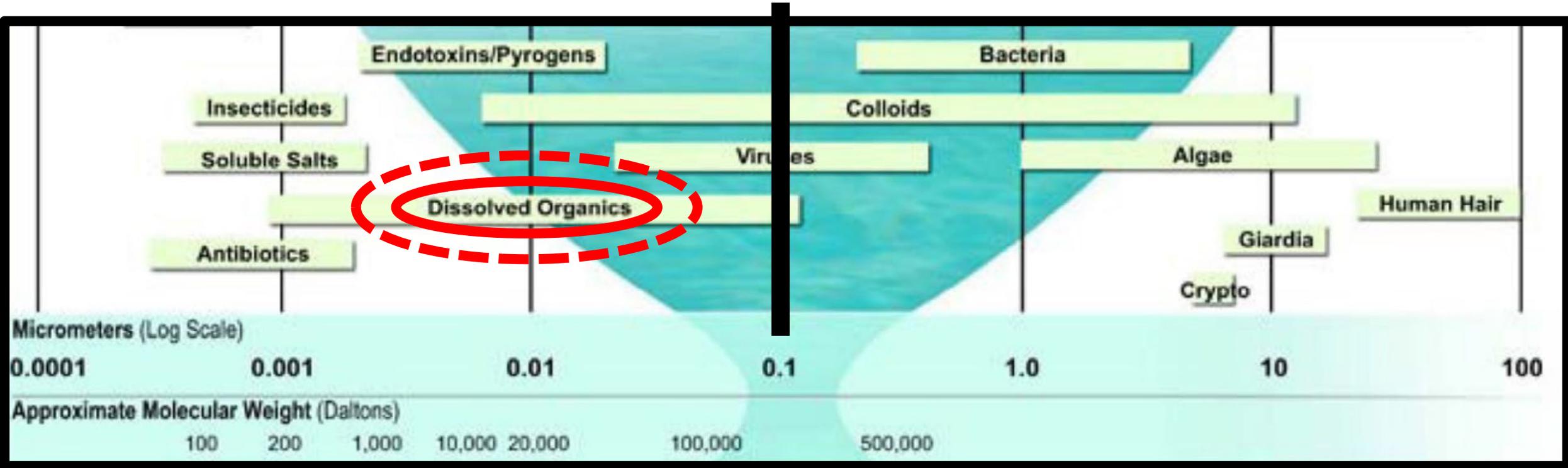
Size Spectrum of Targeted Constituents

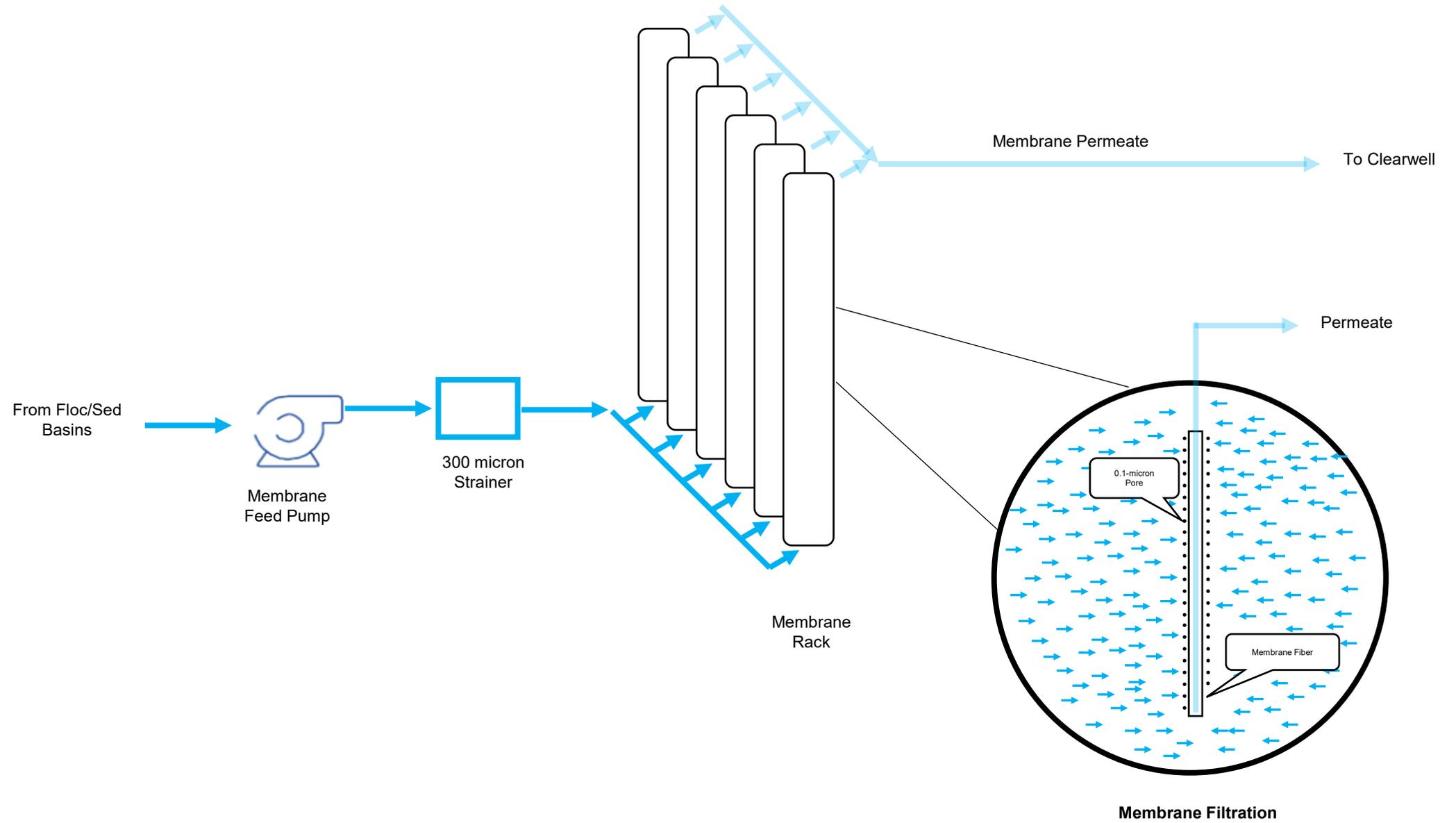


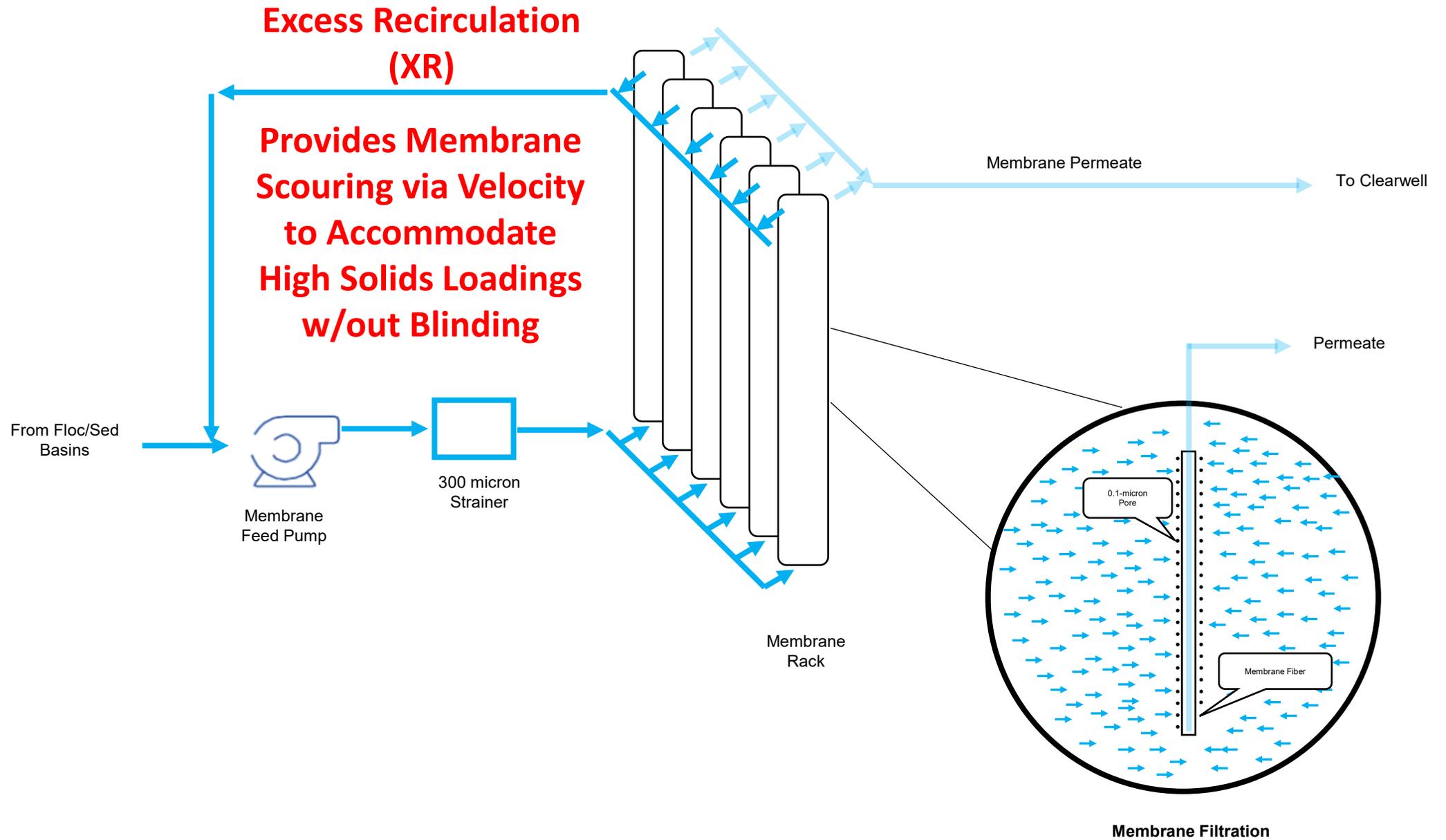
Pall Microfiltration Nominal 0.1-micron Pore Size



Focus of Pre-treatment







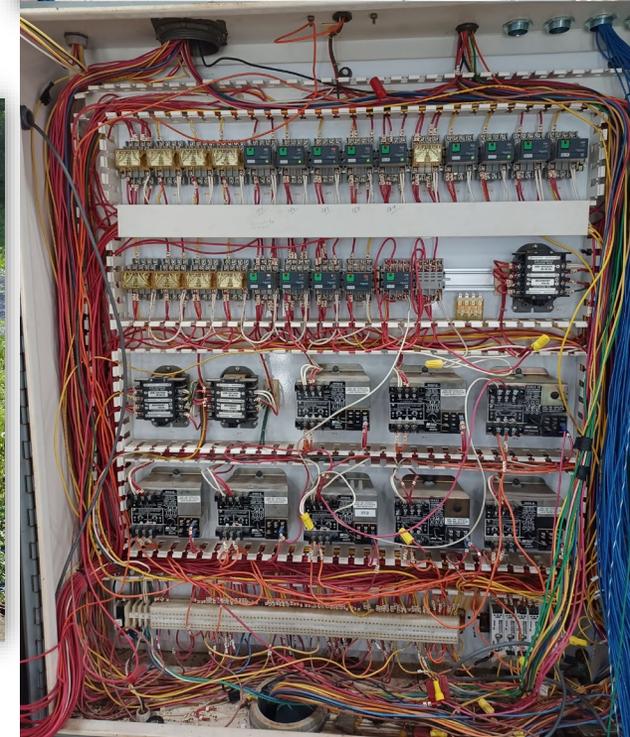
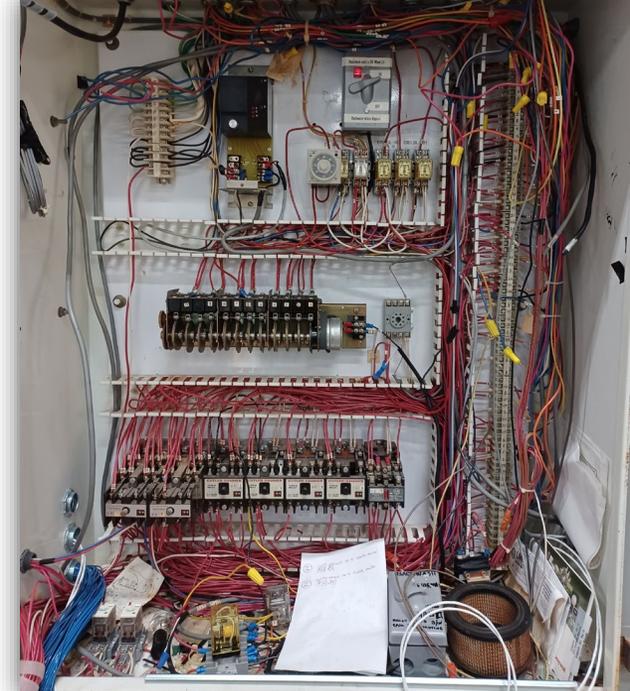
Resiliency & Reliability Improvements

Rapidan River Intake

- Relocate intake pump disconnects
- Replace electrical equipment
- Two new screens and airburst
 - 0.25 fps velocity requirement

Plant Site

- Fiberoptic communications
- New generators
- New SCADA system and control panel overhaul



Investigating Alternative Sources

Reservoirs

- County and RSA have investigated several potential locations for raw water impoundments

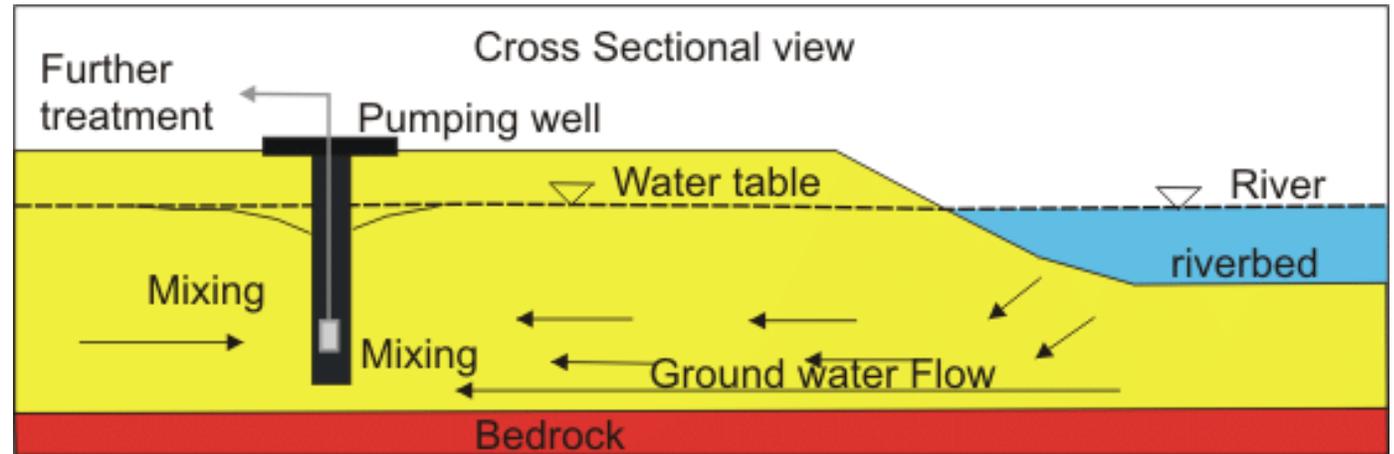
Groundwater

- Local geology does not support high yield groundwater wells

Riverbank Filtration

- More geotechnical investigation necessary

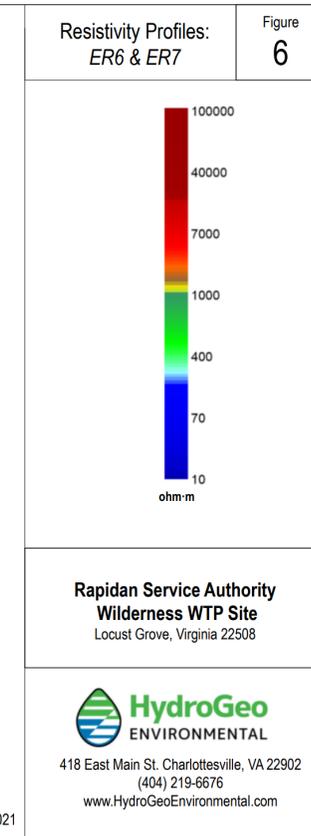
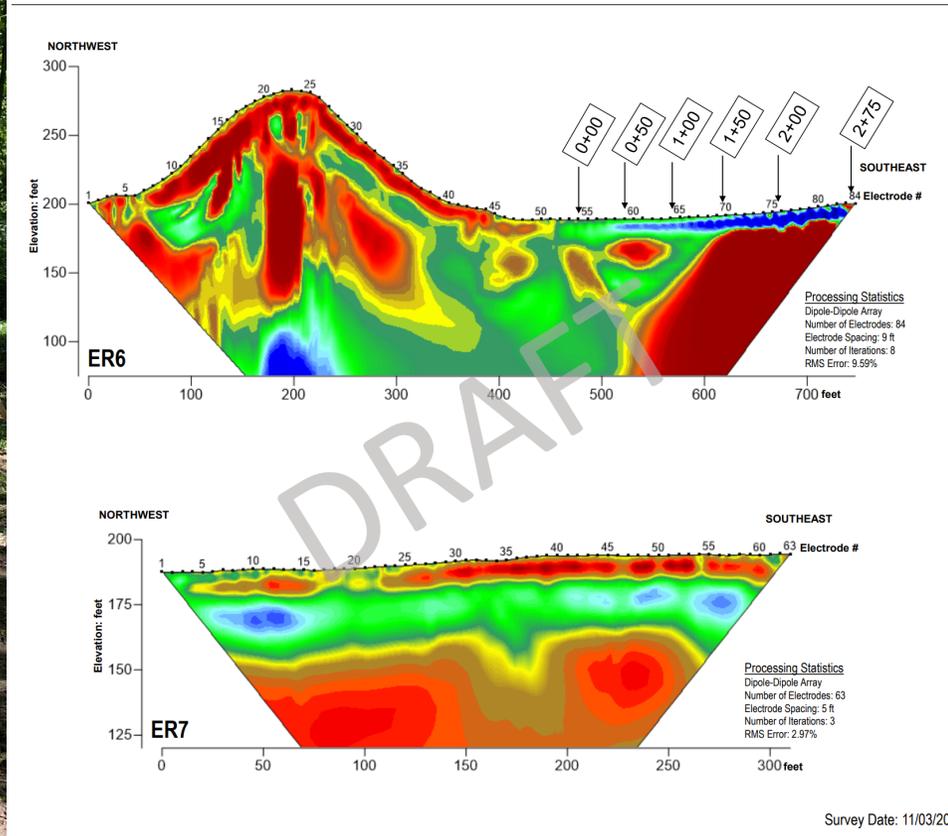
Riverbank Filtration (RBF)

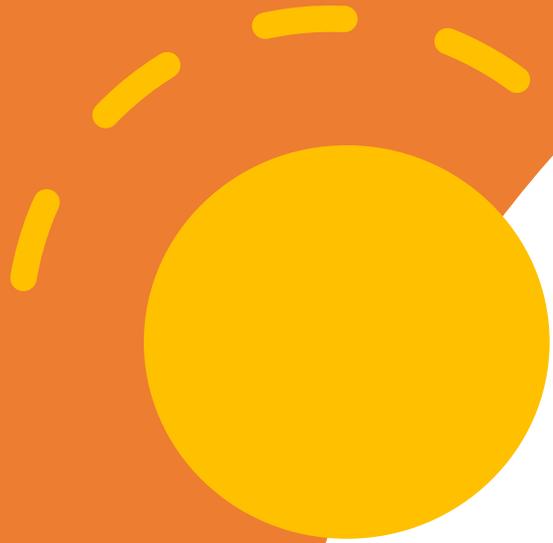


- Riverbank Filtration is a technique where ground water under the direct influence of surface water (GWUDI) is collected from the alluvial soil matrix near the bedrock boundary using vertical wells, horizontal wells, or micro-tunnels.
- Because the water is naturally filtered, it requires less full-scale treatment, can eliminate taste and odor issues, provides an additional barrier of pathogen removal and creates a stable water temperature which benefits downstream treatment.
- Proposed as a potential means to provide the Germanna-Wilderness WTP a supplemental, year-round source of consistent quality water – even during periods of low river flow.
- Geotechnical engineering studies will need to be performed to evaluate the subsurface conditions and suitability of the site for riverbank filtration.

2021 RBF Investigation

- Electrical Resistivity Survey
- Core drilling
- Monitoring wells





Future Phases

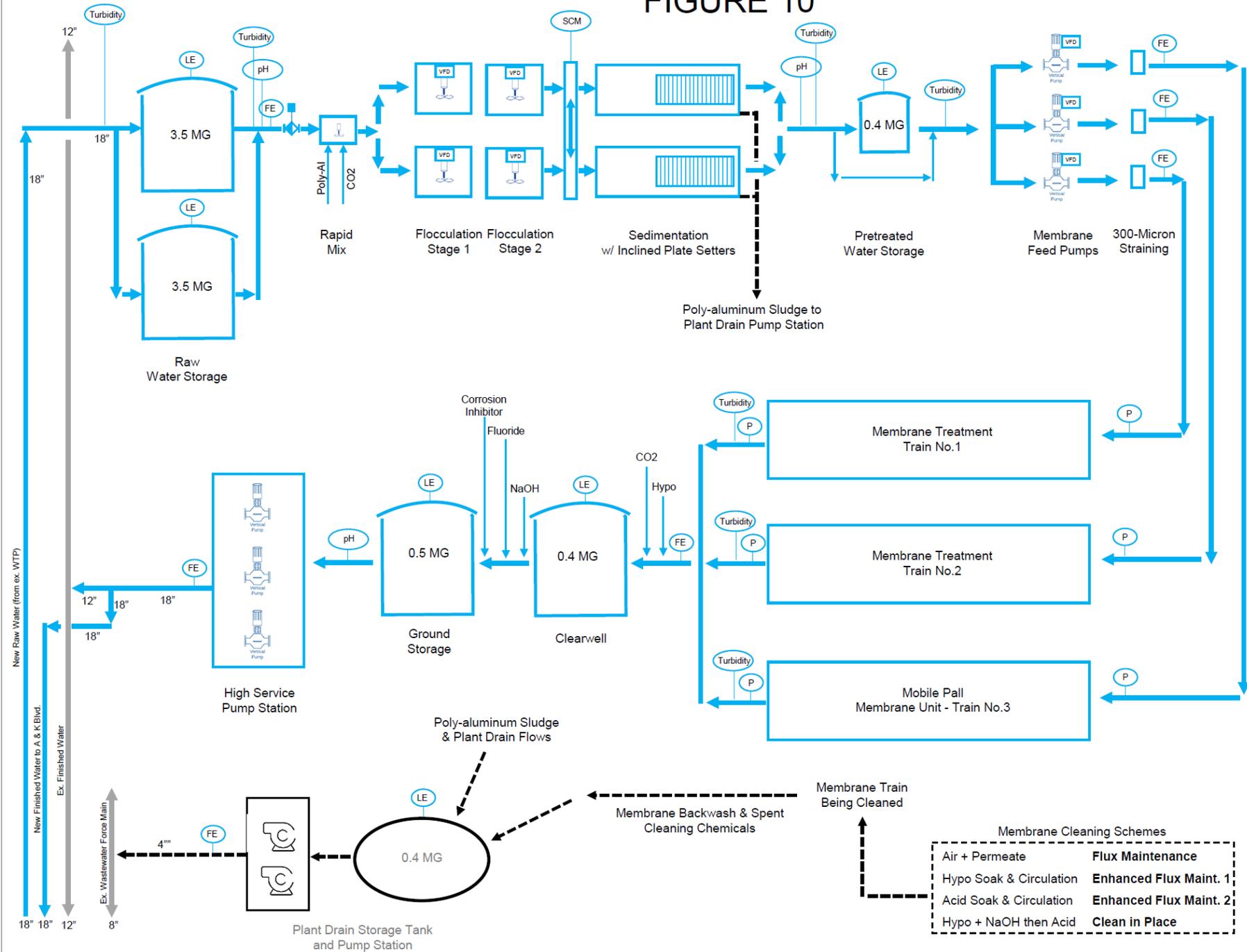
Phasing Overview of the Germanna-Wilderness Water Treatment Improvements Plan

	Rated Capacity (MGD)	Water Receiving Membrane Treatment (%)	Existing or Greenfield Site	Treatment Train Redundancy (N-1)	Sedimentation Ahead of Membranes (Y/N)	Mobile Membrane System in Use (Y/N)	# of Fixed Membrane Trains Installed (#)
Current	1.5	N/A	Existing	2 Units	N/A	N/A	N/A
Phase I	2.5	45%	Existing	3 Units	N	Y	0

Phasing Overview of the Germanna-Wilderness Water Treatment Improvements Plan

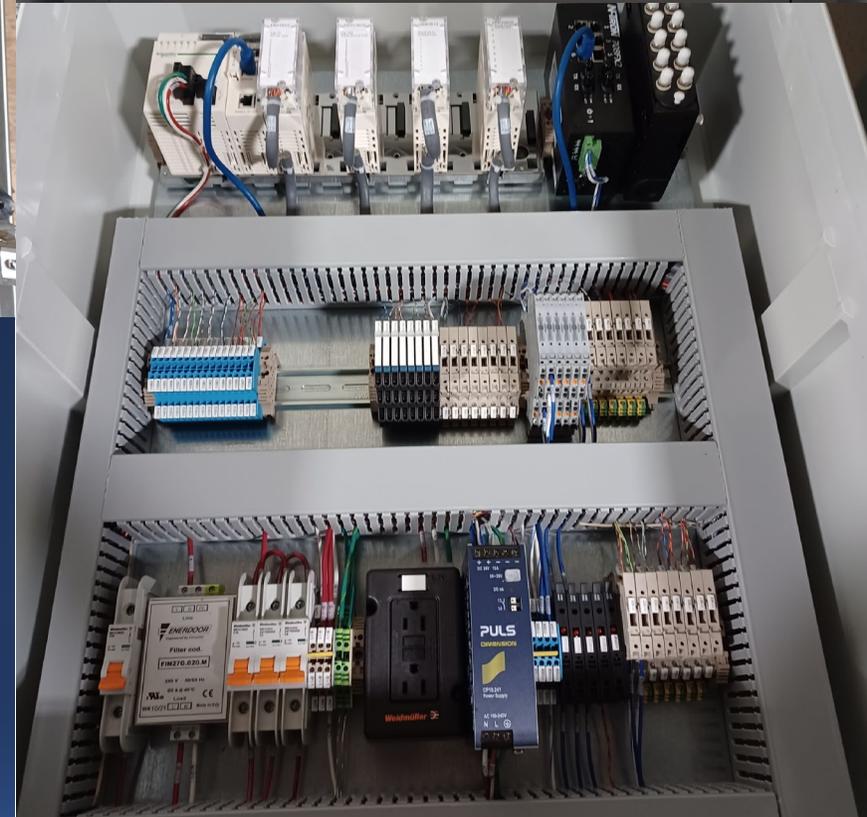
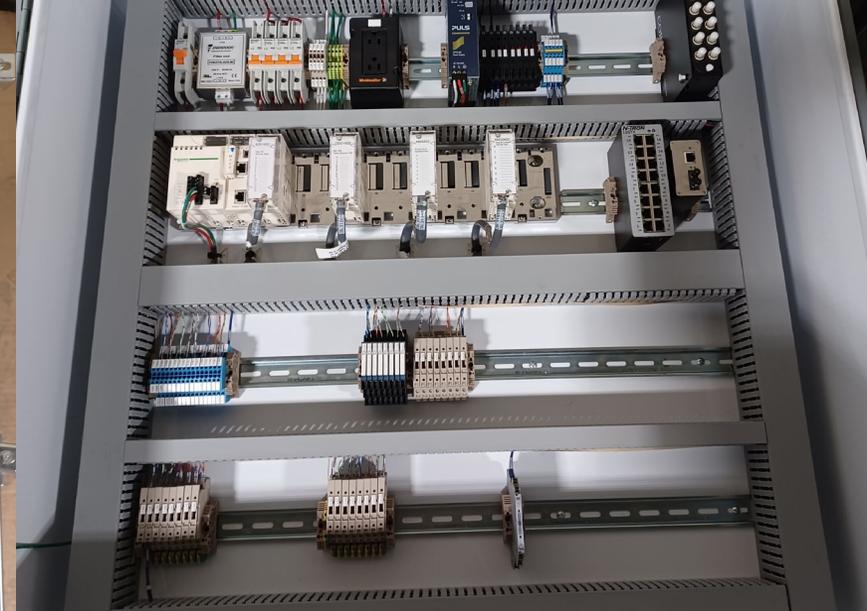
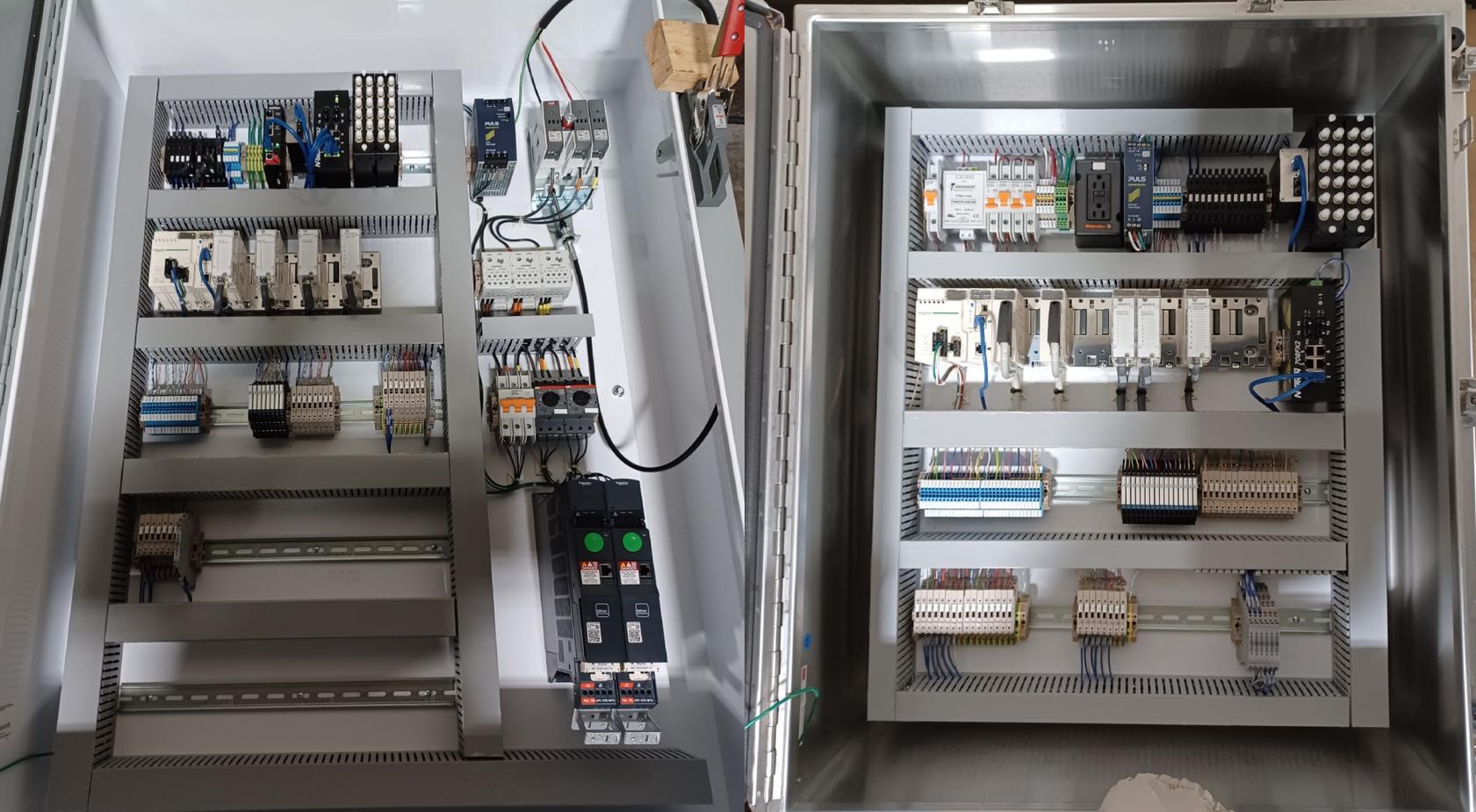
	Rated Plant Capacity (MGD)	Water Receiving Membrane Treatment (%)	Existing or Greenfield Site	Installed Treatment Capacity (MGD)	Pre-Treatment Ahead of Membranes (Y/N)	Mobile Membrane System in Use (Y/N)	# of Fixed Membrane Trains Installed (#)
Current	1.5	N/A	Existing	1.5	N/A	N/A	N/A
Phase I	2.5	45%	Existing	2.5	N	Y	0
Phase II	3.0	100%	Green-Field	6.0	Y	Y	2
Phase III	6.0	100%	Green-Field	8.0	Y	Y	3

FIGURE 10



Construction Progress





SCADA Upgrade – Panels Built



Site Work – Effluent Connection



Concrete Work – Ongoing