



PREVENT. PROMOTE. PROTECT.

250 William Howard Taft Road  
Cincinnati, OH 45219  
Phone: 513.946.7800 Fax: 513.946.7890  
hcph.org

May 17, 2021

Dear Property Owner,

Hamilton County Public Health (HCPH) previously pre-approved you at 50% grant funding through the Water Pollution Control Loan Fund (WPCLF) to help in the sewage treatment system (STS) replacement project at your primary residence. The WPCLF requires at least three quotes be submitted to Hamilton County Public Health for each eligible project. HCPH previously reviewed and approved the STS replacement plan for your property. Attached you will find a copy of the approved plan which you will need to use in order to solicit quotes on behalf of HCPH.

Using the attached forms, sample contract, approved STS design plan for your property and the guidance provided in this letter, you will need to contact registered STS installers individually for quotes. Attached is a list of registered STS installers you may contact. Any contractors interested in your project must be given a copy of this letter with all attachments. Interested contractors will need to provide a quote for the total cost for all work needed to install the approved STS using the form provided. This will include all items specified on the approved STS design plan, any needed connection of plumbing into the building sewer, disconnection and re-routing of any clear water from the plumbing system or STS, any needed electrical service upgrade if required to accommodate the replacement STS components, any other eligible and justified items, finished grading, seed and straw, and proper abandonment of the existing STS components.

To keep the process moving forward at least three quotes must be obtained by you on behalf of HCPH. All quotes must be collected by you and submitted at one time to HCPH by 06/30/2021. Keep in mind that returning all quotes sooner will be better to help your chances of receiving the WPCLF funding. Quotes will be reviewed by a team of individuals at HCPH. The contract will be awarded to the qualified applicant based on the lowest and best bid and will be dependent upon bidder's availability to complete the requested work in a timely fashion. Awarded contracts are strictly between HCPH and the selected contractor. Any attempt to enter into separate contract, addendum, modification, invoice or other contractual agreement, except for the property owner's matching percentage to be paid directly by the owner to the contractor, without prior approval by HCPH may disqualify the bidder.

If selected to complete the STS installation, the contractor will be contacted directly by HCPH. At that time, they will be required to sign a site specific version of the attached contract and submit all required contract paperwork to HCPH. Once verified, a Notice-to-Proceed will be issued to the contractor by HCPH allowing the selected contractor to begin the installation. All work required must be completed (including final inspection) by December 15, 2021 and following receipt of the Notice-to-Proceed.

It should be noted that any unexpected changes and/or alterations needed during the performance of work, requires a Contract Change Order (see Contract - Attachment B). Payment for any changed or extra services will not occur without pre-approval using this method. Also note that the contract has special insurance and bid bonding/financial guarantee requirements that must be followed.



Healthy choices. Healthy lives. Healthy communities.



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For the WPCLF portion of the payment to occur, HCPH must approve the final STS installation. After which, the contractor must submit to HCPH an invoice, by December 17, 2021, to document the incurred costs for the repair/replacement along with an approval certificate issued by HCPH. Upon verification of this information, HCPH will send a request to Ohio EPA for reimbursement of the eligible system repair/replacement costs. After confirmation by Ohio EPA, the Ohio Water Development Authority will distribute the funding to HCPH, who will then pay the contractor the approved amount. Any portion of the approved bid amount not covered by the WPCLF must be paid directly by the property owner to the contractor.

At this time, if you would like to remain eligible for the WPCLF, you must solicit quotes, on behalf of HCPH, for your STS replacement project. When submitting each quote to you, the contractor must include a completed, signed and dated copy of the following attachments:

- i Hamilton County Bid Proposal Form
- i Contractor Equal Employment Opportunity (EEO) Certification Form
- i Certification Regarding Debarment, Suspension, and Other Responsibility Matters Form
- i American Iron and Steel (AIS) Form

At least three quotes must be collected by you, then be submitted together to HCPH with the items listed above, on or before June 30, 2021 to:

Hamilton County Public Health  
Attn: Chris Griffith  
250 William Howard Taft  
Cincinnati, OH 45219

If you have any questions concerning this program, please feel free to contact me directly at 946-7866.

Sincerely,

A handwritten signature in black ink that reads "Chris Griffith RS". The signature is stylized and cursive.

Christopher M. Griffith, RS  
Director of Water Quality

Hamilton County Bid Proposal Form

Contractor Name: \_\_\_\_\_

Contractor Address: \_\_\_\_\_

Contractor Phone(s): \_\_\_\_\_

Project Address: \_\_\_\_\_

Bid Due Date: \_\_\_\_\_

Total Amount of Bid: \_\_\_\_\_

Total Amount in Written Words: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Signature, Printed Name, Contractor

\_\_\_\_\_  
Date

I will begin the work within upon receipt of the written Design Contract and Notice to Proceed Order, and will complete the work within 45 days, unless otherwise agreed to by Hamilton County Public Health.

The above total price includes all materials, labor and other costs such as overhead, permits, sales tax and profit. This bid is valid for a period of 30 days after the date this proposal is received by Hamilton County Public Health.

Mail Bid Packet to: Hamilton County Public Health

Attn: Chris Griffith  
250 William Howard Taft  
Cincinnati, OH 45219

## Contractor Equal Employment Opportunity Certification

During the performance of this contract, the undersigned agrees as follows:

1. The undersigned will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The undersigned will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The undersigned agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this equal opportunity (federally assisted construction) clause.
2. The undersigned will, in all solicitations or advertisements for employees placed by or on behalf of the undersigned, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
3. The undersigned will send to each labor union or representative of workers, with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the undersigned's commitment under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The undersigned will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The undersigned will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and relevant orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency of the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the undersigned's non compliance with the equal opportunity (federally assisted construction) clause of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part, and the undersigned may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No 11246 of September 24, 1965, or by rules, regulations, or order of the Secretary of Labor, or as provided by law.
7. The undersigned will include this equal opportunity (federally assisted construction) clause in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order No 11246 of September 24, 1965, so that such provision will be binding upon each subcontract or vendor. The undersigned will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor, as a result of such direction by the administering agency the undersigned may request the United States to enter into such litigation to protect the interest of the United States.

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(Signature)

(Date)

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(Name and Title of Signer, Please type)

(Firm Name)

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification;
- (d) Have not within a three year period preceding this application / proposal had one or more public transactions (Federal, State, or local) terminated for cause or default; and
- (e) Will not utilize a subcontractor or supplier who is unable to certify (a) through (d) above.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

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Type Name & Title of Authorized Representative

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Signature of Authorized Representative

---

Date

I am unable to certify to the above statements. My explanation is attached.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters  
INSTRUCTIONS

Under Executive Order 12549 an individual or organization debarred or excluded from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program or a subagreement thereunder for \$25,000 or more.

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or subagreement participant thereunder must complete the attached certification provide an explanation why they cannot. For further details, see 40 CFR 32.510, Participants' responsibilities, in the attached regulation.

Go to <https://www.sam.gov/portal/SAM/##11> to access the Excluded Parties List System (EPLS). The EPLS includes information regarding entities debarred, suspended, proposed for debarment, excluded or disqualified under the nonprocurement common rule, or otherwise declared ineligible from receiving Federal contracts, certain subcontracts, and certain Federal assistance and benefits. This information may include names, addresses, DUNS numbers, Social Security Numbers, Employer Identification Numbers or other Taxpayer Identification Numbers, if available and deemed appropriate and permissible to publish by the agency taking the action.

Where To Submit

The prospective EPA grant, loan, or cooperative agreement recipient must return the signed certification or explanation with its application to the appropriate EPA Headquarters, Regional office, or Ohio EPA, as required in the applications.

A prospective prime contractor must submit a complete certification or explanation to the individual or organization awarding the contract.

Each prospective subcontractor must submit a complete certification or explanation to the prime contractor for the project.

Applicants may reproduce these materials as needed and provide them to their prospective prime contractor, who, in turn, may reproduce and provide them to prospective subcontractors.

Additional copies / assistance may be requested from:

Ohio EPA  
Division of Environmental and Financial Assistance  
P.O. Box 1049  
Columbus, Ohio  
43216 1049 (614)  
644 2798

<http://epa.ohio.gov/defa/EnvironmentalandFinancialAssistance.aspx>

American Iron and Steel Acknowledgement

The Contractor acknowledges to and for the benefit of \_\_\_\_\_ (“Purchaser”) and the State of Ohio (the “State”) that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Name and Title of Authorized Signatory, Please Print or Type \_\_\_\_\_

Bidder’s Firm \_\_\_\_\_

Check here if the WPCLF or WSRLA applicant will be requesting an individual waiver for non-American made iron and steel products. Please note that the waiver box does not need to be marked for nationwide waivers.

CONSTRUCTION CONTRACT  
HAMILTON COUNTY PUBLIC HEALTH  
With xxxx xxxxx  
For the Property at xxxxx Road  
Dated xx xx, 2021

PROJECT: HOUSEHOLD SEWAGE TREATMENT SYSTEM REPAIR/REPLACEMENT PROJECT

This CONTRACT, made and entered into at HAMILTON COUNTY, Ohio, on xxxx xx, 2021 by the HAMILTON COUNTY PUBLIC HEALTH, hereinafter referred to as "HCPH"); and xxxxxxxx (hereinafter referred to as "CONTRACTOR").

WITNESSETH, the HCPH and the CONTRACTOR hereby agree as follows:

1. CONTRACT DOCUMENTS

The Contract consists of this document, the Contractor's Bond, the Contractor's Bid, the Design Drawings, the Design Specifications, all Addenda issued prior to execution of this Contract, the Notice To Proceed (Attachment A), all Change Orders (Attachment B) issued subsequent thereto and Federal, State, and/or Local Regulations; and when specified: Labor and Material Bond, Affirmative Action and Equal Opportunity Requirements, Contractor Equal Employment Opportunity Certification Form (Attachment C), Certification Regarding Debarment, Suspension and Other Responsibility Matters Form (Attachment D), and American Iron and Steel Acknowledgement Form (Attachment E).

2. CONTRACT REGULATIONS

Terms and conditions of this Contract shall be governed by the provisions of Chapters 153 and 4115 and Section 149.53 of the Ohio Revised Code, and all applicable local, State and Federal Ordinances, Statutes and Regulations.

The CONTRACTOR agrees not to discriminate against any employee or applicant for employment because of race, creed, sex, handicap, or color, including, but not limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship. All records, manuals, forms, drawings, schedules, lists, surveys, specifications, designs, and other data pertaining to the work specified in this contract are and shall remain the sole property of the HCPH. The use of any Subcontractor must be reported to the HCPH and they shall be bound by the same requirements as the CONTRACTOR.



3. BONDING

A bond or other form of financial guarantee shall be submitted by the CONTRACTOR in accordance with Sections 153.54/307.89 of the Ohio Revised Code and Section 3.4 of the Water Pollution Control Loan Agreement for the full amount of the Contractor's Bid.

4. THE WORK

The CONTRACTOR shall perform and complete all work of the Project required by the Contract Documents for xxxxxx Road, supplying all the labor, materials, supervision, tools and equipment necessary and required for the proper abandonment of the existing sewage treatment system (tanks and drywells, if present) and replacement of the sewage treatment system in accordance with the Installation Permit, Design, Project and Contract Documents; shall proceed in a prompt and diligent manner, and shall do the several parts thereof at such times and in such order as the HCPH may direct, and shall execute, construct, finish, and test when required, the Project in an expeditious, substantial and workmanlike manner to the satisfaction of HCPH, and to the final acceptance of the Project by HCPH.

5. TIME OF COMMENCEMENT AND COMPLETION

The CONTRACTOR shall commence work upon receipt of the written Notice To Proceed (Attachment A) issued by HCPH. The CONTRACTOR shall complete the Project work by December 15, 2021 and following the Notice To Proceed.

6. RIGHTS OF ACCESS

The signatories agree to ensure that the Director or its duly authorized agents shall have the right at all reasonable times to enter upon the Project Site(s) and Project Facilities, and to examine and inspect the same and to exercise the Director's rights pursuant to the WPCLF Assistance Agreement.

7. CONTRACT CONFLICTS

In the event of a conflict between the contract and the WPCLF Assistance Agreement, the provisions of the WPCLF Agreement shall prevail.

8. CONTRACT SUM

Hamilton County Public Health, utilizing OHIO EPA funding, shall pay the CONTRACTOR for the performance of the Work, up to the sum of \$xx,xxxx.xx (xx% of eligible costs paid by HCPH with \$x,xxx.xx - xx%

covered by the property owner) subject to additions and deductions by Change Orders (Attachment B) properly approved and executed. All properly approved and executed Change Orders for increases will be paid by HCPH, utilizing OHIO EPA funding, and/or homeowner contribution. Neither HCPH nor OHIO EPA will be responsible for additional reinspection fees.

9. PAYMENTS

Based upon Applications for Payment submitted to the HCPH by the CONTRACTOR, and after installation approval by HCPH, the contractor shall submit an invoice that documents costs all incurred to HCPH. The invoice shall detail the services rendered, including charge rates, number of hours, materials or supplies consumed, and other information needed to support the invoice to HCPH. Upon verification of this information, HCPH will send a request to Ohio EPA for reimbursement of the eligible costs. After confirmation by Ohio EPA, the Ohio Water Development Authority will distribute the funding to HCPH, who will then pay the Contract Sum to the CONTRACTOR as provided in Chapter 153 of the Ohio Revised Code and after payment is received from the Ohio EPA.

10. NEGLECT, DEFAULT, DELAY, ETC.

Hamilton County Public Health or Hamilton County Board of Health shall not be liable to the CONTRACTOR for any neglect, default, delay, or interference of or by another contractor, nor shall any such neglect, default, delay, or interference of or by another contractor, or alteration which may be required in said Work within the time aforesaid, or from the damage to be paid in default thereof. The CONTRACTOR shall pay HCPH \$200.00 for each and every calendar day of completion the Project is delayed beyond the date fixed for completion in Section 3 herein.

11. INSURANCE

The Insurance Specifications for Contractors and their subcontractors are as follows:

- A. All insurance required herein shall be issued by companies licensed to do business in Ohio, and which are rated not less than A: VII by A. M. Best.
- B. Commercial General Liability insurance with commercial general liability form GC 00 01 or its equivalent, with limits of at least \$1,000,000 per occurrence and \$1,000,000 in the aggregate covering death, bodily injury, and property damage. Coverage must include premise and

operations, contractual liability, third party property damage, severability of interest, completed operations coverage, maintained for at least three years beyond the date of the contractor's completion of the work, waiver of subrogation, and waiver of "cross claim exclusion between insured's".

- C. Business auto liability insurance of at least \$1,000,000 combined single limit, on all owned and non-owned leased and hired automobiles.
- D. Umbrella and excess liability policies of at least \$1,000,000, per occurrence and in the aggregate, above the underlying General Liability and business auto policies. Coverage must include drop down features, concurrency of effective dates; aggregates in the primary apply in the Umbrella, waiver of subrogation.
- E. The Commercial General Liability and business auto policies must endorse the Board of Health of Hamilton County, Ohio, their employees, officials, agents and volunteers as additional insureds. Further these policies must waive subrogation claims against the aforesaid individuals.
- F. Owner shall require its contractors and subcontractors to provide Workers' Compensation Insurance coverage at the statutory limits required by the Ohio Revised Code. The Contractor shall provide Workers Compensation Insurance for all employees engaged in Work who may come within the protection of the workers compensation law, and, where applicable, employer's General Liability Insurances for employees not so protected and shall require all Subcontractors to provide corresponding insurance. The Contractor shall indemnify the Owner, Hamilton County Board of Health, their employees, officials, agents and volunteers and the Consulting Engineer against any and all liabilities, cost and expenses due to accidents or other occurrences covered by the workers compensation law.
- G. Each policy required herein may not be canceled or materially changed except upon thirty days prior written notice given to: Hamilton County Public Health, 250 William Howard Taft, Cincinnati, Ohio 45219.

- H. Maintenance of the insurance required hereunder is a material element of this Agreement. Material changes of the required coverage or cancellation of the coverage in violation of subsection G, above, is a material breach of this Agreement.
- I. Builders Risk: In addition to such fire and other physical damage insurances as the Contractors elects to carry for his own protection, he shall also secure and maintain in the name of the Owner, the government agency sponsoring the Project, Subcontractors, the Consulting Engineer and any other parties having an interest in the Project, as named insured as their interest may appear; a builders' risk policy for fire, extended coverage, vandalism and malicious mischief in the amount of one hundred (100) percent of the value of the complete parts of the Project and Materials in storage, except that such coverage shall not be required in connection with sewer, water main or paving construction. Pump or lift station construction shall not be considered sewer or water main construction for purposes of this paragraph.
- J. Contractor's Public Liability and Property Damage Liability Insurance:  
Contractor's Public Liability Insurance providing a limit of not less than \$500,000 for all damages arising out of bodily injuries, including accidental death to one person, and a total limit of 1,000,000 for all damages arising out of bodily injuries, including accidental death, to two or more persons in any one occurrence. Contractor's Property Damage Liability Insurance providing for a limit on not less than \$500,000 for all damages to or destruction of property.  
Coverage under this policy shall include, to the limits indicated above, the collapse or damage to any structure, building or its contents, public or private utility, or pavement during construction and for two (2) years thereafter.  
Whenever Work under the Contract is to be done in the vicinity of existing underground utilities or structures, coverage under the policy shall also include, to the limits indicated, all damages to said underground utilities or structures during construction and for a period of two (2) years thereafter. Whenever Work under the Contract is to be done by blasting, coverage under the policy shall also include, to the limits indicated above, all damages of any kind whatsoever caused by blasting.

K. Contractor's Protective Public Liability and Property Damage Liability

Insurance: Contractor's Protective Public Liability and Property Damage Liability Insurance for operations performed by Subcontractors providing for coverage and limits corresponding to those described in subparagraph J.

L. Owner's (HCPH) Protective Public Liability and Property Damage Liability

Insurance: Regular Owner's Protective Public Liability and Property Damage Liability Insurance for operations performed by the Contractor or any Sub-contractor providing for coverage and limits corresponding to those specified elsewhere herein.

M. Railroad Protective Liability Insurance: In any of the Work under this Contract is on railroad R/W, the Contractor shall at its sole cost and expense, procure and provide, for and in behalf of each railroad company. Protective Liability Insurance (AARAASHO form) with minimum limits per occurrence of not less than \$2,000,000 for bodily injury, death and/or property damage, subject to an aggregate limit of \$6,000,000 per annum. The policy shall name each railroad company as the insured and be issued to the Contractor. Each railroad company shall be provided with a copy of each policy of insurance prior to commencement of any work.

#### Certificates of Insurance

The Contractor shall file a Certificate of Insurance for all coverage required in these Insurance Specifications on the ACORD 25 Form (preferred), and a copy of his current Worker's Compensation Certificate, with the Hamilton County Public Health before starting work on the project, and shall keep such Certificates current and on file with the County for the life of this Contract.

#### Indemnification Clause

The Contractor agrees to indemnify and save The Board of County Commissioners, Hamilton County Ohio, Hamilton County Board of Health, HCPH, their officials, officers, agents, and employees harmless from any and all losses, claims, actions, costs, expenses, judgments, subrogation's, or other damages resulting from injury to any person (including injury resulting in death), or damage (including loss or destruction) to property of whatsoever nature of any person, firm, or corporation arising out of the errors, omissions or negligent acts of the Contractor in the performance of the terms of this Contract by the Contractor, including but not limited to the Contractor's

employees, agents, subcontractors, sub-subcontractors, and others designated by the Contractor to perform work or services in, about, or attendant to, the work and services under the terms of this contract.

#### Notice To Proceed

The Contractor shall not commence work under this contract until he has obtained all the insurance required herein, has submitted appropriate Certificates of Insurance to and received approval of the County as evidenced by a Notice to Proceed (Attachment A).

#### Subcontractors

The Insurance Specifications apply equally to all subcontractors and sub-subcontractors at any tier during the period of their work on the project. The Prime Contractor shall be solely responsible for his subcontractor's liability if he permits the Sub to work on the project without the Sub having been issued a Notice to Proceed by the County.

#### 12. FAILURE TO COMPLY

If the CONTRACTOR shall fail to comply with any of the terms, conditions, provisions or stipulations of this Contract, HCPH may avail itself of any and all remedies provided in their behalf in the Contract, and shall have the right and power to proceed in accordance with the provisions thereof.

#### 13. RESOLUTION OF DISPUTES

In the event of a dispute covering additional costs, claims and any other matter arising out of or relating to this Contract, or the breach thereof, such disputes shall be decided by submission to a court of competent jurisdiction within one (1) year of the date upon which HCPH accepts and approves the project for use. The CONTRACTOR hereby waives any right to rely upon the statute of limitations for actions on contracts.

Failure to bring an action within one year of the above date shall constitute a bar to such action. If, however, within ten (10) days of the specific event giving rise to the disputed matter, the CONTRACTOR gives HCPH, by written notice, a request to submit the matter to arbitration, HCPH and the CONTRACTOR may agree, within sixty (60) Days of receipt of the above notice, to submit the matter to arbitration as set forth below.

If the parties agree, by written change order signed by HCPH, the Ohio EPA, and the CONTRACTOR, to submit such dispute to arbitration, all proceedings shall be according to Ohio

Revised Code Chapter 2711, and, unless waived, the Ohio Rules of Civil Procedure and the Ohio Rules of Evidence. HCPH and the CONTRACTOR shall each choose one arbitrator. The two arbitrators shall agree upon and choose a third arbitrator, who shall preside over the proceedings.

Compensation of the arbitrators shall be as agreed upon by HCPH, the CONTRACTOR and the arbitrators. Payment for the arbitrators shall be shared equally by HCPH and the CONTRACTOR. The CONTRACTOR shall deposit, as a precondition to commencement of the hearing, its equal share of the compensation of the arbitrators with HCPH to be placed in an account for that purpose, or with an escrow agent suitable to both parties. The hearing or the arbitration shall commence within sixty (60) days of the agreement to arbitrate. If the hearing is not commenced within sixty (60) days of the agreement to arbitrate, said agreement shall be void and the dispute shall be resolved by submission to a court of competent jurisdiction as herein before specified. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof. All questions with regard to the rights and authority of the arbitration panel shall be resolved pursuant to Chapter 2711, of the Ohio Revised Code.

14. IN FORCE AND EFFECT

Subject to the applicable provisions of law, this contract shall be in full force and effect from and after the date when a fully executed and approved counterpart hereof is forwarded to the CONTRACTOR, but the CONTRACTOR shall not start work on the Project until written notification to proceed is received from HCPH.

15. Executive Order 11246 Sec.202

Except in contracts exempted in accordance with Section 204 of this Order, all Government contracting agencies shall include in every Government contract hereafter entered into the following provisions:

During the performance of this contract, the contractor agrees as follows:

- A. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment, or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and

selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of the nondiscrimination clause.

- B. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- C. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of this notice in conspicuous places available to employees and applicants for employment.
- D. The contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- E. The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- F. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, or by rule regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- G. The contractor will include the provisions of Paragraphs (A) through (G) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued



pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

16. Violating Facilities Clause

The Contractor agrees to comply with all applicable standards, orders or requirements under Section 306 of the Clean Air Act, 42 USC 1857 (h), Section 508 of the Clean Water Act, 33 USC 1368, Executive Order 11738, and EPA regulations, 40 CFR Part 32, which prohibits the use under non-exempt Federal contracts, grants, or loans of facilities included on the EPA List of Violating Facilities.

17. Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The Contractor certifies to the best of its knowledge and belief that it and its principles:

- A. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or Agency;
- B. Have not within a year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.
- C. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or Local) with commission of any of the offenses enumerated in paragraph (B) of this certification;

- D. Have not within a three year period preceding this application / proposal had one or more public transactions (Federal, State, or Local) terminated for cause or default' and
- E. Will not utilize a subcontractor or supplier who is unable to certify (A) through (D) above.

IN WITNESS WHEREOF, the County and the Contractor affix their signatures:

WITNESS: HAMILTON COUNTY PUBLIC HEALTH

\_\_\_\_\_ Health Commissioner

\_\_\_\_\_ Date

WITNESS: CONTRACTOR: \_\_\_\_\_

\_\_\_\_\_ By: \_\_\_\_\_

\_\_\_\_\_ Title

Contractor to complete applicable paragraph below:

\_\_\_\_\_ A Corporation organized under the Laws of \_\_\_\_\_ and qualified to do business in the State of Ohio.

\_\_\_\_\_ Co-partners trading and doing business under the firm name and style of

\_\_\_\_\_

\_\_\_\_\_ List names of all Partners \_\_\_\_\_

Or Joint Venture Participants \_\_\_\_\_

\_\_\_\_\_ An individual doing business under the firm name and style of

\_\_\_\_\_

ATTACHMENT A  
HAMILTON COUNTY PUBLIC HEALTH  
NOTICE TO PROCEED

Date \_\_\_\_\_  
Contractor Name  
Street Address  
City, State, Zip Code

Notice To Proceed With: \_\_\_\_\_

Enclosed is your copy of the completely executed contract in the amount of \$\_\_\_\_\_ to be paid from the \_\_\_\_\_ fund.

You are hereby authorized and notified to PROCEED with the repair or replacement of the household sewage treatment system located at \_\_\_\_\_ in accordance with all terms and conditions of your contract with HCPH. This includes by reference the specifications upon which you bid.

Sincerely,

Greg Kesterman  
Health Commissioner, Hamilton County Public Health

ATTACHMENT B  
*State of Ohio*  
 WATER POLLUTION CONTROL LOAN FUND (WPCLF/SRF) HSTS

**CONTRACT CHANGE ORDER**

RECIPIENT \_\_\_\_\_ CHANGE ORDER NBR \_\_\_\_\_  
 LOAN NUMBER \_\_\_\_\_ CONTRACT \_\_\_\_\_  
 OWDA PROJECT No. \_\_\_\_\_ DATE \_\_\_\_\_

---

Description of Change  
 (include address):

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 (Health Department Representative)

ACCEPTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 (Contractor)

\_\_\_\_\_ (Company)

Original Contract Amt		
Previous Changes (+ / --)		
This Change (+ / --)		
Adjusted Contract Amt		
Ohio EPA Acceptance	Date	

## ATTACHMENT B

### CHANGE ORDER INSTRUCTIONS:

All Change Orders for this work, regardless of costs, must be submitted to Ohio EPA for review.

#### Changes Requiring Prior Approval

Any change which substantially modifies the Project Facilities as specified in the Ohio EPA approved Facilities Plan and Final Permit to Install or Final Plan Approval (when applicable) or alters the direct or indirect impact of the Project Facilities upon the environment must be incorporated into a Change Order. One copy of the Change Order prior to execution is to be submitted to Ohio EPA for review and prior approval of the acceptability of the change. "Prior to execution" means before the Change Order is signed by the Owner.

Ohio EPA will review the Change Order and inform the Owner of the technical, environmental and operational acceptability of the change, and give the Owner permission to proceed with the proposed work.

#### All Other Changes

Change Orders not requiring prior approval as described above must be submitted to Ohio EPA within one (1) month of the time at which they are approved by the Owner. Change Orders for WPCLF projects should be submitted to the Division of Environmental and Financial Assistance (DEFA).

#### Change Order Approval Process

After the Change Order is executed, one (1) copy of the Change Order, including the supporting documentation, is to be sent to Ohio EPA for final review. The HSTS Change Order form must have original signatures.

Health Departments should submit change orders electronically to the DEFA Engineer who reviewed and approved their project.

After the Change Order is accepted and eligible costs determined, Ohio EPA will return a signed copy of the HSTS Change Order form.

#### Payments for Change Order Work

The Owner is precluded from submitting to the OWDA payment requests for Eligible Project Costs associated with the Change Orders until the Ohio EPA's approval of the Change Orders has been obtained.

ATTACHMENT C  
Contractor Equal Employment Opportunity Certification

During the performance of this contract, the undersigned agrees as follows:

1. The undersigned will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The undersigned will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The undersigned agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this equal opportunity (federally assisted construction) clause.
2. The undersigned will, in all solicitations or advertisements for employees placed by or on behalf of the undersigned, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
3. The undersigned will send to each labor union or representative of workers, with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the undersigned's commitment under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The undersigned will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The undersigned will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and relevant orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency of the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the undersigned's non compliance with the equal opportunity (federally assisted construction) clause of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part, and the undersigned may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No 11246 of September 24, 1965, or by rules, regulations, or order of the Secretary of Labor, or as provided by law.
7. The undersigned will include this equal opportunity (federally assisted construction) clause in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order No 11246 of September 24, 1965, so that such provision will be binding upon each subcontract or vendor. The undersigned will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non compliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor, as a result of such direction by the administering agency the undersigned may request the United States to enter into such litigation to protect the interest of the United States.

---

(Signature)

(Date)

---

(Name and Title of Signer, Please type)

---

(Firm Name)

ATTACHMENT D

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal of State antitrust statues or commission if embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification;
- (d) Have not within a three year period preceding this application / proposal had one or more public transactions (Federal, State, or local) terminated for cause or default; and
- (e) Will not utilize a subcontractor or supplier who is unable to certify (a) through (d) above.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

---

Type Name & Title of Authorized Representative

---

Signature of Authorized Representative

---

Date

I am unable to certify to the above statements. My explanation is attached.

ATTACHMENT D  
Certification Regarding Debarment, Suspension, and Other Responsibility Matters  
INSTRUCTIONS

Under Executive Order 12549 an individual or organization debarred or excluded from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program or a subagreement thereunder for \$25,000 or more.

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or subagreement participant thereunder must complete the attached certification provide an explanation why they cannot. For further details, see 40 CFR 32.510, Participants' responsibilities, in the attached regulation.

Go to <https://www.sam.gov/portal/SAM/##11> to access the Excluded Parties List System (EPLS). The EPLS includes information regarding entities debarred, suspended, proposed for debarment, excluded or disqualified under the nonprocurement common rule, or otherwise declared ineligible from receiving Federal contracts, certain subcontracts, and certain Federal assistance and benefits. This information may include names, addresses, DUNS numbers, Social Security Numbers, Employer Identification Numbers or other Taxpayer Identification Numbers, if available and deemed appropriate and permissible to publish by the agency taking the action.

Where To Submit

The prospective EPA grant, loan, or cooperative agreement recipient must return the signed certification or explanation with its application to the appropriate EPA Headquarters, Regional office, or Ohio EPA, as required in the applications.

A prospective prime contractor must submit a complete certification or explanation to the individual or organization awarding the contract.

Each prospective subcontractor must submit a complete certification or explanation to the prime contractor for the project.

Applicants may reproduce these materials as needed and provide them to their prospective prime contractor, who, in turn, may reproduce and provide them to prospective subcontractors.

Additional copies / assistance may be requested from: Ohio EPA  
Division of Environmental and Financial Assistance  
P.P. Box 1049  
Columbus, Ohio 43216 1049  
(614) 644 2798

<http://epa.ohio.gov/defa/EnvironmentalandFinancialAssistance.aspx>



ATTACHMENT E

American Iron and Steel Acknowledgement

The Contractor acknowledges to and for the benefit of \_\_\_\_\_ (“Purchaser”) and the State of Ohio (the “State”) that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name and Title of Authorized Signatory, Please Print or Type

\_\_\_\_\_  
Bidder’s Firm

Check here if the WPCLF or WSRLA applicant will be requesting an individual waiver for non-American made iron and steel products. Please note that the waiver box does not need to be marked for nationwide waivers.



PREVENT. PROMOTE. PROTECT.

*Greg Kesterman*  
*Health Commissioner*

*250 William Howard Taft Road, 2nd Floor*  
*Cincinnati, Ohio 45219*

*Phone 513.946.7800*  
*Fax 513.946.7890*

*hamiltoncountyhealth.org*

March 23, 2021

GARY L & RUTH M CAMPBELL  
8574 MT HOPE RD  
HARRISON OH 45030

Re: Sewage Treatment System Application, 8574 MT HOPE RD, CROSBY TWP

Dear GARY L & RUTH M CAMPBELL

A recent application request for design approval of a sewage treatment system (STS) at 8574 MT HOPE RD, CROSBY TWP, has been approved on 03/22/2021. Please be aware that the soil area designated on the approved plans for the primary and replacement system must be protected by the owner. Use of construction fencing and signage are minimum measures that must be undertaken by the owner to protect those areas.

You may now proceed to seek bids from registered and qualified installation contractors. A list of contractors can be found at <https://tinyurl.com/registered-STs-Contractors>. It is recommended that a minimum of three bids be obtained for comparison. Please be aware:

- Your selected registered and qualified installation contractor must obtain an Installation Permit from Hamilton County Public Health (HCPH) prior to starting work on the STS.
- The installation (and abandonment of your existing STS components, where necessary) of the sewage treatment system must meet all of the requirements of the Ohio Administrative Code 3701-29, the approved design and permit.
- Any proposed changes to the STS plan must be approved by HCPH and the STS designer before any changes are made, additional review fees may apply.
- Any electric work for the STS must be permitted, inspected and approved by IBI Inc. (513-381-6123).
- Any interior plumbing changes must be permitted, inspected and approved by the Plumbing Division of Hamilton County Public Health (513-946-7854)

As the STS is installed on the property, Hamilton County Public Health will conduct multiple inspections. Once final approval has occurred, you will be issued an operation permit for the STS. It is recommended that a pre-determined final payment amount with your contractor be withheld until you have confirmation from Hamilton County Public Health that all approvals have occurred.

If the application approval discussed in this letter is for an STS under orders to be replaced or an otherwise failing system, you have until 07/20/2021 to have the installation completed. If the application approval is exclusively for a system being replaced because of an upgrade to the property, installation must occur before occupancy is awarded.

If you have any questions, you can reach me at 946-7871. If you reach my voice mail, I will return your call the following business day.

Sincerely,  
GREG CASSIERE, R.S.  
SUPERVISOR  
Division of Water Quality



Gary Campbell  
8574 Mount Hope Road

**OSU Mound Calculations - Sept 2020 Version**  
**Split Mound Design**  
Based on OSU Bulletins 813 and 829  
(3/4" Laterals)

**Wastewater Volume per Day**

Number of Units	No. of bedrooms	3.0	Determined from	Provided Information
Unit Flow Rate	(gpd/ft)	100	Fluoride per	Table 1001
Total Flow Rate	(gpd/ft)	300		

**Existing Water Usage per Day**

Unit Flow Rate	(cu ft)	
Days per Recurring Period	days	
Avg. Unit Flow Rate	(gpd/ft)	600/ft

**Flow Rate Per Mound**

Mound 1	(gpd/ft)	150
Mound 2	(gpd/ft)	150

**Site & Soil Conditions**

		Mound 1	Mound 2	
Site Slope Perpendicular to Mound Long Axis (Length)	(%)	7.0	7.0	From Site Investigation
Linear Loading Rate (LLR)	(gpd/ft)	3.0	3.0	From Site Investigation
Additional LLR capacity (if applicable)	(gpd/ft)	0.0	0.0	(if applicable)
Basal Loading Rate (BLR)	(gpd/sq ft)	6.0	6.0	From Site Investigation
Depth to Seasonal Water Table	(inches)	8.0	8.0	From Site Investigation
Depth to Restrictive Layer	(inches)	28.0	28.0	From Site Investigation
Depth to Limiting Condition	(inches)	6.0	6.0	From Site Investigation

**Design Parameters and Calculations**

Will System Have Treatment?	Drop down list		
	Mound 1	Mound 2	
Regulatory Vertical Separation Distance (in)	24	24	Default value is 18"
Effective vertical separation distance (in)	24	24	Any soil credits?
Regulatory in-situ soil depth (in)	6	6	Default value is 6"
Mound Depth (inches) (1)	4	4	Use 4" (min) for precast mounds; 6" (min) for septic effluent
Mound Depth (ft) (1)	0.33	0.33	
Top Soil Depth (inches) (2)	6	6	Use 6"-8" typical
Top Soil Depth (ft) (2)	0.5	0.5	
Width of Distribution Area (ft)	3.0	3.0	LLR/Sand Fill Loading Rate (1 GPD/ft)
Length of Distribution Area (ft)	10.0	10.0	Design flow rate / LLR
LLR Reduction (if applicable) (%)	0%	0%	Reduction as allowed by OAC 3701-28-15(N)(2)(h) - up to 10% for new construction; up to 50% for replacement.
Adjusted Length of Distribution Area (ft)	10.0	10.0	Length of distribution x (1-reduction factor)
Adjusted LLR after reduction (if applicable)	3.0	3.0	Back-calculated LLR based on adjusted length
Adjusted width after reduction (if applicable) (ft)	3.0	3.0	Design flow rate/SLR/Adjusted length of distribution
Minimum # of Laterals	2	2	Laterals must be split with either 1,2,4,8, etc supply lines. If 8 laterals, think about using 1" laterals
Lateral Length (ft)	3.0	3.0	Maximum lateral length = 32' (for 3/4" laterals)
Initial Length of Gravel Bed (ft)	3.0	3.0	Equal initial total lateral lengths
Min. No. of Offsets	2	2	Equals initial area of distribution bed (initial length of gravel bed x adj. width) divided by 6 (Max 6 #2 per offset)
Number of manifolds	2	2	If Distribution Area width is 4 ft or greater, use dual manifolds
# dual manifolds, spacing between laterals (ft)	3.0	3.0	Value not used in a single manifold design
# dual manifolds, spacing outside laterals (ft)	3.0	3.0	Value not used in a single manifold design
Total # of laterals per manifold	2	2	No. of laterals x No. of manifolds
Min. # of offsets per lateral	2	2	Min. # of offsets / total # of laterals
Min. Offset Spacing	1.50	1.50	Lateral length / # of offsets
Effective offset spacing - Mound 1	2.00	2.00	(feet/inches)
Effective offset spacing - Mound 2	2.00	2.00	(feet/inches)
Effective No. of offsets per lateral	11	11	Lateral length / effective offset spacing
Effective total lin. of offsets	33.0	33.0	Effective # of offsets per lateral x total number of laterals
Effective lateral length (feet/inch)	3.0	3.0	Effective offset spacing x effective # of offsets per lateral
Effective Total Lateral Length (ft)	33.0	33.0	Equals # of laterals x lateral lengths
Effective Length of Gravel Bed (ft) (1)	6.0	6.0	Equal effective total lateral lengths plus 6" for each internal cleanout sweep plus 12" each end
Depth of Gravel Bed (ft) (1)	0.5	0.5	Default is 0.5 to 0.7'
Basal Width (ft)	3.0	3.0	Adjusted LLR / SLR
Basal Width beyond Distribution (ft)	3.0	3.0	Calculated Basal width minus effective width of distribution
Top of Sand Offset (ft)	3.0	3.0	Set value per detail
Top of Sand Width (ft)	4.0	4.0	Effective width of distribution plus 2x sand offset
Upslope sand depth (ft)	2.0	2.0	Min sand depth required (in feet)
Downslope sand depth (ft)	2.0	2.0	Equals min. sand depth x site slope x gravel width (feet/inches)
Upslope sand depth at offset	2.0	2.0	Equals upslope sand depth - site slope x 6" sand offset (feet/inches)
Downslope sand depth at offset	2.0	2.0	Equals downslope sand depth + site slope x 6" sand offset (feet/inches)
Upslope Correction Factor	1.17	1.17	Lookup value from table below
Downslope Correction Factor	1.17	1.17	Lookup value from table below
Upslope sand width - horizontal (ft)	3.0	3.0	(feet)
Upslope sand width - 30 Single Lateral (ft) (1)	3.0	3.0	BOUND #1 - Lateral to Upper Toe - Length along slope
Upslope sand width - 30 Dual Lateral (ft) (1)	3.0	3.0	BOUND #1 - Upper Lateral to Upper Toe - Length along slope
Upslope sand width - 30 Single Lateral (ft) (2)	3.0	3.0	BOUND #2 - Lateral to Upper Toe - Length along slope
Upslope sand width - 30 Dual Lateral (ft) (2)	3.0	3.0	BOUND #2 - Upper Lateral to Upper Toe - Length along slope
Downslope sand width - horizontal (ft)	3.0	3.0	(feet)
Downslope sand width - 30 Single Lateral (ft) (1)	3.0	3.0	BOUND #1 - Lateral to Lower Toe - Length along slope
Downslope sand width - 30 Dual Lateral (ft) (1)	3.0	3.0	BOUND #1 - Upper Lateral to Lower Toe - Length along slope
Downslope sand width - 30 Single Lateral (ft) (2)	3.0	3.0	BOUND #2 - Lateral to Lower Toe - Length along slope
Downslope sand width - 30 Dual Lateral (ft) (2)	3.0	3.0	BOUND #2 - Upper Lateral to Lower Toe - Length along slope
Total Sand Width - horizontal (ft) (1)	6.0	6.0	Equals Top of Sand width (A+1) + upslope width (L) + downslope width (D) (feet/inches)
Total Sand Width - 30 ft (ft) (1)	6.0	6.0	
Total Sand Width - 30 ft (ft) (2)	6.0	6.0	
Top of Sand Length (ft)	6.0	6.0	Effective total length of distribution area plus 2x Top of sand offset
Mound Development Length (ft) (1)	6.0	6.0	Any of upslope and downslope depths of sand x sideslope factor (3:1) (feet/inches)
Total Sand Length (ft) (1)	6.0	6.0	Top of Sand length plus 2x sideslope lengths
Total Basal Area Required (sq ft)	231.0	231.0	Design flow rate divided by original SLR
Total Basal Area Provided (sq ft)	412.0	412.0	Total sand length times total sand width
Unusable Cover Width (ft) (1)	3.0	3.0	***Check Cross Section Detail - should equal J + 5 ft.
Downslope Cover Width to meet 6:1 req. (ft)	3.0	3.0	Downslope sand width plus any buffer distance plus 1ft
Required Buffer Area to meet 6:1 req. (ft)	3.0	3.0	Perimeter drains must be Min 6 ft from nearest lateral end 1 ft from toe of sand mound
Downslope Cover Width to meet 3:1 (min) slope (ft)	4.5	4.5	Downslope cover width to meet minimum 3:1 slope
Required Buffer Area to meet 3:1 (min) slope (ft)	4.5	4.5	Required Buffer Width to meet minimum 3:1 slope distance
Required Downslope Cover Width (ft) (1)	7.5	7.5	Larger Downslope Width between 6:1 req or 3:1 slope
Required Downslope Cover Width (ft) (2)	4.5	4.5	Average of upslope and downslope sand depth + gravel depth + (soil depth) x 3:1 slope
Total Width of Mound (ft) (1)	13.5	13.5	Upslope cover width + downslope cover width + top of sand width
Total Length of Mound (ft) (1)	7.5	7.5	Effective length of the distribution area + (2 x sideslope cover length) + (2 x sand offset)
Dose Volume (without distribution)	8.2	8.2	Dose volume = total lateral length x 5 x 0.028 gal/ft (assumes 3/4" laterals)
Dose Volume (with distribution)	11.9	11.9	Dose volume = total lateral length x 5 x 0.045 gal/ft (assumes 1" laterals)
Dose Volume (without distribution)	11.9	11.9	Dose volume = total lateral length x 3 x 0.028 gal/ft (assumes 3/4" laterals)
Dose Volume (with distribution)	11.9	11.9	Dose volume = total lateral length x 3 x 0.045 gal/ft (assumes 1" laterals)



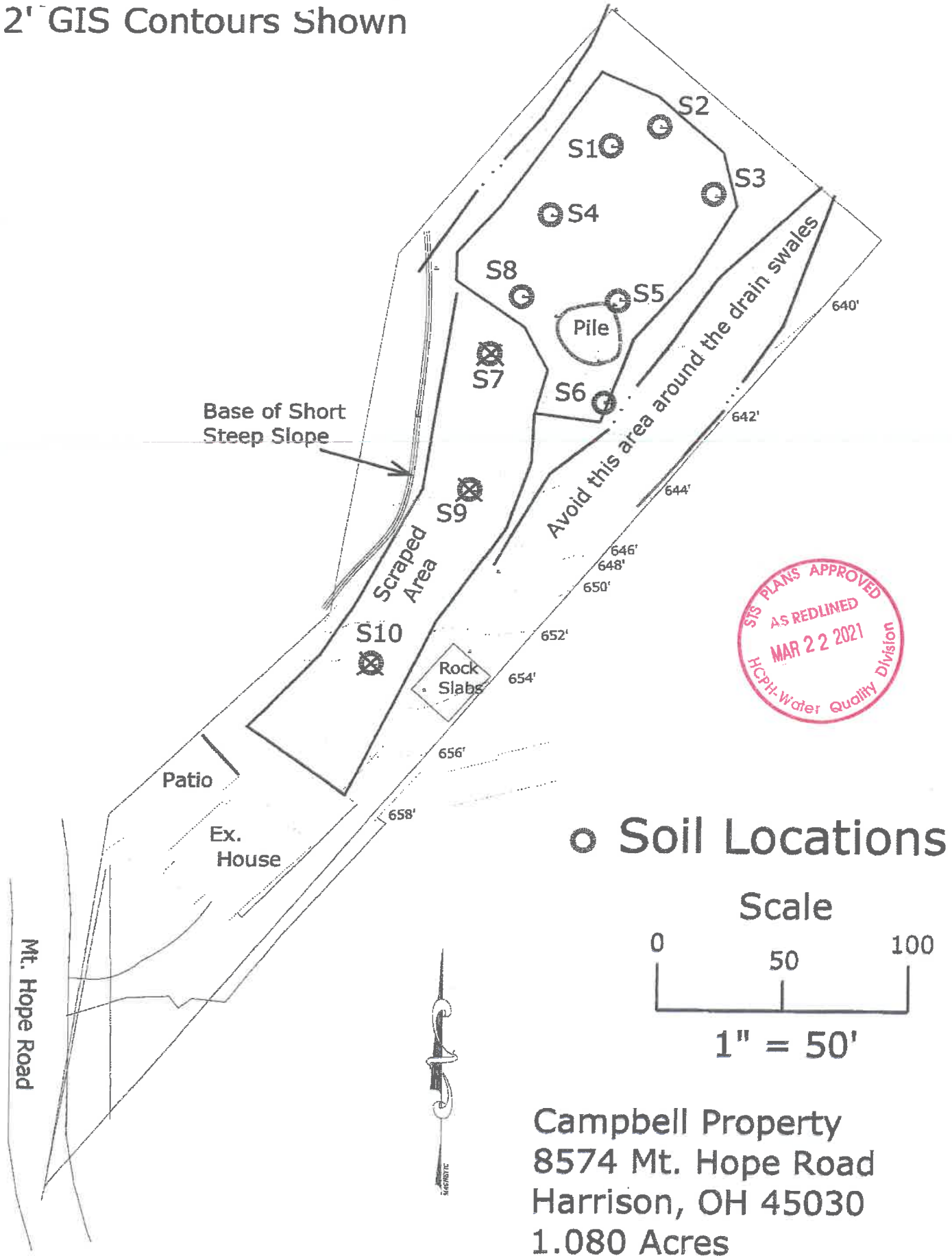
When a flow restrictive layer is present within twelve inches of the natural ground surface, each dose shall deliver no greater than one-eighth of the daily design flow and at least three times the void volume of the laterals during each twenty-four hour period.

Dose volume = total lateral length x 3 x 0.028 gal/ft (assumes 3/4" laterals)

Dose volume = total lateral length x 3 x 0.045 gal/ft (assumes 1" laterals)

This mound calculation spreadsheet is the property of 8CB Engineers and may not be used without expressed consent from 8CB Engineers

# 2' GIS Contours Shown



○ Soil Locations

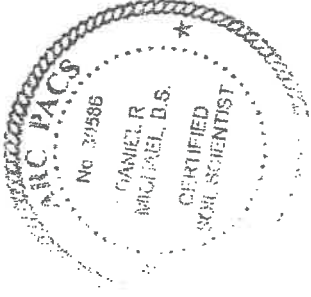
Scale



1" = 50'

Campbell Property  
8574 Mt. Hope Road  
Harrison, OH 45030  
1.080 Acres

# Soil and Site Evaluation for Sewage Treatment and Dispersal



County: Hamilton  
 Township/Sec.: Crosby  
 Property Address/Location: 8574 Mt. Hope Road  
Harrison, OH 45030  
 Parcel # / Subdiv. Lot #: \_\_\_\_\_  
 Applicant Name: Campbell  
 Address: 8574 Mt. Hope Road  
Harrison, OH 45030  
 Phone #: 513-312-2181  
 Lot #: \_\_\_\_\_  
 Test Hole #: 1.2.3.4.5  
 Latitude/Longitude: \_\_\_\_\_  
 Method:      Pit      Auger X Probe

Land Use/Vegetation: grass  
 Landform: upland  
 Position on Landform: side slope  
 Percent Slope: 7%  
 Shape of Slope: convex  
 Coord. Method/Accuracy: GPS - 3ft

Certification Stamp or Certification# #30586  
 Signature: Dan Michael, CPS  
 Phone #: 513-934-1040

Soil Profile		Estimating Soil Saturation				Estimating Soil Permeability						Remarks/Risk Factors:
		Munsell Color (hue, value, chroma)		Redoximorphic Features		Class	Texture Approx. % clay	Approx. % Fragments	Grade	Structure		
Horizon	Depth (inches)	Matrix color	Concentrations	Depletions	Soil Permeability					Size	Shape	Consistence
A <sub>1</sub>	0 - 8	10YR 4/2 dark grayish brown	10YR 3/1 1%	10YR 5/2 15%	silt loam	15%	0%	3 - strong	r	fr	friable	
B <sub>t</sub>	8 - 20	10YR 4/6 dark yellowish brown	10YR 3/1 1%	10YR 5/2 15%	silty clay loam	32%	1%	2 - moderate	m	SBK	firm	
2B <sub>1</sub>	20 - 40+	10YR 4/4 dark yellowish brown	10YR 3/1 1%	10YR 5/2 25%	clay	36%	2%	2 - moderate	co	SBK	firm	
<b>Limiting Conditions</b>												
Perched Seasonal Water Table		Depth to (in.)		Descriptive notes		Remarks/Risk Factors:						
Ground Water/Aquifer		8 to 20 in.		Fractured - Karst (circle one)		S7, S9, S10 areas are scraped or shallow to very high clay content soil.						
Highly Permeable Material (range)		> 50 in.		Highly Weathered Soil with slow permeability								
Bedrock		> 50 in.										
Flow Restrictive Layer		26 in.										
Highly Weathered Soil		26 in.										
Fractured Glacial Till		> 50 in.										
Other High Risk Limiting Conditions		> 50 in.										



**SEWAGE TREATMENT SYSTEM (STS) DESIGN PROPOSAL NOTES AND SPECIFICATIONS**

When referring to codes cited in this proposal, use HCPH Resolution A-2015: Policies and Standard Pursuant to Ohio Administrative Code Section 3701-29; Household Sewage Disposal Systems.

This proposal has been designed in accordance with guidelines provided by Ohio Administrative Code Section 3701-29 and local public health regulations. HCPH Installation Manual shall be used for procedures and to supplement information not otherwise specified in these plans. Additional information regarding installation instructions, materials, system devices, components and products specified in this STS proposal can be found by consulting manufacturer resources. For all further guidance or services such as change requests, or where conflicts exist, please consult AA Plumbing for clarification before proceeding. It is highly recommended to have a copy of the Hamilton County Installation Manual during installation.

**Definitions:**

- "3701-29-# #" refers to the Ohio Administrative Code.
- "HCPH" = Hamilton County Public Health.
- "IBI" = The Inspection Bureau, Inc. Required for Electrical inspection.
- "ODH" = Ohio Department of Health.
- "Section" refers to the HCPH Installer's Manual.
- "STS" = Sewage Treatment System.

**System Proposal Details:**

This design is for a Existing 3 bedroom home with a Daily Design Peak Flow of 360 GPD. The peak flow should not be reached on a routine basis. Average flows of 216 GPD can be accommodated routinely with typical residential wastewater strength as specified in Ohio Administrative Code (OAC) 3701-29 for households.

The seasonal water table is at 8" and flow restrictive layer is 26" from the ground's surface.

Conditions require a 24" Vertical Separation Distance with 8" In Situ Soil. (see attached calculation sheet)

Owner chose an Aqua Safe AS500L-EZ + 5 Pre pretreatment system with aeration which supplies 1' Soil Depth Credit and an Infiltrator IM-1530 Single Compartment Dosing Tank with a time-dosed Control Panel to a split zone sand mound with upslope interceptor drains and downslope perimeter drains. The DDF of the system will be split equally between both mounds, which each will accommodate 180 GPD.

The split zone sand mound minimum design length and width are calculated based on the worst soil conditions under the soil absorption system using OSU Bulletins 813 and 829. The Soil Loading rate for silt loam with strong granular structure is 0.8 GPD/sq.ft for pretreated effluent. The Linear Loading Rate for silt loam with strong granular structure with an infiltrative distance of 8-12" and 7% slope (as determined on-site) is 3.0 GPD/In.ft.

The split zone sand mound minimum design length is 180 GPD / 3.0 Gal/In.ft. = 60 feet long (each mound). Total mound dimensions for both mounds, including soil cover, are 16.7 feet wide by 71.6 feet long. Total sand / basal area is 6.9 feet wide by 65.6 feet long.

**Changes and Use of This Design**

It is the responsibility of the contractor to verify that the system can be installed as designed, based on their preliminary lay-out of the job. It is the responsibility of the installer and property owner to inform the designer of any conditions on the site, or otherwise, that may affect the installation, operation or maintenance of the STS, including site disturbances that may affect the performance of a soil absorption component. If design changes are needed, redesign fees may apply. The designer will be available to make adjustments.

**System Protection**

Property owner and installer are responsible to protect the soil absorption areas from disturbance. Keep wheeled traffic off the soil absorption area. It is the owner and installing contractor's responsibility to locate underground utilities. If utilities interfere with installation of the approved STS design proposal, construction shall not proceed without documented approval from both AA Plumbing and the authority responsible for approval of the STS proposal.

**System Cost Information**

The property owner has been informed of system options and has been briefed on cost factors. According to 3701-29-10(B)(5), designers of STS systems must include approximate installation costs and operational costs of STS options to assist the homeowner in the selection of the STS options. AA Plumbing estimates the costs associated with this STS design proposal as follows :

- \$38,500 +/- \$7,000 Installation cost\*
- \$1,000 annual operational cost\*

\*This is a general estimate of costs for this system. It is not a bid to install or service the STS. Contact a licensed installer and service provider or distributor for actual bids.

**Design Statements**

- 1) AA Plumbing is available to make adjustments and address concerns, as needed.
- 2) O&M requirements: All system devices and components must be operated and maintained in accordance with the ODH product approval and Hamilton County Public Health Operation Permit Terms and Conditions. System devices and components must be installed per ODH product approval, Hamilton County Public Health Standards and this design. Where conflicts exist, consult AA Plumbing for guidance before proceeding. See reference section on this sheet for information to obtain O&M Instructions. Means of O&M is accessible via the driveway and is within a reasonable distance for a standard truck.
- 3) Obstructions (if any) will be marked on site plan with the word "obstructions", and will have notes describing the obstructions and the proper way to avoid them.
- 4) This plan is the sole ownership of the designer and the homeowner at time of payment. This design may not be altered, changed, used or manipulated without approval of AA Plumbing. Contact AA Plumbing if changes are needed.
- 5) For further information not shown in these plans, refer to reference section on this sheet for web-sites and contact information. Be sure to address any other questions to HCPH during pre-construction meeting.
- 6) No unapproved connections or clear water connections (downspouts, pool/spa water, footer tiles, cisterns, etc) shall be connected to this STS.
- 7) This design is for a non-discharging system.
- 8) STS is sited on lot, with 10' and 50' isolation distances marked on scaled drawing as per 3701-29-06. STS is not in a floodway, wetland or within 100 year flood plain and sanitary sewers are not accessible.
- 9) Soil test provided by Dan Michael, Clear Creek Environmental.
- 10) Soil report describes the limiting condition and is noted.
- 11) STS was designed with adequate depth to limiting layer.
- 12) STS was designed with adequate depth to restrictive layer.
- 13) Soil test indicates soil horizons and depths.
- 14) Soil test indicates soil texture and structure of each horizon.
- 15) Soil test indicates estimated slope. Vertical scale shows actual slope.
- 16) Basal rate and linear loading rate are based off soil report and are appropriate for soils utilized.
- 17) Soil classifications are noted on report.
- 18) If there is highly permeable soil present in report, it will be noted in design. Otherwise N/A.

**Disclaimer**

This plan set is not a site plan to be used for constructing anything other than the Sewage Treatment System. If an accurate legal site plan is required, contact a professional surveyor. This plan offers no guarantees for site stability. If site stability may be an issue, a geotechnical engineer should be consulted. Plan is only as accurate as the information provided by the property owner to the designer. Easements, right-of-ways, hidden objects or information not communicated to the designer invalidates the design. It is the property owner's responsibility to review this plan and information provided to verify all site conditions and design assumptions are correct. If conflicts are found or additional information must be supplied, the owner shall contact the designer and installation shall not proceed until further approval is granted.

**References for Sewage Treatment System Design, Installation, Materials and O&M:**

- Dan Michael, Clear Creek Environmental. 513-934-1040
- Electric Inspections, IBI. 513-381-6080
- Hamilton County Public Health. 513-946-7800. www.hamiltoncountyhealth.org
- Ohio Department of Health. 614-644-7551. www.odh.ohio.gov
- Tuf-Tite. 1-800-382-7009. www.tuf-tite.com
- Dan Brennan, SCS Engineers. 513-826-4174.
- AquaSafe. Ecological Tanks. 318-644-6080 www.etiaquasafe.com
- Infiltrator. 1-800-221-4436. www.infiltratorwater.com
- Orenco. (800) 348-9843. www.orenco.com
- Polylok - www.polylok.com - (888) 284-8514
- SIM/TECH Filter. 888-999-3290. wwwsimtechfilter.com

Designed By:  
AA Plumbing  
6701 Dixie Highway  
Fairfield, OH 45014  
(513) - 758 - 6237



**Know what's below.  
Call before you dig.**



 6701 Dixie Highway Fairfield, OH 45014 513-758-6237				
Client:	Campbell, Gary	Phone:	513-312-2181	
Address:	8574 Mount Hope Road, Harrison, OH 45030	Township:	Crosby	
County:	Hamilton	Parcel #:	530-0111-0077-00	
Acreege:	1.080	Basis:	Replacement; Split Mound	
Project Number: S8574MHR				
Version Number: 09				
Scale: As Noted				
Release Date: 2021/03/18				
Sheet Plot Date: 2021/03/18				
Sheet Number: 1 of 11				

# Property Overview

**NOTE:**

This drawing is intended to be an accurate approximation (per 3701-29-10 Paragraph (C) Section 9c) of the noted site at the time of plan development. It is intended solely to aid in acquisition of a permit for septic system installation. It is NOT intended for use legally as representation in place of a binding document or survey of the property. The proposed system has been designed to meet the rules and limitations implemented by the Ohio Administrative Code Section 3701-29. The designer is not to be held responsible for any reason due to system expectations not being met. The information presented in this design is the property of AA Plumbing and shall not be used without expressed written consent stating as such.



## Legend

- AS500L-EZ + 5 Pre

- IM-1530 Dose Tank

- Soil Sample Site

- Property Line

- 10 ft Contours

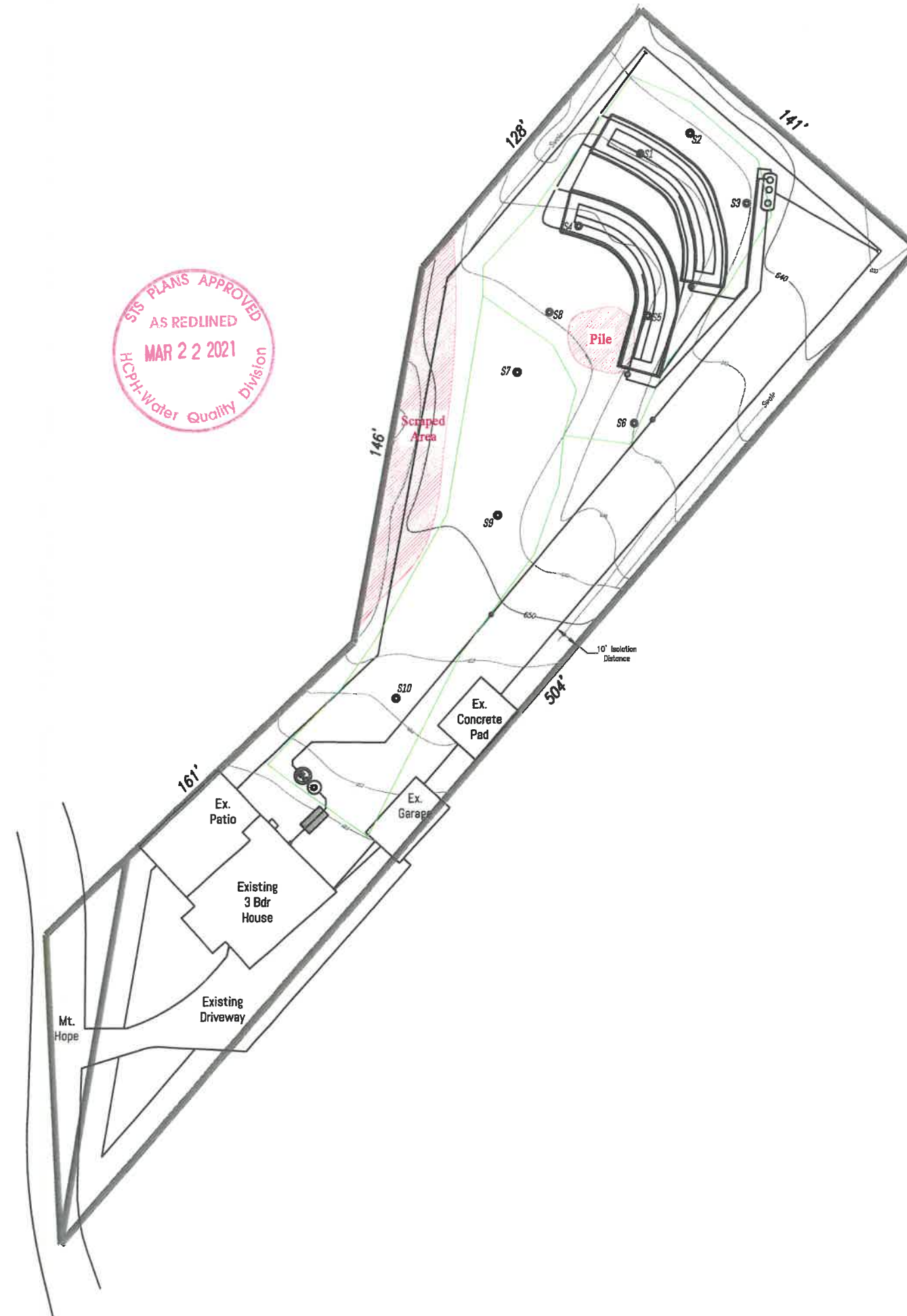
- 2 ft Contours

Contours shown are from County Auditor's website or previous plot plans and may deviate from current conditions. Installer should verify field conditions in order to install system per guidelines in this design and per ODH specifications.

0 25 50



ORIGINAL SCALE: 1" = 50'



6701 Dixie Highway  
Fairfield, OH 45014  
513-758-6237

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Scale: As Noted			
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Sheet Plot Date: 2021/03/18			
Sheet Number: 2 of 11			

# Legend

- AS500L-EZ + 5 Pre
- IM-1530 Dose Tank
- Soil Sample Site
- Property Line
- 10 ft Contours
- 2 ft Contours

0 20 40

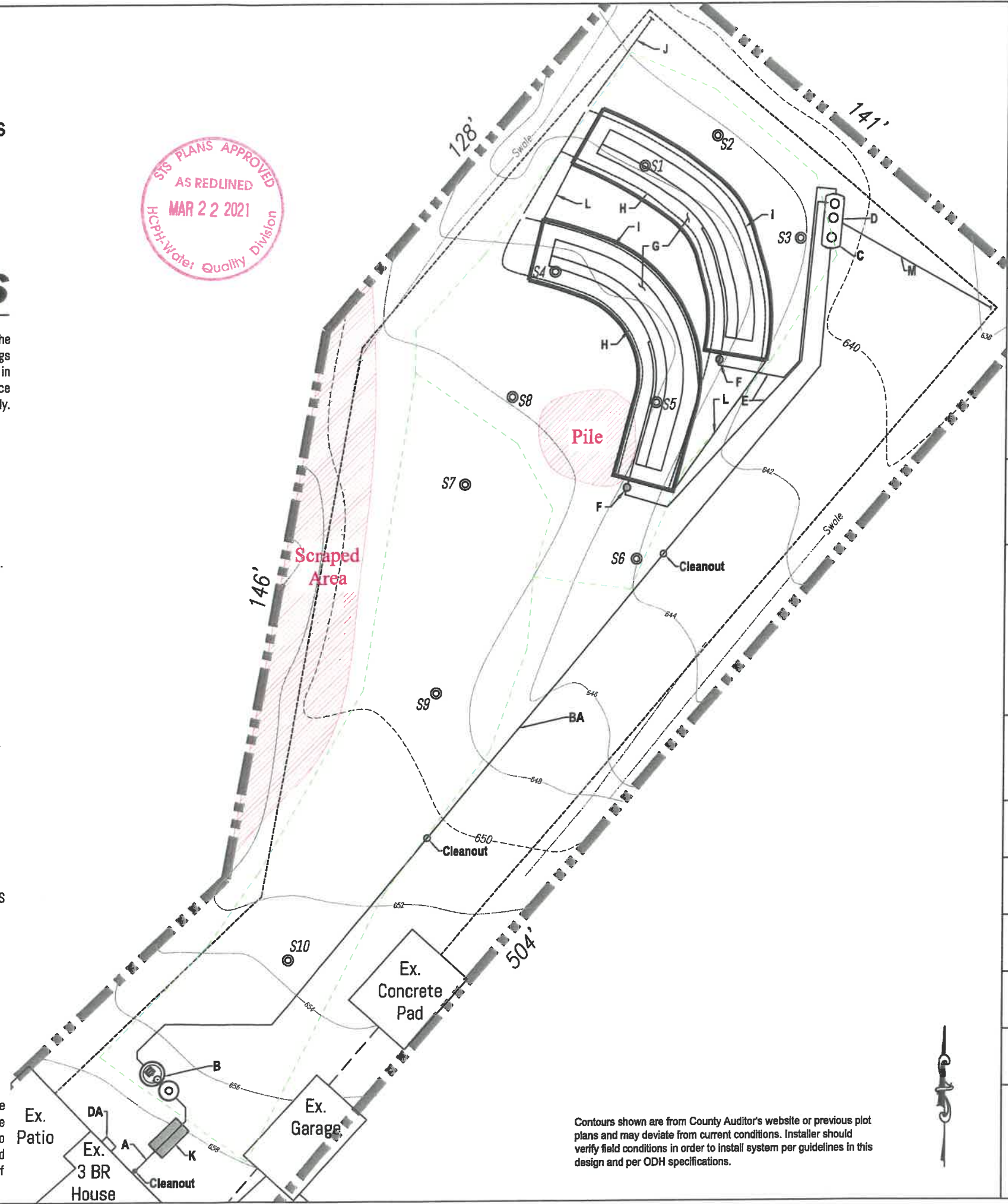
ORIGINAL SCALE: 1" = 40'

# Proposed System Details

**NOTE:**  
Physical marking flags may be placed on-site as necessary to mark critical system locations. It is the responsibility of the property owner to ensure any and all marking flags placed on-site, if applicable, remain in their proper location. Marking flags placed on-site will be noted in this proposal. The installing contractor **MUST** verify all marking flag locations as noted in accordance with the approved STS proposal prior to beginning the installation. If marking flags are not present in accordance with the approved STS proposal, the installing contractor **MUST** call to have marking flags replaced. Additional fees may apply. For more information regarding the system layout, please contact AA Plumbing at (513)-758-6237.

- A) New 4" SCH 40 PVC Sewer line from house to Aqua Safe Aeration Treatment System. Standard cleanout outside house. Distance between cleanouts shall be a maximum of 75' or as noted on plan. Refer to 3701-29-12.
- B) Aqua-Safe AS500L-EZ + 5 Pre Treatment Tank with Aeration motor, 227-1 Alarm (at house ~~under dome~~) and RAB Basic control panel under dome and Anti-Buoyancy Flanges.
  - B)A) 4" PVC SCH 40 outlet pipe from ATU to IM-1530
- C) Infiltrator IM-1530 Single Compartment Dosing Tank with AquaWorx Pressure Bell Assembly and 2 x Orenco PF3005 Pump. Refer to 3701-29-12 (J) and (K).
- D) AquaWorx IPC Control Panel mounted at tank. Mounds will be TIME DOSED. See 3701-29-12 (M) and 3701-29-15 (A)(2)(a)(b), (A)(5).
  - D)A) Install AquaWorx Remote Alarm at House.
- E) 1.25" Sch 40 PVC Force Mains from each pump. Buried at least 24 inches in depth. Refer to Section 5.6.
- F) Trap w/ air release valve. Refer to Section 5.11. See page 4, 5 for Details.
- G) OSU Sloping Site Mound. Refer to OSU Bulletins 813 and 829. 3 Sets of Flags for each mound represent the laterals, upper and lower sand widths.
- H) Interceptor Drain. Refer to 3701-29-16.
- I) Perimeter drain. Refer to 3701-29-16.
- J) Perimeter/ Interceptor drain outlet pipe with animal guard. Must meet requirements of OAC 3701-29-16.
- K) Abandon Existing Septic tank, and STS Components. Will require inspection by Hamilton County Public Health on proper STS abandonment. Refer to 3701-29-21 and [www.hamiltoncountyhealth.org](http://www.hamiltoncountyhealth.org) (Search for "abandon existing septic system" on website for details.)
- L) Toe of Upper Mound may extend to Upslope Drain of Lower Mound. May be filled using soil / topsoil to combine into one structure. NOTE: No sand may be placed over drains.
- M) Anti-Buoyancy Drain for Infiltrator Dose Tank.

**NOTE:**  
This drawing is intended to be an accurate approximation (per 3701-29-10 Paragraph (C) Section 9c) of the noted site at the time of proposal development. It is intended solely to aid in acquisition of a permit for STS installation. It is NOT intended for use legally as representation in place of a binding document or survey of the property. The proposed system has been designed to meet the rules and limitations implemented by the Ohio Administrative Code Section 3701-29. AA Plumbing shall not be held responsible for any reason due to system expectations not being met. The information presented in this design is the property of AA Plumbing and shall not be used without expressed written consent stating as such.

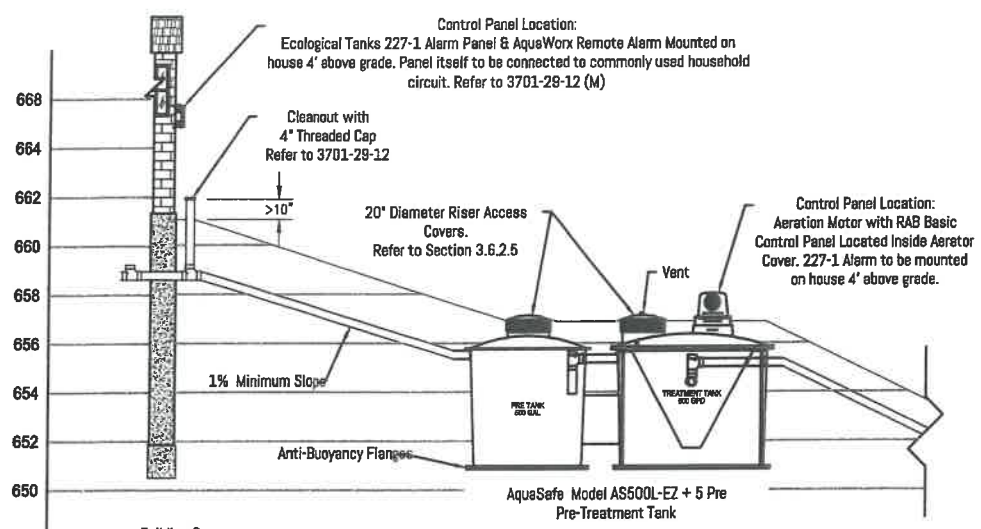


Contours shown are from County Auditor's website or previous plot plans and may deviate from current conditions. Installer should verify field conditions in order to install system per guidelines in this design and per ODH specifications.



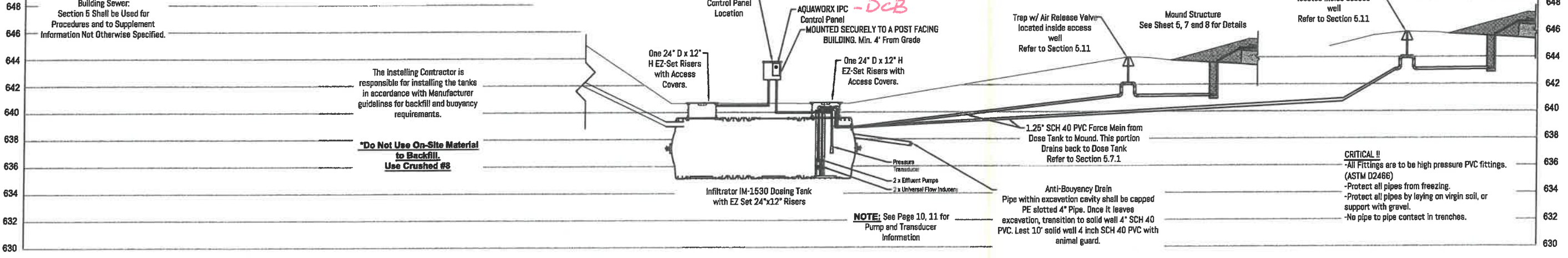
Client:	Campbell, Gary	Phone:	513-312-2181
Address:	8574 Mount Hope Road, Harrison, OH 45030	Township:	Crosby
County:	Hamilton	Parcel #:	530-0111-0077-00
Acreage:	1.080	Basis:	Replacement; Split Mound
Project Number:		S8574MHR	
Version Number:		09	
Scale:		As Noted	
Release Date:		2021/03/18	
Sheet Plot Date:		2021/03/18	
Sheet Number:		3 of 11	





## Vertical Scale

**No Horizontal Scale**  
 Use vertical scale for elevations of house, tanks, pumps, beginning/middle/end of distribution area.  
 Refer to 3701-29-10 (C) (10)



## Pre-tank and Treatment System Information

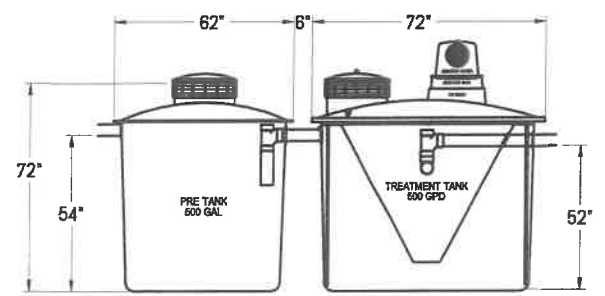
### AS500L-EZ + 5 Pre

500 Gallon Pre-tank  
 500 Gallon Treatment Tank  
 Tank and Components are Approved by ODH  
 Overall height = 72"  
 Bottom of inlet to bottom of tank = 54"  
 Bottom of outlet to bottom of tank = 52"  
 Total length = 142"  
 Total width = 72"

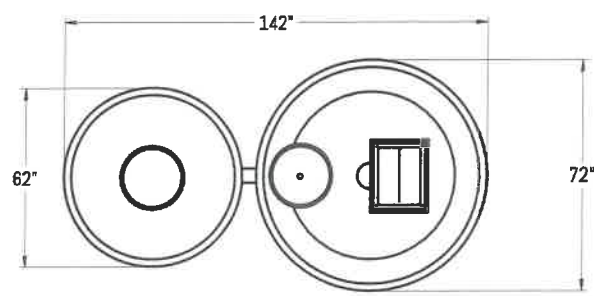
Treatment train must be installed per manufacturer's specifications

### Infiltrator IM-1530 Dose Tank

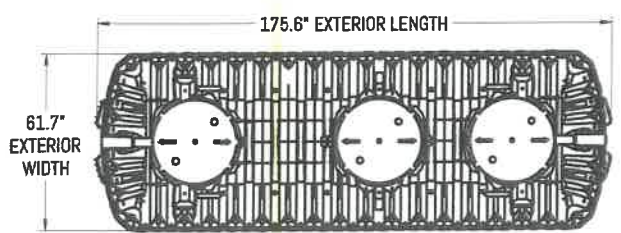
Single Compartment Dosing Tank  
 Tank and Components are Approved by ODH  
 Overall height = 54.5"  
 Bottom of inlet to bottom of tank = 47"  
 Bottom of outlet to bottom of tank = 44"  
 Total length = 175.6"  
 Total width = 61.7"



SIDE VIEW



TOP VIEW



TOP VIEW



SIDE VIEW

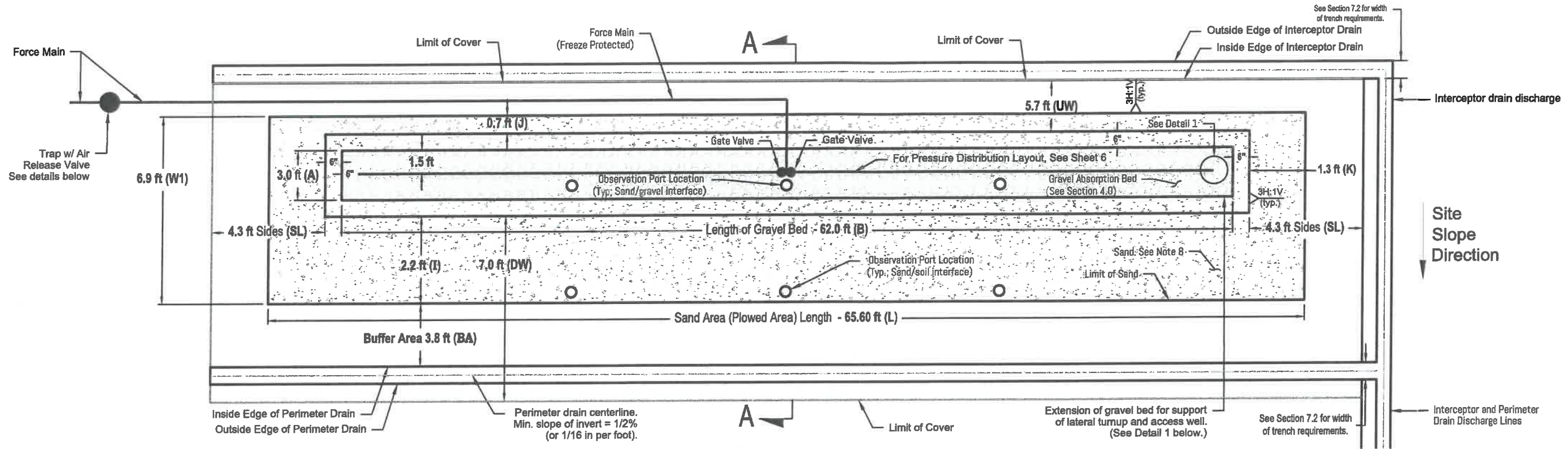
6701 Dixie Highway  
 Fairfield, OH 45014  
 513-788-6237

Client:	Campbell, Gary	Phone:	513-312-2181
Address:	8574 Mount Hope Road, Harrison, OH 45030	Township:	Crosby
County:	Hamilton	Parcel #:	530-0111-0077-00
Acres:	1.080	Basis:	Replacement; Split Mound

Project Number:	S8574MHR
Version Number:	09
Scale:	As Noted
Release Date:	2021/03/18
Sheet Plot Date:	2021/03/18
Sheet Number:	4 of 11

MOUND DETAIL IS NOT TO SCALE - FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR SHALL FOLLOW THE ACTUAL DIMENSIONS SHOWN ON THE DETAIL FOR CONSTRUCTION OF THE MOUND.

# Mound 1 - UPPER MOUND

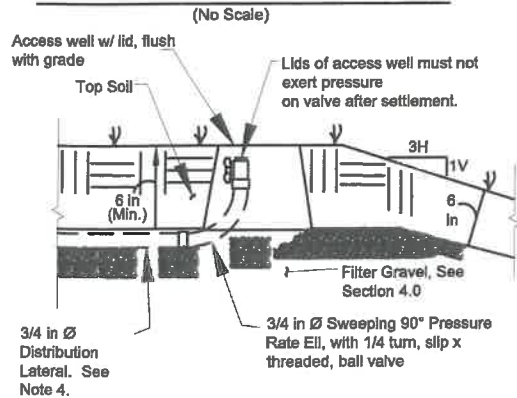


## Sloping Site Mound & Modified Mound Structure - General Plan (No Scale)

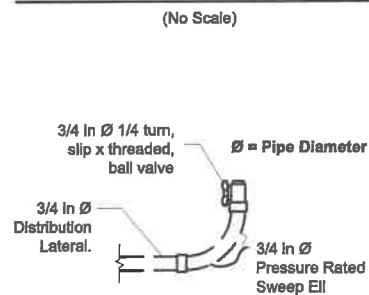


### Details

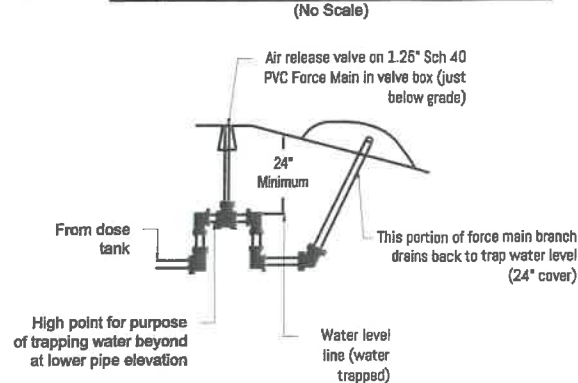
#### Detail 1 - Lateral Cleanout



#### Lateral Cleanout Setup



#### Trap With Air Release Valve



### Notes:

- 1) Observation ports to be installed per Detail 1 & 2, Sheet 7, 8.
- 2) See Approved Plan for dimensions of various mound components.
- 3) Buffer area to be protected (area between basal/sand area and interceptor or perimeter drains). Compaction, excavation, or plowing in this area is NOT permitted.
- 4) Orifices are set at the 6 O'Clock position (down) except first and last orifice on the laterals which face up. See Sheet 9 for the Pressure Distribution layout detail.
- 5) Interceptor Drain and Perimeter Drain share a common discharge line.
- 6) Interceptor Drains do not share a trench with pressure mains. Isolation distance is 3' minimum. If they must cross as part of an approved plan, then the drain is hard piped to 5' on either side of the pressure main and backfilled with tamped dirt. Interceptor drain maintains 6' from any distribution lateral. Perimeter Drain maintains 8' from any distribution lateral. Both drain types maintain at least 12" from any basal area sand fill.
- 7) Sand type complies with Section 4 (Table 4.2). Sand thickness is dependent on Approved Plan. Minimum sand thickness is based on the highest contour elevation on upslope side of the basal area under the gravel area. Top of sand area is to be level.

ALL SECTION NOTATIONS REFERENCE THE HAMILTON COUNTY INSTALLER'S MANUAL

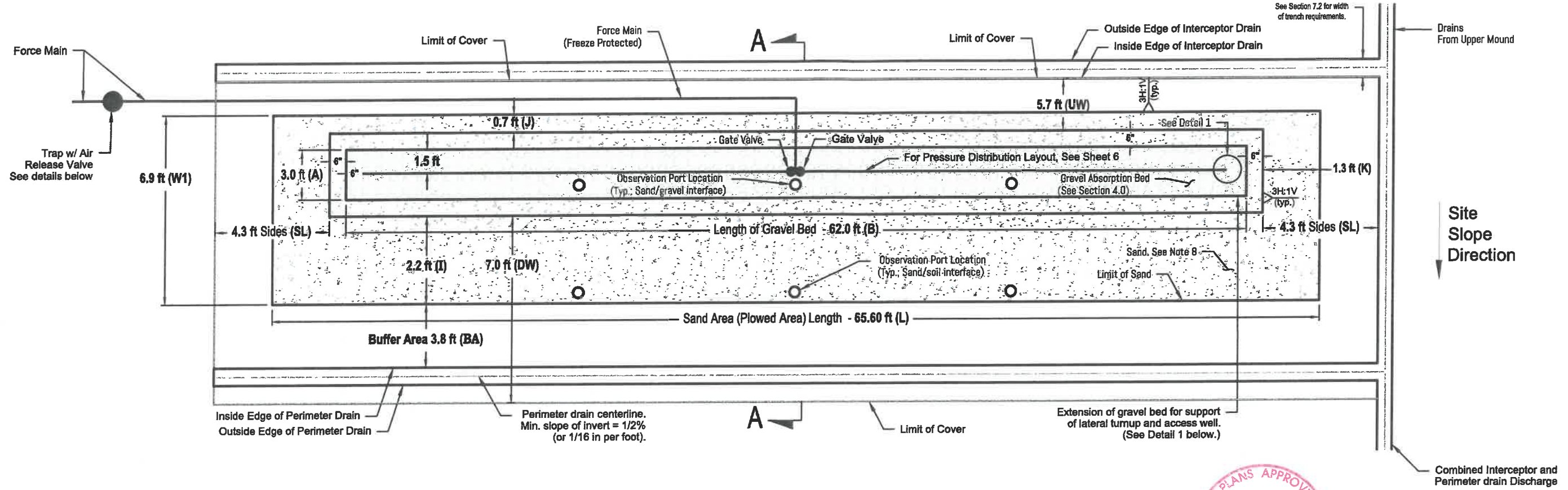


Client:	Campbell, Gary	Phone:	513-312-2181
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County:	Hamilton	Parcel #:	530-0111-0077-00
Acres:	1.080	Basis:	Replacement; Split Mound

Project Number:	S8574MHR
Version Number:	09
Scale:	As Noted
Release Date:	2021/03/18
Sheet Plot Date:	2021/03/18
Sheet Number:	5 of 11

MOUND DETAIL IS NOT TO SCALE - FOR ILLUSTRATION PURPOSES ONLY. CONTRACTOR SHALL FOLLOW THE ACTUAL DIMENSIONS SHOWN ON THE DETAIL FOR CONSTRUCTION OF THE MOUND.

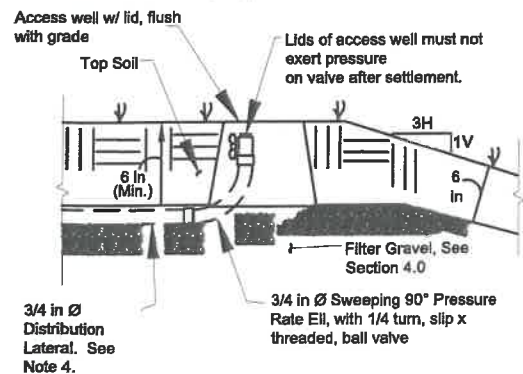
# Mound 2 - LOWER MOUND



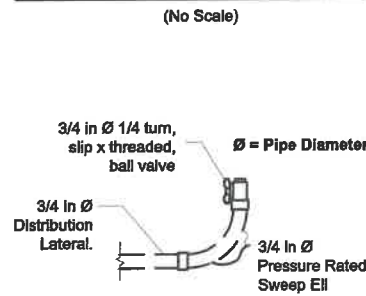
## Sloping Site Mound & Modified Mound Structure - General Plan (No Scale)

### Details

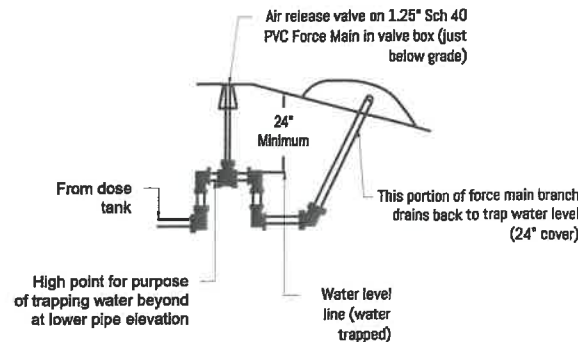
#### Detail 1 - Lateral Cleanout (No Scale)



#### Lateral Cleanout Setup (No Scale)



#### Trap With Air Release Valve (No Scale)



### Notes:

- 1) Observation ports to be installed per Detail 1 & 2, Sheet 7, 8.
- 2) See Approved Plan for dimensions of various mound components.
- 3) Buffer area to be protected (area between basal/sand area and interceptor or perimeter drains). Compaction, excavation, or plowing in this area is NOT permitted.
- 4) Orifices are set at the 6 O'Clock position (down) except first and last orifice on the laterals which face up. See Sheet 9 for the Pressure Distribution layout detail.
- 5) Interceptor Drain and Perimeter Drain share a common discharge line.
- 6) Interceptor Drains do not share a trench with pressure mains. Isolation distance is 3' minimum. If they must cross as part of an approved plan, then the drain is hard piped to 5' on either side of the pressure main and backfilled with tamped dirt. Interceptor drain maintains 6' from any distribution lateral. Perimeter Drain maintains 8' from any distribution lateral. Both drain types maintain at least 12" from any basal area sand fill.
- 7) Sand type complies with Section 4 (Table 4.2). Sand thickness is dependent on Approved Plan. Minimum sand thickness is based on the highest contour elevation on upslope side of the basal area under the gravel area. Top of sand area is to be level.

ALL SECTION NOTATIONS REFERENCE THE HAMILTON COUNTY INSTALLER'S MANUAL

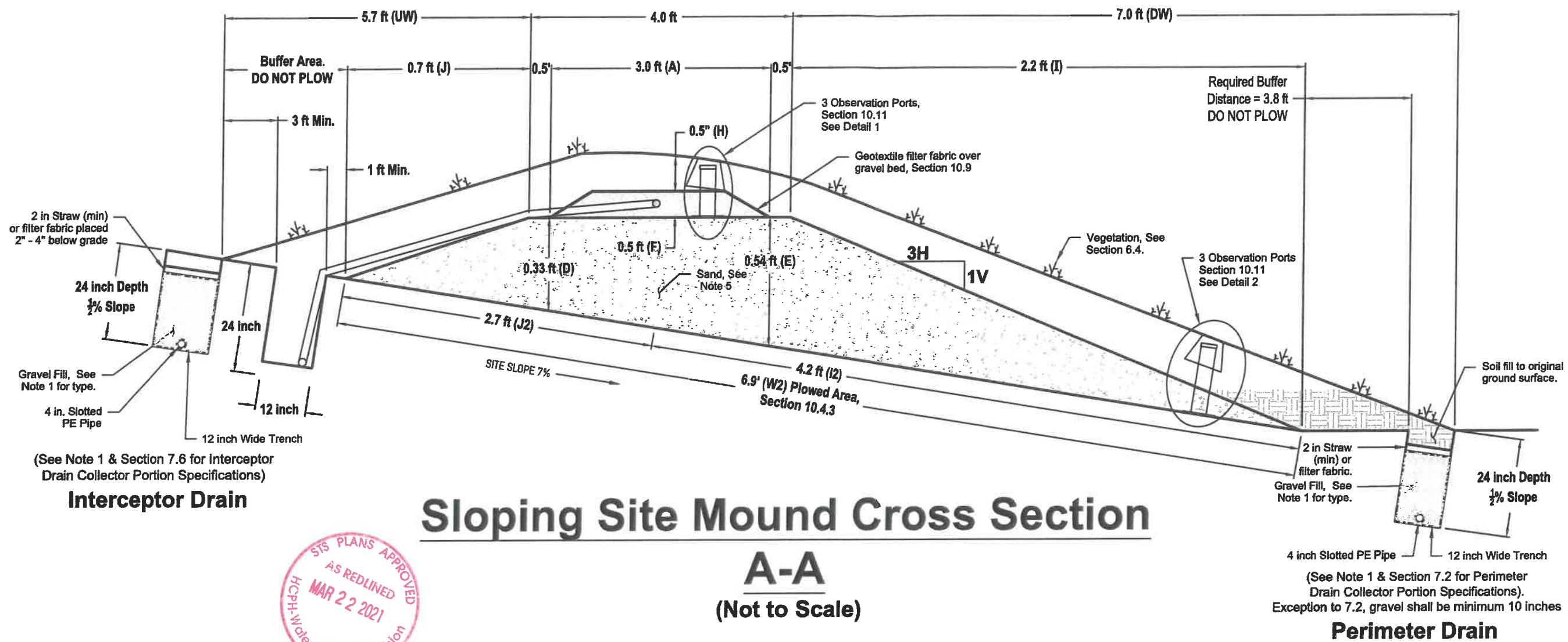
6701 Dixie Highway  
Fairfield, OH 45014  
513-758-6237



Client:	Campbell, Gary	Phone:	513-312-2181
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County:	Hamilton	Parcel #:	530-0111-0077-00
Acres:	1.080	Basis:	Replacement; Split Mound

Project Number:	S8574MHR
Version Number:	09
Scale:	As Noted
Release Date:	2021/03/18
Sheet Plot Date:	2021/03/18
Sheet Number:	6 of 11

# Mound 1 - UPPER MOUND

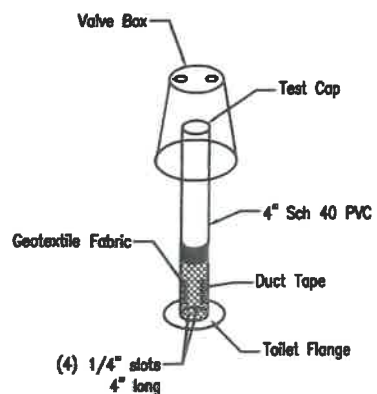


## Sloping Site Mound Cross Section

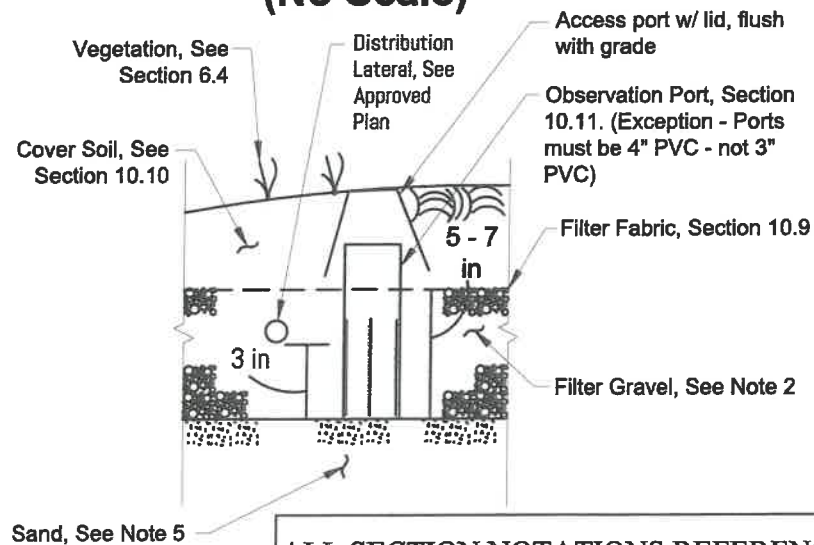
### A-A

(Not to Scale)

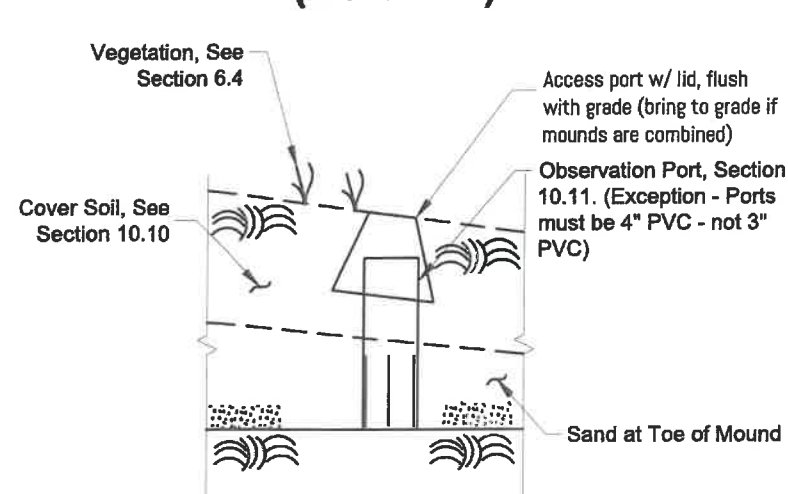
## Observation Port (No Scale)



## Detail 1 (No Scale)



## Detail 2 (No Scale)



ALL SECTION NOTATIONS REFERENCE THE HAMILTON COUNTY INSTALLER'S MANUAL

### Notes:

- 1) The required aggregate backfill varies with the width of the excavated trench, See Section 7.2 & 7.6 for requirements. For aggregate specifications, See Section(s) 4.5, 4.6 or 4.7. If aggregate specified in Section 4.7 is used, then the requirements of Section 4.9 apply. This section requires special marking to allow for confirmation of pipe invert slope.
- 2) The specified aggregate(s) in this component are summarized in Table 4.1. See Sections 4.5, 4.6 or 4.7 for individual aggregate type specifications.
- 3) The force main must be sloped to allow drainback to the point where two (2) feet of cover over the mains is maintained. The minimum slope of the force main for drainback is 1% (1/8 inch per foot). All mains must not penetrate the basal area.
- 4) The thickness of gravel above the lateral depends upon the orientation of the orifices. If the orifices are required to be at the 6 O'Clock position (Down), the laterals are to be installed flat. The gravel thickness is to be such that the distribution lateral is covered, but no more than 1 inch below the surface of the gravel. If the orifices are required to be at the 12 O'Clock position (Up), the laterals are to be installed at a minimum slope of 0.83% (1 in per 10 ft) sloping back (draining back) to the manifold. The thickness of gravel over the top of the lateral will vary, but the minimum thickness below the manifold (lowest point) is 3 inches.
- 5) Sand type complies with Section 4 (Table 4.2). Sand thickness is dependent on Approved Plan. Minimum sand thickness is based on the highest contour elevation on upslope side of basal under the gravel area. Top of sand area is to be level.

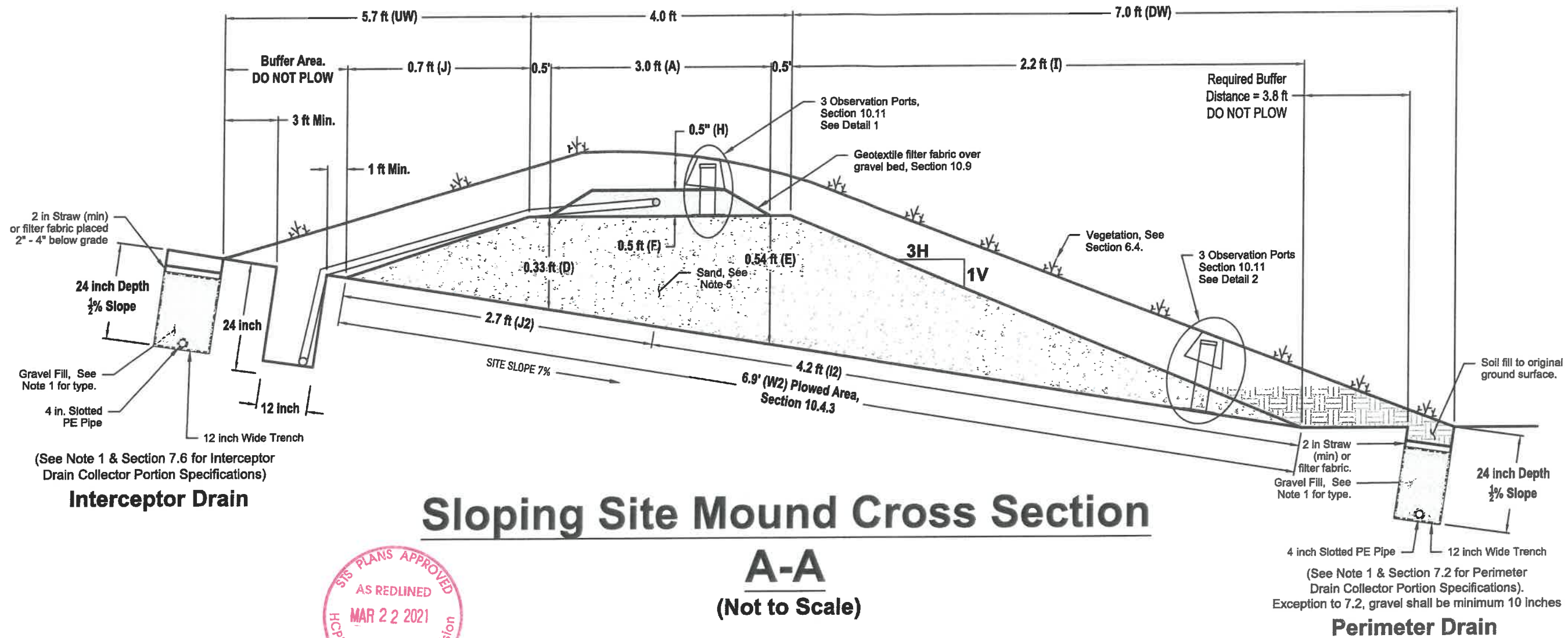


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Project Number:	S8574MHR
Version Number:	09
Scale:	As Noted
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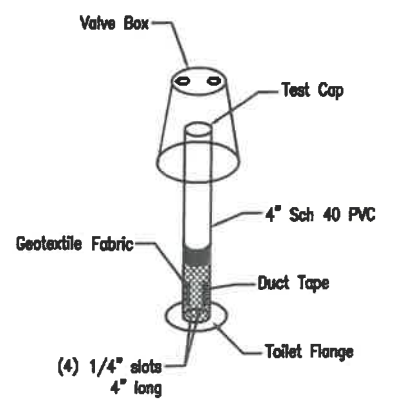
# Mound 2 - LOWER MOUND



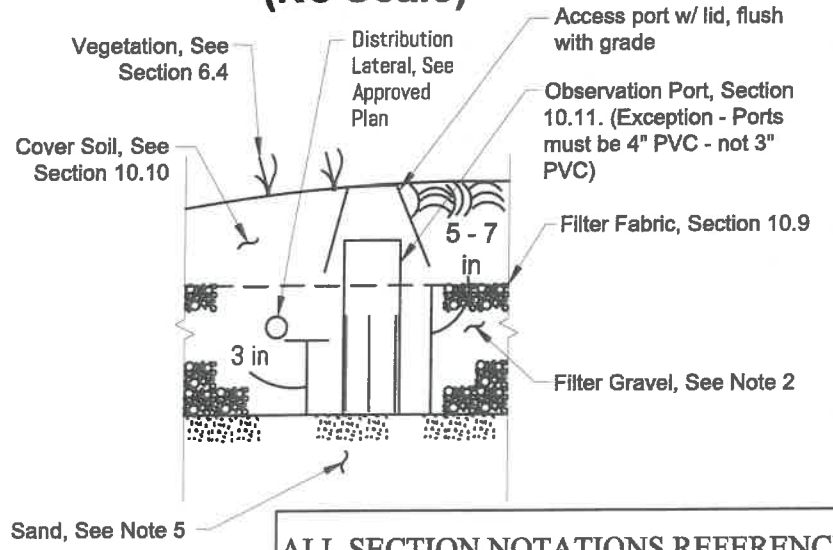
## Sloping Site Mound Cross Section

**A-A**  
(Not to Scale)

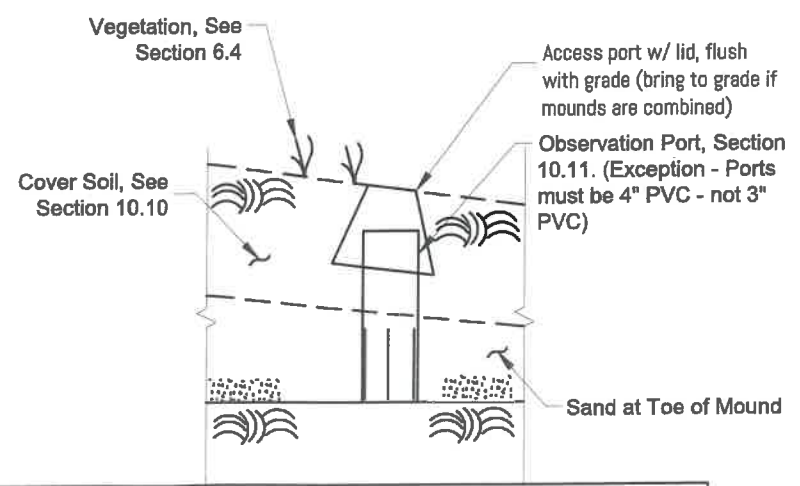
### Observation Port (No Scale)



### Detail 1 (No Scale)



### Detail 2 (No Scale)



### Notes:

- 1) The required aggregate backfill varies with the width of the excavated trench, See Section 7.2 & 7.6 for requirements. For aggregate specifications, See Section(s) 4.5, 4.6 or 4.7. If aggregate specified in Section 4.7 is used, then the requirements of Section 4.9 apply. This section requires special marking to allow for confirmation of pipe invert slope.
- 2) The specified aggregate(s) in this component are summarized in Table 4.1. See Sections 4.5, 4.6 or 4.7 for individual aggregate type specifications.
- 3) The force main must be sloped to allow drainback to the point where two (2) feet of cover over the mains is maintained. The minimum slope of the force main for drainback is 1% (1/8 inch per foot). All mains must not penetrate the basal area.
- 4) The thickness of gravel above the lateral depends upon the orientation of the orifices. If the orifices are required to be at the 6 O'Clock position (Down), the laterals are to be installed flat. The gravel thickness is to be such that the distribution lateral is covered, but no more than 1 inch below the surface of the gravel. If the orifices are required to be at the 12 O'Clock position (Up), the laterals are to be installed at a minimum slope of 0.83% (1 in per 10 ft) sloping back (draining back) to the manifold. The thickness of gravel over the top of the lateral will vary, but the minimum thickness below the manifold (lowest point) is 3 inches.
- 5) Sand type complies with Section 4 (Table 4.2). Sand thickness is dependent on Approved Plan. Minimum sand thickness is based on the highest contour elevation on upslope side of basal under the gravel area. Top of sand area is to be level.

ALL SECTION NOTATIONS REFERENCE THE HAMILTON COUNTY INSTALLER'S MANUAL

6701 Dixie Highway  
Fairfield, OH 45014  
513-758-6237

Client:	Campbell, Gary	Phone:	513-312-2181
Address:	8574 Mount Hope Road, Harrison, OH 45030	Township:	Crosby
County:	Hamilton	Parcel #:	530-0111-0077-00
Acreeage:	1.080	Basis:	Replacement, Split Mound

Project Number:	S8574MHR
Version Number:	09
Scale:	As Noted
Release Date:	2021/03/18
Sheet Plot Date:	2021/03/18
Sheet Number:	8 of 11

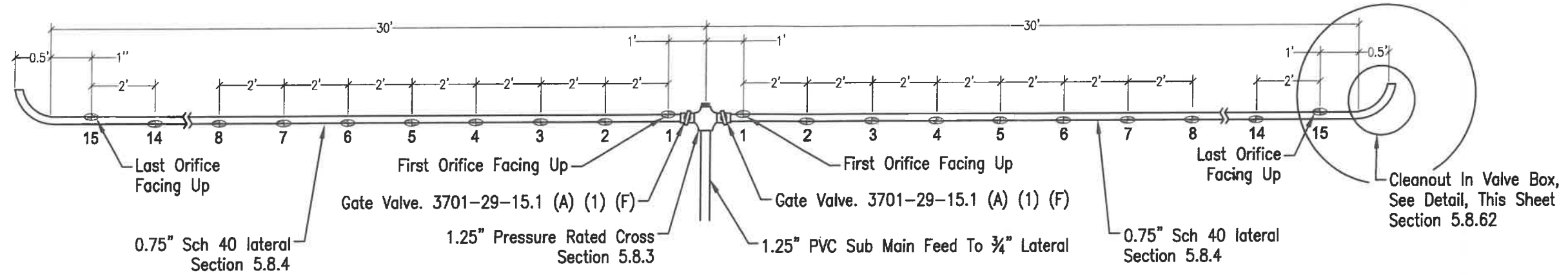
Overall Gravel Length: 62.0 Feet

## Upper and Lower Mounds

### Typical Lateral Detail (2 laterals shown) Showing 1 of 1 Lateral Set (Per Mound)

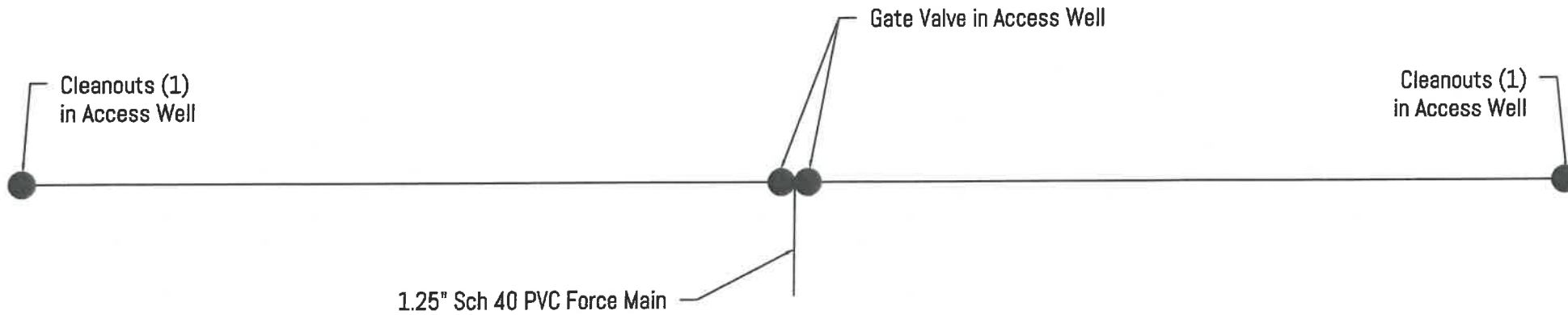
15 Orifices (1/8" Orifice Diameter) Per 30' Lateral

Not To Scale

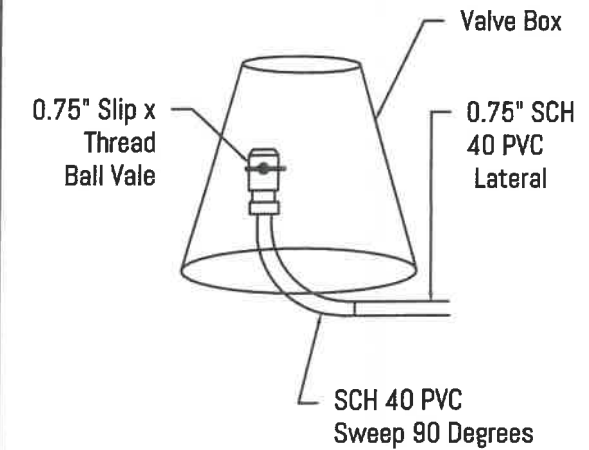


Note: Orifices to be shielded by Sim/Tech Orifice Shields or equivalent

Note:  
All pipe shall be schedule 40 PVC meeting ASTM D1785. All fittings and gate valves shall be pressure-rated meeting ASTM D2466.



## Detail A



6701 Dixie Highway  
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County:	Hamilton	Parcel #:	530-0111-0077-00	
Acreege:	1.080	Basis:	Replacement; Split Mound	
Project Number: S8574MHR				
Version Number: 09				
Scale: As Noted				
Release Date: 2021/03/18				
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Sheet Number: 9 of 11				

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

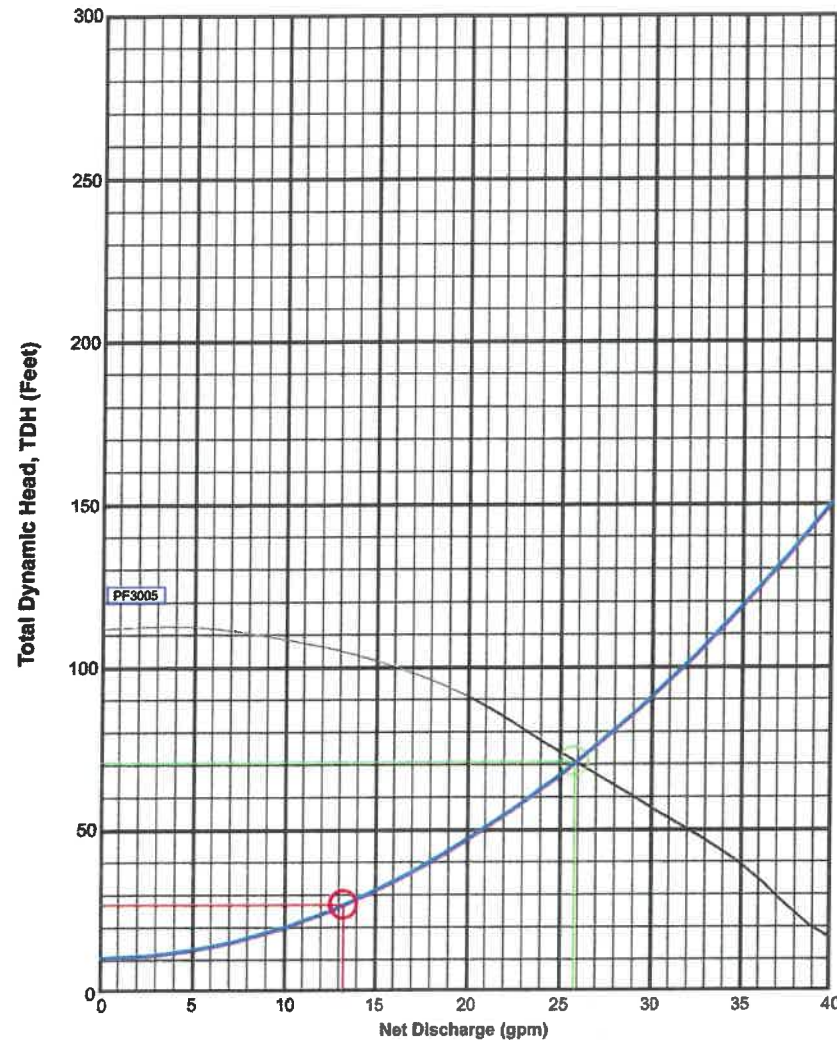
Parameters		
Discharge Assembly Size	2.00	inches
Transport Length	165	feet
Transport Pipe Class	40	
Transport Line Size	1.25	inches
Distributing Valve Model	None	
Max Elevation Lift	11	feet
Manifold Length	0	feet
Manifold Pipe Class	40	
Manifold Pipe Size	1.00	inches
Number of Laterals per Cell	2	
Lateral Length	30	feet
Lateral Pipe Class	40	
Lateral Pipe Size	0.75	inches
Orifice Size	1/8	inches
Orifice Spacing	2.00	feet
Residual Head	5	feet
Flow Meter	None	inches
'Add-on' Friction Losses	5	feet

Calculations		
Minimum Flow Rate per Orifice	0.43	gpm
Number of Orifices per Zone	30	
Total Flow Rate per Zone	13.3	gpm
Number of Laterals per Zone	2	
% Flow Differential 1st/Last Orifice	7.5	%
Transport Velocity	2.9	fps

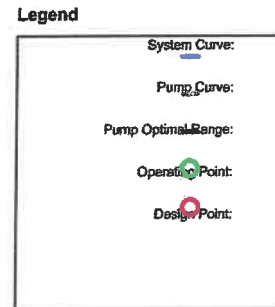
Frictional Head Losses		
Loss through Discharge	0.4	feet
Loss in Transport	4.0	feet
Loss through Valve	0.0	feet
Loss in Manifold	0.0	feet
Loss in Laterals	0.9	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	5.0	feet

Pipe Volumes		
Vol of Transport Line	12.8	gals
Vol of Manifold	0.0	gals
Vol of Laterals per Zone	1.7	gals
Total Volume	14.5	gals

Minimum Pump Requirements		
Design Flow Rate	13.3	gpm
Total Dynamic Head	26.3	feet



**PumpData**  
 PF3005 High Head Effluent Pump  
 30 GPM, 1/2HP  
 115/230V 1Ø 60Hz, 200V 3Ø 60Hz



**Mound 1 - UPPER MOUND**

**Pump Selected: Orenco PF 3005 High Head PF3005 High Head Effluent Pump Technical Details**

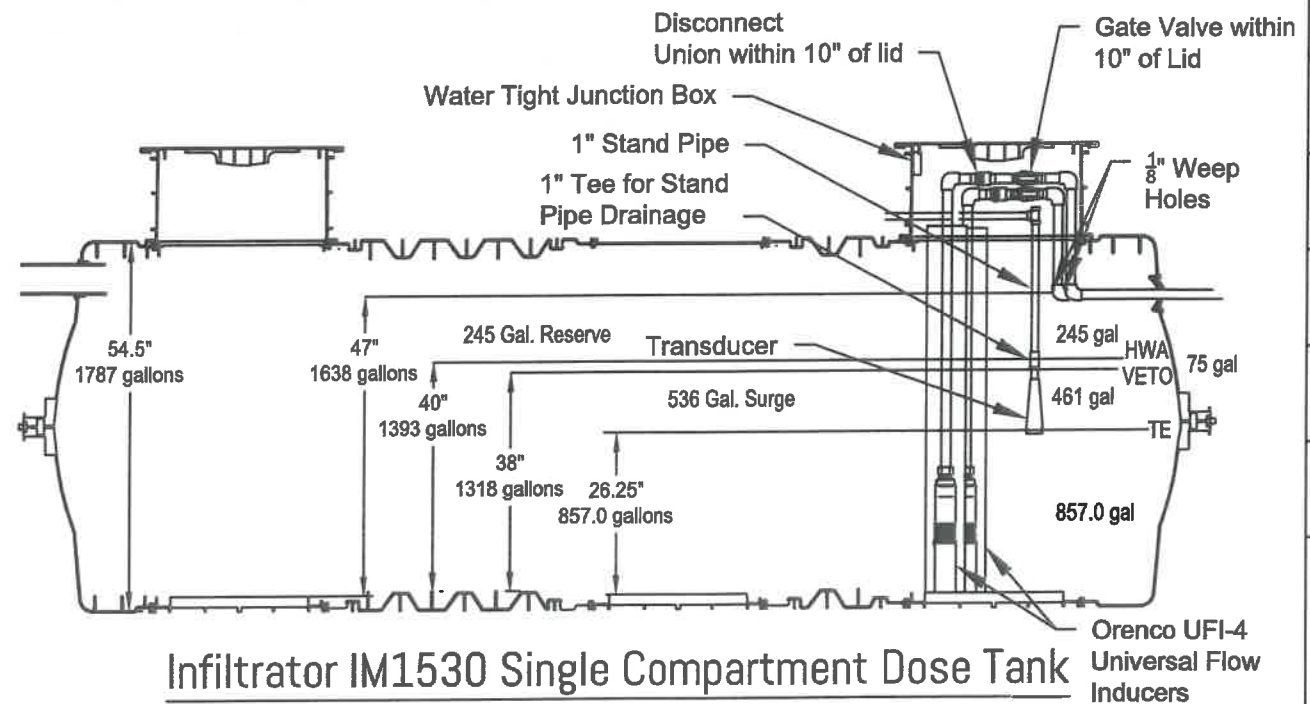
- Minimum 24-Hour Run-Dry Capability with No Deterioration in Pump Life or Performance
- Liquid End Repair Kits Available for Better Long-Term Cost of Ownership
- Super Stainless Franklin Electric Motor, Rated for Continuous use and Frequent Cycling
- Type S00W 600-V Motor Cable (suitable for Class I, Division 1 and Division 2 applications)
- Five-Year Warranty on Pump or Retrofit Liquid End from Date of Manufacture Against Defects in Materials or Workmanship
- 0.5 HP, 120 VAC, Single Phase, 10 FLA, 1.5" FPT Discharge
- Min. Liquid Level of 24"

**Tank Settings:**  
 Transducer: 26" from Bottom  
 Timer Enable: 1/4" (26.25" from Bottom of Tank)  
 Veto: 12" (38" from Bottom of Tank)  
 High Water Alarm: 14" (40" from Bottom of Tank)  
 Reserve Volume: 245 gallons  
 Surge Volume: 536 gallons

**Dose Volume:** 8.4 gallons plus Field Verified Drainback

**Notes:**

1. Actual dose volume will be determined after time drawdown is completed and total drainback is calculated. Control panel timer settings are to be set at this time.
2. Pumps may be substituted with an equivalent model meeting design specifications.
3. Pumps may also be installed under separate riser access wells if desired.
4. May install 1/4 turn ball valve on each main to expedite drainback for startup.



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Project Number:	S8574MHR
Version Number:	09
Scale:	As Noted
Release Date:	2021/03/18
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**Pump Selection for a Pressurized System - Single Family Residence Project**

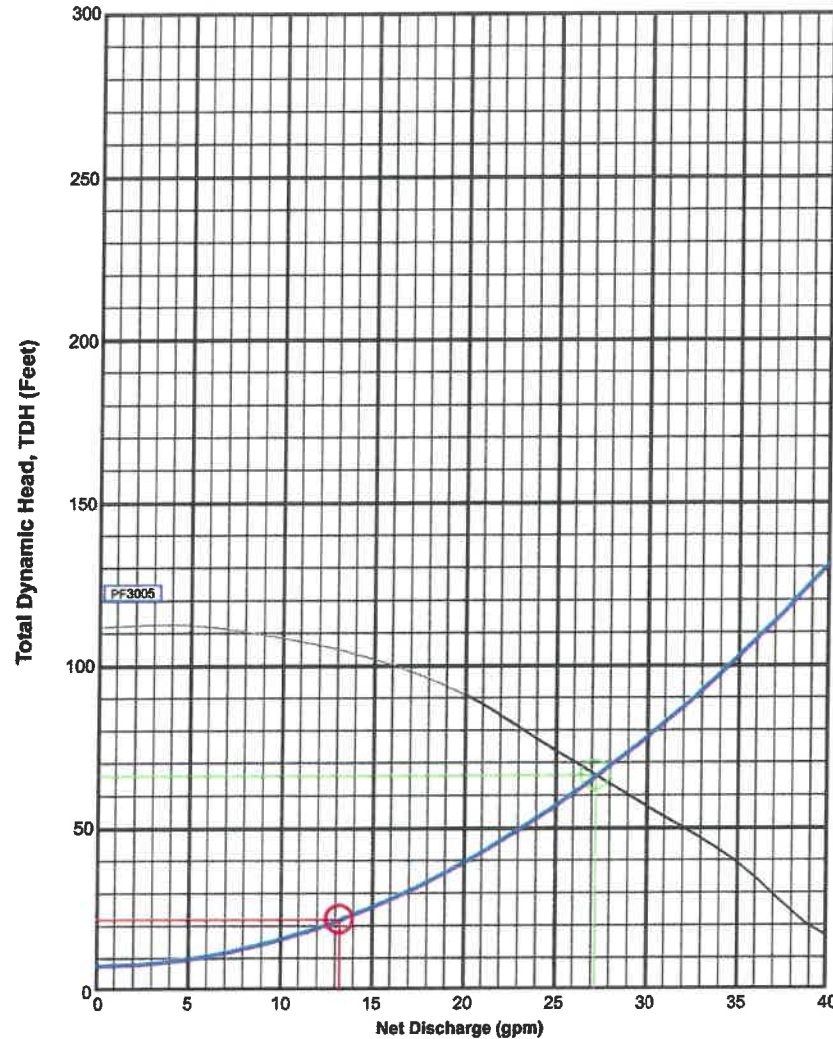
Parameters		
Discharge Assembly Size	2.00	inches
Transport Length	115	feet
Transport Pipe Class	40	
Transport Line Size	1.25	inches
Distributing Valve Model	None	
Max Elevation Lift	8	feet
Manifold Length	0	feet
Manifold Pipe Class	40	
Manifold Pipe Size	1.00	inches
Number of Laterals per Cell	2	
Lateral Length	30	feet
Lateral Pipe Class	40	
Lateral Pipe Size	0.75	inches
Orifice Size	1/8	inches
Orifice Spacing	2.00	feet
Residual Head	5	feet
Flow Meter	None	inches
'Add-on' Friction Losses	5	feet

Calculations		
Minimum Flow Rate per Orifice	0.43	gpm
Number of Orifices per Zone	30	
Total Flow Rate per Zone	13.3	gpm
Number of Laterals per Zone	2	
% Flow Differential 1st/Last Orifice	7.5	%
Transport Velocity	2.9	fps

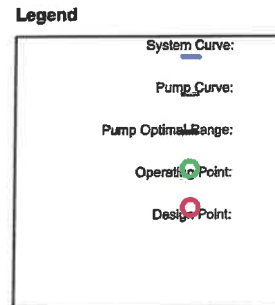
Frictional Head Losses		
Loss through Discharge	0.4	feet
Loss in Transport	2.8	feet
Loss through Valve	0.0	feet
Loss in Manifold	0.0	feet
Loss in Laterals	0.9	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	5.0	feet

Pipe Volumes		
Vol of Transport Line	8.9	gals
Vol of Manifold	0.0	gals
Vol of Laterals per Zone	1.7	gals
Total Volume	10.6	gals

Minimum Pump Requirements		
Design Flow Rate	13.3	gpm
Total Dynamic Head	22.1	feet



**PumpData**  
 PF3005 High Head Effluent Pump  
 30 GPM, 1/2HP  
 115/230V 1Ø 60Hz, 200V 3Ø 60Hz



**Mound 2 - LOWER MOUND**

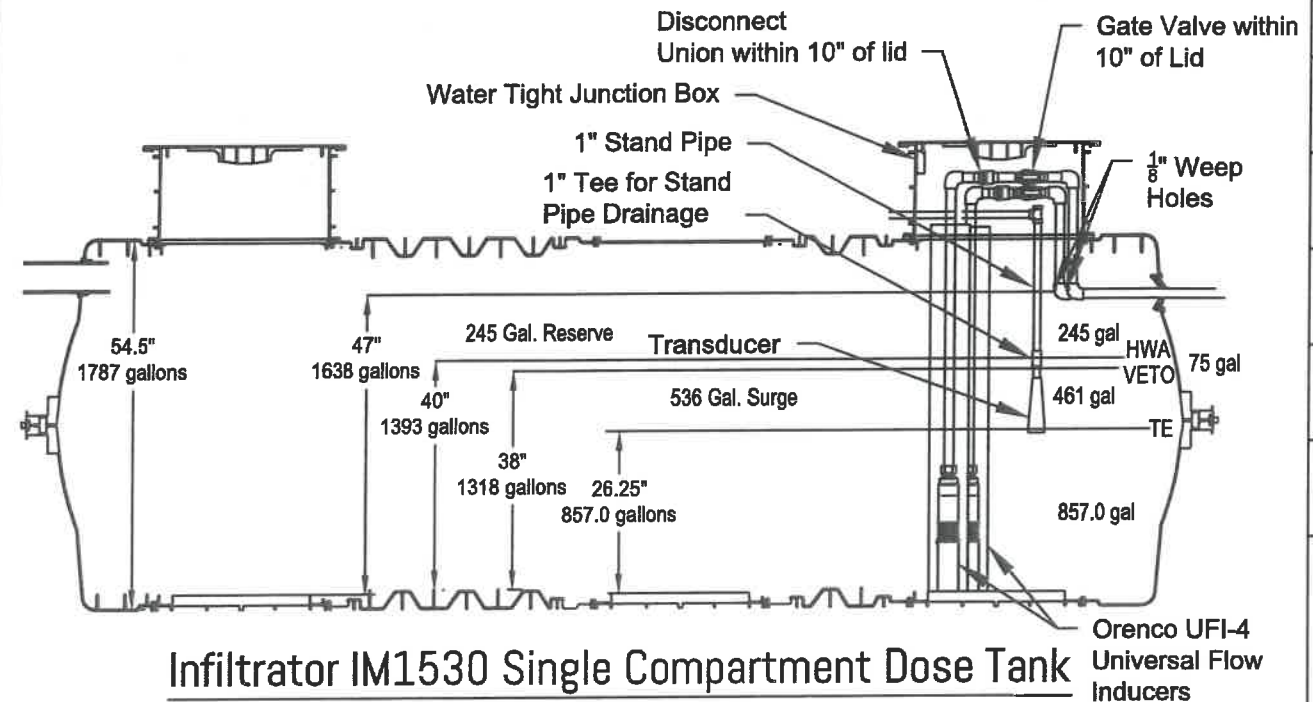
**Pump Selected: Orenco PF 3005 High Head PF3005 High Head Effluent Pump Technical Details**

- Minimum 24-Hour Run-Dry Capability with No Deterioration in Pump Life or Performance
- Liquid End Repair Kits Available for Better Long-Term Cost of Ownership
- Super Stainless Franklin Electric Motor, Rated for Continuous use and Frequent Cycling
- Type S00W 600-V Motor Cable (suitable for Class I, Division 1 and Division 2 applications)
- Five-Year Warranty on Pump or Retrofit Liquid End from Date of Manufacture Against Defects in Materials or Workmanship
- 0.5 HP, 120 VAC, Single Phase, 10 FLA, 1.5" FPT Discharge
- Min. Liquid Level of 24"

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