

COMMONWEALTH OF KENTUCKY  
**CABINET FOR HEALTH AND FAMILY SERVICES**  
DEPARTMENT FOR PUBLIC HEALTH

4/5/23  
DATE

No. \_\_\_\_\_  
Permit/License/  
Registration/  
Certification

G1647  
Sanitation Code

E  
Action Code

758162 No. \_\_\_\_\_  
Request for Service

**NOTICE TO CORRECT VIOLATIONS**

PURSUANT TO KRS 212.210 KRS 211.180  
LAW OR REGULATION

ISSUED TO: Central States Water Resources  
Bluegrass Water Utility Operating Co  
NAME  
1630 Des Peres Rd, Ste 140  
ADDRESS  
St Louis MO 63131  
CITY STATE ZIP

An inspection conducted at Marshall Ridge, located  
at 209 Harting Ridge Rd West Paducah, KY, under the date of  
(Address) (Facility)  
4/4/23, by Crystal Stevenson + Joel Barrett  
(Date) (Inspector)

disclosed the following violations:

Failing overflow sewage laterals for lagoon  
standing sewage in area where overflow laterals are  
located

Lagoon fencing damaged; gaps in the bottom of  
the fencing in multiple areas

.....  
This is an official notice to correct the above listed violations with a period of 30  
days from the date of receipt of this notice. Failure to comply with this notice within the specified time  
period may result in suspension of your:  PERMIT  LICENSE  REGISTRATION  
 CERTIFICATION or, further legal action (as applicable) being taken against you, unless a written  
request for a hearing is filed with the cabinet during that time period.  
.....

Crystal Stevenson Signature  
Health Official Signature  
mcracken  
Health Department  
(270) 444-9631 ext 130  
Telephone

Date Received \_\_\_\_\_  
Health Env III Title  
40 Bld 2597 Mailing Address

30 days from receipt  
Time Period Expires  
4/5/23  
Date  
Paducah, KY 42002  
City, State, Zip



COMMONWEALTH OF KENTUCKY  
CABINET FOR HUMAN RESOURCES  
DEPARTMENT FOR HEALTH SERVICES

**NOTICE TO REMEDY INSANITARY CONDITIONS**

To Central States Water Resources

Notice is given that the filingagoon system; standing sewage; damaged fencing

Located at 209 Harting Ridge Rd West Paducah, KY 42086

Is in violation of the Rules and Regulation of the Cabinet for Human Resources or KRS 212.210

Crystal Stevenson (270) 444 9631 ext 130  
Joell Barrett (270) 444 9631 ext 169

and notice is given to abate such conditions within a period of 30 days.

Signed Crystal Stevenson

McCracken County Health Department

Date 4/5/23



RECEIVED  
MAY 18 2023  
BY: \_\_\_\_\_

Andy Beshear  
GOVERNOR

**ENERGY AND ENVIRONMENT CABINET**  
**DEPARTMENT FOR ENVIRONMENTAL PROTECTION**

PADUCAH REGIONAL OFFICE  
130 EAGLE NEST DR  
PADUCAH, KY, 42003-9435

Rebecca W. Goodman  
SECRETARY

Anthony R. Hatton  
COMMISSIONER

May 12, 2023

Certified No. 7019 1640 0001 2357 4774  
Return Receipt Requested

Arthur Faiello  
Bluegrass Water  
1630 Des Peres Rd STE  
140 Des Peres, MO 63131-1871

Re: Notice of Violation  
AI ID: 177466  
AI Name: Harting Ridge Lagoon  
Activity ID: ENV20230001  
McCracken County, KY

Dear Arthur Faiello:

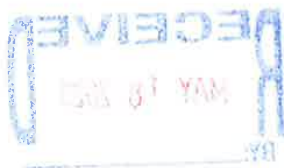
The Kentucky Department for Environmental Protection (DEP) has issued the enclosed Notice of Violation for violations discovered at your facility. Please review this Notice of Violation carefully to ensure that all remedial measures are completed by the specified deadlines.

Your cooperation and attention to this matter is appreciated. If you have any questions, please contact me at 502-782-5935.

Sincerely,

Zachary Campbell,  
Environmental Scientist III  
Division of Water

Enclosure: Notice of Violation, Investigation Report



COMMONWEALTH OF KENTUCKY  
ENERGY AND ENVIRONMENT CABINET  
DEPARTMENT FOR ENVIRONMENTAL PROTECTION  
Division of Water

NOTICE OF VIOLATION

To: Arthur Faiello  
Bluegrass Water  
1630 Des Peres Rd STE  
140 Des Peres, MO 63131-1871

AI Name: Harting Ridge Lagoon AI ID: 177466 Activity ID: ENV20230001  
Discovery ID: CIV20230001 County: McCracken  
Enforcement Case ID:  
Date(s) Violation(s) Observed: 04/06/2023

This is to advise that you are in violation of the provisions cited below:

**1 Violation Description for Subject Item AIOO0000177466():**

The KPDES program requires permits for the discharge of pollutants from a point source into the waters of the Commonwealth. [401 KAR 5:055 Section 2].

**Description of Non Compliance:**

Discharging without a KPDES permit. All point source discharges are required to obtain a KPDES permit.

**The remedial measure(s), and date(s) to be completed by are as follows:**

Cease all unpermitted discharges. Contact the local health department and develop a plan to eliminate the discharge through the installation of an approved wastewater treatment system or demonstrate that your property has a functioning sewer system or other approved wastewater system. Submit a written copy of this plan to the undersigned within thirty (30) days of receipt of this notice. Failure to comply with these remedial measures or repeated violations of this requirement may subject you to an immediate referral to the Division of Enforcement. [401 KAR 5:055 Section 2]

**2 Violation Description for Subject Item AIOO0000177466():**

No person shall, directly or indirectly, throw, drain, run or otherwise discharge into any of the waters of the Commonwealth, or cause, permit or suffer to be thrown, drained, run or otherwise discharged into such waters any pollutant, or any substance that shall cause or contribute to the pollution of the waters of the Commonwealth in contravention of the standards adopted by the cabinet or in contravention of any of the rules, regulations, permits, or orders of the cabinet or in contravention of any of the provisions of this chapter. [KRS 244.70-110].

**Description of Non Compliance:**

Straight pipe observed on the property contributing to the pollution of the waters of the Commonwealth.

**The remedial measure(s), and date(s) to be completed by are as follows:**

Cease all unpermitted discharges. Contact the local health department and develop a plan to eliminate the discharge through the installation of an approved wastewater treatment system or demonstrate that your property has a functioning sewer system or other approved wastewater system. Submit a written copy of this plan to the undersigned within thirty (30) days of receipt of this notice. Failure to comply with these remedial measures or repeated violations of this requirement may subject you to an immediate referral to the Division of Enforcement. [KRS 244.70-110]

**3 Violation Description for Subject Item AIOO0000177466():**

Surface waters shall not be aesthetically or otherwise degraded. [401 KAR 10:031 Section 2].

**COMMONWEALTH OF KENTUCKY**  
**ENERGY AND ENVIRONMENT CABINET**  
**DEPARTMENT FOR ENVIRONMENTAL PROTECTION**  
**Division of Water**

**Description of Non Compliance:**

Polluting the waters of the Commonwealth.

**The remedial measure(s), and date(s) to be completed by are as follows:**

Cease all unpermitted discharges. Contact the local health department and develop a plan to eliminate the discharge through the installation of an approved wastewater treatment system or demonstrate that your property has a functioning sewer system or other approved wastewater system. Submit a written copy of this plan to the undersigned within thirty (30) days of receipt of this notice. Failure to comply with these remedial measures or repeated violations of this requirement may subject you to an immediate referral to the Division of Enforcement. [401 KAR 10:031 Section 2]

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Violations of the above cited statute(s) and/or regulation(s) are subject to a civil penalty per day per violation. Violations carry civil penalties of up to \$25,000 per day per violation depending on the statutes/regulations violated. In addition, violations may be concurrently enjoined. Compliance with remedial measures and their deadlines does not provide exemption from liability for violations during the period of remediation, nor prevent additional remedial measures from being required.

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If you have questions or need further information, write or call the undersigned:

Division of Water  
Paducah Regional Office  
130 Eagle Nest Dr  
Paducah, KY 42003  
(8:00 AM – 4:30 PM)  
Zachary Campbell, Environmental Scientist III

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

  
Zachary Campbell, Environmental Scientist III  
Date: May 12, 2023

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

  
Ms. Shannon McLeary, Environmental Control Supervisor  
Date: May 12, 2023

How Delivered: USPS Certified/Registered # 7019 1640 0001 2357 4774



Energy and Environment Cabinet  
Department for Environmental Protection  
Division of Water  
Wastewater Inspection Report

**AI ID:** 177466      **AI Type:** SANI-Wastewater Treatment & Collection (2213)  
**AI Name:** Harting Ridge Lagoon  
**AI Address:** 209 Harting Ridge Rd

**City:** West Paducah, **State:** Kentucky **Zip:** 42086  
**County:** McCracken **Regional Office:** Paducah Regional Office  
**Latitude:** 37.063391 **Longitude:** -88.750158  
**Site Contact:** Arthur Faiello  
**Title:** Kentucky Regional Manager      **Phone #:** 314 -464-3618  
**Inspection Type:** Incident Investigation **Activity #:** CIV20230001  
**Incident IDs:** 2516255  
**Inspection Start Date:** April 6, 2023 **Time:** 01:00 PM **End Date:** April 6, 2023 **Time:** 02:00 PM

**Lead DEP Investigator:** Zachary Campbell  
**Other DEP Investigators:**  
**External Investigators:** Joel Barret  
**Persons Interviewed:**

**General Comments:** This investigation was conducted in response to Incident #2516255 with the greywater lagoon on Harting Ridge in West Paducah. The levee between cells of the lagoon is failing. Water was observed on the outside of the levee marked with flags indicating where the lateral fields are. Joel Barret with the Purchase Health Department was contacted and confirmed. A dye test was conducted and confirmed a breach in the lagoon. A drainage ditch runs along the length of the lagoon and there is evidence of discharge from the site. A NOV will be issued for discharging without a KPDES permit and a referral will be made to the Health Department. A sufficiency letter may be issued once a KPDES permit is approved or the breach in the lagoon is repaired and approved by the Health Department.  
**Overall Compliance Status:** Out of Compliance- NOV

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**Investigation Results**

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**SI:** AIOO177466

**SI Description:**

**Inspector Comment:**

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**Requirement:** Does the responsible party hold the proper KPDES permit?. [401 KAR 5:055 Section 2]

**Compliance Status:** V-Out of Compliance-NOV

**Comment:** Discharging without a KPDES permit. All point source discharges are required to obtain a KPDES permit.

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**Requirement:** Was a straight pipe observed on the property, which could contribute to the pollution of the waters of the Commonwealth?. [KRS 224.70-110]

**Compliance Status:** V-Out of Compliance-NOV

**Comment:** Straight pipe observed on the property contributing to the pollution of the waters of the Commonwealth.

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**Requirement:** Have surface waters been aesthetically or otherwise degraded?. [401 KAR 10:031 Section 2]

**Compliance Status:** V-Out of Compliance-NOV

**Comment:** Polluting the waters of the Commonwealth.

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**Documentation**

- Photos taken
- Documents obtained from facility
- Samples taken by outside source
- Request for Submission of Documents

- Record of visual determination of opacity
- Samples taken by DEP
- Regional office instrument readings taken
- Other documentation

Inspector:

*Zach Campbell*

Date: 04-21-2023

Received By: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Delivery Method: USPS

Certified Mail Number: 7019 1640 0001 2357 4774





June 12, 2023

Zachary Campbell  
Environmental Scientist III  
Division of Water  
Paducah Regional Office  
130 Eagle Nest Dr.  
Paducah, KY 42003

RE: Bluegrass Water Utility Operating Company, LLC  
Harting Ridge Lagoon (Marshall Ridge)  
Agency No. 177466

On behalf of Bluegrass Water Utility Operating Company, LLC (BWUOC), we are submitting this letter per the EEC's requirement consistent with the current Notice of Violation issued by Division of Water on May 12, 2023. We are continuing to work to meet effluent compliance for this facility.

BWUOC assigned the project to 21 Design Group to assess and prepare design plans and specifications, to include technical revisions, design drawings and construction permitting with the local health county department. As of May 30, 2023, 21 Design Group determined the spray field will need to be redesign and reworked to ensure the facility meets design requirements. BWUOC and 21 Design Group have been working together to evaluate potential options for modification on the spray fields.

KY-Regional Manager executed a work order to place a temporary berm to block and/or prevent erosion along the bank. 21 Design Group plans to address rebuilding the drainage system along the east side of the lagoon. Crystal Stevenson, Local Health Department, approved 21 Design Group concept but she recommended redesigning the project based on the new design regulations. 21 Design Group has not received the requirements of the health department and Ms. Stevenson has not provided the required detailed information need. BWUOC will send our operations contractor to reach Ms. Stevenson to provide approval. Once the design plans have been submitted to health department office, construction approval will be granted.

Please let us know if this letter does not meet the status report requirements of achieving system compliance.

Sincerely,

**Justin Lundgren**  
EHS Compliance Coordinator  
Email: [JLundgren@cswrgroup.com](mailto:JLundgren@cswrgroup.com)  
Office: (314) 492-8425 ext. 138



@ bluegrasswateruoc.com

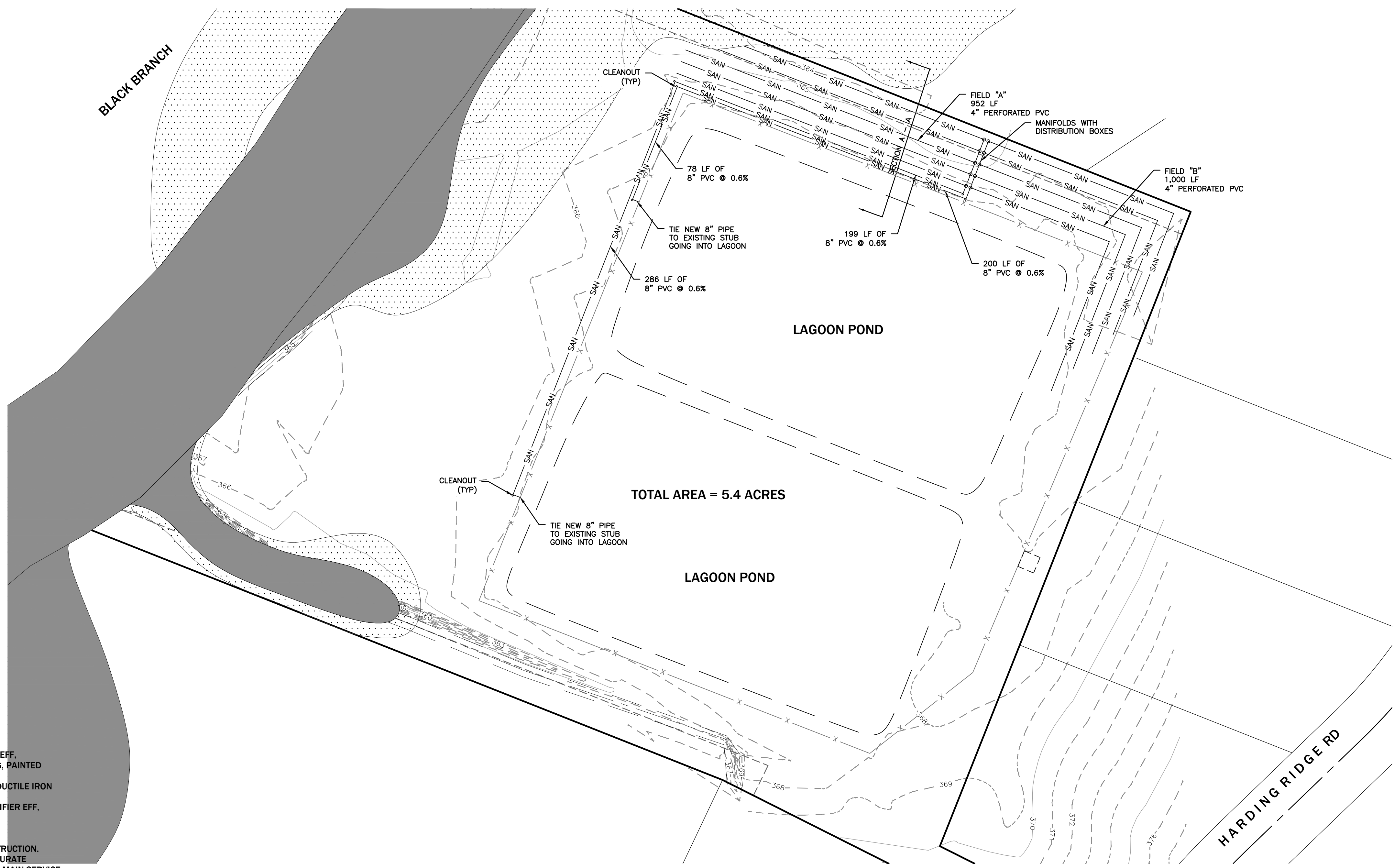
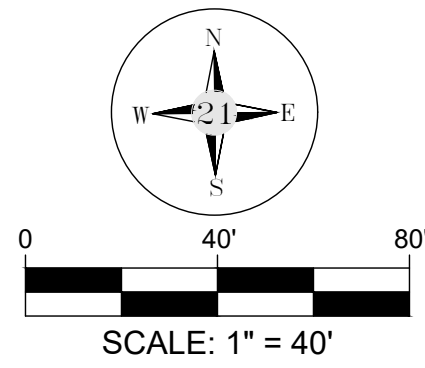
1-866-752-8982

support@bluegrasswateruoc.com









**NOTES:**

**LIQUID PIPING MATERIALS:**

- ABOVE GRADE: FOR RS, RAS, WAS, SCUM, MBBR EFF, CLARIFIER EFF, CCT/POST-AER EFF USE SCH.80 PVC WITH UV INHIBITOR COATING, PAINTED CARBON STEEL, 304SS, OR DUCTILE IRON PIPE.
- BELOW GRADE FORCE MAIN: FOR RS FM USE SDR-21 PVC WITH DUCTILE IRON FITTINGS, HDPE OR DUCTILE IRON PIPE.
- BELOW GRADE GRAVITY: FOR RAS, WAS, SCUM, MBBR EFF, CLARIFIER EFF, CCT/POST-AER EFF USE SDR-35 PVC OR HDPE.

**SANITARY SEWER NOTES:**

1. THE SEWER DESIGN DOES NOT ALLOW FOR BASEMENT CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ACCURATE AS-BUILT RECORDS OF THE SEWER MAIN, LATERALS, & FORCE MAIN SERVICE LATERALS AND SHALL BE REFERENCED TO THE NEAREST DOWNSTREAM MANHOLE AND MEASURED ALONG THE CENTERLINE OF THE SEWER MAIN. THE LENGTH OF THE LATERAL SHALL BE MEASURED AT RIGHT ANGLES FROM THE CENTERLINE OF THE TEE TO THE END OF THE LATERAL. THE DEPTH OF THE LATERAL SHALL BE MEASURED FROM THE TOP OF THE GROUND TO THE TOP OF THE LATERAL. THE AS-BUILT PLANS SHALL BE SUBMITTED TO THE ENGINEER UPON COMPLETION OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES PRIOR TO THE START OF CONSTRUCTION FOR VERIFICATION AND LOCATION OF UTILITIES.

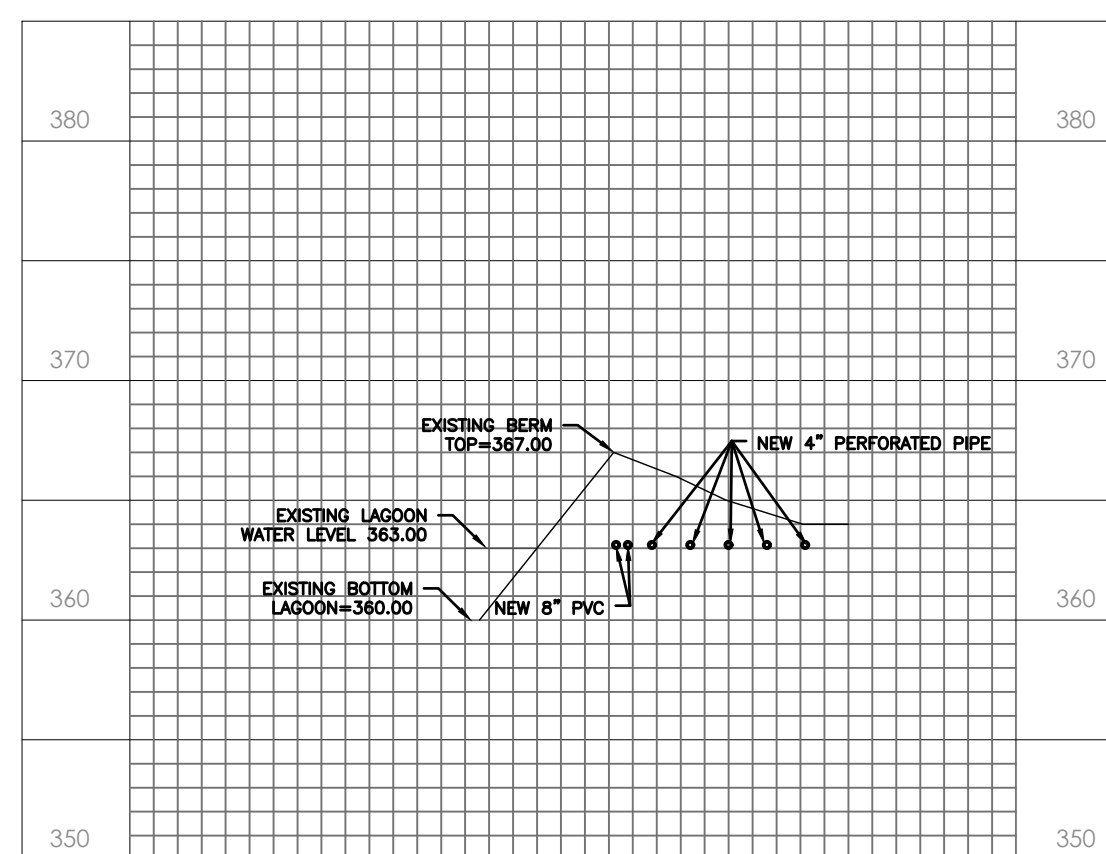
**ANTICIPATED FLOW**

41 SINGLE FAMILY RESIDENCES  
 x 3-1/3 AVERAGE NUMBER OF BEDROOMS PER DWELLING  
 136.5 BEDROOMS  
 x 120 GAL/BEDROOM/DAY  
 16,398 GALLONS OF TOTAL DAILY WASTE  
 x 5 SQ FT/GAL  
 81,990 SQ FT OF LAGOON WATER SURFACE AREA REQUIRED  
 82,000 SQ FT OF LAGOON WATER SURFACE AREA PROVIDED

**LATERAL FIELD SIZING:**

ANTICIPATED DAILY FLOW: 16,398 GAL  
 PER 902.010.085 SECTION 6(11) (d)  
 LATERAL LENGTH PER GALLON 0.10 LF/gal  
 TOTAL LENGTH REQUIRED: 16,398 GAL \* 0.10 LF/gal = 1,640 LF  
 TOTAL LENGTH PROVIDED: 1,952 LF

**SECTION A - A**



DATE	REVISION	BY

**21 DESIGN GROUP INC.**  
 1351 Jefferson, Suite 301  
 Washington, MO 63090  
 P: 636-432-5029  
 mail@21designgroup.net

**SITE/RAINFIELD PLAN**  
 MARSHALL RIDGE WWTF IMPROVEMENTS  
 HARDING RIDGE ROAD  
 McCRACKEN COUNTY, KENTUCKY

ENGINEERING CERTIFICATE OF AUTHORITY NO. EF 7034  
 ENGINEERING LICENSE: BENJAMIN J. KUENZEL, PE43678

SEAL DATE:	
DRAWN BY:	CV
PROJ NUMBER:	0542-18
DATE:	07/13/2023
DRAWING NO:	C04

ALL RIGHTS RESERVED. All 21 Design Group, Inc. plans, specifications and drawings are protected under copyright law and no part may be copied, reproduced, displayed publicly, used to create derivatives, distributed, stored in a retrieval system or transmitted in any form by any means without prior written permission of 21 Design Group, Inc.

SECTION 02720 DIVISION 2 - SITE WORK

SANITARY SEWER

SCOPE:

The Contractor shall furnish all material, equipment, tools, and labor necessary to install gravity sewer systems as shown on Construction Drawings.

SUBMITTALS:

- A. Submit six (6) copies of shop drawings, specifications, lists of material, and other data of all sanitary sewer materials needed to provide compliance with the specified requirements herein.

MATERIALS:

A. Defective Materials:

The Contractor shall be responsible for all material furnished by him, and shall replace at his own expense all such material found defective in the manufacture or damaged in handling after delivery by the manufacturer. This shall include the furnishing of all material and labor as required for the replacement of material found defective prior to final acceptance of the work or prior to expiration of warranties.

B. Storage of Materials:

The Contractor shall be responsible for the safe storage of materials furnished by or to him and accepted by him and intended for the work until it has been incorporated in completed project. Material, all pipes, fittings, and other accessories shall be kept free from dirt and foreign matter at all times.

C. Pipe Materials:

Provide pipe and associated materials of the size indicated on the Construction Drawings and meeting the following requirements:

- 1) Plastic Pipe and Fittings:  
A. General: Plastic gravity sewer pipe and fittings shall be type PSM Polyvinyl Chloride (PVC) sewer pipe conforming to 0g to the requirements of ASTM Specification D3034 or ASTM ES for PVC Eg pipe and fittings with a minimum standard dimension ratio (SDR) of 35. The PVC compound used in the manufacture of pipe and fittings shall meet or exceed the requirements for classes 12454-8 or 12454-C as defined by ASTM D1784. An approved equal plastic pipe and joining system is the Ultra Rib PVC gravity sewer pipe conforming to ASTM Specifications D 3212 and F 412.

SECTION 02746

DIVISION 2 - SITE WORK

ABSORPTION LAGOON & LATERAL FIELD SYSTEM

SCOPE:

Provide all material, labor & equipment necessary to complete the Absorption Lagoon, Lateral Field System, piping, and valves as shown on the drawings.

SUBMITTALS:

Submit six (6) specifications of copies of shop drawings, list of materials, all piping and valving material needed to prove compliance with the requirements set forth herein.

ABSORPTION LAGOON:

Excavation of the absorption lagoon shall be done using a bulldozer or similar track type equipment to reduce compaction of the lagoon bottom. Lagoon bottoms shall be uniformly level and shall be constructed to provide a maximum wastewater depth below the overflow outlet of four and one-half (4-1/2) feet, and a minimum freeboard height of two (2) feet.

Containment berming, dikes, or dams may be of excavated materials, if sufficient clay content exists in the soil to prevent seepage between the berm and the original soil surface after compaction to 95% of standard proctor and are "keyed" into the original soil beneath for at least two (2) feet at the base. All fill material shall be free of debris and vegetation. Berms, dikes or dams shall be constructed on three (3) feet vertical to one (1) foot horizontal slope. The lagoon shall be enclosed within a six (6) foot high fence or its equivalent with a locked gate.

LATERAL FIELD SYSTEM:

A. System Layout:

- All systems shall be installed in the flagged area set aside such purpose. Installation of the system in any other prohibited without the written consent of the local health department Certified Inspector.
- Layout of the system on the site by the Certified Installer shall be accomplished by using suitable stakes or markers to locate excavation sites for system components, and shooting of surface grades to establish necessary excavation depths to assure proper elevation "fall" in the system. Lateral trenches shall be laid out to follow parallel to the surface contour lines of the site.
- Maximum length for individual lateral trenches for gravity distribution systems shall be no more than one hundred (100) feet.
- Lateral trenches for gravity distribution systems shall be spaced a minimum of eight (8) feet on centers. Lateral trench spacing shall be increased two (2) feet on centers on all sites with slopes greater than 15% and less than 20%. On slopes greater than slopes greater than 20%, each 5% increase in slope, or fraction thereof, shall require an additional spacing of two (2) feet on centers for lateral trenches.

B. Excavation Requirements:

- Only that heavy equipment necessary to the installation of an onsite sewage disposal system shall be permitted in the flagged aside for the system. Such equipment shall be operated a s to minimize travel over, and compaction of, the system area.
- Excavation of the lateral field shall be restricted by the soil moisture conditions of that portion of the area at the intended depth of excavation for all soil texture classes listed in Soil Group IV. Such restriction shall apply for all system installations taking place during the months of November through May, or anytime immediately after heavy rainfall. Soil moisture conditions shall be determined by test excavation to the intended depth of the lateral trenches or beds. A small portion of soil excavated from that depth shall be rolled between thumb and fingers. If the soil can be rolled into a "wire" shaped form which does not easily crumble, the soil is too wet to work and will compact and seal absorption surfaces. If a "wire" form cannot be rolled and the soil crumbles, excavation can proceed.
- Excavations for lateral trenches shall be made specified by the Certified Inspector based on site evaluation results. Maximum trench or bed depth (from grade) for a conventional onsite sewage disposal system shall be considered as being twenty four (24) inches. Minimum trench width for gravelless pipe shall be eighteen (18) inches to a maximum of twenty four (24) inches. Minimum or maximum trench width shall be as per manufacturer's specifications for leaching chambers. Trench grade for gravelless pipe shall be level.

C. Distribution Boxes:

Distribution boxes shall be installed level, and all piping connections shall be watertight. Such components showing structural damage on delivery, or damaged in placement shall be replaced with undamaged component.

- Outlet leader piping shall be extended past the inside sidewall of the box at least three-fourths (3/4) of an inch but no greater than one (1) inch to allow for the attachment of plastic caps or plugs by solvent welding or cementing. Once attached, the water level is raised to the desired point on the caps or plugs, the level is marked on all caps or plugs, and a knife is used to cut out the upper portion of the cap or plug to or plug to the level marked.
- Additional water is carefully added while closely observing the water as it enters the outlets. If the outlets are properly leveled, all outlet lines will begin to receive water at the same level and time. If one or more lines are receiving water while others remain dry, adjustments to those higher outlets will be necessary. Fine adjustment is then made by shaving down the cutouts on the caps or plugs until leveling is achieved.
- Special leveling devices in the form of caps or inserts designed for this purpose shall be used where available.

D. Non-perforated Plastic Pipe:

Non-perforated plastic pipe shall be used as leader piping to connect outlets in the distribution box(es) to the perforated lateral lines in gravity distribution systems, and shall extend two (2) feet into all trenches or beds before connection to perforated lateral lines.

All leader piping connected to equal flow boxes shall be installed at no greater than one-eighth (1/8) inch per foot slope for the first five (5) feet of run from the box which will restrict the flow velocity of effluent.

A. Lateral Lines:

Lateral lines for conventional gravity distribution trenches or beds shall be laid as follows:

- A six (6) inch deep layer of approved trench rock or other fill material must be placed in the trench or bed carefully to prevent the sealing of the absorption qualities of the soil from fill impact, and then leveled;
- Lateral piping is placed and leveled on the trench fill materials in the center of the trench (or properly spaced in beds), and retained in place to prevent movement, while additional trench fill material is then added to a level of two (2) inches above the top of the top of the lateral piping, for a total of twelve (12) inches of trench fill material;
- Other methods of lateral piping and trench rock placement may be approved by the Water Cabinet upon demonstration of equivalency compliance.
- A two (2) to four (4) inch layer of approved barrier material, straw or a single layer of synthetic filter fabric, is then placed over the trench fill material to prevent entry of backfill soil fines.
- Pipe material for lagoon and drain field shall comply with Section 02720 - Pipe Material, Sub-Section 1. a. unless otherwise noted in the construction drawings.

EFFLUENT PIPING:

Installation of effluent piping to an absorption lagoon and overflow piping to the lateral field system shall be as follows:

A. Gravity Inflow Piping:

Non-perforated gravity flow piping shall be laid in an excavated trench into the lagoon and anchored to a poured concrete, three (3) foot square, four (4) inch thick apron. The inlet tee shall be installed horizontal and anchored to the concrete pad.

- A post indicator valve shall be installed on each 8" diameter PVC effluent line into the lagoon. The valves shall be installed per manufactures instructions and in accordance with the construction drawings. Post indicator valve shall be Mueller or approved equal.

B. Overflow Piping:

Overflow piping consists of a supported, vertically tee oriented connected to a non-perforated gravity flow plastic pipe which conducts overflow to the distribution box(es) of the lateral field. The overflow should be located at a point within the lagoon that is furthest distance from the inlet apron. The upper leg of the tee shall be covered with galvanized one-fourth (1/4) inch square screen wire and the lower leg extended downward to within three and one-half (3-1/2) feet of the lagoon bottom.

- All submerged piping into and out of a lagoon shall be provided with suitable water stops or lead collars with a minimum extension of twelve (12) inches on all sides of the pipe.

BACKFILLING AND FINISH GRADES:

A. General:

When manufacturer's installation instructions require specific backfilling procedures to protect component warranties, prevent damage, or prevention floatation of the component due to ground water pressure, those procedures shall be followed. Soil for backfilling gravelless pipe trenches shall be loose and friable. Soil aggregates (clods or clumps) shall be no larger than one-half (1/2) inch in any dimension for backfill in contact with the pipe and filter wrap to assure proper operation. Use of large clods or clumps of soil backfill is prohibited. If soil excavated from trenches will not meet criteria, suitable backfill soil shall be obtained elsewhere.

B. Lateral Trenches:

Backfilling of lateral trenches or drainage trenches shall be accomplished with minimal compaction of soil fill, and soil fill material shall be left mounded four (4) to six (6) inches above grade trenches to allow for settling. Backfilling over lateral beds shall be accomplished through the use of lightweight wheeled or crawler type tractors to minimize compaction, and shall be left mounded four (4) to six (6) inches above grade to allow for settling.

- Backfilling shall not be done until after the system has been inspected and approved to that point of construction by a Certified Inspector.

C. Finish Grading:

Finish grading over the onsite sewage system shall be performed in such a manner as to minimize compaction through the use of lightweight equipment. Such grading shall be restricted to work necessary to provide positive surface drainage away from the system, especially the lateral field. Final grading over staked or flagged system components shall be accomplished manually, or with lightweight equipment using extreme care to prevent damage to or misalignment of components.

- Finish grading work which removes soil from the system area, or which results in that area being used to dispose of excess soil graded from other areas on the site, shall be prohibited.

- Finish grading on other areas of the site shall be done in such a manner as to divert surface water runoff from driveways, patios, downspouts, slopes, ditches, gullies, etc., away from the area where the system is installed. When site conditions are such that normal grading procedures cannot divert all such runoff, diversion ditches, swales, berms, or other such diversion drainage means shall be constructed to divert runoff away from system.

- Seeding and maintenance of lagoon slopes and drain field shall be in accordance with Section 02936 Seeding of these Specifications.

SYSTEM SETBACK REQUIREMENTS:

Minimum setback distances shall be required for installation of onsite sewage disposal systems from structures, water supplies, roads, streams, bodies of water, and other structural or topographic features, as listed below:

Lagoon and lateral trenches shall be installed a minimum distance from the following structures or topographic features as measured from the structure to the sidewall of the lagoon or lateral trench.

Property lines - 50 feet

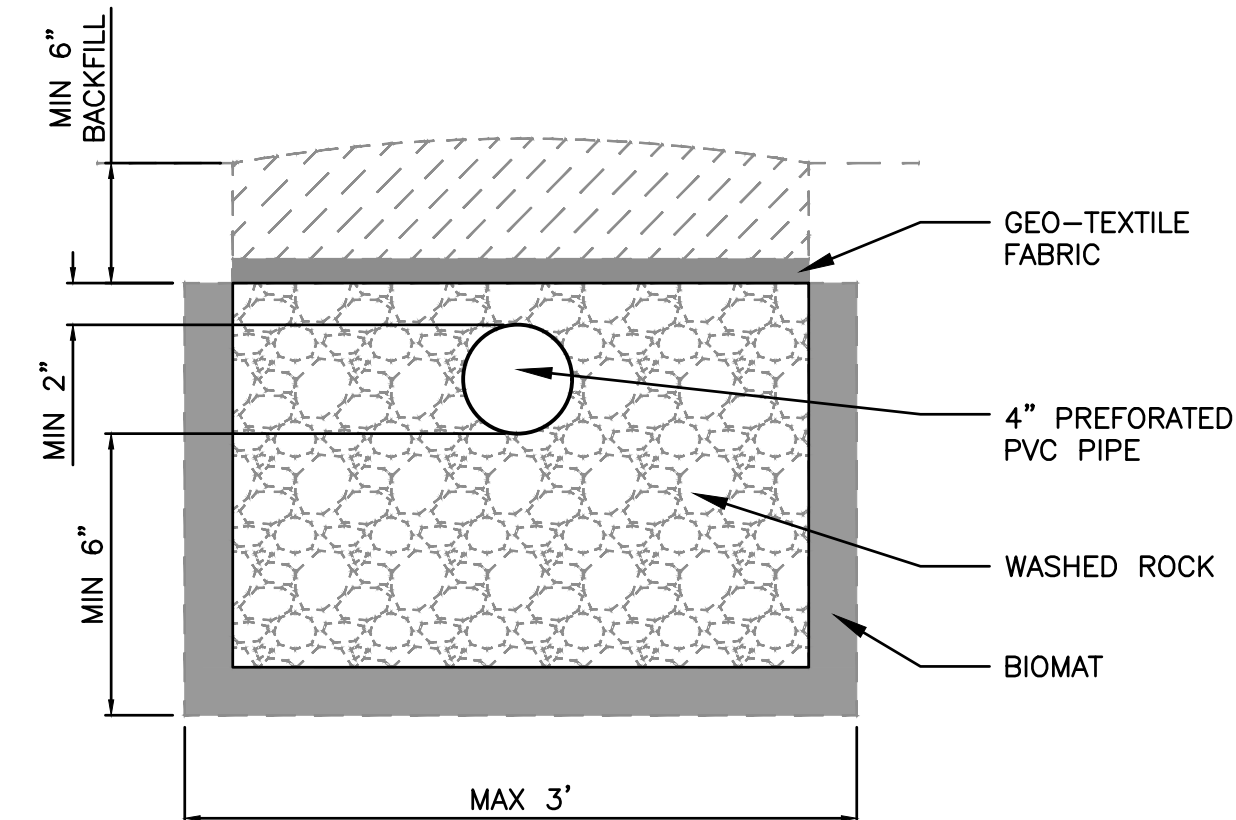
Building Foundations - 10 feet

Streams - 25 feet

Drainage Ditches - 25 feet

Buried Water Lines or Utility Lines - 10 feet

Utility Easements - 10 feet



PERFORATED PIPE DETAIL

DATE	REVISION	BY

**DESIGN GROUP INC.**

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P: 654-432-5029

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Washington, MO 63090

**DETAIL SHEET**

MARSHALL RIDGE WWTF IMPROVEMENTS  
HARDING RIDGE ROAD  
McCRACKEN COUNTY, KENTUCKY

ENGINEERING CERTIFICATE OF AUTHORITY NO. EF 7034  
ENGINEERING LICENSE: BENJAMIN J. KUENZEL PE43678

SEAL DATE:	
DRAWN BY:	CV
PROJ NUMBER:	0542-18
DATE:	07/13/2023
DRAWING NO:	C05

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Case No. 2022-00216  
Bluegrass Water's Response to PSC 7-1  
Exhibit PSC 7-1(a)  
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